

Copyright Undertaking

This thesis is protected by copyright, with all rights reserved.

By reading and using the thesis, the reader understands and agrees to the following terms:

1. The reader will abide by the rules and legal ordinances governing copyright regarding the use of the thesis.
2. The reader will use the thesis for the purpose of research or private study only and not for distribution or further reproduction or any other purpose.
3. The reader agrees to indemnify and hold the University harmless from and against any loss, damage, cost, liability or expenses arising from copyright infringement or unauthorized usage.

IMPORTANT

If you have reasons to believe that any materials in this thesis are deemed not suitable to be distributed in this form, or a copyright owner having difficulty with the material being included in our database, please contact lbsys@polyu.edu.hk providing details. The Library will look into your claim and consider taking remedial action upon receipt of the written requests.

PARENTS “MAKE A DIFFERENCE” - PARENTAL BELIEFS,
FAMILY PROCESSES, ACHIEVEMENT MOTIVATION AND
PSYCHOLOGICAL COMPETENCE OF
ADOLESCENTS EXPERIENCING
ECONOMIC DISADVANTAGE IN HONG KONG

LEUNG TSIN YEE, JANET

Ph.D

The Hong Kong
Polytechnic University

2012

The Hong Kong Polytechnic University

Department of Applied Social Sciences

Parents “Make a Difference” – Parental Beliefs,
Family Processes, Achievement Motivation and Psychological Competence of
Adolescents Experiencing Economic Disadvantage in
Hong Kong

Leung Tsin Yee, Janet

A thesis submitted in partial fulfilment of the requirements for the degree of
Doctor of Philosophy

September, 2011

CERTIFICATE OF ORIGINALITY

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it reproduces no material previously published or written, nor material that has been accepted for the award of any other degree or diploma, except where due acknowledge has been made in the text.

Leung Tsin Yee Janet

Abstract

This study examined the relationships amongst parental beliefs, family processes, and achievement motivation and psychological competence of economically disadvantaged adolescents in Hong Kong. The research employed the ecological perspective of human development, with expectancy-value theory of motivation (Eccles et al., 1998, 2006) and social capital theory of the family (Coleman, 1988, 1990) as the theoretical framework. Three parental beliefs – Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, and expectations of children's future – were studied. The research further investigated how parenting style, parental control, family functioning, and parental sacrifice for children's education influenced adolescents' positive development.

The research covered two phases. The first phase focused on the development and validation of two instruments. The second phase involved the main study. A sample of 275 intact economically disadvantaged families was recruited, with at least one adolescent child aged 11-16 in each family. A quantitative cross-sectional research design using the validated instruments was employed.

The Parental Expectations of Children's Future Scale and the Parental Sacrifice for Children's Education Scale were developed and validated in this study. Both measures showed good internal consistency, test-retest reliability, convergent validity, and factor analysis, suggesting that they possessed good psychometric properties.

There were important findings from the main study. First, parental beliefs, particularly expectations of children's future, significantly predicted parental control, family functioning and parental sacrifice for children's education. Second, adolescents' perceptions of maternal control and paternal sacrifice for children's education predicted adolescent achievement motivation, whereas maternal control, family functioning and paternal sacrifice for children's education predicted adolescent psychological competence. Third, the mediating effects of family processes in the influences of parental beliefs on adolescents' achievement motivation and psychological competence were identified.

Fourth, fathers and mothers showed significant differences in the

perceptions of parenting style, parental control and parental sacrifice, with fathers having less involvement in family processes. Fifth, there were significant parent-adolescent discrepancies in the perceptions of parenting style, parental control, family functioning and parental sacrifice for children's education. Finally, it was found that mother-child discrepancies in perceptions of maternal sacrifice for children's education adversely predicted adolescents' achievement motivation, whereas father-child discrepancies in perceptions of family functioning adversely predicted adolescents' psychological competence.

The study provides important theoretical contributions. It highlights the importance of developing indigenous Chinese concepts and family models. The study also employed the "positive youth development" paradigm to address the importance of parental beliefs and family processes as protective factors of adolescent development in the context of poverty. Furthermore, the study portrayed how dyadic and systemic family processes are related to adolescent development in Chinese families experiencing economic disadvantage.

The research has practical implications for social work intervention and policy formulation to enhance achievement motivation and resilience of economically disadvantaged adolescents, which can provide important cues for alleviating the problem of intergenerational poverty. With these methodological advances of multiple perspectives and validated indigenous instruments, the research is a pioneering scientific study of familial factors in the positive development of Chinese adolescents experiencing economic disadvantage.

Publications arising from the thesis

- Leung J.T.Y. and Shek, D.T.L. (in press). Are family processes related to achievement motivation of Chinese adolescents experiencing economic disadvantage in Hong Kong? *International Journal of Disability and Human Development*, 12(2).
- Leung J.T.Y. and Shek, D.T.L. (in press). Parent-adolescent discrepancies in perceived family functioning and developmental outcomes in Chinese adolescents experiencing economic disadvantage. *International Journal of Disability and Human Development*, 12(2).
- Leung J.T.Y. and Shek, D.T.L. (in press). Parental beliefs and parenting characteristics of Chinese parents experiencing economic disadvantage in Hong Kong. *International Journal of Disability and Human Development*, 12(2).
- Leung J.T.Y. and Shek, D.T.L. (in press). Parental beliefs and family functioning in Chinese families experiencing economic disadvantage in Hong Kong. *International Journal of Disability and Human Development*, 12(2).
- Leung J.T.Y. and Shek, D.T.L. (in press). Parenting for resilience: Family processes and psychosocial competence of Chinese adolescents experiencing economic disadvantage in Hong Kong. *International Journal of Disability and Human Development*, 12(2).
- Leung J.T.Y., & Shek, D.T.L. (2011). "All I can do for my child" ---Development of the Chinese Parental Sacrifice for Child's Education Scale. *International Journal of Disability and Human Development*, 10(3), 201-208.
- Leung J.T.Y., & Shek, D.T.L. (2011). Expecting my child to become "Dragon" --- Development of the Chinese Parental Expectation on Child's Future Scale. *International Journal of Disability and Human Development*, 10(3), 257-265.
- Leung J.T.Y., & Shek, D.T.L. (2011). Poverty and adolescent developmental outcomes: a critical review. *International Journal of Adolescent Medicine and Health*, 23(2), 109-114.
- Leung J.T.Y., & Shek, D.T.L. (2011). Qualitative and quantitative approaches in the study of poverty and adolescent development: separation or

integration? *International Journal of Adolescent Medicine and Health*, 23(2), 115-121.

Leung J.T.Y., & Shek, D.T.L. (2011). Validation of the Chinese Parental Expectation on Child's Future Scale. *International Journal of Disability and Human Development*, 10(3), 267-274.

Leung J.T.Y., & Shek, D.T.L. (2011). Validation of the Chinese Parental Sacrifice for Child's Education Scale. *International Journal of Disability and Human Development*, 10(3), 209-215.

Acknowledgements

I would like to express my sincere gratitude to my thesis supervisor, Professor Daniel T. L. Shek, for his guidance, support and encouragement throughout the journey of my study. He has stimulated my interest, sharpened my ideas and built up my vigour on conducting research. Most importantly, he has demonstrated to me how a responsible and passionate scholar should be.

I am thankful to Professor Bruce Thyer and Dr. Samson S. K. Tse, my external examiners, who gave me valuable comments on my thesis. I would like to extend my appreciation to Professor Y. C. Chan, the Chairman of the Board of Examiners, and Dr. Charles Chan, who have given me constructive comments on the research proposal. Furthermore, I would like to thank Professor A. B. Yu and Dr. S. Phillipson for their generosity to lending me the instrument tools. I also show my appreciation to Luke and Cinkie for their proofreading.

May I express my gratitude to the agencies and social workers that helped me in the data collection process. Their effort contributed greatly to the achievement of the study. Special thanks should be given to my colleagues of The Salvation Army, they not only helped me in data collection of both validation and main studies, gave valuable comments on the newly developed measures in content validation, but also tolerated for my impatience and non-stop urge during the process.

I am indebted to my parents for their unconditional care and sacrifice. I was poor in my childhood, but I was never deprived. They provided the best for my development, and socialized my belief that “I am capable”. They are exactly the ones who inspire me on my research idea, through giving me the experiences of love and hope.

I thank God for all His grace. He lifts me up in times of difficulties and despair, and gives me wisdom and strength so that I can break the hurdles. I know that He is always with me.

Lastly, I would like to use this poem to round up my experience in the pursuit of my study, and express my deepest gratitude to those who have helped me in the long journey.

Stepping for the journey full of cheers,
Lot of excitement, but sometimes fears;
Understanding that the path is long and demanding,
But achievement is the result of toughness and tears.

Readings and assignments seem never end,
Theories and findings that you have to comprehend,
Searching for truth in our life reality,
Like looking for a diamond upon the sand.

The more you learn, the more the questions,
The world should be viewed with curiosity and passion.
Critical step of setting research questions and hypotheses,
There's always a drive to find the solution.

Data are grounded from participants' experiences.
Thanks for the NGOs for their assistance.
There's no fast route on thesis writing,
The only things that help are diligence and perseverance.

I have to thank my supervisor with gratitude,
For inspiring me on the scholarly attitude,
Answer lots of questions and tons of requests,
His encouragement and guidance is never overdue.

Deeply indebted to my parents for their love and care,
For lots of burdens they are ready to share,
When face challenges, sadness and despair,
Whenever hard times they are always there.

Praise to God for guiding my way in His Light,
When there is darkness, the star is bright,
Lift me up in times of disappointment,
Pursue me to be good and to do right.

Table of contents

	<u>Page</u>
Abstract	i
Publications arising from the thesis	iii
Acknowledgements	v
Table of contents	vii
List of Figures	x
List of Tables	xii
 Chapter One:	 1
Introduction	
 Chapter Two:	 5
Family and Child Developmental Outcomes in Economically Disadvantaged Adolescents	
2.1 Impacts of poverty on cognitive and psychological development of economically disadvantaged adolescents	5
2.2 The familial pathways through which poverty affects adolescent development	13
2.3 Familial protective factors	17
2.4 Parental and parent-child differences in perceptions of family processes of intact families	24
2.5 Impacts of poverty on adolescent development and family processes: Conceptual problems	29
2.6 Impacts of poverty on adolescent development and family processes: Methodological problems	37
 Chapter Three:	 43
Theoretical perspectives on the impacts of poverty on family processes and adolescent development	
3.1 Behavioural perspective	43
3.2 Social-cognitive perspective	46
3.3 Developmental perspectives	49
3.4 Symbolic interactionism	55
3.5 Systems Theory	57
3.6 Ecological perspective	59
3.7 Socio-cultural perspective	61
3.8 Functional perspective	63
3.9 Structural Perspective	66
3.10 The Feminist Perspective	69
3.11 Social conflict perspective	71
3.12 Evaluation of different theoretical perspectives	80

Chapter Four:	89
Theoretical perspective and models employed in the study	
4.1 Employment of ecological perspective as the theoretical perspective of the study	89
4.2 Theoretical accounts of the influence of parental beliefs and family processes on achievement motivation and psychological competence of economically disadvantaged adolescents	92
4.3 Influences of Chinese culture on parental beliefs, family processes and development of adolescents	96
4.4 Conceptual model of the study	104
4.5 Proposed mechanisms in the conceptual model	105
4.6 Summary	130
Chapter Five:	132
Research questions and hypotheses	
Chapter Six:	144
Research design and methodology	
6.1 Research design – philosophical orientation and justifications	144
6.2 Measurement tools	147
6.3 Phases of implementation	154
Chapter Seven:	156
Validation Study	
7.1 Formulation of the instruments	156
7.2 Content validation of the instruments by experts	159
7.3 Validation of the instruments	166
Chapter Eight:	210
Main Study	
8.1 Method	210
8.2 Profile of the study sample	215
8.3 Psychometric properties of the measurement tools	219
8.4 Research questions and hypotheses – Results	240
Chapter Nine:	367
Discussion	
9.1 Psychometric properties of the measurement tools	367
9.2 Empirical findings for the Research Questions	378
9.3 Theoretical implications of the research	401
9.4 Practical Implications	429
9.5 Methodological advances of the study	442
9.6 Limitations of the research	450

Chapter Ten:	457
Conclusions and Suggestions for Future Research	
10.1 Summary of findings	457
10.2 Recommendations for future research	461
10.3 Conclusion	465
Appendices	467
Appendix 1 – Interview guide of focus group	467
Appendix 2 – Content Validation Questionnaire for Experts	471
Appendix 3 – Parent Questionnaire	487
Appendix 4 – Adolescent Questionnaire	503
Bibliographies	523

List of Figures

	<u>Page</u>
Figure 4.1 Conceptual model of this study	105
Figure 5.1 Hypothetical Model 1	133
Figure 5.2 Hypothetical Model 2	135
Figure 5.3 Hypothetical Model 3	137
Figure 5.4a Hypothetical Model 4a	138
Figure 5.4b Hypothetical Model 4b	139
Figure 5.4c Hypothetical Model 4c	140
Figure 5.5 Hypothetical Model 5	143
Figure 8.1 Predictions of different family processes perceived by adolescents on achievement motivation of adolescents experiencing economic disadvantage	266
Figure 8.2 Predictions of different family processes perceived by adolescents on psychological competence of adolescents experiencing economic disadvantage	267
Figure 8.3 The paths of independent variable, mediator and dependent variable	273
Figure 8.4 Path model of effects of parental beliefs on achievement motivation of adolescents with fathers' perception of paternal control on child's behaviours as the mediator	292
Figure 8.5 Path model of effects of parental beliefs on achievement motivation of adolescents with fathers' perception of paternal sacrifice for children's education as the mediator	293
Figure 8.6 Path model of effects of parental beliefs on achievement motivation of adolescents with average score of paternal control on child's behaviours as the mediator	294
Figure 8.7 Path model of effects of parental beliefs on achievement motivation of adolescents with average score of paternal sacrifice for children's education as the mediator	295
Figure 8.8 Path model of effects of parental beliefs on psychological competence of adolescents with fathers' perception of family functioning as the mediator	296
Figure 8.9 Path model of effects of parental beliefs on psychological competence of adolescents with fathers' perception of paternal sacrifice for children's education as the mediator	297
Figure 8.10 Path model of effects of parental beliefs on psychological competence of adolescents with maternal control perceived by adolescents as the mediator	298
Figure 8.11 Path model of effects of parental beliefs on psychological competence of adolescents with average score of paternal control on child's behaviours as the mediator	299
Figure 8.12 Path model of effects of parental beliefs on psychological competence of adolescents with average score of family functioning as the mediator	300

Figure 8.13	Path model of effects of parental beliefs on psychological competence of adolescents with average score of paternal sacrifice for children's education as the mediator	304
Figure 8.14	Predictions of different parent-child discrepancy scores of family processes on achievement motivation of adolescents experiencing economic disadvantage	322
Figure 8.15	Predictions of different parent-child discrepancy scores of family processes on psychological competence of adolescents experiencing economic disadvantage	323

List of Tables

	<u>Page</u>
Table 3.1	Impacts of poverty on adolescent development and family functioning according to different perspectives 74
Table 3.2	Criteria for evaluation of theories suggested by White and Klein (2008) 80
Table 3.3	Performance of different theories on the evaluative criteria suggested by White and Klein (2008) 85
Table 4.1	General causes of attributions for children's achievement 109
Table 4.2	Positive youth development constructs 117
Table 4.3	Different models of family functioning identified by Walsh (2003) 123
Table 6.1	The measurement instruments used in the study 147
Table 7.1	Domains and themes of parental expectations of children's future from focus groups 184
Table 7.2	The original scale of Parental Expectation of Children's Future 186
Table 7.3	Domains and themes of parental sacrifice for children's education 187
Table 7.4	The modified scale according to the results of content validation by experts 189
Table 7.5	Ratings on degree of relevance of PECF by the experts 190
Table 7.6	Ratings on degree of clarity of PECF by the experts 191
Table 7.7	Ratings on degree of representativeness of PECF by the experts 192
Table 7.8	Modifications of PECF 193
Table 7.9	The modified PECF according to the results of content validation by experts 194
Table 7.10	Ratings on degree of relevance of SA by the experts 194
Table 7.11	Ratings on degree of clarity of SA by the experts 196
Table 7.12	Ratings on degree of representativeness of SA by the experts 197
Table 7.13	Modifications of the SA 197
Table 7.14	The modified SA according to the results of content validation by experts 198
Table 7.15	Item-total statistics of PECF 199
Table 7.16	Correlations of PECF with other measures on parenting 199
Table 7.17	Rotated Component Matrix for six-factor solution of PECF 200
Table 7.18	Inter-correlations of items of PECF 201
Table 7.19	Item-total statistics of Revised-PECF 202
Table 7.20	Correlations of Revised-PECF with other measures on parenting 202
Table 7.21	Rotated component matrix of Revised-PECF 203

Table 7.22	Summary of reliability and validity statistics of PECF and Revised-PECF	204
Table 7.23	Revised-PECF	204
Table 7.24	Item-total statistics of PSA and MSA	205
Table 7.25	Correlation coefficient between PSA, MSA and other parenting measures in adolescent study	205
Table 7.26	Rotated component matrix for 3-factor solution of PSA and MSA	206
Table 7.27	Item-total statistics of SA	207
Table 7.28	Correlation coefficient between SA and other parenting measures	207
Table 7.29	Rotation Component matrix of SA using parent's data	208
Table 7.30	Summary of psychometric properties of SA, PSA and MSA	209
Table 8.1	Poverty threshold in reference with household size employed in the study	324
Table 8.2	Age distribution of fathers and mothers	324
Table 8.3	Duration of stay in Hong Kong of fathers and mothers	324
Table 8.4	Educational standard of fathers and mothers	324
Table 8.5	Occupations of fathers and mothers	325
Table 8.6	Geographical distribution of poor children of age 0 to 14 (By-Census of 2006)	325
Table 8.7	Geographical location of the family sample	326
Table 8.8	Types of housing of the family sample	326
Table 8.9	Marital status of the participating families	326
Table 8.10	Number of children in the families	326
Table 8.11	Monthly household income of the families by CSSA recipients	327
Table 8.12	Monthly household income of the families by number of children Monthly household income of the families by number of children	327
Table 8.13	Recipients of CSSA	327
Table 8.14	Family distribution on recipients of Textbook Allowance	327
Table 8.15	Age of adolescents by gender	328
Table 8.16	Education levels of adolescents by gender	328
Table 8.17	Duration of stay of adolescents in Hong Kong by gender	328
Table 8.18	Item-total statistics of Parental Expectations of Children's Future Scale (PECF)	329
Table 8.19	Inter-correlations among the measures derived from FECF	329
Table 8.20	Inter-correlations among the measures derived from MECF	329
Table 8.21	Coefficients of congruence on factor structure of FECF and MECF in the main study	330
Table 8.22	Inter-correlations among the measures derived from FSA	330
Table 8.23	Inter-correlations among the measures derived from MSA	330

Table 8.24	Inter-correlations among the measures derived from APSA	331
Table 8.25	Inter-correlations among the measures derived from AMSA	331
Table 8.26	Three-factor model of factor structure of SA	332
Table 8.27	Four-factor model of factor structure of SA	333
Table 8.28	Five-factor model of factor structure of SA	334
Table 8.29	Factor loadings of SA in present study and validation study	335
Table 8.30	Coefficients of congruence on 3-factor structure of SA of present study and in validation study	336
Table 8.31	Item-total statistics of CBA	336
Table 8.32	Rotated component matrix of FCBA and MCBA	337
Table 8.33	Inter-item correlations matrix of FCBA	337
Table 8.34	Inter-item correlations matrix of MCBA	337
Table 8.35	Inter-correlations among the measures derived from FAQ	338
Table 8.36	Inter-correlations among the measures derived from MAQ	338
Table 8.37	Inter-correlations among the measures derived from FPS	338
Table 8.38	Inter-correlations among the measures derived from MPS	338
Table 8.39	Inter-correlations among the measures derived from APPS	338
Table 8.40	Inter-correlations among the measures derived from AMPS	339
Table 8.41	Inter-correlations among the measures derived from FCS	339
Table 8.42	Inter-correlations among the measures derived from MCS	339
Table 8.43	Inter-correlations among the measures derived from APCS	340
Table 8.44	Inter-correlations among the measures derived from AMCS	340
Table 8.45	Inter-correlations among the measures derived from FFAI	340
Table 8.46	Inter-correlations among the measures derived from MFAI	341
Table 8.47	Inter-correlations among the measures derived from AFAI	341
Table 8.48	Item-total statistics of SOAM	342
Table 8.49	Inter-correlations among the measures derived from PYD	343
Table 8.50	Correlations between parental beliefs measures across fathers and mothers	343
Table 8.51	Correlations of paternal beliefs and family processes reported by fathers	343
Table 8.52	Correlations of maternal beliefs and family processes reported by mothers	344
Table 8.53	Standard multiple regression of fathers' family processes by paternal beliefs	344
Table 8.54	Standard multiple regression of mothers' family processes by maternal beliefs	344
Table 8.55	Correlation coefficients of paternal beliefs reported by fathers and family processes perceived by adolescents	345
Table 8.56	Correlation coefficients of maternal beliefs reported by mothers and family processes perceived by adolescents	345

Table 8.57	Correlations between relative family processes and adolescent development perceived by adolescents experiencing economic disadvantage	345
Table 8.58	Correlations between relative family processes and adolescent development perceived by adolescents experiencing economic disadvantage	346
Table 8.59	Prediction of perceived parental sacrifice on achievement motivation and psychological competence of adolescents experiencing economic disadvantage	346
Table 8.60	Prediction of paternal and maternal family processes on adolescent development in economic disadvantaged families	346
Table 8.61	Prediction of overall family processes on adolescent development in economic disadvantaged families	347
Table 8.62	Correlations between relative family processes perceived by fathers and mothers and adolescent development experiencing economic disadvantage	347
Table 8.63	Prediction of paternal and maternal family processes on adolescent development in economic disadvantaged families	348
Table 8.64	Prediction of overall family processes on adolescent development in economic disadvantaged families	348
Table 8.65	Standard multiple regression of fathers' family processes by paternal beliefs	349
Table 8.66	Direct, indirect and total effects of parental beliefs on achievement motivation (SOAM) of adolescents via paternal control perceived by fathers (FCS)	349
Table 8.67	Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via paternal control perceived by fathers (FCS)	349
Table 8.68	Direct, indirect and total effects of parental beliefs on psychological competence (PYD) of adolescents via paternal control perceived by fathers (FCS)	350
Table 8.69	Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via paternal control perceived by fathers (FCS)	350
Table 8.70	Direct, indirect and total effects of parental beliefs on psychological competence (PYD) of adolescents via perceived family functioning by fathers (FFAI)	350
Table 8.71	Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via perceived family functioning by fathers (FFAI)	351
Table 8.72	Direct, indirect and total effects of parental beliefs on psychological competence (PYD) of adolescents via perceived family functioning by mothers (MFAI)	351

Table 8.73	Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via perceived family functioning by mothers (MFAI)	351
Table 8.74	Direct, indirect and total effects of parental beliefs on achievement motivation (SOAM) of adolescents via paternal sacrifice for children's education perceived by fathers (FSA)	352
Table 8.75	Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via paternal sacrifice for children's education perceived by fathers (FSA)	352
Table 8.76	Direct, indirect and total effects of parental beliefs on psychological competence (PYD) of adolescents via paternal sacrifice for children's education perceived by fathers (FSA)	352
Table 8.77	Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via paternal sacrifice for children's education perceived by fathers (FSA)	353
Table 8.78	Direct, indirect and total effects of parental beliefs on adolescent achievement motivation (SOAM) via adolescents' perceived maternal control (AMCS)	353
Table 8.79	Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via adolescents' perceived maternal control (AMCS)	353
Table 8.80	Direct, indirect and total effects of parental beliefs on adolescent psychological competence (PYD) via adolescents' perceived maternal control (AMCS)	354
Table 8.81	Sobel test statistics on mediating effect of paternal expectations of children's future on adolescent achievement motivation via adolescents' perceived maternal control (AMCS)	354
Table 8.82	Correlations between parenting responses measures across participants	355
Table 8.83	Direct, indirect and total effects of parental beliefs on adolescent achievement motivation (SOAM) via averaged scores of measures from fathers, mothers and adolescents of paternal control (AVPCS)	355
Table 8.84	Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via averaged measure of paternal control (AVPCS)	356
Table 8.85	Direct, indirect and total effects of parental beliefs on adolescent achievement motivation (SOAM) via averaged scores of measures from fathers, mothers and adolescents of maternal control (AVMCS)	356

Table 8.86	Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via averaged measure of maternal control (AVMCS)	356
Table 8.87	Direct, indirect and total effects of parental beliefs on adolescent psychological competence (PYD) via averaged scores of measures from fathers, mothers and adolescents of paternal control (AVPCS)	357
Table 8.88	Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of paternal control (AVPCS)	357
Table 8.89	Direct, indirect and total effects of parental beliefs on adolescent psychological competence (PYD) via averaged scores of measures from fathers, mothers and adolescents of maternal control (AVMCS)	357
Table 8.90	Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of maternal control (AVMCS)	358
Table 8.91	Direct, indirect and total effects of parental beliefs on adolescent's achievement motivation via averaged scores of measures from fathers, mothers and adolescents of family functioning (AVFAI)	358
Table 8.92	Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via averaged measure of family functioning (AVFAI)	358
Table 8.93	Direct, indirect and total effects of parental beliefs on adolescent psychological competence via averaged scores of measures from fathers, mothers and adolescents of family functioning (AVFAI)	359
Table 8.94	Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of family functioning (AVFAI)	359
Table 8.95	Direct, indirect and total effects of parental beliefs on adolescent achievement motivation via averaged scores of measures from fathers, mothers and adolescents of paternal sacrifice for children's education (AVPSA)	359
Table 8.96	Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of paternal sacrifice for children's education (AVPSA)	360
Table 8.97	Direct, indirect and total effects of parental beliefs on adolescent achievement motivation via averaged scores of measures from fathers, mothers and adolescents of maternal sacrifice for children's education (AVMSA)	360

Table 8.98	Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via averaged measure of maternal sacrifice for children's education (AVMSA)	360
Table 8.99	Direct, indirect and total effects of parental beliefs on adolescent psychological competence via averaged scores of measures from fathers, mothers and adolescents of paternal sacrifice for children's education (AVPSA)	361
Table 8.100	Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of paternal sacrifice for children's education (AVPSA)	361
Table 8.101	Direct, indirect and total effects of parental beliefs on adolescent psychological competence via averaged scores of measures from fathers, mothers and adolescents of maternal sacrifice for children's education (AVMSA)	361
Table 8.102	Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of maternal sacrifice for children's education (AVMSA)	362
Table 8.103	Means and standard deviations for the measures of dyadic processes	362
Table 8.104	Effects of parents and parent-child and post-hoc comparison on the different measures of dyadic processes	362
Table 8.105	Effects and post-hoc comparison of reporters on the measure of family functioning	363
Table 8.106	Effect size (partial eta squared) of dyadic discrepancies on different family processes	363
Table 8.107	Correlations for parenting style scale and related discrepancy scales	363
Table 8.108	Correlations for parental control scales and related discrepancy scales	363
Table 8.109	Correlations for family functioning scales and related discrepancy scales	364
Table 8.110	Correlations for Parental Sacrifice for Children's Education Scales and related discrepancy scales	364
Table 8.111	Correlations between parent-child discrepancies of family processes and adolescent development experiencing economic disadvantage	364
Table 8.112	Prediction of parent-child discrepancies on parenting style and practices on achievement motivation of adolescents experiencing economic disadvantage	365
Table 8.113	Prediction of parent-child discrepancies on family functioning on achievement motivation and psychological competence of adolescents experiencing economic disadvantage	365
Table 8.114	Prediction of parent-child discrepancies on parental sacrifice for children's education on achievement motivation and psychological competence of adolescents experiencing economic disadvantage	365

Table 8.115	Prediction of paternal and maternal family processes on adolescent development in economic disadvantaged families.	366
Table 8.116	Prediction of overall parent-child discrepancies of family processes on achievement motivation and psychological competence of adolescents experiencing economic disadvantage	366
Table 9.1	Theoretical advances of the study	423
Table 9.2	Methodological advances of the study	448

Chapter One: Introduction

Hong Kong has always been one of the world's most affluent cities. The gross domestic product (GDP) of Hong Kong has increased steadily by 7.2% in real terms over 2010 (Census and Statistics Department, 2011a, p.5). The unemployment rate has stayed at low levels, with 1.9% in 2010 and 2.2% in 2011 (Census and Statistics Department, 2011b, Table 006), and the average wage rose to 4.9% between March 2010 and March 2011 (Census and Statistics Department, 2011a, Table 019). Hong Kong was ranked 21st out of 169 countries on the Human Development Index (United Nations Development Programme, 2010b), indicating high levels of economic and social development. It seems that Hong Kong is a place full of wealth and opportunity.

However, in reality, poverty is a serious and undeniable social problem. The Gini Coefficient, measuring the disparity between the rich and the poor, increased from 0.518 to 0.533 between 1996 and 2006 (Census and Statistics Department, 2007b, p.109). In the 2010 Gini Index, a global indicator to measure levels of economic inequality (United Nations Development Programme, 2009, Table M: Note d), Hong Kong was ranked first among 42 highly developed countries, i.e., having the largest income inequality (United Nations Development Programme, 2010a, Table 3). The percentage of households with monthly household income lower than HK\$4000 (US\$412.8) also rose from 6.7% of total households in 1996 to 9.2% in 2006 (Census and Statistics Department, 2007b, p.36). The number of Comprehensive Social Security Assistance (CSSA) recipients rose from 376,507 in 1999 to 482,001 in 2009, an increase of 28% over one decade. Among all CSSA recipients in 2009, 88,422 (or 18.3%) were under age 15, 10.3% of the total child population in Hong Kong (Census and Statistics Department, 2010, p. FC6). However, CSSA recipients only represent the economically disadvantaged families who are receiving cash assistance from the government. A large number of low-income families do not apply for CSSA. The Hong Kong Council of Social Service, calculating the number of people with monthly domestic household income less than 50% of the median, estimated that nearly 1.24 million Hong Kong residents were living in poverty. Among these, 24.5% (214,300 people) were under age 14. It was estimated that 24.8% of the children population in Hong Kong were living in

poverty (Hong Kong Council of Social Service, 2009). Clearly, the issue of child poverty is alarming and needs to be addressed.

As stated by McLoyd et al. (2009), poverty is “not a unitary variable or distinct event. Rather, it is a conglomerate of stressful conditions and events, many of which are outside personal control, especially if the poverty is chronic” (p. 445). There is ample research on the impacts of poverty on children and adolescents’ physical, cognitive and psychological functioning (Bogler et al. 1995; Conger & Conger, 2008; Conger et al., 1992, 1993; Conger & Donnellan, 2007; Parke et al., 2004; Sampson & Laub, 1994; Whitbeck et al., 1997). The trend of poverty-related research has also shifted from studying the deprivation of poor children and their families to the ecological influences at the home, school and community levels and, further, to their links to social structural forces as explanatory variables (McLoyd et al., 2009). Though the impacts of poverty on child and adolescent development appear to be a growing concern, there is comparatively less research on the processes that contribute to resilience and competence of adolescents experiencing poverty. Shek (2002e) found a few studies examining adversity and resilience of adolescents, particular in the context of poverty. McLoyd et al. (2009) observed “a dearth of research about contributors to positive adaptation in the context of socioeconomic disadvantage” (p. 446).

With the seriousness of poverty in Hong Kong, as well as the impacts of poverty on child and adolescent development, one might think poverty-related research in Hong Kong would be numerous. However, it is unexpectedly scarce. Still, the few available studies provide several observations. First, studies on relationships between family processes and poverty are scarce. Computer searches of three different databases (PsycINFO, Social Work Abstracts and Sociological Abstracts) in July 2011 for the period 1980-2011 using the search terms “family processes” and “economic disadvantage or poverty” produced only 1057, 21 and 602 results respectively. The number of citations dropped to 14, 16 and 11 respectively, when searching for studies of Chinese communities with the terms “family processes”, “economic disadvantage or poverty” and “Chinese”. Second, the few studies on family processes and poverty do stress the negative impact of poverty on family processes, but family as a buffer or stabilizing factor in beating the odds of poverty and building adolescents’ positive outcomes is

seldom explored. Third, only a few studies in Hong Kong have touched upon Chinese beliefs and culture in analyzing the impacts of poverty. However, many researchers have mentioned that beliefs and cultural values are crucial in understanding poor families' conceptualization of adversity and their coping mechanisms (Cross, 1995; McCubbin et al., 1998a), and that they should receive academic and empirical attention. Fourth, research in Hong Kong seldom takes into account of the perspectives of both parents and adolescents. The single source of data reduces the reliability of the research. Fifth, parental differences and parent-child discrepancies on perceptions of family processes are unexplored in economically disadvantaged families, but these differences have significant academic and practical implications for understanding and helping families living in poverty.

To address the problem of family poverty, several questions should be asked: Can economically disadvantaged families break the vicious cycle of intergenerational poverty? What are the antecedents for families to create positive change? Do parents' beliefs and cultural values matter? If they do matter, are these beliefs be the driving force for economically disadvantaged adolescents to build up competence and achievement motivation? What are the mediating paths that link parental beliefs to adolescents' achievement motivation and psychological competence?

The study of the relational world-view of Native Americans by Cross (1995) gives insight on how family resilience is important in protecting family members from risks and vulnerabilities, as well as building up resilience of individuals in face of adversity. Cross (1995) suggested that family resiliency was enhanced through the process of parenting, as families passed on their beliefs, culture, values and skills to their children. What the parents did to cope with the changes was simply "parent[ing] for resiliency" (Cross, 1995).

It is the primary mission of social work profession to enhance human well-being and to meet the basic human needs of the people, especially to the needs and empowerment of people who are vulnerable, oppressed, and living in poverty (National Association of Social Workers, 2012, Code of Ethics: Preamble). Thus, it is of critical importance for social workers to understand the impacts of poverty on family functioning and adolescent psychosocial development, and to be sensitive to the protective factors that help the economic

disadvantaged families to tackle the problem of intergenerational poverty.

Against this background, the present study focused on the relationships amongst parental beliefs, family processes, achievement motivation and psychological competence of adolescents experiencing economic disadvantage. Three parental beliefs, namely, Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, and expectations of children's future, were studied. The research also investigated how parenting styles, parental control, family functioning, and parental sacrifice for children's education influenced adolescents' positive development.

A quantitative cross-sectional research design with the use of validated instruments was adopted in this study. A sample of 275 intact families experiencing economic disadvantage were recruited, with at least one adolescent child aged 11 to 16 in each family. The research has theoretical implications for developing indigenous Chinese concepts and building Chinese family models to understand the influences of parental beliefs and family processes on adolescent development in the context of poverty. Practical implications for social work intervention and policy formulation that enhance achievement motivation and resilience of adolescents experiencing economic disadvantage are also presented, providing important cues for alleviating the problem of intergenerational poverty.

The thesis covers ten chapters. Following the introduction, Chapter Two reviews the literature on the impacts of economic disadvantage on adolescent development via family processes. Conceptual and methodological problems of the literature are discussed. Chapter Three reviews social science theories that describe the impacts of poverty on family functioning and adolescent development. Chapter Four introduces the theoretical perspective and conceptual model of the research. Chapter Five lists the research questions, hypotheses and proposed models. Research design and methodology, including philosophical orientation, measurement tools, and implementation methods are presented in Chapter Six. Chapter Seven is the validation study. Chapter Eight presents the results of the main study. Chapter Nine discusses the key findings in both the validation study and the main study, highlighting the theoretical, practical and educational implications. Methodological advances and limitations of the research are suggested. Chapter Ten summarizes the findings in response to the research questions and gives recommendations for future research.

Chapter Two: Family and Child Developmental Outcomes in Economically Disadvantaged Adolescents

The literature review covers six sections. First, there is a review of the impacts of poverty on cognitive and psychological development of economically disadvantaged adolescents. The second part covers the familial pathways through which poverty influences adolescent development. Family processes and family resources are highlighted. The third part discusses the protective factors which help adolescents in building up resilience against the odds of poverty, with a focus on parental beliefs and family influences. The fourth part reviews parental differences and parent-child discrepancies on family processes in intact families, emphasizing Chinese families and economically disadvantaged families. The fifth part discusses the conceptual problems of existing studies, while the sixth part highlights the methodological problems of available research.

2.1. Impacts of poverty on cognitive and psychological development of economically disadvantaged adolescents

Much research has studied the impacts of poverty on adolescent development. In particular, cognitive and psychological dimensions of adolescent development in economically disadvantaged families will be discussed here.

2.1.1. Cognitive development of economically disadvantaged adolescents

To analyse the impacts of poverty on adolescents' cognitive development, two dimensions, (1) intellectual development and school achievement, (2) educational attitudes, aspirations, and motivation, are important.

2.1.1.1. Intellectual development and school achievement

According to Piaget's developmental theories, a spectrum of stimulation is important for children to develop cognitive potential. Cognitive development can be understood in two aspects: formal and contentual. The formal aspect covers the operations by which the stimuli are perceived and responded to. This includes perceptual discrimination skills, ability to sustain attention, ability to use adults as sources of information and to satisfy curiosity, and ability to delay

gratification. Contentual aspect is the actual content of the child's knowledge and comprehension. It includes the language-symbolic system, environmental information, concepts of comparability and relativity (Deutsch, 1968, p. 482). However, it is found that children in poverty may have the problem of "stimulus deprivation". The deprivation not only happens in quantity, but also of the spectrum of available stimulation. Stimulation deprivation causes deficiencies to formal and contentual cognitive development and, in turn, results in discrepancies of cognitive development at the child's maturational level (Deutsch, 1968). Ample evidence shows that poverty has great influence on early-childhood cognitive development, including children's intelligence, verbal and reasoning skills, academic achievement and school readiness (Duncan, et al., 1994; Korenman et al., 1995; Smith et al., 1997). In summary, poverty slows a child's maturation.

Besides the lack of stimulation that poor children and adolescents may experience, impairment of children's health also hinders children's cognitive development. Inadequate nutrition, delayed or lacking prenatal care, as well as prenatal exposure to drugs, hamper the physical and cognitive development of children (McLoyd, 1998b). Biological impairment in childhood may create vulnerabilities in adolescence and adulthood. Hertzman (1999) referred this as the "biological embedding" of early experience, with "latent" damaging effects in adulthood.

It has been suggested that the foci of cognitive development impacted by poverty differ in children and adolescents. Guo (1998) distinguished between cognitive ability and school achievement. He argued that childhood is a crucial period for the development of cognitive ability, whereas adolescence is more focused on school achievement. Guo predicted that poverty during childhood had a much stronger link to cognitive ability, while poverty in early adolescence was strongly associated with achievement, an outcome attributed not only to ability, but also to motivation and opportunities (Guo, 1998).

To understand the impacts of poverty on cognitive development in late childhood and adolescence, a variety of indicators, including school achievement, years of schooling, receipt of special education, grade failure and general engagement in schools (Barajas et al., 2008) are important. Low-income adolescents were found to drop out from high school at a higher rate than did

adolescents in other socio-economic groups. In the United States, 10% of low-income youth dropped out of high school, twice the percentage of middle-income adolescents, and nearly 6 times the percentage of high-income adolescents (U.S. Department of Education, National Center for Education Statistics, 2001). Some research showed only modest impacts of poverty on academic performance of adolescents (Haveman & Wolfe, 1994, 1995; Teachman et al., 1997), but some found significant impacts on academic competence (Brody et al., 1994). White's meta-analysis (1982) found evidence that the effects of poverty on academic attainment diminished with age (White, 1982). One reason for this phenomenon is that the extra-familial environment including schools, peer groups and neighbourhood, takes priority over family conditions (Brooks-Gunn et al., 1997). Furthermore, it should be noted that timing of poverty is an important factor influencing adolescent achievement. Income poverty experienced in early childhood had a stronger correlation with school completion of adolescents than did the impact of income poverty itself (Duncan et al., 1998). Again, this shows that earlier poverty experience strikes deep at the developmental process of adolescents and has long-lasting and indelible effects.

2.1.1.2. Educational attitudes, aspirations and motivation of economically disadvantaged adolescents

Mickelson (1990) identified two types of adolescent educational attitudes: abstract and concrete. Abstract attitudes reflect the dominant ideology, held by a majority of adolescents in many cultures, that education is a critical component of success. Concrete attitudes reflect the reality that adolescents observe around them, including the opportunities and the payoff of education. Mickelson (1990) found that minority adolescents from lower socioeconomic backgrounds had less positive concrete attitudes about education, and it was these concrete attitudes (instead of abstract ones) that were associated with academic achievement.

Research found that youth of low socio-economic status exhibited a decline of educational aspiration throughout adolescence, whereas adolescents of high socio-economic status did not (Kao & Tienda, 1998). Furthermore, perceived barriers to educational and occupational success were linked with diminished achievement values among low-income, ethnic-minority adolescents (Taylor &

Graham, 2007). The impacts are crucial, as adolescence is the stage for identity formation. Perceived barriers to educational and occupational success of poor adolescents would dampen their aspirations for the future.

Regarding motivation, the theory suggested by Atkinson (1964) emphasized the importance of expectancy in motivation. Motivation consists of two components: the desirability of an outcome and the expectancy that one can attain it. In the path of poverty, people perceive themselves facing uncontrollable circumstances. A psychological response in two phases is predicted: the first phase is reactance; and the second phase is learned helplessness, i.e., when the loss of control persists (Kane, 1987). Under the learned helplessness model, repeated experiences with uncontrollable outcomes interfere with an individual's capability to seek opportunities for exercising control. Thus, learned helplessness infers a "motivational deficit" (believing action is useless), "cognitive interference" (difficulty in learning that action can produce positive outcomes in new situations) and "affective reaction" (depression or resignation) (Kane, 1987, p.411). Repeated experience of lacking of control in poverty results in perceived helplessness and may spill into other spheres of life.

Pareek (2002) further used an analytical model of human behaviour to describe the effects of motivation and values. He suggested that behaviour (B) was the result of motivation (M) and expectancy (E), which in turn were determined by the social system (SS). The model was represented as $(SS) \rightarrow (M, E) \rightarrow (B)$ (Pareek, 2002, p. 264). In the topic at hand, poverty is viewed as a structural component of society. Its conditions are reinforced by mechanisms such as socialization and produce a specific pattern of motivation with low need for achievement, low need for extension and high need for dependence. This motivational pattern, together with expectancy of powerlessness, produces the lifestyles and culture of poverty. The behavioural outcomes resulting from low motivation and expectancy of powerlessness include disproportionate risk taking, interest in chance, lack of interest in feedback, seeking of company of friends with similar frustrations and views, lack of activity or initiative, lack of regard for others, lack of faith and trust, avoidance behaviours, fear of failure, seeking favours of superiors and overconformity (Pareek, 2002). The lack of motivation and the instigation of a culture of poverty may fit the "epidemic" theories (Jencks

& Mayer, 1990), i.e., that neighbourhoods and peers influence the spread of adolescent problem behaviours (Duncan & Brook-Gunn, 1997).

2.1.1.3. Cognitive development on economically disadvantaged adolescents in Chinese communities

Research on cognitive development and school achievement of economically disadvantaged adolescents in Hong Kong is limited. The few studies have found an association of family functioning and school adjustment (indexed by perceived academic performance when compared with schoolmates, satisfaction with academic performance, and perception of one's conduct) in economically disadvantaged adolescents. Results also showed a stronger relationship between family functioning and perceived academic performance in economically disadvantaged adolescents than those without economic disadvantage (Shek, 2002b). Another study performed by Shek (2004b) showed an association of endorsement of positive Chinese beliefs about adversity and school adjustment in economically disadvantaged adolescents. This study also found a stronger association between endorsement of positive Chinese beliefs about adversity and perceived school conduct in economically disadvantaged adolescents than in those not experiencing economic disadvantage (Shek, 2004b). However, research on motivation and educational attitudes of economically disadvantaged adolescents in Chinese communities is minimal.

2.1.2. Psychological development of economically disadvantaged adolescents

In studying psychological development of economically disadvantaged adolescents, psychological well-being is stressed. Psychological well-being can be conceptually defined as the absence of manifested psychiatric symptoms (Bradburn, 1969), or the presence of positive mental health attributes (Diener, 1984) and coping resources (Folkman et al. 1979). Thus, we can focus on two aspects: (1) morbidity of mental problems and behavioural outcomes, and (2) positive youth development attributes such as self-esteem, sense of mastery and future orientation. The former are frequently used as they are easily conceptualized and operationalized.

2.1.2.1. Morbidity of mental problems and behavioural outcomes of economically disadvantaged adolescents

When measuring morbidity of mental problems and behavioural outcomes, two dimensions are generally categorized: (1) internalizing outcomes such as depression, anxiety and withdrawal; and (2) externalizing outcomes such as aggression, tantrums and acting out (Brooks-Gunn et al., 1999; Conger et al., 1992, 1993, 1994; Costello et al., 2003). Behavioural outcomes in adolescence also include onset of sexual intercourse, drug abuse, alcohol use, and smoking. (Brooks-Gunn et al., 1997).

Research consistently shows that economic disadvantage results in internalizing and externalizing behavioural outcomes of adolescents (Bolger et al., 1995; Brody et al., 1994; Conger et al., 1992, 1993, 1994; Costello et al., 2003, Sampson & Laub, 1994; Vazsonyi et al., 2006). Still, these outcomes varied with duration of poverty. Children and adolescents experiencing persistent economic hardship showed higher scores of internalizing and externalizing problems than those experiencing intermittent hardship and those without hardship (Bolger et al., 1995; Costello et al., 2003). In their Great Smokey Mountains study, Costello et al. (2003) found that externalizing symptoms of children aged 9-13 living in persistent poverty were reduced when family income increased, but internalizing effects remained unaffected. Similar observations were made by McLeod and Shanahan (1996). Thus, internalizing symptoms of children living in persistent poverty appear to be long-lasting.

Research also shows gender and ethnicity differences. The relationship between poverty and externalizing behaviours was stronger for boys than it was for girls in the Charlottesville Longitudinal study of 8-year-old to 10-year-old children. Furthermore, among children experiencing persistent poverty, internalizing behaviours decreased over time for girls but increased over time for boys (Bolger et al., 1995). With respect to ethnicity, among those experiencing persistent economic hardship, white children's scores decreased over time, but African-American children's scores increased. There was a significant effect of internalizing symptoms of African-American children experiencing persistent economic hardship, regardless of gender (Bolger et al., 1995).

2.1.2.2. Positive youth development attributes of economically disadvantaged adolescents

Psychological well-being should not be simply interpreted as the absence of pathological psychological symptoms, the concept of mental health also includes positive youth development attributes such as self-esteem, locus of control, self-mastery, purpose in life and future orientation. However, little research has been done into the impacts of poverty on this area of adolescent development. Whitbeck et al. (1991) found that family economic hardship had a weak direct effect on early adolescents' self-esteem, but exhibited significant indirect effect through decreasing parental support and involvement. Also, like the externalizing behavioural outcomes above, the impact on positive attributes is affected by duration of poverty. In the Charlottesville Longitudinal study, children experiencing persistent economic hardship had the lowest scores of self-esteem, when compared those with intermittent economic hardship and those without economic hardship (Bolger et al., 1995).

Social evaluation theory provides some explanation for the influence of socioeconomic disadvantage on adolescents' psychological development. The psychological well-being of individuals is shaped by the messages they receive from their status in society through reflected appraisals and social comparison (Rosenberg, 1979). Adolescence is a stage marked by growth in abstract thought, taking social perspective, and integrating one's own experience with others and the society as a whole; thus, it is posited that awareness of the "social meanings" of being socioeconomically disadvantaged would be more salient in adolescents than children, resulting in poor psychosocial adjustment and hurdles to positive youth development (McLoyd et al., 2009). Persons in lower socioeconomic strata will have a negative appraisal of self-worth, with a sense of resentment, powerlessness and loss of control. This will be magnified by the stigmatizing conditions and circumstances precipitated by socio-economic disadvantage (Lindheim & Syme, 1983). However, in a research review of the association between socio-economic status (SES) and self-esteem, Rosenberg and Pearlin (1978) found the relationship of SES and self-esteem was strong in adults, relatively weak in adolescents, and virtually non-existent for children. The researchers explained their findings by the psychological meaning of social class and experiences of individuals exposed to social inequality. Adults are more

exposed to different social stratification systems and social inequalities in the workplace, whereas the major extra-familial context of adolescents and children is school, which tends to be socio-economically homogenous (Rosenberg & Pearlin, 1978).

Future orientation was defined by McLoyd et al. (2009) as a “cognitive-motivational-affective construct that refers to an individual’s thoughts, feelings, plans, and attitudes about his or her future” (p. 468). Future orientation has been regarded as an important positive youth development attribute, as it determines the goals and aspirations of individuals and shapes their decision-making and plans (Nurmi, 1991). However, it was found that children and youth from low socio-economic status exhibited lower occupational aspirations and expectations (Cook et al., 1996), perceived more barriers to occupational success (Taylor & Graham, 2007), and expressed higher levels of cynicism about work, opportunities and the social mobility system (McLeod, 1987).

2.1.2.3. Psychological development of economically disadvantaged adolescents in the Chinese community

Economically disadvantaged adolescents in the Chinese community exhibited poorer psychological well-being when compared with adolescents who did not experience economic disadvantage (Shek, 2005b, 2007c, 2008a). Psychological, family, cultural and interpersonal factors were also found to be correlated with violent behaviours of Chinese economically disadvantaged adolescents. The factors included adolescents’ perceived stress, psychological symptoms, and existential mental health (psychological factors), attitudes towards poverty and Chinese beliefs on adversity (cultural belief factors), family functioning (family factors), and interpersonal support and interpersonal conflicts (interpersonal factors) (Shek & Tang, 2003). Furthermore, economically disadvantaged adolescents exhibited higher levels of current economic hardship and future economic worry than those without economic disadvantage, and they identified a generally stronger relationship between perceived economic stress and emotional quality of life (Shek, 2005c). Regarding present lives and future orientation, qualitative research showed that though economically disadvantaged adolescents had positive perceptions of the present lives and future lives, they

perceived their ideal lives as embedded in the main theme of economic sufficiency (Shek, Lam & Lam, 2004).

2.2. The familial pathways through which poverty affects adolescent development

The effects of poverty on adolescent development are mediated by ecological factors. Brooks-Gunn, Britto and Brady (1999) highlighted five pathways for influencing the well-being of children and adolescents: (1) health and nutrition; (2) parental mental health; (3) parenting behaviours; (4) home environment; and (5) neighbourhood conditions (Brooks-Gunn et al., 1999). Bradley and Corwyn (2002) categorized three classes of processes that mediated socio-economic status and child well-being: (1) stress reactions, which include allostatic load, i.e., “the body’s capability to adapt and adjust to environmental stressors via physiological change” (p. 383) and parenting; (2) resources, which include nutrition, access to health care, housing, cognitive stimulation, parenting expectations and styles, and teacher attitudes and expectations; (3) health-relevant behaviours and lifestyles. Among these pathways and mediator variables, many relate to familial context and family processes, which is precisely the focus of this study.

2.2.1. Family processes as pathways through which poverty affects adolescent development

The “family stress model” of economic hardship has become the mainstream model for studying the impacts of poverty on adolescent development via family processes. The family stress model addresses how parental distress (parental mental health) and parenting behaviours mediate the effects of poverty on adolescent development. The model proposes that economic hardship exerted economic pressure on the family. Indicators of hardship include low income, high debts relative to assets, and negative financial events such as pay cuts and work instability. Economic pressure includes unmet material needs, unstable bill payment and forced cutbacks on necessities. The stresses and strains experienced by families give psychological implications to economic hardship. When economic pressure is high, parents are at risk of emotional distress

(anxiety and depression) and behavioural problems (antisocial behaviour and substance abuse). The emotional and behavioural disturbances will result in marital conflict, which then leads to poor parenting, demonstrated by less affection towards children, less involvement in children's daily activities and inconsistency in disciplinary practices. These affect children's emotional, behavioural, cognitive and physical well-being (Conger & Conger 2008; Conger & Donnellan, 2007; Conger et al., 2002). The family stress model, then, illustrates how parents' mental health, parenting qualities and the parent-child relationship mediate the impact of poverty on adolescent development.

Many researchers have employed the family stress model as the framework for analysing the impacts of poverty on child and adolescent development with family processes as mediating variables. Studies of different ethnic and national groups, geographical locations (rural and urban), family structures (single-parent or two-parent), age (young children, senior children, adolescents) provide empirical evidence for the model. (Bogler et al., 1995; Parke et al., 2004; Sampson & Laub, 1994; Whitbeck et al., 1997).

In the Chinese community, the impacts of economic disadvantage on adolescent adjustment have been studied, with parenting characteristics and parent-child relational qualities as the mediating variables (Shek, 2005d, 2005e; Shek et al. 2000). Parental influences and family functioning were related to psychological well-being and problem behaviours of Chinese economically disadvantaged adolescents, but the effects varied with the child's gender (Shek, 2002b, 2005b, 2005e). When comparing poor and non-poor families, paternal parenting quality and father-child relationships were generally poorer in poor families than in non-poor families. Furthermore, adolescents experiencing different degrees of economic disadvantage differed from some paternal parenting processes, but not in other measures of parenting processes or emotional well-being (Shek, 2008a).

2.2.2. Family resources as a pathway through which poverty affects adolescent development

The family investment model focuses on the link between poverty and children's resources. Income provides material goods as well as a wide range of non-material resources, including parental time and guidance, quality schools,

safe and supportive neighbourhoods, safe and adequate living environment and community resources, and opportunities. These contribute to human, social and cultural capital (Ripke & Huston, 2006). The family investment model works on the basic propositions that family income affects the investment and that parents provide for the lives of the children. Family income during childhood and adolescence is positively related to academic, financial, and occupational success in adulthood (Conger & Donnellan, 2007).

It is expected that parents who are more economically advantaged are more ready to invest time, energy and money in bringing up children. Conger and Donnellan (2007) listed four dimensions of family investment that foster the competent development of children: (1) availability of learning materials; (2) parental stimulation of learning through direct as well as indirect means, such as tutoring; (3) standard of living, including food, housing, clothing and medical care; and (4) residential location (p.181). All these resources serve as investment for developing the human capital of children. Children with more human capital would enhance their cognitive ability, academic achievement, and social-emotional well-being. However, for families in poverty, such investment remains a luxury as they can provide only immediate needs such as food and clothing. Thus, children's cognitive and psychological development is restricted.

Recent research has paid more attention to how familial and environmental stimulation contribute to the cognitive and socio-emotional development of children and adolescents. The Home Observation for Measurement of the Environment (HOME) Inventory is widely used to assess the quality and quantity of stimulation and support available to children and adolescents in their home environment (Caldwell & Bradley, 2003). Not surprisingly, home environments play a significant role in children's cognitive and behavioural outcomes (Yeung et al, 2002). Smith et al. (1997) also found that the association between family income and children's academic achievement was mediated by the home environment. Bradley and Corwyn (2002) further suggested that maternal education had the most consistent direct influence on children's cognitive and behavioural outcomes together with some indirect influence from a cognitive stimulating environment. Conversely, home environment can be an obstacle to the development of economically disadvantaged adolescents. Bradley et al. (2000) found that the quality of home environment was moderately correlated with the

number of developmental problems manifested by adolescents from five socio-cultural groups (African Americans, Chinese Americans, European Americans, Mexican Americans and Dominican Americans).

Economically disadvantaged parents also tend to be less involved in their children's education (Crosnoe et al, 2002; Edin & Lein, 1997; Furstenberg et al., 1999; Lareau, 2004). This may be due to financial and time constraints, as parents of low-income families often work long hours in physically demanding jobs (Edin & Lein, 1997; Lareau, 2004). Parents' perception that they are less knowledgeable of the school system and their pessimism about their children being able to attend high school are also barriers to their involvement in children's education (Crosnoe et al, 2002; Furstenberg et al., 1999).

Other studies have examined the limited financial resources and material deprivation of poor Chinese families (Chiu, 2005; MacPherson & Chen, 1996; Oxfam Hong Kong & Policy 21, 2011; The Boys' and Girls' Club Association of Hong Kong, 2006). A study on resources for the developmental needs of economically disadvantaged children found that poor children did not show differences in internal assets (such as social competence) when compared with non-poor children, except in learning abilities, where poor children were less competent. But poor children showed discrepancies in external assets such as financial and material resources (books, computers, bookshelves) and family support. This lack of necessary resources likely affects the academic performance of poor children, which further reduces their chances of escaping poverty. Furthermore, poor children lacked the confidence that parents could save enough for them to attend universities (The Boys' and Girls' Club Association of Hong Kong, 2006).

However, research systematically studying how family resources mediate impacts of poverty on adolescent development in the Chinese community is minimal. Thus, there is a research gap in understanding how poverty, and specifically family resources, impacts adolescent development in the Chinese community.

2.2.3. Integration of family processes and family resources

Yeung et al. (2002) attempted to integrate the family stress and family investment models. They tested their integrated model with a quantitative study

of 753 children aged 3-5. The results supported the hypothesis that family processes and family resources mechanisms are associated with child outcomes (Yeung et al., 2002). However, as children in the sample were all of pre-school age, effects on older children and adolescents were unexplored.

2.3. Familial protective factors

Conceptual and empirical studies on resilience try to answer the questions: While economically disadvantaged children and adolescents face debilitating psychological or behavioural problems, why do some adapt so well? How do they face the environment of adversity? What enables their escape from the influences of poverty? Garmezy (1993) suggested three categories of protective factors that moderated the influences of poverty: (1) personality/dispositional features, such as self-esteem, locus of control, self-efficacy, optimum, stress reactivity, active coping strategies, cognitive competence, communicative skills, affective responses to others and predictability; (2) affectional ties within the families, such as cohesion, warmth, shared values, patience, consistency of rules, and support from adults; and (3) availability of external support systems such as schools, churches and caring agencies. Echoing these suggestions, studies of two cohorts (ages 7-9 and 10-12) living in urban adversity found that economically disadvantaged children and adolescents displayed positive school adaptation and functioning. The effects were moderated by personal attributes and family resources. Personal attributes included realistic control attributions about family adversity, personal mastery of efficacy, perceived competence, future expectations, and social-emotional competence. Family resources included nurturing relationships with primary caregivers; stable family environments; inductive, age-appropriate and consistent family discipline practices; and mother attributes (Wyman 2003; Wyman et al., 1992, 1999).

Recent qualitative research gives insight into the protective factors, including personal, familial, cultural and contextual dimensions, of Chinese economically disadvantaged adolescents in beating the odds of poverty. The personal dimension includes low sense of poverty and positive meaning of poverty in their experience. The familial dimension consists of parental support, positive parental role modelling, and sibling support. The cultural dimension

includes cultural interpretation of poverty. The contextual dimension consists of blurred poor neighbourhood boundaries and weak subculture of poverty (Lam et al. 2004).

As the present study is concerned with how parental beliefs and family processes build up adolescents' resilience to poverty, we will review the literature about the cultural and familial factors of parental beliefs and family processes.

2.3.1. Parental beliefs as protective factors in moderating the impacts of poverty

Though literature is scarce on how parental beliefs moderate the impacts of poverty for economically disadvantaged adolescents, it is worth reviewing the literature to search for the building blocks of adolescent resilience. Two dimensions of parental beliefs, (1) beliefs about adversity, and (2) child-specific beliefs, are worth noting.

2.3.1.1. Beliefs about adversity

Cultural beliefs contribute to the belief systems of parents on adversity by influencing how adversity is defined and conceptualized, as well as by shaping coping resources and behaviour (Shek et al., 2003). Parents with strong beliefs in overcoming adversity tend to act positively in the face of difficulties and challenges, which in turn influences their children's development. Gofen (2009), in her qualitative study of how first-generation higher-education students broke through the intergenerational cycle of education-level inheritance, found that parental beliefs about education as a path to escape from poverty resulted in parental investment and involvement, which in turn influenced the educational aspirations, ambition and motivation of their children.

In Chinese communities, Lee (1985) suggested that traditional beliefs help those in lower social-economic strata cope with stress from economic striving. However, he gave this a negative connotation that people used mythical explanations and manipulations of life's vicissitudes to cope with stress (Lee, 1985, p. 203). The mechanisms of how this explanation and manipulation buffers poor families' stress needs to be explored. Nevertheless, empirical evidence supports the idea that adolescents with stronger endorsement of positive Chinese

beliefs about adversity displayed better psychological well-being and school adjustment as well as fewer problem behaviours (Shek, 2004b, 2005a; Shek et al., 2003). Maternal endorsement of positive Chinese beliefs about adversity was related to adolescent adjustment (Shek et al., 2003). Furthermore, positive Chinese beliefs about adversity and adolescent adjustment were related more strongly with economically disadvantaged adolescents than without economic disadvantage (Shek, 2004b).

2.3.1.2. Child-specific beliefs

Eccles et al. (1998) identified six child-specific parental beliefs that may influence children's motivation: (1) causal attributions for children's performance; (2) perceptions of the difficulty of a specific task; (3) expectations for their children's success, and confidence in their children's abilities; (4) beliefs about the value of the specific task; (5) differential achievement standards of fulfilling the task; and (6) beliefs about the external barriers to success (Eccles, 1998, pp. 1058-1059).

Among these, parental expectation is one of the most significant factors in predicting children's cognitive and psychological competence (Davis-Kean, 2005, Fan & Chen, 2001, Gill & Reynolds, 1999; Schoon et al., 2004). A study of children ages 8-12 of low socio-economic status found that parents' expectations of their children predicted significant educational achievement (Davis-Kean, 2005). A longitudinal study found that parental educational aspirations for children were significantly associated with educational resilience and level of academic achievement among less privileged adolescents. Higher educational expectations among low-income parents were associated with better adjustment of adolescents in secondary schools, which in turn encouraged higher educational attainment (Schoon et al., 2004). A study of 712 low-income African American children in the sixth grade found similar results that children's perception of parents' expectations predicted their reading and mathematics results (Gill & Reynolds, 1999). A study of single-parent African American families found that mothers' developmental goals for children, indexed by being respectful, being well-educated, getting along with others and being well-behaved, influenced the academic and psychosocial competence of children through competence-promoting parenting practices (Brody et al., 1999).

Other parental child-specific beliefs that influence the development and achievement of their children are causal attributions for children's success and failure, as well as perception of children's abilities. Causal attributions directly impact parent's affective responses, parenting practices and involvement in children's activities, which in turn influences children's and adolescent development (Bugental & Happaney, 2002; Georgiou, 1999; Halle et al., 1997; O'Sullivan & Howe, 1996). A study of 473 parents with children studying in sixth grade in public elementary schools found that parental attribution of success to children's effort was positively related to the child's actual school achievement, through parental involvement in facilitating development of children's interests (Georgiou, 1999). On the contrary, parents who are more likely to attribute success or failure to external characteristics (such as luck) may correlate with children's underachievement (O'Sullivan & Howe, 1996). Halle et al. (1997) also found that low-income African American parents' expectations of children's future, together with perceptions of children's abilities, were significantly and positively related to achievement.

2.3.2. Family qualities and processes as protective factors in moderating the impacts of poverty

The literature on resilience shows that familial qualities and processes are important in buffering the impacts of poverty for economically disadvantaged adolescents (Garmezy, 1993; Masten et al., 1990; Rutter, 1987, 1990; Werner & Smith, 1992). Parenting styles and practices in socialization, warm and stable family environment with affectional family relationships, and family involvement in school activities and resources for children's education predicted positive cognitive and psychological competence of economically disadvantaged adolescents.

The relationship between adolescents' resilience and parents' supervision/discipline practices also has empirical support (Chao & Sue, 1996; Shek 1995b; Smith & Carlson, 1997; Wyman et al., 1992). Chao and Sue (1996) found both parental control and parental warmth predicting academic achievement of Chinese students. Shek (1995b) found that parenting styles, indexed by global parenting characteristics and specific parenting practices, correlated significantly with psychological well-being and school adjustment.

Smith and Carlson (1997) showed that parental management and supervision, as well as the ability to provide support and guidance in the face of stress and disadvantage, affected adolescents' resilience. Wyman et al. (1992) had similar findings in interviewing the children aged 10-12 who experienced life stresses: the resilient group reported inductive and consistent family discipline practices.

Warm and stable family environments, with affectionate relationships, serve as important buffers for poor adolescents facing adversity and building resilience. This involves cohesion in the family, shared values among family members and support from adults. McCubbin (1996) reported that resilient poor families demonstrated high levels of warmth, affection, and emotional support. They sustained family rules and promoted family traditions, celebrations and spiritual connections. Seccombe (2002) found that resilient families had routines, celebrations, shared core values and clear-cut expectations for their children. Warm and supportive family environments also influence the positive development of economically disadvantaged adolescents (Furstenberg et al., 1999; Shek, 2002e; Smokowski et al., 1999; Wyman et al., 1992). In their in-depth study of poor urban adolescents, Furstenberg et al. (1999) found that open, supportive adolescent-parent relationships encouraged adolescent autonomy and problem-solving, which in turn predicted academic success. Smokowski et al. (1999) performed a qualitative study examining autobiographical essays of adolescents experiencing economic risks. The informants showed above-average results in reading and mathematics achievement. Family support was identified as the crucial factor in resilience and achievement motivation. Wyman et al. (1992) found that "resilient" adolescents with life stresses exhibited more positive relationship with primary caregivers as well as stable family environments. Similar findings were obtained in the Chinese community. Shek (2002e), in his study of 229 economically disadvantaged adolescents, found that more positive perceptions of parental qualities, indexed by parenting styles, support from parents, and satisfying relationships with parents, were generally associated with better psychological well-being and school adjustment of adolescents.

According to the family investment model, it seems that economically disadvantaged families would be deficient in providing material resources for building children's human capital. However, some scholars argue that it is

investment preference, rather than income, that affects the education of children in economically disadvantaged families (Becker & Tomes, 1985; Gofen, 2009). Regardless of income, parents who highly value their children will devote more resources to children's development, though investment in children's education requires parental sacrifice in low-income families (Schlee et al., 2009).

The idea is supported by some qualitative studies. Gofen (2009), in her qualitative study of how first-generation higher education students broke through the intergenerational cycle of education-level inheritance, found that family capital prioritizing education was critical to the success. Parents focused on education in their daily expressions and were ready to sacrifice their own needs for the educational needs of the children. Interestingly, students recognized this sacrifice and thus felt a duty to fulfil their parents' expectations (Gofen, 2009). A study of low-income immigrant families found that a sense of filial obligation motivated children and adolescents towards academic achievement and away from problem behaviours, and reinforced later financial support to their families, in response to the sacrifice of parents who had migrated to the United States to improve their children's prospects (Fuligni & Yoshikawa, 2003). Weiling (2003) performed a qualitative study based on eleven ethnographic interviews with economically disadvantaged families in Mexico to understand the phenomenological meanings families gave to the education of their children. It was discovered that parents made deep personal sacrifices for their children's educational achievement. Influenced by the strong Latino values of collectivism and familism, parents felt that all the sacrifices were worthwhile and that this was the only wish they had for their children (Weiling, 2003). Thus, parental sacrifice for children's education in economically disadvantaged families is an important family process that requires more attention.

Parental sacrifice pertains not only to financial resources but also to time. This is especially a problem for parents who have to work long hours in physically demanding jobs, a common experience of low-income families (Edin & Lein, 1997; Lareau, 2004). However, as with financial resources, parents tend to spend time on their children's education, as they realize its importance for their children's future. Englund et al. (2008) compared the educational pathways of 179 high school graduates and school dropouts. Children whose parents were involved in their schools in middle childhood and who experienced good

parent-child relationships in early adolescence were more likely to have positive trajectories toward academic success. In contrast, those who had poor relationships with parents were more likely to drop out, even if they were doing well academically. The findings suggest that parent support and involvement in education significantly influence children's success. Without family support and involvement, even academically able adolescents may be diverted from a successful educational pathway to a failing one (Englund et al., 2008). Hango (2007) also found that parental involvement reduced the harmful effects of socio-economic disadvantage. Father's interest in school reduced the impact of economic hardship on education, especially in middle childhood (age 11), and both parents' interest in education had the largest direct impact in adolescence (age 16). Furthermore, in a study conducted by Cooper and Crosnoe (2007) of 489 inner-city families, economic disadvantage did not disrupt parental involvement or child academic orientation. On the contrary, parental involvement was associated with greater levels of child academic orientation despite economic disadvantage. Davis-Kean (2005) optimistically concluded that economic difficulties "do not necessarily constrain academic development. It is possible that parents as 'co-teachers' in the home may find a better psychological balance of stimulation and demand for their children. Poor children perform well in school despite restricted material resources. If parents are successful in providing an emotionally stable and stimulating environment, the negative effects of financial restrictions can be minimized" (p. 302).

With the limited financial resources of the economically disadvantaged families, parents struggle more for the educational needs of their children. To fulfil educational requirements, parents need to respond to immediate expenses, be equipped with information technology devices for effective learning, invest more in learning materials and activities to stimulate children, and save money for further education. Sacrifice of personal needs may often be the result. However, research on *how* economically disadvantaged parents sacrifice for education is unexplored.

2.4. Parental and parent-child differences in perceptions of family processes of intact families

This section emphasizes the differences in perceptions of family processes among family members, with special attention on Chinese families and economic disadvantaged families. It is noteworthy that there is very limited research in this area.

2.4.1. Parental differences in family processes

This review of parental differences in perceptions of family processes covers two aspects: (1) qualitative differences between fathers and mothers in child-rearing roles, and (2) quantitative assessments of fathers' and mothers' involvement in parenting.

2.4.1.1. Qualitative differences in child-rearing roles

The literature describes different roles for fathers and mothers in family processes. Fathers, as “breadwinners”, are responsible for protecting family members and striving for family resources to provide daily necessities and ensure children's development. Mothers, as caregivers, are responsible for daily management of the family and care of the children. Different theories have been suggested for these distinct roles. First, in the psychoanalytic theory, mothers are identified more as attachment figures for the children, whereas fathers are more remote (Hosley & Montemayor, 1997). Second, the sex-role theory (Bem, 1974) suggests that femininity is associated with expressiveness, whereas masculinity is associated with instrumentality (Spence, 1993). Mothers may adopt a more affective style of parenting, whereas fathers may adopt a more goal-oriented style (Russell et al., 1998). Third, the gender-ideology approach suggests that gender ideologies shape the involvement of parents in parenting and doing housework. Mothers are more involved in the socialization process than are fathers (Coverman, 1985; Kluwer et al., 2000). Fourth, the role theory of cultural perspectives suggests that parenting roles and practices are determined by culture, which is historically developed and traditionally accepted. In Confucian thought, the family system is patriarchal and hierarchical (Ho, 1986). Fathers are defined as providers and disciplinarians, mainly responsible for mobilizing resources and

protecting the family. Mothers, in contrast, are defined as caregivers, responsible for maintaining the childcare and household management (Hosley & Montemayor, 1997; McKinney & Renk, 2008). These findings echo the Chinese cultural inclination of “*nan zhu wai, nu zhu nei*” (men manage things outside the family; women manage things inside). Fifth, the resource perspective posits that fathers comparatively pursue greater resources and decision-making power that constitute to differential roles and tasks in parenting between fathers and mothers (Presser, 1994).

Specifically regarding parenting practices, stylistic differences have been suggested in fathers’ and mothers’ interaction with children (Parke & Buriel, 1998). Fathers seem to be more involved in physical and outdoor-play activities, whereas mothers are more involved in care-giving, household tasks and school activities (Russell & Russell, 1987). Paternal and maternal involvement continues to be different in adolescence. Fathers engage adolescents in a “peer-like” manner and are more playful with adolescents (joking and teasing), which promote a more egalitarian father-child exchange and helps adolescents develop their own sense of identity and autonomy (Larson & Richards, 1994; Shulman & Klein, 1993).

In Chinese culture, there is a strong traditional discourse of “strict fathers, kind mothers” (Wilson, 1974). Fathers are generally regarded as “harsh disciplinarians” whereas mothers are kind and affectionate (Shek, 2002c). Popular Chinese maxims like “*bang xia chu xiao zi*” (a filial son is the product of the rod), and “*ci mu duo bai er*” (a fond mother spoils the son) clearly state the “strict father, kind mother” thesis. This seems to contrast with the “peer-like” interaction in Western fathers’ practice. However, the traditional “strict father, kind mother” thesis has been challenged in the contemporary Chinese literature (Shek, 1998c, 2007b, 2008b). Though a study of 429 Chinese secondary school students’ perceptions of paternal and maternal global parenting styles and specific parenting practices found significant paternal-maternal differences, different definitions of “strictness” produced different results. The concept “strict father” made sense when “strictness” was defined in term of “harshness”. But when “strictness” was defined as “demandingness”, fathers were not any more demanding than mothers (Shek, 1998c). Another longitudinal study of 2559 Chinese adolescents found general perceptions of the father’s behavioural and

psychological control to be lower than those of the mother (Shek, 2008b). Instead of supporting the “strict father, kind mother” thesis, these studies pointed to a “strict mother, kind father” thesis, or even “stricter mothers and kinder mothers”, with fathers remaining detached and uninvolved (Shek, 2007b, 2008b).

2.4.1.2. Quantitative assessments of involvement in parenting

Literature review consistently shows that fathers are less involved in the socialization of children than are mothers (Forehand & Nousiainen, 1993; Noller & Callan, 1990; Paulson & Sputa, 1996). This pattern exists during infancy and continues through middle childhood to adolescence (Collins & Russell, 1991; Parke & Buriel, 1998). In a study of 244 ninth-graders and their families on perceptions of parental demandingness, responsiveness and involvement, both adolescents and parents perceived mothers to be more involved in parenting than were fathers (Paulson & Sputa, 1996). Similar results were found in the study of Forehand and Nousiainen (1993) that mothers exhibited higher acceptance and control of their children than did fathers.

As mentioned, the psychoanalytic theory (Hosley & Montemayor, 1997), sex-role theory (Bem, 1974), gender ideology approach (Coverman, 1985; Kluwer et al., 2000), the role theory of cultural perspectives (Hosley & Montemayor, 1997; McKinney & Renk, 2008), and the resource perspective (Presser, 1994) all account for the relatively lower involvement of fathers in parenting. When looking specifically at socio-economic context, the structural model further suggests that blue-collar (lower socio-economic status) families, when compared with white-collar families (higher socio-economic status), demonstrate more patriarchal authority and clearly defined divisions of labour, with less shared decision-making and more defined spousal roles (Presser, 1994; Rubin, 1976). This suggests that fathers of low socio-economic status are more detached in parenting. Also, physically demanding jobs and long, non-standard hours of work add additional barriers to economically disadvantaged fathers' parenting involvement. In Chinese communities, fathers also seem to exhibit less behavioural control, be less responsive and less demanding than mothers, as perceived by adolescents (Shek, 1998c, 2007b, 2008b).

Research on parental differences in economically disadvantaged families is minimal. A study of coercive family processes in poor Midwestern families

found no significant difference between fathers and mothers on marital conflicts or parent-child financial conflicts. There was only slight evidence that fathers were more adversely affected by family financial burdens than were mothers (Conger et al., 1994).

2.4.2. Parent-child discrepancies on perceptions of family processes

There is empirical evidence for parent-adolescent differences in the perceptions of different family processes. These include parenting styles (Paulson & Sputa, 1996; Padmawidjaja & Chao, 2010), parenting practices (Cottrell et al, 2003; De Los Reyes et al., 2010; Gulon et al., 2009; Reynolds et al., 2011) and family functioning (Ohannessian et al., 1995, 2000; Shek, 1999d). Adolescents generally received lower scores on parenting and family functioning than did their parents. There are three possibilities for these parent-adolescent differences.

First, developmental theorists interpret the differences as an indication of individuation (Grotevant & Cooper, 1986), which is a normative developmental process. The increase of family conflict between adolescents and parents may be regarded as a manifestation of the adolescent desire for autonomy, independence and identity formation (Lerner & Spanier, 1980; Montemayor & Flannery, 1991; Steinberg, 1991).

Second, the parent-adolescent discrepancies may be interpreted in terms of the “generational stake” hypothesis; that is, parents have a stake in maximizing the similarities between themselves and their adolescent children, whereas adolescents have a stake in minimizing the similarities so as to display autonomy and independence (Bengtson & Kuypers, 1971). Parents want to nurture their children, enhance family cohesion, and provide a healthy environment for the children. Thus, they have a tendency to portray their families as positive and cohesive, as they have invested much time and effort in maintaining family functioning (Lerner & Knapp, 1975; Lerner & Spanier, 1980). Thus, parents’ perceptions of family processes may also be distorted (Niemi, 1974). On the other hand, adolescents focus on searching for self-identity and autonomy. The differences in developmental agendas result in discrepancies in the perceptions of family processes (Welsh et al., 1998).

These two explanations assume that the discrepancies between parents and

adolescents can be attributed to the different developmental lenses through which parents and adolescents view their family functions and interaction. In their views, the different perceptions of family processes are considered normal, facilitating adolescents' healthy development (Ohannessian et al., 1995; Welsh et al., 1998).

Third, some family theorists suggest that parent-child discrepancies are the results of conflict between parents and adolescents. Olson et al. (1983) suggested that the stresses within the family result in different views of family processes among family members. Minuchin (1985) also suggested that parent-child discrepancies reflect family disorganization, maladaptive family interaction patterns, and a lack of cohesion. In summary, parent-child discrepancies may reveal the inability of family members to communicate and/or solve family problems effectively. In other words, unlike the individuation and generational-stake theses that see parent-child discrepancies as normal and healthy, this perspective suggests that different perceptions of family processes are associated with maladjustment of families, which in turn results in poor adjustment and psychological outcomes of adolescents (Feinberg et al., 2000; Guion et al., 2009; Ohannessian et al., 2000; Welsh et al., 1998).

A review of the literature in predicting different parent-child perceptions of family processes shows inconsistent results. Carlson et al. (1991) suggested that parent-child discrepancies in some domains showed increased autonomy of adolescents. i.e., healthy development, but discrepancies in other domains reflected a lack of connectedness associated with poorer functioning. Stronger evidence indicated that parent-child discrepancies in perceiving family processes were related to low levels of adolescent self-competence, self-esteem, emotional adjustment and social competence (Gaylord et al., 2003; Guion et al., 2008; Ohannessian et al., 1995, 2000; Tein et al., 1994).

Such parent-child discrepancies in Chinese contexts have rarely been studied. Among them, Shek (1999d) conducted a longitudinal research on the perceptions of family functioning among Chinese parents and their adolescents. However, his research did not predict parent-child discrepancies in perceptions of family functioning on adolescent development. Padmawidjaja and Chao (2010) analysed parents' and adolescents' reports of the parenting practices of Chinese Americans in comparison with European Americans. However, they did not

make any prediction about parent-child discrepancies in perceived parental control or parental warmth on adolescent development.

Moreover, research on the relationships between parent-child discrepancies of perceptions of family processes and adolescent development in low socio-economic contexts is almost non-existent.

2.5. Impacts of poverty on adolescent development and family processes: Conceptual problems

Though there is ample research on the impacts of poverty on adolescent development in the West, these studies have conceptual problems: (1) using various definitions and measurements of poverty; (2) neglecting the dynamic nature of poverty; (3) ignoring levels of analysis; (4) lacking concern for the theoretical conceptualization of adolescent resilience and positive development in the context of poverty; (5) neglecting of parental beliefs as protective factors of adolescents in facing poverty; (6) ignoring cultural considerations on understanding impacts of poverty; (7) glossing over the diversity of mediating familial processes and factors that influence adolescent development; (8) lacking concern for understanding parental difference on family processes in poor families; and (9) neglecting parent-child discrepancies in perceptions of family processes. Each of these will be discussed in detail.

2.5.1. Definition and measurement of poverty

The complexity of poverty as a construct brings “conceptual muddiness” (Ripke & Huston, 2006, p. 522) to the related studies. Though the terms “poverty,” “economic disadvantage” and “low socio-economic status” are commonly used in describing the families in the studies, they represent different concepts and have different properties. Of the three commonly used constructs, “economic disadvantage” is the simplest. However, it still cannot escape the issue of what economic threshold or baseline determines and differentiates “disadvantage”. The problems of defining and measuring “economic disadvantage” remain.

Poverty is a complex concept that goes beyond economic deprivation. Rowntree (1901) defined families as being in poverty when their income was not

“sufficient to obtain the minimum necessities for the maintenance of merely physical efficiency” (Rowntree, 1901, p.86). This is “absolute poverty”, a measure of the subsistence level of living, i.e., what is adequate for survival and maintenance of human development. It is a threshold that reflects a minimum standard of living conditions. The absolute poverty threshold is commonly used in measuring poverty due to its objectivity, simplicity, and clearly defined nature. However, it is a limited indicator that includes only physical needs, and the definitions of “necessities” or “basic” still involve subjective judgment. Townsend (1979), on the other hand, defined poverty as individuals, families and groups “lack[ing] the resources to obtain the type of diet, participation in the activities and to have the living conditions and the amenities which are customary, or at least widely encouraged or approved in the societies to which they belong... they are in effect excluded from the ordinary living patterns, customs, and activities” (p. 31). This is a relative concept of poverty. The idea of relative poverty is that poverty should be understood and measured in the context where it happens. Thus, poverty is “socially defined” (Spicker, 2007, p. 14). Relative poverty draws the poverty line by comparing the household income within the population. For example, in the European Union, 60 per cent of the median monthly household income is the low-income threshold (Eurostat, 2000); in Hong Kong, it is 50 per cent (Subcommittee to Study the Subject of Combating Poverty, Legislative Council of the Hong Kong Special Administrative Region, 2006). The advantages of relative poverty are that it takes social needs into account and is grounded in national and historical contexts (Townsend, 1980). Also, it is easily administered. However, it has weaknesses that the assessment of income does not reflect the consumption needs of the poor, and the chosen proportion of median income is somewhat arbitrary (Commission on Poverty, 2005, Introduction). Differences in definitions of poverty represent different expectations of standards of living and may imply different concepts of measurement.

Socio-economic status (SES) is a more complex construct in both conceptualization and measurement. According to the definition of Bornstein et al. (2003), SES is a “multidimensional construct that is indexed by three quantitative factors having to do with parents, namely educational achievement, occupational status, and financial income, used alone or in combination” (p.31).

Many researchers prefer using SES as it gives a richer picture of a family's situations, combining social and economic domains. Moreover, since SES is a multidimensional construct, it denotes a relative standard which is less volatile than poverty status (McLoyd, 1998b). However, there are difficulties in the conceptualization and measurement of SES: Which component(s) of SES contribute more to the outcomes of adolescents? How can we weigh different components in the study? How can we measure SES? Does the construct of SES fluctuate greatly across time and cultures? The complexity of SES creates conceptual and methodological problems that are not easily handled.

Another issue related to the definition and measurement of poverty lies in the use of eligibility criteria for assistance scheme or particular welfare programmes that require means-testing. For ease of sample gathering as well as clarity in defining poverty, many researchers choose the recipients of assistance scheme or particular welfare programmes as respondents. Examples include Mistry et al. (2002), recruiting participants from the New Hope Project, which provided income supplements, job-search assistance, subsidized health care, and subsidized child care to low-income adults. Wyman et al. (1992) drew a sample from children participating in the Rochester Child Resilience Project, which included a school-based intervention programme to promote coping competencies and self-efficacy. This strategy is also common in Hong Kong, where recipients of Comprehensive Social Security Assistance (CSSA) and Full Textbook Allowance (FTA) were selected as the economically disadvantaged families for certain studies (Shek, 2005a, 2005d, 2008a; Shek et al., 2003). When respondents are drawn in this way from welfare rolls, their perceptions and behaviours are strongly affected by the content and implementation of the programmes in which they have already participated. This may create systematic bias in the research.

2.5.2. Dynamic situations of poverty

Situations of poverty are not stagnant. The situations of families in poverty fluctuate as family incomes fluctuate periodically. Families move in and out of poverty (Duncan & Brooks-Gunn, 1997). Mistry et al. (2002) echoed the point by suggesting that poverty “exhibits a cyclical pattern – that is, families transition in and out of poverty over time. The turbulence created by falling into

and out of poverty may create series stress for parents that impacts children's development over time" (p. 948). The dynamic nature of poverty creates difficulty in measuring the impacts of poverty, especially in the case of cross-sectional research. Even in longitudinal studies, few researchers have tracked family income over time to cover child development from early childhood to adolescence. As mentioned, income poverty experienced in the early childhood years of adolescents had stronger correlation with school completion than the impact of income poverty itself (Duncan et al., 1998). But if family incomes are not analysed across the years of child development, it is difficult to draw causal relationships between the adolescent development (physical, psychological and/or cognitive) and poverty at various stages (infancy, childhood, adolescence) of development.

In addition, depth, duration and timing of poverty have important implications for development. Depth of poverty has a non-linear relationship with cognitive development and behavioural outcomes of children and adolescents, having a greater influence at the lowest end of income distribution (Dearing et al., 2001; Duncan & Brooks-Gunn, 1997; Duncan et al., 1998). This means that severe poverty hampers the most of children and adolescents' development. The duration of poverty can be classified as transient, occasional, recurrent, or persistent (Ashworth et al., 1994). McLoyd et al. (2009) concluded that persistent poverty jeopardized children's and adolescents' cognitive and psychological functioning to a much greater degree than did transient or occasional poverty. As mentioned, children and adolescents experiencing persistent economic hardship showed higher scores of internalizing and externalizing problems than those experiencing intermittent hardship (Bolger et al., 1995; Costello et al., 2003), and persistent poverty's effects on internalizing outcomes are long-lasting (Costello et al., 2003; McLeod & Shanahan, 1996). For timing of poverty, it was found that poverty in infancy and early childhood had more harmful effects than poverty in adolescence (Duncan & Brooks-Gunn, 2000). Adolescents experienced poverty in the early childhood may have higher tendency of school incompleteness (Duncan et al., 1998). Though empirical evidence shows that depth, duration and timing of poverty have important implications for adolescent development, they are usually ignored in research studying the impacts of poverty.

2.5.3. Level of analysis

When studying the impacts of poverty on families and individuals, level of analysis is an important issue that should be clarified. On the theoretical foundation, there has been hot debate on the “legitimate” level of analysis for studying social phenomena. Two dichotomised concepts have been highlighted in the analysis: methodological individualism versus holism. In methodological individualism, the individual is considered the causal agent for research and theoretical explanation, and individuals and their attributes (personality, motivation, etc.) are the focus of study. Hayek (1952) insisted that “(methodological individualism) systematically starts from the concepts which guide individuals in their actions” (p.38) and “their [the social sciences’] task is to constitute these wholes by constructing models from familiar elements” (p.56). Popper (1952) echoed the idea by suggesting that “institutions must be analysed in individualistic terms” (p.324). In his view, it is the aims and motives of individuals that determine the operation of society, which is viewed as merely an aggregation of individuals. There is nothing ‘super-human’ or ‘super-individual’ produced by the constraints of society.

In contrast, holism theorists argue that social facts cannot be reduced to the individual level and that society and social institutions are more than aggregations of individuals. Theories focus on ‘holistic’ characteristics deriving from social interactions. In this view, a family is “not just a collection of individual members but an organized group of interacting persons who develop roles, rules, beliefs, patterns of communication, or organizational structures for task accomplishment and functioning” (Vosler, 1996, p. 11). Thus, proponents of holism suggest, concepts of social cohesion, group solidarity clearly could not be reduced to the individual level.

Beyond the dichotomy of methodological individualism and holism, social theorists have explored the possibility of multiple levels of analysis, a breakthrough in theoretical formulation. In formulating ecological theory, Bronfenbrenner (1979) portrayed a theoretical framework with four levels of environmental systems that influence human development: micro-system, meso-system, exo-system and macro-system (Boss et al., 1993). Though many researchers have employed the ecological perspective in studying the impacts of

poverty on adolescent development, most have explored only the micro-system and meso-system. The exo-system, such as parents' values of work, and macro-system, such as cultural values and norms, are seldom explored but may have implications for economically disadvantaged adolescents.

Level of analysis is of critical importance in understanding the impacts of poverty on individual and family functioning, as this social phenomenon captures three levels or structures, individual, family and societal, which are interwoven with one another. Anderson (1999) solved the puzzle of studying of socio-economic status by calling for integrated, multilevel and interdisciplinary research.

2.5.4. Lack of focus on adolescent resilience and positive development

While numerous studies have explored the mediating effects of poverty of parent stresses and family processes on adolescent development, comparatively little has been done on the theoretical conceptualisation of adolescent resilience and positive development in the context of poverty. Shek (2002e) found few studies examining adversity and resilience of adolescents, particularly in the context of poverty. Luthar (1997) suggested "greater attention to theoretical conceptualizations regarding 'normative development', in the context of poverty" (p. 579). McLoyd et al. (2009) noted "a dearth of research about contributors to positive adaptation in the context of socioeconomic disadvantage" (p. 446). Criticizing deficit models in research, Burton and Jarrett (2000) suggested that youth are "erroneously assigned aberrant attributions when in fact their behaviours represent a cadre of actions that fit contextual demands" (p.1118). In particular, research studying family characteristics and family processes that build up adolescent resilience to adversity and poverty is lacking. Smith and Carlson (1997) commented that "while there is ample research on the role of social support in mediating stress in adults, there is comparatively less research on social support for child and adolescent adjustment" (p.239).

2.5.5. Neglect of parental beliefs as protective factors

Though parental beliefs may influence family strategies, which in turn affect the well-being of family members, research on parental beliefs in poor families is scarce. A PsycINFO advanced search in July 2011 for the period 1980-2011, with

the search terms of poverty/economic disadvantage, parental belief and adolescent, found only 14 publications. Just three of these pertained to the Chinese community (using the search terms of poverty/economic disadvantage, parental belief, adolescent and Chinese). A Social Work Abstracts advanced search in July 2011 for the period 1980-2011, with the terms of poverty/economic disadvantage, parental belief and adolescent, found no publications. The minimal research on parental beliefs of poor families may be due to the difficulties of theorization and conceptualization of belief systems, the cultural-specificity of belief systems, and the lack of tools for measuring parental beliefs. Sigel and McGillicuddy-De Lisi (2002) commented that “a clear conception of beliefs [for parents] and theoretical explanations of how and why beliefs are effective are lacking” and that literature on beliefs “is superficial, poorly defined, and while often in face validity, it is sorely lacking in providing information about construct and content validity” (p. 497). Leung (1996) also saw “a dearth of theorizing and data on the beliefs systems of Chinese” (p. 262).

2.5.6. Cultural considerations in understanding the impacts of poverty

Ethnicity and culture are important in the study of poverty’s impact on adolescent development. They lay down the ideological values, norms, and institutional patterns that make up the ‘blueprints’ for the ecology of human development (Boss et al., 1993). They affect the socialization process, parenting strategies, social adaptation and adolescent development. Furthermore, beliefs and cultural values are crucial in poor families’ conceptualizations of adversity and their coping mechanisms in the face of stress (McCubbin et al., 1998b).

However, the importance of ethnicity and culture has not drawn the appropriate level of concern in related research. Ethnicity is always considered a control variable rather than a theoretical interest. Burton and Jerrett (2000) commented on the “lack of attention given to cultural and contextual perspectives of family processes” (p. 1128). Phinney (1992) stressed the importance of culture and ethnicity, as “members of ethnic minority groups must resolve questions regarding retention of their own cultural heritages, relationships with the dominant culture, and experience with prejudice and discrimination” (p. 163). The important ingredients of cultural values, norms, and institutional patterns that may moderate the vulnerability and adaptation of

adolescents and their families in poverty should be given more research attention.

2.5.7. Diversity of mediating factors in the relationship between family processes and adolescent development

The impact of poverty on adolescent development is a complex process involving more than one pathway. It would be difficult to studying one particular process or factor that influences a specific developmental outcome (Bradley & Corwyn, 2002). It is particularly difficult to draw causal relationships between adolescent outcomes and complex social settings such as neighbourhoods (Duncan & Raudenbush, 1999) and to interpret the mediating relationships across different levels and disciplines (Anderson, 1999), as a number of potential factors contribute to the effects, and the result has more than one explanation.

Analysing the relationship between SES and parenting, Hoff et al. (2002) found that a host of other factors may influence parenting, making it difficult to isolate the variance due to SES. Mistry et al. (2002) similarly observed that parenting is a complex and reciprocal construct, which is both multi-dimensional and multi-determined (p.948). Cumming et al. (2000) stated that “the interplay between parenting and child functioning reflects a reciprocal process unfolding over time” (p.160).

2.5.8. Lack of studies on parental differences in family processes

With reference to the sex role theory and the structural model, the strength of parental differences in family processes should be amplified according to the characteristics of a lower socioeconomic stratum (e.g., more patriarchal authority, more defined spousal roles, physically demanding jobs, long and non-standard hours of work) (Rubin, 1976; Presser, 1994). The differential roles, as well as the relative involvement of fathers and mothers in family processes, have important implications for handling the family dynamics of poor families. Furthermore, parental differences in family processes in poor families further intensify parents’ psychological stress, with mothers usually shouldering the burdens of economic stresses, doing the bulk of the parenting and being blamed for children’s problems (Shek, 2008b). Unfortunately, research on parental differences in family processes for economic disadvantaged families is scarce. The lack of concern for this element of the situation may be hindered our understanding of

family dynamics and interactions in the context of poverty.

2.5.9. Lack of research on parent-child discrepancies in perceptions of family processes

Informant discrepancies have long been regarded as “‘methodological nuisances’ (De Los Reyes, 2011, p. 2). The traditional way of handling informant discrepancies was to treat them as measurement errors (McGuire, 1969) instead of addressing them actively as a legitimate construct valuable for empirical study. Thus, very few studies have investigated the influence on adolescent development of parent-child discrepancies in perceptions of family processes, and research in this area about low socioeconomic contexts is of course almost non-existent. However, some researchers have said that “informant discrepancies” are absolutely “more than measurement error” (Achenbach, 2011, p. 80). Parent-child discrepancies have important meanings and implications for the clinical assessment of children and adolescents (Achenbach, 2011; Achenbach et al, 1987; De Los Reyes, 2011). As suggested by De Los Reyes (2011), informant discrepancies can be important for understanding the causes and consequences of child and adolescent psychopathology, and for allowing treatments to be more focused and appropriate. This illustrates the need to consider parent-child discrepancies of perceptions of family processes as a legitimate construct and to explore their influences on adolescent development.

2.6. Impacts of poverty on adolescent development and family processes: Methodological problems

Besides these nine conceptual problems, there are methodological problems in the study of the impacts of poverty on adolescent development and family processes: (1) predominance of correlational studies; (2) lack of longitudinal studies; (3) problems with units of analysis; (4) problems with measurement tools; (5) problems in measuring family processes and relationships; and (6) difficulties in recruiting participants and high attrition rate.

2.6.1. Limitations of correlational research

Many studies of the effects of economic disadvantage on adolescent

development have been non-experimental, with the majority using a correlational approach. However, the problems of directionality and the third variable hinder the establishment of cause-and-effect relationship.

The directionality problem, or reversibility, is that a correlational study can establish a relationship between two variables (A and B) but has the problem in determining which variable is the 'cause' and which is the 'effect'. It is possible that A causes B ($A \rightarrow B$), but it is also possible that B causes A ($B \rightarrow A$). In experimental design, the criterion of directionality, i.e., a cause having a direct effect, is proved by manipulating the independent variable and observing the variations of the dependent variable. But in correlational design, as the variations of the variable are determined by participants' responses to the measuring instrument, the researcher cannot manipulate the independent variable. Rather, the research question becomes whether the variables under investigation are in some way related to one another. The type of analysis is thus correlational, rather than causal (c.f. Crano & Brewer, 2002, p.125; Gravetter, & Forzano, 2006, p. 317). The directionality problem is more profound in cross-sectional study, where all scores of variables are gathered at once. Taking the impact of poverty on adolescent development via family processes as an example, it is possible that parenting qualities of families in poverty influence adolescents' externalizing behaviours, but at the same time it is possible that adolescents' externalizing behaviours influence parenting qualities (Shek, 2005d). A longitudinal study of perceived family functioning and adolescent adjustment in Chinese economically disadvantaged adolescents found that the relationships between perceived family functioning and adolescent psychological well-being and problem behaviour were bi-directional (Shek, 2005b). Correlational research designs have problems on drawing causal relationships.

The third-variable problem is that, although a correlational study may establish the relationship between two variables, this relationship may be spurious, i.e., influenced by a third variable. Experimental design effectively eliminates plausible rival explanations through randomization and other direct controls in context and procedure to hold extraneous variables constant. However, in correlational studies, researchers cannot hold extraneous variables constant. Rather, they can only anticipate and measure extraneous variables in the questionnaires, and then exercise statistical control over these variables in the

analysis (Singleton et al., 1993). Thus, the causal inferences from correlational design are generally less confident than those from experimental design. Poverty's influence on adolescent development is affected by many co-occurring conditions, such as single parenthood, minority and immigrant status, parent education and occupation status, and family members with mental illness. These are "classic" third variables (Bradley & Corwyn, 2002, p. 379), making it difficult to isolate the effect of income deprivation or economic disadvantage. Magnuson and Duncan (2002) echoed this point, claiming that most developmental studies using non-experimental design may have "consequently suffered from serious omitted-variable bias" (p. 106).

Researchers have developed different strategies in research design and data analysis to improve the confidence of explanation in correlational studies. Cross-lagged panel correlation in longitudinal research design increases the confidence of directionality, employment of partial correlation controls third variables statistically, and employment of structural equation modelling facilitates the causal interpretation of correlational results.

2.6.2. Lack of longitudinal studies

Another problem with cross-sectional design is its inherent inability to infer cause-and-effect relationships because it lacks an element of time order. This is especially critical in the study of poverty, with its dynamic and specific patterns. Mistry et al. (2002) suggested that since poverty is cyclical, with families transitioning in and out of poverty over time, the process and cumulative impact of poverty over time are critical for any analysis. Cross-sectional studies have difficulties capturing this process and cumulative impact. Besides, cross-sectional designs are also susceptible to the problem of directionality. Reciprocal relationship of parenting and child outcome causes difficulty in generating causal relationships.

Recently, the development of structural equation modelling (SEM), or path analysis, has facilitated causal interpretation of correlational results from cross-sectional studies. The structural model of hypothetical relationships, including the direct and indirect effects among the constructs, is carefully tested in structural equation modelling, giving more confidence for causal analysis of the correlational results. However, Mistry et al. (2002) gave a sound comment:

“When applied to cross-sectional data, the results obtained from analyses involving SEM, at best, support the proposition that the pattern of associations are an adequate representation of the data; they do not provide confirmation of a causal relation between two constructs...Moreover, as is the case for most statistical procedures, SEM cannot rule out the problem of omitted variables” (p. 948).

2.6.3. Problems of measurement tools

Measurement tools are important instruments in assessing psychological constructs, and validation of measurement tools is important to ensure validity and reliability of the measurement. It is especially important for measurement tools used in specific ethnicities and cultures. The tools may be unreliable or invalid if they are not validated with specific samples. However, many general measurement tools used in studying adolescents and families in a specific culture may not have undergone such a validation process. In many cases, even if the measurement tools have been validated, the impacts of culture are underestimated. An illustration is the Home Observation for Measurement of the Environment (HOME) Inventory, which is widely used to assess the quality and quantity of stimulation and support available to Western children and adolescents in their home environment (Caldwell & Bradley, 2003). The inventory is useful for family research in the United States. However, it has been argued that the HOME Inventory cannot be applied directly to other cultures. Bradley et al. (1996), in their review of more than 70 studies utilizing the HOME Inventory outside the United States, found that many items were inappropriate in other cultures and had to be dropped.

This is especially critical for using Western-designed measurement tools in Chinese cultures. As the two cultures' philosophical orientation and cultural development are very different, the measurement tools developed in Western countries do not truly reflect the perceptions and behaviours of Chinese people. For instance, in measuring achievement motivation of adolescents, Yu (1996) found that achievement motivation theories and concepts developed in Western, individualist societies should not be applied to measure the achievement motivation of people from collectivist, non-Western societies (Yu, 1996). Shek (1998e) also reminded social workers and clinical practitioners to be conscious

of cultural variations in the application of family assessment tools. This highlights the need for the development of indigenous measurement instruments.

2.6.4. Problems in measuring family processes relationships

Analysing the impact of poverty on adolescent development inevitably includes measuring family processes and parent-child relationships. However, as Wampler and Halverson (1993) pointed out, quantitative measurement is the weakest in “capturing the complexity of family life in the sense of an on-going stream of behaviour over a long period of time that interweaves the perceptions of individuals with behaviours in relationships” (p. 189). The perceptions of family relationship may change in many ways. Nevertheless, we are reminded to consider the six aspects of measurement (p.185) to consider when constructing measurement tools for family research: (1) general theoretical orientation (e.g. behaviourist, social exchange, structural-functionalism, systems, developmental); (2) domain (family as unit, marital, parent-child); (3) source (insider, family members or outsider, trained observer); (4) level (global, individual); (5) relation to real time (prospective or retrospective, sequential or non-sequential); and (6) aspects of relationship studied (e.g. behaviours, attitudes, emotion, affect).

2.6.5. “Legitimate” Unit of Analysis

Unit of analysis is always an issue when studying the impact of poverty on adolescent development, especially with family processes as the pathways. Ohannessian et al. (1995) found that adolescents perceived lower levels of family cohesion than did their parents. Thus, the typical method of gathering information only from adolescents is problematic. Day et al. (2001) argued that considering responses from just one person in family research provides “a very limited basis for extrapolating a sequence of events that may lead to a certain decision or interactional style” (p. 110). They called for research strategies that include “the collective perceptions of multiple family members”, as researchers can “appropriate latent, covert, unseen processes that influence, predict, and alter subsequent behaviour by family members” (p.110). Furthermore, collection of data from more than one source would allow triangulation of data, minimizing individual biases and enhancing reliability.

2.6.6. Difficulties in recruiting participants and high attrition rate

Income and SES are sensitive variables. Poverty may bring social stigmatisation. It is not surprising that researchers face reluctant potential respondents and high attrition rates for studies on economic disadvantage. Stigmatisation and social exclusion experienced by the “poor” is especially strong in the Chinese community, where individual achievement is an aspect of family achievement (Wilson & Pusey, 1982) and poverty is perceived as “losing face” and disgracing the family name. This shame may discourage family members from participating in poverty-related studies. It is particularly difficult to study parenting qualities, as parents with better parenting qualities tend to be more willing to participate in the research than are those with poorer parenting qualities (Hoff et al., 2002). This contributes to systematic bias and threatens the generalizability of the research.

Chapter Three: Theoretical perspectives on the impacts of poverty on family processes and adolescent development

Theoretical perspectives for studying the impact of poverty on adolescent development and family processes range from microscopic to macroscopic. Microscopic perspectives focus on individuals' behaviours and changes in response to the context of poverty and presume that individuals are responsible for the explanation of the phenomena. They range from understanding psychological phenomena in individuals (e.g. developmental perspective, social psychological perspective) to looking at interaction patterns among individuals (e.g. symbolic interactionism). Macroscopic perspectives focus on structural or cultural determinism on studying the impacts of poverty. They range from analysing positions and norms in society (e.g. cultural perspective) to understanding structures of world systems (e.g. structuralism, social conflict theory). Under the microscopic-macroscopic spectrum, eleven theoretical perspectives are discussed in the first part of the chapter: (1) behavioural perspective; (2) social-cognitive perspective; (3) developmental perspectives (life span theories, life course theory and family development theory); (4) symbolic interactionism; (5) systems theory; (6) ecological perspective; (7) socio-cultural perspective; (8) functional perspective; (9) structural perspective; (10) feminist perspective; and (11) social conflict perspective. The second part of it evaluates these eleven perspectives according to the criteria suggested by White and Klein (2008).

3.1 Behavioural Perspective

In the classical behavioural views, behaviours were based on drives. Hull (1943) suggested that the drive comes out of the satisfaction of basic biological needs (such as hunger, thirst) and learned secondary needs (such as escape from fear, incentives). This drive motivates one's behaviours to satisfy the needs. He further hypothesized that behaviour is a joint function of drives and habits, i.e.

Behaviour = Drive X Habit.

Skinner (1974) focused on how different kinds and rates of reinforcement affect one's behaviours. Behaviours are controlled by their consequences, with positive consequences leading to an increase, and negative consequences leading to a decrease of the behaviours. He termed the use of positive and negative consequences to change behaviour as "operant conditioning" (Skinner, 1953). Watson (1928) applied the theory of conditioning to the family. He suggested that the acquisition of desirable and undesirable habits of the adolescents could be solely explained by the conditioning processes parents applied to their children. Therefore, adolescent behavioural problems could be traced to the improper conditioning of children by parents.

3.1.1 Applications in studies of economic disadvantage with family and individual functioning

3.1.1.1 Intrinsic and extrinsic motivation of adolescents in learning

Within a good number of behavioural theories, motivation is a central concept in learning. The degree of learning acquired is determined by drive and those underlying intrinsic and extrinsic motivation (Malone, 1981).

Motivation on learning in economically disadvantaged adolescents requires an attitude for the desire to succeed, which is cultivated both intrinsically and/or extrinsically. Studies showed that adolescents who demonstrate positive intrinsic and extrinsic desire for success will have better future goals, which in turn become driving forces for them to achieve success (Ames & Ames, 1989; Malone, 1981). Deci and Ryan (2000) defined intrinsic motivation as motivation that originates from an individual for the enjoyment of increases of competency in accomplishment of a particular task. Extrinsic motivation, on the other hand, is motivation that is directed at attaining or avoiding something outside the self. While the intrinsically motivated adolescents work for satisfaction, the extrinsically motivated adolescents strive for the attainment of other forms of external reward (i.e. money, awards, recognition from others) (Walker et al. 2006). The financial difficulties, interpersonal hardships and resource deprivation that economically disadvantaged adolescents experience may restrict their

development of personal interest, which in turn lower their intrinsic motivation (Malone, 1981). Furthermore, poor adolescents perceived more barriers to educational and occupational success (Kao & Tienda, 1998; Taylor & Graham, 2007) that may hamper their future aspiration. This also reduces their intrinsic motivation for striving for a better future. On the contrary, economically disadvantaged adolescents are extrinsically motivated by the reinforcement from others, the respect and adornment. This extrinsic motivation produces a deep, long-lasting commitment to learning (Kohn, 1993).

3.1.1.2 Reduced positive reinforcement of children and adolescents living in poverty

While there is theoretical support that positive reinforcement is a useful strategy for children and adolescents' positive behaviours, it was found that children and adolescents experiencing economic disadvantage showed a reduction in positive reinforcement for sustaining their positive development, when compared with the non-poor groups. Three aspects are worth to be highlighted. First, adolescents experiencing economic disadvantage may restrict their development of personal interest (Malone, 1981), which in turn may restrict the recognition, respect and reward from others. Second, parents were less involved in their children's education (Crosnoe et al, 2002; Edin & Lein, 1997; Furstenberg et al., 1999; Lareau, 2004) and may not necessarily give positive reinforcement to their children (Grant et al. 2005). The financial constraints may also restrict them to give extrinsic reward to children and adolescents even when they perform well academically. Third, there is evidence that teachers perceived poor students less positively (e.g. having fewer self-regulatory skills) than the non-poor students. Therefore, they gave less attention, provided fewer learning opportunities, and gave less reinforcement for good performance to poor students (Alexander, et al., 1987; Rist, 1970).

3.1.2 Critique

The primary criticism of behavioural perspective is that it oversimplifies the complexity of human life. The generalization of human behaviours based on the

study of lower organisms was strongly criticized with its negligence of the study of human mind (Gross, 2001; Parrish, 2010). The “Skinner Box” remains one of the controversial aspects of behaviourism. Another critique lies on the behaviourist emphasis of external factors that influences human behaviours. There is no free will but rather only the external stimuli in our environments that determine our behaviours (Hjelle & Ziegler, 1986).

3.2 Social-cognitive perspective

Rooted in the concept of “social self” (James, 1890) and expanded by the social learning theory of Bandura (1986), social cognitive perspective is important in understanding how individuals’ thoughts, feelings and behaviours are affected and modified by the social environment. While Skinner’s operant conditioning focuses on reinforcement that determines one’s behaviours, Bandura’s social learning theory emphasizes on the social modelling of behaviour (Bandura, 1986). The central idea of social learning theory is that we learn as we observe. Through observing the features of the role models, one learns and guides his/her behaviours (Bandura, 1986). Bandura concluded that by “understanding how people learn to imitate becomes a matter of understanding how the requisite subfunctions develop and operate” (Bandura, 1974, p.864). Bandura (1986) developed the social-cognitive framework, in which “the social portion of the terminology acknowledges the social origins of much human thoughts and action; the cognitive portion recognizes the influential causal contributions of thought processes to human motivation, affect, and actions” (p.xii). Crosbie-Burnett and Lewis (1993) further highlighted five capabilities of individuals in responding to the human and cultural context: (1) symbolizing, which allows an individual to process experience into models that guide actions; (2) forethought for setting goals and plans; (3) vicarious learning; (4) self-regulation, which motivates and regulates behaviour; and (5) self-reflection, which allows analysis of experience and thought processes. Through these capabilities, individuals can govern their actions in response to the changing social environment. The social-cognitive perspective gives us a detailed sketch of the psychological processes of individuals as they respond to their environments,

which is useful in analysing human motivations, thoughts and actions.

3.2.1 Applications in studies of economic disadvantage with family and individual functioning

3.2.1.1 Modelling of unhealthy lifestyles and habits to adolescents by parents, neighbours, and peers

Under the role modelling hypothesis, health-relevant/ lifestyle behaviours of low SES parents may mediate the development of adolescents (Adler & Ostrove, 1999). It was found that members of low SES use tobacco and alcohol more, and tend to diet and exercise less (Baum et al., 1999). These unhealthy lifestyles and habits as well as early engagement of risky behaviours such as smoking, alcohol use, substance use, sexual behaviours may affect adjustment of adolescents (Harrell et al., 1998). However, empirical studies on role modelling hypothesis were inconsistent and it appears that lifestyles could not account for most of the impacts (Adler et al., 1999).

Adolescents also learn the unhealthy lifestyles and behaviours from neighbours and peers. Jencks and Mayer (1990) identified “epidemic” theories to explain the peer influences on the spread of problem behaviours. The collective socialization theories also suggest that the neighbourhood role models are critical in child’s socialization. The theories were supported with empirical evidence in the low socio-economic context (Duncan & Brook-Gunn, 1997).

3.2.1.2 Learned helplessness of individuals in poverty

The motivation theory suggested by Atkinson (1964) emphasized the importance of expectancy in motivation. As mentioned in Section 2.1.1.2, individuals in poverty may exhibit the psychological responses of reactance and learned helplessness when loss of control persists. The learned helplessness infers a “motivational deficit” (believing action is useless), “cognitive interference” (difficulty in learning that action can produce positive outcomes in new situations) and “affective reaction” (depression or resignation) (Kane, 1987, p.411). This perceived helplessness may spill over to other spheres of lives.

Individual causal attributions about the lack of control may have implications for the persistence and generalizability of the effects of learned

helplessness. If individuals perceive their loss of control as due to internal deficits such as lack of ability, the persistence and generalizability of the effects of learned helplessness would be large. On the contrary, if individuals perceive loss of control as due to external forces such as luck, or a particular condition, the persistence and generalizability of the effects of learned helplessness would be minimal (Kane, 1987).

Echoing the analysis of the social-cognitive perspective, Pareek (2002) drew an analytical model of the effects of poverty on individuals' motivation and behavioural outcomes (Section 2.1.1.2). The conditions of poverty produced a specific pattern of motivation with low need for achievement, low need for extension and high need for dependence. This pattern, together with an expectancy of powerlessness, resulted in the "lifestyle of poverty" or "culture of poverty", characterized by disproportionate risk taking, interest in chance, lack of interest in feedback, preferring friends with similar frustrations and views, lack of activity and initiative, lack of regard for others, lack of faith and trust, avoidance behaviours, fear of failure, seeking favors of superiors and over-conformity (Pareek, 2002).

3.2.2 Critique

The social-cognitive perspective is criticized for its emphasis on the individual without consideration of the structural circumstances and constraints (e.g., lack of opportunities) from which poor people suffer. Furthermore, the perspective is criticized as a "blame the victim" approach, as it views poverty through individuals' "motivational deficits". Mehryar (1984) objected that "psychologizing" poverty was liable to pathologize the poor rather than seeing the social systems that constrained them. It has further been argued that cultures of poverty cannot be explained by individual causes, as culture is formed under "the social organization that creates specific social types that reproduce and maintain themselves with predictable regularity" (Sarbin 1970, p. 31). Furthermore, as mentioned, empirical studies on the role modelling hypothesis were inconsistent and it could not account for most of the impacts of poverty on family functioning and individual's behavioural outcomes (Adler et al., 1999).

3.3 Developmental perspectives

Developmental perspectives study the life development of individuals and families. The assumption is that life span is divided into different developmental stages that are age-relevant, sequential, qualitatively distinct, mutually exclusive and cross-culturally applicable. Developmental perspectives contain three complementary theoretical approaches: (1) individual life span theories; (2) life course theory; and (3) family development theory. Each theoretical approach will be discussed with its application to the context of poverty.

3.3.1 Life span theories

Life span theories focus on an individual's ontogenetic development as well as the factors that affect development. Examples include Erikson's life span theory of human development, Piaget's cognitive stages of development and Kohlberg's moral stages of development. Life span is divided into different developmental stages according to an individual's ontogenetic maturation. The stages are age-relevant, sequential, qualitatively distinct, mutually exclusive and cross-culturally applicable. The theories focus on the individual's psychological, cognitive, and affective development, which is grounded on human beings' genetic capacity and progressive learning of language and thoughts (White & Klein, 2008).

3.3.1.1 Applications in studies of economic disadvantage with family and individual functioning

3.3.1.1.1 Cognitive development of children living in poverty

As mentioned in Section 2.1.1.1, children in poverty may suffer from the problem of "stimulus deprivation", deficiencies in formal and contentual cognitive development at the child's maturational stage (Deutsch, 1968). In other words, poverty reduces the rate of maturation. Poverty has great influence on cognitive development in early childhood, including intelligence, verbal and reasoning skills, academic achievement and school readiness (Duncan et al.,

1994; Korenman et al., 1995; Smith et al, 1997).

Also from Section 2.1.1.1, timing of poverty is an important factor in influencing adolescents' achievement (Duncan et al., 1998). Earlier poverty experience strikes adolescents' developmental process and has long-lasting, indelible effects.

3.3.1.1.2 The Cycle of Deprivation

Children experiencing poverty often receive inadequate child-rearing practices, which in turn affect emotional, social and intellectual development. This can result in poor school adjustment and may later lead to poor employability and unstable marriage and family life. A cycle of deprivation occurs, as the inadequacy experienced in childhood results in poor development in adolescence and adulthood. The vehicle continues to generate intergenerational poverty, as the poor adults perform inadequate parenting and transmit the problem to the next generation (Holman, 1978).

3.3.1.2 Critique

As life span theories focus mainly on the individual's ontogenetic development, they pay less attention to environmental and social factors, which are always considered extraneous variables. Thus, life span theories seldom stand alone in their explanation of poverty. Recently, life span theories have been employed in conjunction with life course theory and the ecological perspective in the explanation of environmental impacts on human development.

3.3.2 Life course theory

Beyond life span theories that focus on the individual's ontogenetic development, life course theory examines an individual's event history and how earlier events influence later outcomes. Life course theory involves a "contextual, processual and dynamic approach to the study of changes in the lives of individual family members over time, and of families as social units as they change over historical periods" (Bengtson & Allen, 1993, p.469). Though life course theory takes individual development as the focus of study, it incorporates

time, history and events as major components of change. It is the interplay of life span development, historical time, events, and social context that contribute to the study of life course. This is “a sociological meaning of development” (White & Klein, 2008, p. 129). Bengtson and Allen (1993) highlighted five basic themes of the life course perspective: temporal contexts (ontogenetic time, generation time, historical time), social-structural contexts (socio-structural location, social construction of meanings on development and life events, cultural context), diachronic processes and changes; heterogeneity in structures and processes, and multi-disciplinary assessment (Bengtson & Allen, 1993).

Life course perspective shares some characteristics employed by individual developmental theories, which includes that life span is divided into different developmental stages that are age-relevant, sequential, qualitatively distinct and mutually exclusive. Besides, life course theory defines developmental stage as accomplished by developmental tasks with age-graded social norms during an individual's ontogenetic maturation (White & Klein, 2008). What makes the theory unique is that it incorporates the historical and social dimensions of changes into individuals' development.

3.3.2.1 Applications in studies of economic disadvantage with family and individual functioning

3.3.2.1.1 Life course development and economic security

The risk of poverty follows a cycle of rising and falling, as demands on income are associated with life course and family growth. Rowntree (1901) developed the economic life course model to portray the risk of poverty for a wage labourer. He found that the life of a wage labourer was marked by three periods of economic stress. The first period began at birth. Throughout childhood, the child may suffer economic deprivation due to the inadequacy of the breadwinner to support all family dependents. When the child approached adulthood, the family came out of poverty, as more family members went out to work and shared the family economic burden. The second period of economic stress occurred when the individual got married and gave birth to children. They

became parents and had responsibilities for their dependents. The third period of poverty risk occurred when the individual approached old age, when wages dried up and savings could be quickly exhausted (Cheal, 1996). Though the model was developed a century ago, Axinn and Levin (1979) made similar observations in the study of life cycle of family welfare.

The model is greatly affected by historical events and economic situations, as well as public policies such as pension systems. A unique characteristic of life course theory is that it takes such temporal context into consideration.

Life course theory has been used in the study of developmental trajectories of children and adolescents experiencing economic disadvantage. Elder (1999) employed life course theory as the theoretical framework of the longitudinal Oakland Growth Study. The project followed the life course (for 40 years) of a group of 167 people who had been in fifth or sixth grade during the Great Depression (1930s). The research focused on two areas of interest: (1) variations of family structure, social experiences and personality of the children among families in the middle class or working class during the Great Depression; and (2) effects on the careers, values, and psychosocial functioning of those children in adulthood. The developmental life experiences of children were emphasised, focusing on how the economic deprivation of the Great Depression (a historical event) during childhood affected their families and further affected their future development to adulthood.

3.3.2.2 Critique

Life course theory is prone to several criticisms. First, it is limited to drawing causal relationships from historical life events to individuals' future development. The ambiguity of the independent variables, and the numerous extraneous variables that may arise during life course, all contribute to the poor explanatory power of the developmental outcomes influenced by the events. Second, the theory is historical and social-cultural specific in analysing social phenomena, which limits its generalizability and explanatory power for explaining the phenomena in different contexts. Third, as life course theory highly depends on longitudinal panel studies, the high percentage of subject

attrition and threats of repeated measurement contribute to weak confidence in the findings. Fourth, the theory has difficulty in finding empirical support and testability, with the complexities of longitudinal data and analytical approaches. These further weaken confidence in the theory.

3.3.3 Family development theory

Family development theory suggests that there are systematic patterns in families' changes as they move through different stages and events of their family life course. Family development theory was initially characterized by the ideas of "family life cycle" (Glick, 1947; Loomis & Hamilton, 1936) and later reconceptualised to "family career" by Aldous (1978). Family development is viewed as a process of events and stages. It is worth noting that family development is stage and duration dependent, as institutional sequencing and timing norms exist. Each family stage defines some specific positions and roles of the members in the kinship structure. The role relationships developed are normatively in line with the stages of family and individual development (Rodgers & White, 1993).

3.3.3.1 Applications in studies of economic disadvantage with family and individual functioning

3.3.3.1.1 Characteristics of family life cycle of families living in poverty

A study of African American families living in poverty found four distinguishing characteristics in the family life cycle of families in poverty: (1) condensed life cycle; (2) female-headed households; (3) chronic stress and untimely losses; and (4) reliance on institutional support (Hines, 2005).

Condensed life cycle – The phases of the family life cycle of African American families living in poverty were accelerated and condensed, and showed overlapping intergenerational structure (Burton et al., 1996). Individuals became parents and grandparents at a far earlier age. Family roles expanded beyond their normal chronological and developmental positions. For instance, a teenage

mother, by giving birth, was launched into the stage of parenthood, while her mother suddenly became a grandmother and often assumed the role of substitute parent. Role overload and assumptions of new responsibilities meant inadequate time and energy for resolving their own developmental tasks. Facing these challenges, individuals may feel besieged, inconsistent and exhausted in fulfilling their own developmental tasks and family roles. The support of the extended family system also becomes critical for transitions in the family life cycle (Hines, 2005).

Female-headed households – Poor African American families had a high tendency to have experienced divorce or separation, and there were a high proportion of never legally married parents. The trend of teenage motherhood resulted in limited availability of mates as well as loss of hopes and dreams for other life possibilities (Hines, 1995). In fact, as many single-parent households were female-headed, mothers' burden was doubled by the dual role of being the breadwinner and the nurturer. This further pushed the poor families in persistent and deep poverty, which again required the extended family to take up more care-giving functions.

Chronic stress – Embedded in large, extended families for support and care-giving, members might find less autonomy and independence. They had to sacrifice their freedom and their own choices in order to gain support from their families. This created great stress and a sense of apathy, in order to be protected from disappointment, pain and degradation (Hines, 1995).

Reliance on institutional support – Poor families had a high dependence on institutional and welfare support. On one hand, stigmatisation pushed the families to the psychological and social edge, but on the other hand, mutual aid from cultural, religious and other institutions was a critical safety net of resources for the families (Hines, 1995).

3.3.3.2 Critique

Family development theory faces some criticisms. The central problem lies on the identification of the process of development. The structure and parameters of family life lie heavily on individuals' ontogenetic development as well as on social norms. However, the basis and justification for the process of development are arguable. The changes in family development are viewed as discrete jumps between family stages, rather than as a gradual, continuous process (White & Klein, 2008). The theory is also criticized for explaining only uniform and patterned ways of normal family development and for failing to accommodate cultural specificity or different forms of family structures. A related problem is that family development theory relies on aggregate patterns of family behaviours to infer institutional sequencing norms (White & Klein, 2008). Any variations deviating from the family life cycle are considered deviations of family normality. In the study of family development in poverty, the condensed and overlapping patterns of life development, as well as the female-headed household, are considered as deviations from normal family processes. Instead of accommodating different family structures and processes, the family development theory considered those as deviations from normality, or as "abnormal". Moreover, the theory does not supply systematic ideas for analysis of family development processes, making theoretical deductions difficult. This restricts the explanatory and predictive power of the theory (Rodgers & White, 1993).

3.4 Symbolic interactionism

Symbolic interactionism is rooted in the thinking of Mead (1934) and Blumer (1969). As the name suggests, symbolic interactionism focuses on the connection between symbols (i.e. shared meanings) and interactions (i.e. verbal and nonverbal actions and communications). It provides a framework for understanding how humans create symbolic worlds and how these worlds, in turn, shape human behaviours (LaRossa & Reitzes, 1993).

Schwandt (1994) summarized symbolic interactionism as resting on three premises of the importance of meanings for human behaviour: (1) human beings

act toward the physical objects and other beings in their environment on the basis of the meanings that these things bring to them; (2) these meanings derive from the social interactions between and among individuals; and (3) these meanings are established and modified through an interpretive process (p. 124). Thomas and Thomas (1928) made a simple conclusion with the pragmatic maxim, “What humans define as real has real consequences” (p. 572). The perspective echoes the interpretivist paradigm, i.e., it is humans who create the social world.

3.4.1 Applications in studies of economic disadvantage with family and individual functioning

3.4.1.1 Definitions, meanings and interpretation

Empirical support for the meaning of family functioning in families living in poverty is scarce. McCreary and Dancy (2004) employed a symbolic interactionism framework to study the dimensions of family functioning from the perspectives of low-income African American single-parent families. Definitions of family membership, dimensions on family functioning and interactions among family members were explored. Biological relationship was an important criterion for how participants identified as members of the family. Emotional nurturing, communication, common activities, mutual help and appropriate parenting were important dimensions of family functioning (McCreary & Dancy, 2004).

3.4.2 Critique

There are several critiques of symbolic interactionism. First, there is hot debate on whether social behaviours are defined by social structural norms or by interactional role-making. Some scholars argue that many roles in the society are clear and strictly sanctioned, with little room for role-making. Thus, interactionists overestimate the actor’s influence in creating roles and downplay the importance of structural constraints (White & Klein, 2008). Overestimating actors’ definition of settings will result in a “subjective fallacy”, which may lead to theoretical vacuousness in the worst case (LaRossa & Reitzes, 1993).

Another similar critique is that the perspective mainly focuses on the individual and “self as agent”, ignoring the causal efficacy of social institutions and social structures. Furthermore, the subjectivity and idiographic assumption weaken generalizability and explanatory power. A related comment is that symbolic interactionist research lacks methodological rigor, as researchers employ a single qualitative symbolic interactionist methodology. Finally, LaRossa and Reitzes (1993) criticized symbolic interaction theory for failing to deal with concepts and dimensions related to emotions and affect. This limits the theory’s conceptual utility.

3.5 Systems Theory

Influenced by organic and evolutionary perspectives on society (Spencer, 1880) as well as the emerging development of information and *automata*, systems theory possesses some basic assumptions. First, aggregations of individuals may come together in organized forms, and “the whole is greater than the sum of its parts”. Thus, a system should be understood as a whole, and the family is viewed as one such system. Second, all parts of the system are inter-connected. Third, human systems are self-reflexive; in other words, because humans are capable of examining their systems and establishing goals for themselves, human systems are themselves the object of examination and the target of explanation. Fourth, all systems have some forms of feedback that allow the systems to affect the environment and, in turn, permits the environment to affect the systems. Last but not least, systems are heuristics – they are not real things, and systems theory is a heuristic theory for us to understand our world (c.f. Whitchurch & Constantine, 1993; White & Klein, 2008).

When applying systems theory in family research, it should be noted that systems researchers concerned less with the intra-psychic or personality characteristics of individual members. Rather, a family's transactional patterns are the focus. Hierarchy, boundaries, boundary permeability, feedback, equilibrium, equifinality are essential components of family analysis when applying the systems theory (Whitchurch & Constantine, 1993; White & Klein, 2008).

3.5.1 Applications in studies of economic disadvantage with family and individual functioning

3.5.1.1 “Childhood adultification” in economically disadvantaged families

Through thirty years of ethnographies of American poor families, Burton (2007) developed the conceptual model of “childhood adultification” in economically disadvantaged families. In her conceptualization, childhood adultification involved “contextual, social, and developmental processes in which youth are prematurely, and often inappropriately, exposed to adult knowledge and assume extensive adult roles and responsibilities within their family networks” (Burton, 2007, p. 329). Families living in poverty experience blurring of generational boundaries, as well as a breakdown in authority hierarchies between parents and children. This loosening of the family hierarchy results in “the absence of an echelon structure” and leads to “children hav[ing] rights and responsibilities not very different from their parents” (Weiss, 1979, p. 99). As a result, childhood adultification was the contingent of the children brought to the family.

3.5.2 Critique

Due to the heuristic nature of the theory and its concepts (such as boundary and feedback), systems theory is said to be a 'model' instead of a perspective or a theory. The lack of ontological claims limits the theoretical foundation. Regarding a heuristic device as reality results in reification, or what Whitehead (1929) called “the fallacy of misplaced concreteness” (p.11) (White & Klein, 2008). Furthermore, the systems framework consists of confusing generality and ambiguity, building difficulties into the operationalization of the abstract concepts for empirical research (Ruben & Kim, 1975). The concepts are too vague and thus the hypothetical-deductive model of empirical testing is difficult. Fisher (1978) argued that the term “system ‘theory’ is probably a misnomer... [It] is a loosely organized and highly abstract set of principles... which are subject to numerous interpretations” (p. 196). Besides, systems theory is too global and abstract, and therefore is “virtually meaningless” (Ingoldsby et al., 2004, p. 177).

Another critique is that systems theory gives us a way of conceptualizing phenomena but has no explanatory power (Litterjohn, 1989), the lack of which weakens the theoretical conviction of the theory. Last but not least, some concepts of systems theory (e.g. hierarchy) are criticized by feminists as operating from a patriarchal, and thus biased paradigm (Whitchurch & Constantine, 1993).

3.6 Ecological perspective

Bronfenbrenner (1979) argued that a person's behaviour is a function of the interaction of the person's traits and abilities with the environment, that is $B = f(PE)$ which B stands for behaviours, P stands for person and E stands for environment. It is the interaction of the two components ($P \times E$) that distinguishes the ecological view of human development from ontological individual approaches. The ecology of human development "involves the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate environment in which the developing person lives, as this process is affected by relations between these settings, and by the larger contexts in which the settings are embedded" (Bronfenbrenner, 1979, p.21). This "person-process-context" model (Bronfenbrenner, 1986) helps us explore the impacts of environment on the development of individuals.

Bronfenbrenner (1979) constructed a theoretical framework with four levels of environmental systems that influence human development: micro-system, meso-system, exo-system and macro-system. Micro-system refers to individual interactions with the immediate environment. Meso-system expands to relationships in context. Exo-system involves systems that indirectly influence an individual's development. Macro-system encompasses the broad ideological values, norms, and institutional patterns of a particular culture that make up the 'blueprints' for the culture's ecology of human development (c.f. Boss et al., 1993, p.423).

3.6.1 Applications in studies of economic disadvantage with family and individual functioning

Both the “family stress model” and the “family investment model”, mentioned in Sections 2.2.1 and Section 2.2.2, employ the ecological perspective. The family stress model addresses how parental distress (parental mental health) and parenting behaviours mediate the effects of poverty to adolescent development, whereas the family investment model mainly describes how family resources and home environment contribute to the influence of poverty.

3.6.1.1 Family stress model

The family stress model of economic hardship has become the mainstream framework for analyzing the impacts of poverty on family processes and children’s and adolescents’ development. The family stress model illustrates how parents’ mental health, parenting qualities and parent-child relationships mediate the impact of poverty on adolescent development.

3.6.1.2 Family investment model

The family investment model focuses on the link between poverty and children’s resources. Family income affects the investment that parents provide in building the human capital of children, which affects cognitive ability, academic achievement, and social-emotional well-being (Conger & Donnellan, 2007). For families in poverty, investment of human capital is limited and thus children’s cognitive and psychological development is restricted.

3.6.2 Critique

The ecological perspective faces some criticisms. As the concepts and principles of human ecology originated in and are borrowed from biological ecology, there are questions about whether the concepts and principles are applicable to human development. Apart from the physical and mechanistic operation of human reaction to the environment, the reflective and intentional actions of human beings should not be neglected (Bubolz & Sontag, 1993). Also, there is the problem of unclear specification of ontogenetic causation and

sociogenic causation (White & Klein, 2008). The shift from ontogenetic to sociogenic is unidentified and unspecified.

In addition, the scope of the ecological perspective is too broad and all-inclusive, making the perspective less focused and less distinctive. It has been criticized as a “way of looking at things” and does not provide adequate substantiation for theory-building and practice (Wakefield, 1996a, 1996b). The perspective may easily lead to blurriness in study focus. Besides, some concepts of ecological perspective are abstract (e.g. interdependence, adaptation etc.) and may cause difficulties in operationalization of variables. Last but not least, it is not easy to test the theory with traditional methodologies, as it is complex in concepts and levels of analysis. More advanced techniques such as hierarchical linear modelling must be used to handle multi-level complexity.

3.7 Socio-cultural perspective

Culture is defined as “patterns, explicit and implicit, of and for behaviour acquired by symbols, constituting the distinctive achievements of human groups” (Kroeber & Kluckhohn, 1952, p.181). Under the definition, culture has the distinctive feature of “symbolic and behavioural inheritance” (Shweder et al, 1998, p. 867) that is historically developed and traditionally accepted. This perspective emphasizes that human behaviours are manifestations of attitudes and standards recognized by the groups of people concerned, or by society, instead of genetic determinants of the attitudes and behaviours.

3.7.1 Applications in studies of economic disadvantage with family and individual functioning

3.7.1.1 Culture of Poverty

Adopting the ethnographic approach, Lewis (1968) introduced the concept of “culture of poverty”, describing “an adaptation and a reaction of the poor to their marginal position in a class-stratified, highly individuated, capitalist society. It represents an effort to cope with the feelings of hopelessness and despair that develop from the realization of the improbability of achieving success in terms of

values and goals of the larger society” (p. 188). In the culture of poverty, Lewis found that poor people on the individual level exhibited strong sense of marginality, helplessness, dependence and inferiority. They had strong present-time orientation, less ability to defer gratification, and strong sense of resignation and fatalism (Lewis, 1968). On the family level, there were free union or consensual marriages, a relatively high percentage of abandonment of mothers and children, a trend towards mother-centered families with dependence on resources from maternal relatives (Lewis, 1968). On the community level, while poor people exhibited a sense of community in their slum neighbourhood, there was a lack of participation and integration into major institutions of the larger society due to the lack of economic resources, segregation and discrimination, fear, suspicion and apathy (Lewis, 1968).

In the culture-of-poverty model, poor people adapt collectively by developing an alternative culture to face the situational constraints, and the values are self-perpetuating, passing from generation to generation. The intergenerational transmission of these cultural values has permanent effects, trapping poor people in poor circumstances (Lewis, 1968).

Sarbin (1970) attempted to connect the concept of the culture of poverty with the theory of social organization by suggesting that “the culture of poverty is not a phrase to refer to the absence of economic or social goods; it is not just a matter of economic deprivation, or low position of socioeconomic indicators. ...A culture is a set of acquired patterns of conduct, a way of life that provides its participants with adaptive techniques to deal with a set of recurring problems. Viewed in this way, the focus is less exclusively on the individual victims of poverty but rather on the social organization that creates specific social types that reproduce and maintain themselves with predictable regularity” (p. 31). Under the theory of social organization, people tend to locate themselves in their environment by defining themselves in a variety of role systems. In this way, the individual defines one’s social identity. When people with similar social identities come together and influence each other, a “culture” is formed. The “culture of poverty” is formed when poor people aggregate and define themselves as “the disreputable poor” (Sarbin, 1970). The heavily ascribed roles

of these “disreputable poor” created the feelings of helplessness, powerlessness, and anomie (Sarbin, 1970).

3.7.2 Critique

The culture-of-poverty model has received some criticisms. One central criticism lies with the misuse of the term “culture” to describe the effects of structural constraints that the poor face, including unemployment, poor education and discrimination (Kane, 1987). Moreover, it was argued that behaviours of the poor are reactions to the “situational” constraints caused by economic deprivation, instead of the manifestations of the culture of poverty (Haralambos & Holborn, 1995). Besides, the culture-of-poverty model was criticized as a “stereotyped interpretation” with an “ethnocentric tendency to interpret behavioural patterns among low-class people as isolated traits rather than in terms of their social context, as shortcomings from some presumed ‘middle-class’ ideal” (Leacock, 1971, p. 17). Furthermore, the model fails to explain the existence of upward mobility between the socio-economic strata. Last but not least, there is a lack of empirical support for the consistent relationship between parental attitudes and child outcomes (Kane, 1987), which creates doubts about the culture-of-poverty suggestion that values pass from generation to generation.

3.8 Functional perspective

In functionalism, a structure exists as a part of a functional system that should serve the sustenance and development of the social system as a whole. Thus, functionalism stresses social integration and order to fulfil the goals of the society. Parsons (1937, 1951) posited four “functional imperatives” that all systems require: adaptation, goal attainment, integration, and latency (maintenance of morale and motivation). He stressed that subsystems should serve these four imperatives. Though functionalism touches upon the concepts of system and structure, it should be differentiated from systems theory and structuralism, as it is an ‘action’ perspective. Functionalism focuses on the course of actions that the system or structure would take to reach its goals and functions.

In this perspective, family is a social structure or functional subsystem that aims to serve the functional imperatives of the society. Parsons and Bales (1955) wrote that “the basic and irreducible functions of the family are two: the primary socialization of children so that they can truly become members of the society into which they have been born; second, the stabilization of the adult personalities of the population of the society” (pp.16-17).

3.8.1 Applications in studies of economic disadvantage with family and individual functioning

Functionalism does not pay much attention to the issue of poverty, as it accepts that poverty exists inevitably in a progressive industrialized society. However, it is still interesting to understand how poverty “functions” in society under the functionalist’s point of view.

3.8.1.1 Positive functions of poverty

Gans (1973) found that poverty performed three functions in maintaining the stability of the society. First, poverty helps retain a large group of people who are willing to perform “dirty jobs”. Second, poverty provides employment and financial security for a number of occupations and professionals that serve the poor. Third, Gans claimed, poverty helps reinforce mainstream norms by providing a reliable measuring rod for status comparison (Gans, 1993). However, these positive functions of poverty are seen through the eyes of the non-poor, particularly the rich, i.e., the beneficiaries of the status quo. This highlights a fundamental weakness of functionalism when studying poverty.

3.8.1.2 Socialization of children with economic disadvantage

The process of socialization passes the values and mores of cultural and social systems to children and fulfils society’s need for integration, conformity, and harmony. This helps construct the children’s personality systems to be consistent and confirmatory to societal values. Durkheim (1951) did not emphasise the negative impacts of poverty on individual and family functioning.

On the contrary, she took an optimistic view of poverty on developing individuals' moral obligations. Durkheim argued that a good and contributing citizen must tolerate oppression. "The less one has the less he is tempted to extend the range of his needs indefinitely... [Poverty] is actually the best school for teaching self-restraint. Forcing us to constant self discipline, it prepares us to accept collective discipline with equanimity" (Durkheim, 1951, p. 254). In this view, economically disadvantaged children are socialized to accept the social reality and obliged to conform to conventional values. However, there is a risk that children and their families are contented with low socio-economic status, i.e., as an ascribed status. Sarbin (1970) was concerned that people in the culture of poverty would believe in fate and luck, and thus would lack initiative for upward mobility.

3.8.2 Critique

There are several critiques of functionalism. First, since the ultimate objective of functionalism is the perseverance and orderliness of the social system as a whole, the perspective carries moral imperatives and political interpretation. Pittman (1993) stated that "the presumed moralism allegedly undergirding functionalism with a conservative, consensus-based, status quo bias, is almost certainly the product of the period of theory development (1940s and 1950s) rather than inherent to the theory itself" (p. 221). The perspective is criticized as a moral perspective rather than a scientific perspective.

Second, functionalism sees individuals and families as only passive recipients of the social system, parts of society who have to fulfil designated roles for the survival of the whole. However, post-structural theorists argue that human beings have the capacity to process social experience and devise ways of coping with life (Bourdieu, 1977; Giddens, 1976). Individuals and families are never passive subjects of economic, social or institutional structures, but are active agents who work out strategies and interactions that shape the outcome of development.

Third, the holistic concept of focusing on social systems and ignoring individual attributes draws criticism. Fourth, many family scholars, particularly

conflict theorists, challenge functionalism for the “myth of family consensus and harmony” (Steinmetz & Straus, 1974) and for perceiving family conflict as ‘deviant’ and ‘abnormal’. They argue that family conflict is natural and inevitable. Fifth, in the functionalist study of the socialization process of economically disadvantaged children, conformity to the status quo may result in families to identify with and posit themselves in low socio-economic status. This would affect their potentiality for upward mobility and achievement of economic betterment.

3.9 Structural Perspective

Structuralism has been one of most influential theories in explaining social phenomena. It stresses the analysis of social structures as the fundamental influence of social life. In structuralism, it is social positions that define social structure. Blau (1975) outlined two main types of structural parameters that determine social positions: (1) nominal parameters, differentiating populations without ranking into different subsets, such as sex and race; and (2) graduated parameters, differentiating people into different status dimensions, such as socio-economic status. The former allows the formation of different groups, accepting heterogeneity by nominal distributions of the population. The latter allows the formation of different status that may result in inequality in the society (Ritzer, 1992). Both nominal and graduated parameters determine the degree of a population’s differentiation and integration, and they affect the interrelationships among them. By “interrelationships”, structuralists mean two factors linking social positions: (1) social associations among peoples; and (2) social mobility allowing movement of people between different positions (Ritzer, 1992).

3.9.1 Applications in studies of economic disadvantage with family and individual functioning

3.9.1.1 Formation of urban underclass

Conventionally, social stratification divides the populations into upper, middle, and working (lower) classes in capitalist society. However, some

sociologists claimed that there was a group beneath the working (lower) class: the underclass (Mann, 1992; Wilson, 1978, 1987). The underclass is “a massive population at the very bottom of the social ladder plagued by poor education and low-paying jobs” (Wilson, 1978, p.1). Unlike cultural proponents that assume poor individuals are embedded in a distinctive but maladaptive culture, structuralists blame maladaptive economic organization. Poverty “slopped easily, unreflectively into a language of family, race and culture rather than inequality, power and exploitation” (Katz, 1989, p.8). Field (1989) identified three groups of underclass: (1) the long-term unemployed; (2) single-parent families; and (3) elderly pensioners. Changes in modern economic structure such as uneven economic growth, increase in technology and automation, significant shift from manufacturing to service industries, industry relocation and segmentation of labour market have caused workers to be economically vulnerable (Axinn & Stern, 1977; Wilson, 1978). Besides, structuralists also challenge social policies that widen the gap of upper and lower classes and cause inequality. In summary, structuralism sees poor people, as the lowest social stratum, suffering from the structural constraints of unemployment, low wages and poor education, and facing the challenges of social inequality and restricted upward mobility.

3.9.1.2 Impacts of socio-economic status on family structures and dynamics

The literature on family and social stratification gives a rich account of impacts of socio-economic status on family structures and dynamics. Rank (2000) highlighted six aspects for studying the impacts of socio-economic status on family structures and dynamics: (1) marital homogamy and decreased likelihood of marriage; (2) childbearing; (3) socialization of children; (4) gender roles; (5) extended kinship; and (6) poverty across generations.

Marital homogamy and decreased likelihood of marriage – Marital homogamy applied consistently to social class, i.e., individuals tended to marry those of similar class or socio-economic status (Rank, 2000). However, the likelihood of marriage among the poverty class was found to be lower than that of the general population (Cheal, 1996; Rank 1994). Poverty undermines the availability of

economically secure partners (Rank, 2000). Wilson (1987) suggested that economic restructuring results in the movement of capital and job opportunities out of the city, thus, shrinking the “marriageable” pool (Wilson, 1987, p. 145).

Childbearing – Demographic data indicated an association of lower levels of income and higher rates of fertility. Women with lower income and educational levels tend to have children at earlier ages and are more likely to have children out of wedlock. This may be due to poor access to information on birth control, inability to afford contraception, the perception of a lack of future opportunities, and the need to undergo a rite of passage to become an adult (Rank, 2000).

Socialization of children – The lower the social class, the fewer parents demonstrate warmth, the less supportive the father is in child rearing, the less emphasis is placed on child development and use of verbal skills, the less reasoning is used with children, the more physical punishment is used, the less tolerance there is for children’s impulsive behaviours and the less emphasis is placed on independence, achievement and creativity (Rank, 2000, p.131). These findings are consistent with other findings under the developmental and ecological perspectives.

Gender roles – when comparing blue-collar and white-collar families’ gender roles, blue-collar families demonstrated more patriarchal authority and clearly defined divisions of labour. White-collar families had more egalitarian views of gender roles, with shared decision-making and less-defined spousal roles (Rubin, 1976).

Extended kinship – Similar to the findings of studies on family life cycle, it was found that families in poverty utilized larger kinship networks in exchange of resources. The extended network of kinship serves as a coping mechanism for facing the challenges and hardships of poverty (Edin & Lein, 1997; Harvey 1993).

Poverty across generations – it was found that social class tended to perpetuate itself, that is, children tended to remain in the lower class to which their parents

belonged. Upward social mobility was less than expected. Unlike the explanation of the culture of poverty (that there is intergenerational transmission of cultural values to children), intergenerational poverty in the structuralist view is due to the lack of resources and opportunities, which in turn affects children's life chances and outcome (Berrick, 1995; Rank & Cheng, 1995).

3.9.2 Critique

The structural perspective only emphasizes the structural constraints poor people are facing and thus undermines individual and cultural aspects. The explanatory power of a single-cause theory is doubtful. Besides, as the perspective takes a macro-view of the social phenomenon of poverty, it fails to understand the impact of poverty at the micro-level. The life experience and functioning of individuals impacted by poverty are almost completely unexplored. Also, structuralism is open to criticism for its limitations in drawing causal relationships to explain social phenomena. Empirical verification of ideas is difficult and empirical support is weak. Last but not least, the structural perspective calls for structural changes but ignores the vigour of individuals and families in solving problems.

3.10 The Feminist Perspective

The feminist perspective addresses the impact of oppression of women (Lord, 1993). It is an intellectual orientation on the study of unequal gender roles as well as a social movement for change (Lord, 1993; White & Klein, 2008). Thus, the perspective contains empirical and ideological components and has the mission of emancipating women. Under the perspective, there are three separate schools of thought, liberal, radical and socialist, that find different roots of women's oppression and strategies for social change. Liberal feminism sees gender inequality and subjugation of women in political, legal and capitalist economic systems, and calls for equality of opportunities in the systems. Radical feminism emphasizes the male domination of women and sees patriarchal family life and culture as "reproducers of children and objects of sexual gratification and voyeurism" (Lord, 1993, p.5). Thus radical feminists call for the liberation of

women from patriarchal society. Socialist feminism suggests that women's oppression is part of social inequalities in the class structure. Socialist feminists also argue against the sexual division of labour in the household, as supported by patriarchal capitalist economic system (c.f. Ingoldsby, 2004; Lord, 1993; White & Klein, 2008).

3.10.1 Applications in studies of economic disadvantage with family and individual functioning

3.10.1.1 Feminisation of Poverty

Patriarchy in the capitalist system justifies job segregation by sex and a domestic division of labour at home. The submissive position of women in the household, as well as their secondary status in the labour force, puts women in disadvantaged circumstances. They may be exposed to greater risk of poverty when they experience widowhood, desertion, divorce and separation. Women are either forced into the competitive labour market, where they experience unemployment, underemployment, low wages and long working hours, or they are prone to become recipients of public welfare under the categorization of "poor" people. This results in the "feminisation of poverty" and constitutes institutional discrimination against women (Lord, 1993).

Chant (2007) highlighted the characteristics of the feminisation of poverty: (1) women experience a higher incidence of poverty; (2) women experience greater depth/severity of poverty; (3) women are prone to suffer from more persistent poverty; (4) women disproportionately bear the burden of poverty; (5) women face more barriers to lifting themselves out of poverty; (6) "feminisation of poverty" is linked with "feminisation of household hardship", (7) women-headed households are the "poorest of the poor" and (8) female household headship transmits poverty to children, i.e., inter-generational transmission of disadvantage (Chant, 2007, p. 1).

3.10.2 Critique

There are several criticisms of the feminist perspective. First, it is questionable for letting its ideological intentions interfere with the goal of

explaining social phenomena. The activist role of feminist perspective establishes the perspective as a moral or valued perspective with political ideology (White & Klein, 2008). Besides, the perspective works outside the parameters of scientific base of knowledge, as it rejects the traditional view of justification of knowledge claims by empirical testing. It is doubtful whether feminist theories are confirmable (Ingoldsby, 2004; White & Klein, 2008). Furthermore, feminist perspective focuses solely on gender inequality and ignores other important forms of oppression such as those based on race, class, age, disability and religions. This criticism is especially striking in the study of poverty.

3.11 Social conflict perspective

Social conflict perspective takes a very different view in understanding human nature and social reality. From the initial suggestion by Machiavelli and Hobbes that human nature is selfish and fickle, Marx brought the social conflict theory to a climax by introducing the concepts of 'economic determinism', 'class struggle' and 'dialectical materialism'. (Farrington & Chertok, 1993). There are many variations in the perspective, ranging from macro-theory (such as Marxist theory) to micro-analysis of conflict management (such as microresource conflict theory). However, all variations share some basic assumptions on human reality: (1) humans are motivated principally by self-interest, which is fundamental for survival and perseverance; (2) human relations are inherently characterized by conflict, i.e., conflict is inevitable between individuals and social groups; (3) human existence is contradictory, i.e., conflict is endemic in social groups; and (4) as conflict is both endemic and inevitable, the primary concern in the study of social groups (e.g. families) is how to manage conflict (White & Klein, 2008).

3.11.1 Applications in studies of economic disadvantage with family and individual functioning

Social conflict theorists pay less attention to how poverty affects families and individual functioning, as the perspective is concerned more with economic and social exploitation of oppressed groups. Nevertheless, it is interesting to look into the application of the theory in the study of poverty, and its impacts on

family functioning.

3.11.1.1 The cause of poverty

As suggested by Rank (1994), “Marxism focuses on the economic structure of capitalism as the key to understand poverty” (p.30) and “poverty is simply inherent in the economic structure of capitalism – it is an inevitable by-product of the exploitation of workers by capitalists” (p.31). In the Marxist view, not only are the means of production controlled by the owners of the economic systems (bourgeoisie) in capitalistic society, the owners exploit the workers (proletariat) through a variety of mechanisms in the legal, educational, political and familial arenas. Thus, conflict theory works to disclose illusions as well as to emancipate and empower the oppressed groups.

3.11.1.2 Conflicts in families with economic disadvantage

Conflicts and violence in families have been the central foci of studies under the conflict perspective. Conflicts may be more explicit in poor families due to the scarcity of resources, lack of opportunities and uneven distribution of power. Farrington and Chertok (1993) suggested that the conflict perspective acknowledges the widespread and devastating effects of family problems, including unequal opportunities for women, poor living conditions and personal frustrations in families with low socio-economic status.

3.11.2 Critique

There are several critiques of the conflict perspective. First, it has a central aim of emancipate, so one may question whether it goes beyond a scientific theory to an ideological intention. Second, the perspective uses one underlying theme or cause to explain all human behaviours. As mentioned, single-cause theories are suspicious even with the advancement of multivariate analysis and ecological consciousness (White & Klein, 2008). Third, the dimensions of conflict described in different variations of theories are distinctively different. Under Marxist theory of class conflict, conflict is structural and can only be eradicated by revolution. However, in social conflict theory of the family, Sprey

(1969) suggested that abolition of conflicts can be done by effective management, and conflicts “influence the process of cooperation” (p. 704). Fourth, social conflict theory pays less attention to the empirical verification of ideas, thus weakening the empirical support and confidence. Last but not least, as social conflict perspective aims at the emancipation of the poor working class, individual and family functioning is not its main concern. Thus, the theory does not pay much attention to economic impact on individuals and families.

Table 3.1 illustrates the foci and characteristics of the perspectives discussed, including theoretical applications and critiques.

Table 3.1: Impacts of poverty on adolescent development and family functioning according to different perspectives

	Behavioural perspective	Social-cognitive perspective	Developmental perspective		
			Individual life span theories	Life course theory	Family development theory
<i>Main focus</i>	Human behaviours as a consequences of the processes of conditioning	Individuals' social cognitive processes in responding to the environment	Individuals' ontogenetic development and the factors affecting that development.	A contextual, processual and dynamic approach to study changes in individuals' lives over a historical period of time	Family development as the events and stages the family passes through, with each family stage defining specific positions and roles.
<i>Characteristics</i>	<ul style="list-style-type: none"> - Drives motivate one's behaviours to satisfy biological and secondary needs (Hull, 1943) - Behaviours are controlled by their consequences - "Operant conditioning" --- use of positive and negative reinforcement to change behaviours (Skinner, 1953) 	Individuals possess 5 capabilities for responding to the environment: <ol style="list-style-type: none"> (1) symbolizing; (2) forethought; (3) vicarious learning; (4) self-regulation (5) self-reflection (Crosbie-Burnett & Lewis, 1993, p.537).	<ul style="list-style-type: none"> - stages are age-relevant, sequential, qualitatively distinct, mutually exclusive and cross-culturally applicable - Concentrates on the individual's psychological, cognitive, and affective development; grounded in the humans' genetic capacity and progressive learning of language and thoughts 	5 basic themes: <ol style="list-style-type: none"> (1) multiple temporal contexts of development (ontogenetic time, generation time, historical time); (2) multiple social-structural contexts; (3) diachronic processes and changes; (4) heterogeneity in structure and process; (5) multi-disciplinary assessment (Bengtson & Allen, 1993, pp.470-472)	<ul style="list-style-type: none"> - Stages are age-relevant, sequential, qualitatively distinct and mutually exclusive - Role relationships develop within the family stages and normative demands in line with the stage of family as well as maturation of the individual. (Rodgers & White, 1993)
<i>Applications in studies of poverty on adolescent development and family functioning</i>	<ul style="list-style-type: none"> - Poverty influenced intrinsic and extrinsic motivation of children and adolescents on learning (Malone, 1981) - Reduced positive reinforcement in sustaining adolescents' positive development in three aspects: 	<ul style="list-style-type: none"> - Modelling of unhealthy lifestyles and habits to adolescents by parents, neighbours, and peers - Learned helplessness causes "motivational deficit" (believing action is useless), "cognitive interference" (difficulty in learning that action can 	<ul style="list-style-type: none"> - "Stimulus deprivation" resulting from poverty causes deficiencies in formal and contentual cognitive development of children (Deutsch, 1969) 	<ul style="list-style-type: none"> - Three periods of economic stress: (1) childhood – inadequacy of breadwinner's wages to support the dependents; (2) marriage – individuals get married, and give birth to and support children; (3) old age – exhaustion of savings (Axinn & Levin, 1979; Cheal, 1996) 	4 characteristics of the life cycle of families in poverty: <ol style="list-style-type: none"> (1) Condensed life cycle– the phase of family life cycle was accelerated, condensed and with overlapping intergenerational structure (Burton et al., 1996). (2) Female-headed

	<p>(1) restrict adolescent's development of personal interest that may restrict the recognition, respect and reward from others (Malone, 1981);</p> <p>(2) parents may not give positive reinforcement to their children (Grant et al. 2005);</p> <p>(3) teachers gave less attention, fewer learning opportunities, and less reinforcement on good performance of poor students than the non-poor groups (Alexander, et al., 1987; Rist, 1970)</p>	<p>produce positive outcomes in new situations) and "affective reaction" to individuals experiencing poverty (depression or resignation) (Kane, 1987).</p> <ul style="list-style-type: none"> - The effects of low motivation and expectancy of powerlessness include disproportionate risk taking, interest in chance, lack of interest in feedback, lack of regard for others, lack of faith and trust, avoidance behaviours fear of failure, seeking favours of superiors and overconformity (Pareek, 2002) 	<ul style="list-style-type: none"> - Cycle of deprivation as inadequacy in childhood results in poor development in adolescence and adulthood. Intergenerational poverty (Holman, 1978). 	<ul style="list-style-type: none"> - Children of the Great Depression as an exemplar (Elder, 1999). 	<p>households with high tendency of divorce, separation, or never legally marrying; result in dual roles of breadwinner and carer.</p> <p>(3) Reliance on large, extended families.</p> <p>(4) Reliance on institutional support (Hines, 2005)</p>
<i>Critique</i>	<ul style="list-style-type: none"> - Oversimplifies the complexity of human life with its negligence of the study of human mind (Gross, 2001; Parrish, 2010) - The "Skinner Box" remains controversial - No free will but only external stimuli in our environments that determine our behaviours (Hjelle & Ziegler, 1986) 	<ul style="list-style-type: none"> - Works on individual model, not considering structural circumstances or constraints on lack of opportunities for poor people - Criticized as a "blame the victim" approach, "psychologizing" poverty to pathologize the poor instead of seeing the social system that constrains them (Mehryar, 1984). - Empirical studies on role modelling hypothesis were inconsistent and inconclusive (Adler et al., 1999) 	<ul style="list-style-type: none"> - Lack of attention to environmental and social impacts on individuals - Ignores the impact of culture, with the assumption that the theory is universally applicable 	<ul style="list-style-type: none"> - Limitation in drawing causal relationships from historical life events - Limitation on generalizability and explanatory power in different contexts - Dependence on longitudinal panel studies - Difficulties with empirical support and testability 	<ul style="list-style-type: none"> - Changes in family development viewed as discrete jumps rather than a gradual, continuous process (White & Klein, 2008) - Fails to accommodate different forms of family structures and cultural specificity. - Any variations deviating from the family life cycle are deviations from normality (White & Klein, 2008).

Table 3.1: Different theoretical perspectives in studying the impacts of poverty on adolescent development and family functioning (Cont'd)

	Symbolic Interactionism	Systems Theory	Ecological Perspective	Socio-cultural perspective
<i>Main focus</i>	Connections between symbols (i.e. shared meanings) and individuals' interactions (i.e. verbal and nonverbal actions and communications) (LaRossa & Reitzes, 1993)	Family as organized system with inter-connected sub-systems.	Person's behaviour as a function of the interaction of the person's traits and abilities with the environment. "Person-process-context" model (Bronfenbrenner, 1986, p.725).	Human behaviours as the manifestations of attitudes and standards recognized by people who share the same social context and culture.
<i>Characteristics</i>	3 premises of the importance of meanings for human behaviours: (1) human beings act toward physical objects on the basis of interpreted meanings; (2) meanings derive from social interaction; (3) The actor "selects, checks, suspends, regroupes, and transforms the meanings in light of the situation (Blumer, 1969, p.5)" (Schwandt, 1994, p. 124).	<ul style="list-style-type: none"> - Hierarchy represents power in the family system. - The permeability of boundaries between systems and sub-systems determines the flow of energy and information. - Feedback – the "circular loop that brings some of the system's output back to the system as input" (White and Klein, 2008, p. 159). - Equilibrium – the balance of inputs and outputs. A family is homeostatic if equilibrium is maintained by feedback and control. Family subsystems are interdependent. - Equifinality – the ability of the system to achieve the same goals through different routes. (Whitchurch and Constantine, 1993; White and Klein, 2008)	4 levels of environmental systems that influence human development: (1) Micro-system – individual interactions with the immediate environment. (2) Meso-system – extends to relationships in context (3) Exo-system – systems that influence individual's development indirectly. (4) Macro-system – the broad ideological values, norms, and institutional patterns of a particular culture make up the 'blueprints' for the culture's ecology of human development (Boss et al., 1993, p.423).	<ul style="list-style-type: none"> - "Cultural models" – the meanings or interpretations shared by the group (D'Andrade & Strauss, 1992). - Cultural practices – ways of acting, thinking and feeling observed by the group. - Membership – occupying a particular position in the group and development of a sense of identity within the group. (Bugental & Goodnow, 1998)
<i>Applications in studies of poverty on adolescent development and family functioning</i>	Studying the dimensions of family functioning and definition of family membership from the interpretation of low-income African American single-parent families (McCreary & Dancy, 2004)	"Child adultification" (Burton, 2007) – a blurring of generational boundaries and breakdown in authority hierarchies between parents and children. This results in "the absence of an echelon structure" and "children hav[ing] rights and responsibilities not very different from their parents" (Weiss, 1979, p. 99).	<ul style="list-style-type: none"> - Family stress model of economic hardship – parents' mental health, marital qualities, parenting qualities and parent-child relationship mediate the impact of poverty on adolescent development (Conger & Donnellan, 2007). (Section 2.2.1) - Family investment model ---- focuses on the link between poverty and children's resources. 	The "culture of poverty" (Lewis, 1968): <ul style="list-style-type: none"> - At individual level, poor people exhibited strong sense of marginality, helplessness, dependence, inferiority, present-time orientation with little ability to defer gratification, resignation and fatalism (Lewis, 1968, p. 192). - On family level, there were free

			Family income affects the investment that parents make in the lives of the children (Conger & Donnellan, 2007). (Section 2.2.2).	union or consensual marriages, abandonment of mothers and children, mother-centred families with dependence on maternal relatives (Lewis, 1968, p.191). At community level, the poor were characterized by the lack of participation and integration into major institutions of the larger society but a sense of community in the slum neighbourhood. (Lewis, 1968, pp. 191-193).
<i>Critique</i>	<ul style="list-style-type: none"> - Overestimates the actor's influence in creating roles and downplays the importance of structural constraints (LaRossa & Reitzes, 1993, p. 155) - Subjectivity and idiographic assumption weakens generalizability and explanatory power - Lacks methodological rigor with single qualitative symbolic interactionist methodology - Fails to deal with concepts and dimensions related to emotions and affect. (LaRossa & Reitzes, 1993) 	<ul style="list-style-type: none"> - Lack of ontological claims; should be considered as a 'model' to understand the world instead of a theory. - Regarding a heuristic device as reality results in what A. N. Whitehead (1929) called "the fallacy of misplaced concreteness" (p.11) (White & Klein, 2008, p. 173). - The systems framework shows confusing generality and ambiguity, making operationalization of abstract concepts difficult (Ruben & Kim, 1975) - The concepts are too vague and hypothetical-deductive empirical testing is difficult (Fisher, 1978) - The theory is too global and abstract, and therefore "virtually meaningless" (Ingoldsby et al., 2004, p. 177) - Lack of explanatory power (Litterjohn, 1989) - Some concepts such as hierarchy are criticized by feminists as operating from a patriarchal view, and thus biased paradigm (Whitchurch & Constantine, 1993) 	<ul style="list-style-type: none"> - Most concepts and principles originated in and are borrowed from biological ecology. - Unclear specification of ontogenetic causation and sociogenic causation (White & Klein, 2008) - Too broad and all-inclusive, i.e., lacking focus. - Abstract concepts (e.g. interdependence, adaptation) that may cause difficulties in operationalization of variables - Difficulty testing the theory and handling multi-level complexity with traditional methodologies. 	<ul style="list-style-type: none"> - Misuse of the term "culture" to describe the effects of structural constraints (Kane, 1987) - The behaviour of the poor is a response to the "situational" constraints caused by economic deprivation, not the manifestations of the culture of poverty (Haralambos & Holborn, 1995). - A "stereotyped interpretation" with an "ethnocentric tendency to interpret behavioural patterns among low-class people as isolated traits rather than in terms of their social context" (Leacock, 1971, p. 17). - Fail to explain the existence of upward mobility. - A lack of empirical support for the consistent relationship between parental attitudes and child outcomes (Kane, 1987).

Table 3.1: Different theoretical perspectives in studying the impacts of poverty on adolescent development and family functioning (Cont'd)

	Functional perspective	Structural perspective	Feminist Perspective	Social Conflict perspective
<i>Main focus</i>	Social integration and order as the goals of society; families contributing to adaptation, goal attainment, integration, and latency of the system (Parsons, 1937, 1951).	Analysis of social structure as the fundamental influence of social life.	The impact of oppression of women (Lord, 1993, p. 4).	Social conflicts in human nature and social reality.
<i>Characteristics</i>	<ul style="list-style-type: none"> - A structure exists as a part of a functional system that should serve the sustenance and development of the social system as a whole. - Structure of a group refers not only the morphological components of the entity, but also the links between them that organize communication and behavioural patterns. - Norms are social rules that regulate human behaviour, maintain social control and order, and sustain stable patterns of interactions of actors. - Socialized values become motives of actors to follow the norms and perform the roles of the social system (White & Klein, 2008) 	<ul style="list-style-type: none"> - Social structure – the social positions that affect people's role relations and social interaction (Blau, 1975). - Two types of structural parameters that determine social positions: nominal and graduated (Ritzer, 1992). Both parameters determine the degree of differentiation and integration of the populations, and affect the interrelationships among them. - Two factors linking social positions: (1) the various social associations among peoples; and (2) social mobility that allows movement of people between different positions (Ritzer, 1992, p. 525). 	3 schools of thought: <ol style="list-style-type: none"> 1. Liberal feminism – gender inequality and subjugation of women in political, legal and capitalist economic systems. 2. Radical feminism – emphasizes the male domination of women and sees family life and culture as patriarchal (Lord, 1993, p.5). 3. Socialist feminism – argues against the sexual division of labour in the household (Ingoldsby, 2004; Lord, 1993; White and Klein, 2008). 	Ranges from macro-theory (Marxist theory) to micro-analysis of conflict management (microresource conflict theory). Basic assumptions about human reality: <ol style="list-style-type: none"> (1) Humans are motivated principally by self-interest. (2) Conflict is inevitable between social groups. (3) Conflict is endemic in social groups. (4) The primary concern in the study of social groups (e.g. families) is how they manage conflict. (White & Kleihn, 2008).
<i>Applications in studies of poverty on adolescent development and family functioning</i>	<ul style="list-style-type: none"> - 3 positive functions of poverty in maintaining societal stability (1) helps retain a large group of people who are willing to perform “dirty jobs” (2) provides employment and financial security for those who serve the poor (3) helps reinforce mainstream norms by providing a reliable measuring rod for status 	<ul style="list-style-type: none"> - Formation of urban underclass – “a massive population at the very bottom of the social ladder plagued by poor education and low-paying jobs” (Wilson, 1978, p.1). - 6 impacts of socio-economic status on family structures and dynamics: <ol style="list-style-type: none"> (1) marital homogamy and decreased likelihood of marriage (Cheal, 1996; Rank 1994). (2) higher rates of fertility (Rank, 2000) (3) poorer parenting in socialization of 	Feminisation of poverty: <ol style="list-style-type: none"> 1. Women experience a higher incidence of poverty; 2. Women experience greater depth/ severity of poverty; 3. Women are prone to suffer more persistent poverty; 4. Women disproportionately bear the burden of poverty; 5. Women face more barriers to lifting themselves out of 	<ul style="list-style-type: none"> - Poverty in a capitalist society is caused by the control of means of production by the bourgeoisie, and the exploitation of the proletariat through a variety of mechanisms in legal, educational, political and familial arena (Rank, 1994). - Conflicts and violence are more explicit in poor families

	<p>comparison (Gans, 1993).</p> <ul style="list-style-type: none"> - Socialization of children with economic disadvantage to accept the status quo and be obliged to conventional values – as suggested by Durkheim (1951): “[Poverty] is actually the best school for teaching self-restraint. Forcing us to constant self-discipline, it prepares us to accept collective discipline with equanimity” (p. 254). 	<p>children (Rank 2000).</p> <ul style="list-style-type: none"> (4) more patriarchal authority and clearly defined divisions of labour (Rubin, 1976) (5) utilization of larger kinship networks for exchange of resources (Edin & Lein, 1997; Harvey 1993). (6) intergenerational poverty (Berrick, 1995; Rank & Cheng, 1995). 	<p>poverty;</p> <ul style="list-style-type: none"> 6. Women-headed households are the “poorest of the poor” 7. Female household headship transmits poverty to children, that is, inter-generational transmission of disadvantage (Chant, 2007, p. 1). 	<p>due to the scarcity of resources, lack of opportunities among family members and uneven distribution of power (Farrington & Chertok, 1993)</p>
<i>Critique</i>	<ul style="list-style-type: none"> - It is a moral rather than a scientific perspective, as the ultimate objective of functionalism is the perseverance and orderliness of the social system as a whole (Pittman, 1993). - Focuses on social systems and ignores individual attributes. - The “myth of family consensus and harmony” (Steinmetz & Straus, 1974) and perceiving family conflict as ‘deviant’ and ‘abnormal’. - Conformity to status quo may cause families to identify with the low socio-economic status. This affects their potentiality for upward mobility. 	<ul style="list-style-type: none"> - Undermines individual and cultural aspects of the phenomena. - Single-cause theories are suspicious. - Limited ability to draw causal relationships. 	<ul style="list-style-type: none"> - Has ideological/activist intentions and is a moral or value perspective (White & Klein, 2008). - Works outside the parameters of scientific base of knowledge as it rejects the traditional view of justification of knowledge claims by empirical testing (Ingoldsby, 2004; White & Klein, 2008). - Focuses on gender inequality and ignore other forms of oppression. 	<ul style="list-style-type: none"> - The central aim of emancipation may go beyond a scientific theory and has its ideological intention. - Single-cause theories are suspicious (White & Klein, 2008) - Great variations on conflict perspectives with different conceptions of conflicts - Empirical support and confidence are weak. - Not enough attention to economic impact on individuals and families.

3.12 Evaluation of different theoretical perspectives

White and Klein (2008) listed thirteen criteria for evaluating theories, which are described in Table 3.2 below.

Table 3.2 Criteria for evaluation of theories suggested by White and Klein (2008)

Categories	#	Criteria
Structure and consistency	1	<i>Internal consistency</i> : does not contain logically contradictory assertions.
	2	<i>Clarity or explicitness</i> : ideas are expressed unambiguously, and defined and explicated where necessary.
	3	<i>Coherence</i> : key ideas are integrated or interconnected.
	4	<i>Understanding</i> : provides a comprehensible sense of the whole phenomena being examined.
Empirical support	5	<i>Empirical fit</i> : tests have been confirmatory or at least have not been interpreted as disconfirming.
	6	<i>Testability</i> : possible to be empirically supported or refuted.
	7	<i>Groundedness</i> : built up from detailed information about events and processes observable in the world.
Heuristic value and sensitivity	8	<i>Heuristic value</i> : can generate considerable research and intellectual curiosity.
	9	<i>Contextualization</i> : gives serious consideration to the social and historical contexts affecting or being affected by its key ideas.
	10	<i>Interpretive sensitivity</i> : reflects the experiences practiced and felt by the social units to which it is applied.
Usefulness	11	<i>Explanatory power</i> : explains adequately what it is intended to explain.
	12	<i>Predictive power</i> : successfully predicts phenomena that have occurred since it was formulated.
	13	<i>Practical utility</i> : can be readily applied to social problems, policies and programs of action

(White & Klein, 2008, p.28)

The evaluating criteria can be generally divided into four categories: structure and consistency (Criteria 1-4); empirical support (Criteria 5-7); heuristic value and sensitivity (Criteria 8-10); and usefulness (Criteria 11-13). We will now evaluate the 11 different theoretical perspectives in these four categories.

3.12.1 Structure and consistency

Coming from the positivist paradigm of science, the behavioural, social-cognitive, developmental, ecological and structural perspectives have clear ontological and epistemological positions that reality is objective, fixed,

independent of human consciousness and rests on order that is governed by strict, natural and unchangeable laws. They generate clear concepts and offer systematic theoretical frameworks on the study of poverty influencing adolescent development and family functioning. On the contrary, symbolic interactionism and the socio-cultural perspective employ the interpretivist orientation that social reality is created by actors acting in and toward the world. The perspectives offer systematic analyses on understanding meanings and interpretations (*Verstehen*) of how people create and maintain their social world (Sarantakos, 2005). Owing to this idiographic and inductive orientation for understanding human development, symbolic interactionism and the socio-cultural perspective may have rather vague theoretical frameworks and idiosyncratically defined concepts. The feminist and social conflict perspectives employ the critical social-science paradigm that focuses on the emancipation and empowerment of oppressed social groups. The activist mission of the perspectives brings forth ideologically induced concepts and theoretical models. The functional perspective also contains a morally induced theoretical framework that restricts the clarity, coherence and understanding of the social phenomenon. Finally, the heuristic nature of systems theory restricts ontological claims on studying the impact of poverty.

Besides the ontological and epistemological positions that affect the structure and coherence of the perspectives, another spectrum of analysis lies on the micro-macro emphasis for studying the social phenomena. Microscopic perspectives presume that individuals are responsible for the explanation of the phenomena. They range from psychological phenomena in individuals (e.g. behavioural perspective, developmental perspective, social-cognitive perspective) to interaction patterns among individuals (e.g. symbolic interactionism). On the contrary, macroscopic perspectives presume structural or cultural determinism for understanding and explanation of social phenomena. They range from positions and norms in society (e.g. socio-cultural perspective) to structures of the world systems (e.g. functional perspective, systems theory, structural perspective, feminist perspective, and social conflict perspective). The micro-macro extreme is explicit in poverty studies with microscopic perspectives

focus on individuals' behaviours and changes, whereas macroscopic perspectives focus on the causes and impacts of poverty at the societal level. As the above-mentioned perspectives have theoretical inclinations on micro-macro emphases, their comprehensiveness in understanding the impacts of poverty on human development may be restricted. However, it should be noted that the ecological perspective has a unique underlying "person-process-context" framework, allowing both microscopic and macroscopic analyses.

3.12.2 Empirical support

The ontological and epistemological positions of the perspectives also affect their empirical orientation. Employing the positivist or post-positivist orientation, the behavioural, social-cognitive, developmental, ecological, functional and structural perspectives emphasize the importance of empirical foundations based on the thesis of nomological thinking. The ecological perspective, in particular, generates strong empirical support for theories on the impacts of poverty on adolescent development and family functioning. Symbolic interactionism, systems theory and the socio-cultural perspective have weaker empirical support. They rely greatly on qualitative research that has inherent problems drawing inferential conclusions. Finally, rooted in the critical social-science paradigm, the feminist and social conflict perspectives do not emphasize empirical verification of theories.

Regarding testability, both the behavioural, social-cognitive, and ecological perspectives have stronger expectations of testability when compared with other perspectives.

With respect to groundedness, symbolic interactionism and the socio-cultural perspective rely greatly on qualitative research methods and show good groundedness of the data. The behavioural, social-cognitive, and developmental perspectives also demonstrate good groundedness of the data, as hypotheses are verified through experimentation or social surveys. Systems theory and the ecological perspective have fair groundedness of the data. On one hand, most data are obtained from respondents, but on the other hand, abstract concepts generate latent constructs that are not directly observable. The functional and

structural perspectives employ meta-analyses and would tend to have weaker groundedness. Finally, with the clear ideological orientation of the feminist and social-conflict perspectives, only grounded data from oppressed social groups draws attention.

3.12.3 Heuristic value and sensitivity

As systems theory and the ecological, socio-cultural and structural perspectives take serious account of social, cultural and environmental contexts, they have rich contextualization values. The life course theory also considers temporal and socio-structural contexts. Furthermore, the feminist and social conflict perspectives have serious concern for structural contexts in the study of oppression of specific social groups. The other perspectives are less concerned about historical and social contexts.

Systems theory, the social-cognitive, developmental, ecological and socio-cultural perspectives share good heuristic values, as they generate research and intellectual curiosity. However, behavioural perspective shows less intellectual complexity as it fails to study unobservable behaviours and the cognitive mechanisms inside one's consciousness. The feminist and social conflict perspectives, in particular, possess good heuristic values, as they encourage debates about human emancipation at the intellectual and action levels. Symbolic interactionism has relatively weak heuristic values, with its subjective and idiographic emphasis, as does the functional perspective, with its presumed ideological focus.

Stemming from the interpretive social science paradigm, symbolic interactionism has good interpretive sensitivity and allows participants to "voice" their opinions and experiences. The socio-cultural perspective, which focuses on naturalistic qualitative research, also has good interpretive sensitivity.

3.12.4 Usefulness

The behavioural, social-cognitive, and ecological perspectives have good explanatory and predictive power for studying the impact of poverty on family functioning and adolescent development, with their systematic theoretical

frameworks and the facilitation of statistical inferential analyses. The ecological perspective sketches the impacts of poverty on family functioning and adolescent well-being through the illustration of family stress model and family investment model. The structural perspective, though employing a good theoretical framework and enabling statistical inferential analyses, has an inherent restriction as it focuses only on structural factors. This reduces explanatory and predictive power. Symbolic interactionism, systems theory and the socio-cultural perspective have comparatively weak explanatory and predictive power, as they provide mainly novel analyses. The feminist and social conflict perspectives exhibit weak explanatory and predictive power, with their presumed ideological orientation as well as their rejection of empirical verification. The functional perspective also possesses presumed moralistic assumptions but it does allow empirical study. Finally, developmental perspective has problems with conceptualization of family development processes, making theoretical deduction difficult.

Systems theory, the behavioural, social-cognitive, ecological and functional perspectives show good practical utility in the development of psychosocial and family therapeutic intervention, varieties of service provision in reducing the harmful effects of poverty, and formulation of anti-poverty policies. The other perspectives have moderate practical utility for service provision, family intervention and policy formulation.

Table 3.3 summarizes the performance of different perspectives on the evaluative criteria suggested by White and Klein (2008).

Table 3.3: Performance of different theories on the evaluative criteria suggested by White and Klein (2008)

Evaluative criteria		Behavioural perspective	Social-cognitive perspective	Developmental perspective	Symbolic interactionism	Systems theory	Ecological perspective	Socio-cultural perspective	Functional perspective	Structural perspective	Feminist perspective	Social conflict perspective
<i>Structure</i>	<i>Internal consistency</i>	-Clear and operational concepts and variables	-Clear concepts and variables	-Clear concepts on stages of development,	-Clear concepts -Interpretive orientation	-Heuristic nature, lack of ontological claims	-Clear but abstract concepts	-Vague concepts and variables	-Ideologically induced concepts	-Systematic theoretical framework	-Ideologically induced concepts	-Ideologically induced concepts
	<i>Clarity or explicitness</i>	-Systematic theoretical framework	-Systematic theoretical framework	- Less conceptual framework	-Focus on individual's perceptions (microscopic analysis);	-Vague theoretical framework	-Systematic theoretical framework	-Unclear theoretical framework	-Focus on macroscopic analysis; restricted understanding of social phenomena	-Focus on macroscopic analysis; restricted understanding of social phenomena	-Activist mission	-Activist mission
	<i>Coherence</i>		-Microscopic analysis; restricted understanding of social phenomena	-Microscopic analysis; restricted understanding of social phenomena	restricted understanding of social phenomena	-Abstract concepts	-Both macroscopic and microscopic analysis; comprehensive understanding of social phenomena	-Focus on macroscopic analysis; restricted understanding of social phenomena			-Large variations	-Vague concepts and variables
	<i>Understanding</i>	-Microscopic analysis; restricted understanding of social phenomena				-Clear and well-defined variables					-Vague concepts and variables	-Large variations
						-Focus on interrelationships; restricted understanding of social phenomena					-Focus on macroscopic analysis and ideological orientation; restricted understanding of social phenomena	- Focus on macroscopic analysis and ideological orientation; restricted understanding of social phenomena

Table 3.3: Performance of different theories on the evaluative criteria suggested by White and Klein (2008) (Cont'd)

Evaluative criteria		Behavioural perspective	Social-cognitive perspective	Developmental perspective	Symbolic interactionism	Systems theory	Ecological perspective	Socio-cultural perspective	Functional perspective	Structural perspective	Feminist perspective	Social conflict perspective
<i>Empirical support</i>	<i>Empirical fit</i>	-Positivist orientation and emphasis on empirical support	-Positivist orientation and emphasis on empirical support	-Positivist orientation and emphasis on empirical support: less empirical support due to longitudinal studies	-Interpretive orientation; less empirical support with concentration on qualitative research; lack of inferential studies	-Less empirical support	-Post-positivist orientation and emphasis on empirical support -Rich empirical support	-Post-positivist / interpretive orientation -Weak empirical support	-Positivist orientation and emphasis on empirical support	-Positivist orientation and emphasis on empirical support	-Critical social science orientation -No emphasis on empirical verification	-Critical social science orientation -No emphasis on empirical verification
	<i>Testability</i>	-Can be tested	-Can be tested	-Testability problematic	-Difficult to be tested	-Theory difficult to be tested with lack of ontological claims	-Can be tested	-Difficult to be tested	-Difficult to be tested	-Difficult to be tested	-Difficult to be tested	-Difficult to be tested
	<i>Groundedness</i>	-Good groundedness with observed and measured variables	-Good groundedness with observed and measured variables	-Good groundedness with observed and measured variables	-Good groundedness of the data with qualitative research design	-Fair groundedness with abstract concepts	-Fair groundedness with abstract concepts	-Good groundedness of the data with qualitative research design, particularly in ethnographic research	-Focus on meta-analysis and thus weak in groundedness	-Focus on meta-analysis and thus weak in groundedness	-Concerned with grounded data of oppressed social groups	-Concerned with grounded data of oppressed social groups

Table 3.3: Performance of different theories on the evaluative criteria suggested by White and Klein (2008) (Cont'd)

Evaluative criteria		Behavioural perspective	Social-cognitive perspective	Developmental perspective	Symbolic interactionism	Systems theory	Ecological perspective	Socio-cultural perspective	Functional perspective	Structural perspective	Feminist perspective	Social conflict perspective
<i>Heuristic value and sensitivity</i>	<i>Contextualization</i>	-Weak contextualization with study on individual level	-Weak contextualization with study on individual level	-Weak contextualization with study on individual level -Good contextualization of life course theory; takes historical and social context in theorization	-Weak contextualization with study on subjective interpretation of individuals	-Rich contextualization with focus on study of interrelationship	-Rich context with multi-level and multi-system analysis	-Rich contextualization with the consideration of human behaviours and culture	-Weak contextualization with ideological focus	Rich contextualization with analysis of social structure	- Rich contextualization with study of oppression of women	- Rich contextualization with study of oppressed groups
	<i>Heuristic value</i>	-Weak heuristic value, does not study unobservable behaviours and cognitive processes	-Good heuristic value	-Good heuristic value	-Weak heuristic value with subjectivity and idiographic assumptions	-Good heuristic value	-Good heuristic value with rich empirical information	-Good heuristic value with consideration of culture	-Weak heuristic value with presumed moralistic focus	-Weak heuristic value with presumed structural contribution of outcomes	-Good heuristic value, allowing debates on intellectual and action levels	-Good heuristic value, allowing debates on intellectual and action levels
	<i>Interpretive sensitivity</i>	-Weak interpretive sensitivity as it presumes the behavioural outcomes of the respondents	-Weak interpretive sensitivity as it presumes the behavioural outcomes of the respondents	-Weak interpretive sensitivity as it presumes the behavioural outcomes of the respondents	-Good interpretive sensitivity as it allows the participants to "voice" out their experience	-Fair interpretive sensitivity with possibility of naturalistic qualitative research, but analyses with abstract concepts	-Fair interpretive sensitivity with abstract concepts, but allows subjective measures	-Good interpretive sensitivity with possibility of naturalistic qualitative research	-Weak interpretive sensitivity with meta-analysis of data	-Weak interpretive sensitivity with presumed structural contribution of outcomes and meta-analysis	-Restricted interpretive sensitivity to study of oppression of women	-Restricted interpretive sensitivity to study of oppressed groups

Table 3.3: Performance of different theories on the evaluative criteria suggested by White and Klein (2008) (Cont'd)

Evaluative criteria		Behavioural perspective	Social-cognitive perspective	Developmental perspective	Symbolic interactionism	Systems theory	Ecological perspective	Socio-cultural perspective	Functional perspective	Structural perspective	Feminist perspective	Social conflict perspective
<i>Usefulness</i>	<i>Explanatory power</i>	-Good explanatory power with systematic analytical framework and statistical inferential studies	-Good explanatory power with systematic analytical framework and statistical inferential studies	-Poor explanatory power due to lack of systemic ideas for analysis, thus making theoretical deduction difficult	-Weak explanatory power with limitation on qualitative research	-Weak explanatory power; though it gives good conceptualization of phenomenon, it is difficult for drawing causal relationship	-Good explanatory power with systematic analytical framework and statistical inferential studies	-Poor explanatory power with limitation of empirical support	-Poor explanatory power with the presumed moralistic assumption, but allowing empirical studies	-Moderate explanatory power with the possibility of meta-analysis, but mainly focusing on structural factors	-Weak explanatory power with presumed ideological orientation and rejection of empirical verification	-Weak explanatory power with presumed ideological orientation and rejection on empirical verification
	<i>Predictive power</i>	-Good predictive power with possibility of statistical inferential studies	-Good predictive power with possibility of statistical inferential studies	-Poor predictive power, due to lack of systemic ideas	-Weak predictive power with limitation on qualitative research	-Moderate predictive power with good conceptualization of phenomenon	-Good predictive power with possibility of statistical inferential studies	-Poor predictive power with variations in cultural norms and patterns, and weak empirical support	-Poor predictive power with the possibility for empirical studies	-Moderate predictive power but mainly focusing on structural factors	-Weak predictive power with presumed ideological orientation and rejection of empirical verification	-Weak predictive power with presumed ideological orientation and rejection of empirical verification
	<i>Practical utility</i>	-Fair practical utility as it solely focuses on behavioural change	-Good practical utility for service provision, policy formulation and family intervention	-Fair practical utility for service provision and policy formulation	-Fair practical utility for service provision and family intervention	-Good practical utility with frequent use in family therapy, but seldom used in social provision and policy formulation	-Good practical utility for service provision, policy formulation and family intervention	-Fair practical utility for service provision and policy formulation	-Good practical utility for service provision and policy formulation	-Moderate practical utility for policy formulation, but seldom used in service provision and family intervention	-Fair practical utility, mostly used in action for emancipation of women, but seldom used in other aspects	-Fair practical utility, mostly used in action for emancipation of oppressed groups; some use in family intervention for conflict management

Chapter Four: Theoretical perspective and models employed in the study

The section consists of five parts. The first part introduces the ecological perspective of human development and highlights the justifications for the perspective to be employed as the basic theoretical perspective of the study. The second part discusses the theoretical models on the influences of parental beliefs and family processes on adolescent development employed in the research. The third part discusses the influence of Chinese culture on parental beliefs, family processes and development of adolescents. The fourth part illustrates the hypothetical model of the study. The fifth part discusses the conceptual model of the study.

4.1 Employment of ecological perspective as the theoretical perspective of the study

4.1.1 Ecological perspective

The ecological perspective is employed as the theoretical perspective of this study. As mentioned in Section 3.5, the ecological perspective posits a person's behaviour as a function of the interaction of the person's traits and abilities with the environment, i.e., $B = f(PE)$, where B stands for behaviours, P stands for person and E stands for environment. The "person-process-context" model (Bronfenbrenner, 1986, p.725) distinguishes the ecological position of human development from other ontological individual approaches.

As we are looking at the influence of parental beliefs and family processes on adolescent development in economically disadvantaged families, the position of family in the ecological perspective is critical. This perspective sees family as "an energy transformation system that is interdependent with its natural physical-biological, human built, and social-cultural milieu" (Bubolz & Sontag, 1993, p. 419). It focuses on the framework of the family ecosystem that links individuals with the environment, and with the intention and actions of the family to foster healthy development and to help family members adapt to the environment (Bubolz & Sontag, 1993).

4.1.2 Justifications for using the ecological perspective

The evaluation criteria suggested by White and Klein (2008) can assess the desirability of the ecological perspective for understanding the influences of parental beliefs and family processes on adolescent development in the poverty context, and thus justify using the perspective as the theoretical perspective of this study. The perspective is evaluated on the four aspects, as seen in the previous chapter:

(1) Structure and consistency

With the employment of bio-ecology and systems theory, the concepts and of the ecological perspective (adaptation, ecosystem, environment, interdependence and interaction) are clearly defined. Besides, the perspective is based on the principle of survival of the species and adaptation to the environment, and it is coherent with the understanding on individuals and families in facing adverse economic environments. Individuals and families seek survival and protect family members from risks and vulnerability. The well-being and positive development of the family members is the ultimate objective. Thus, the principles of the perspective suit the ultimate goals of the actors. Third, the perspective gives us a good paradigm to look into the attitudes and values of parents, their interactions with adolescents, and psychological outcomes of adolescents in responding to adverse economic and social environments. This “person-process-context” perspective provides a comprehensive understanding for the social phenomena being examined. Fourth, the perspective provides us a systematic framework to understand the attitudes and behaviours of adolescents and their families.

In addition, the ecological perspective as a mega-theory can accommodate well other microscopic and middle-range theories, and it complements social-cognitive theories and some sociological theories. The rich embeddedness of the concepts improves the understanding and coherence of the theory.

(2) Empirical support

Employing the post-positivist paradigm of science, the ecological perspective believes in empirical verification of ideas in order to understand social reality.

Qualitative and quantitative research methods can be employed to understand and verify concepts and ideas.

Though the ecological perspective is in the youthful stage of development and needs more empirical support and testing, the applications for studying the impact of economic disadvantage on individual and family functioning are plentiful and mature. The family stress and family investment models serve as good illustrations of how to employ the ecological perspective in empirical poverty research.

With the development of advanced statistical analytical techniques such as multivariate regression, structural equation modelling (SEM) and hierarchical linear modelling (HLM), complex models of ecological perspective can be tested empirically. This widely increases the empirical testability of the theory.

(3) Heuristic value and sensitivity

Bronfenbrenner's (1979) four levels of environmental systems (micro, meso, exo and macro) provide a systematic framework to understand social phenomena at different levels. This facilitates the contextualization of the perspective. Also, though the perspective has a biological-ecological origin, it takes into account the social-cultural domain in analysing individual and family adaptation. The richness of contextualization is the outstanding property in this perspective. This property is particularly important for the study of individuals and families experiencing economic disadvantage, as it allows the research to touch upon different levels of analysis – societal institutions, cultural norms and values, family processes and individual behaviours. Different levels and units of analysis are important for the full picture of the phenomena.

Besides, the ecological perspective employs an analytical framework and some concepts of systems theory, improving the heuristic value of the perspective. This facilitates further development of the theory with systematic and analytical concepts and tools.

The ecological perspective, employing a post-positivist orientation, understands that human subjectivity cannot be totally dismissed and that human behaviours differ among cultures. It permits the use of qualitative research in support of quantitative research to understand the experiences of the participants. The interpretive sensitivity of the theory is thus essentially improved.

(4) Usefulness

The usefulness of a theory is built on its power of explanation, predictability and practical utility. The ecological perspective provides a systematic framework for us to understand social phenomena. The “person-process-context” model (Bronfenbrenner, 1986) allows us to understand the relationships between the behavioural outcomes of individuals and the influence of the environment. Besides, the theory permits the use of path diagrams and mathematical formulae to illustrate causal relationships. With the support of statistical analytical techniques such as multiple regression and structural equation modelling etc., the power to draw causal relationships is much improved. Thus, the perspective shows good explanatory and predictive power.

The ecological perspective is widely applied in different disciplines, such as psychology, sociology, social work and social policy. The application of the perspective reflects its practical utility in analysing and explaining different phenomena. For example, the perspective has been widely employed in studies of functioning of individuals and families in economic disadvantage. The family process models greatly contribute to the formulation of service provision and social policies to alleviate the effects of poverty. The perspective has also been extensively used in family therapy and family intervention.

In summary, when compared with other perspectives, the ecological perspective is a good choice for studying the impacts of economic disadvantage on individual and social functioning – it has a clear and coherent theoretical structure, good empirical support, multilevel and multi-system considerations, good heuristic value and sensitivity, satisfactory explanatory and predictive power, and also practical utility.

4.2 Theoretical accounts of the influence of parental beliefs and family processes on achievement motivation and psychological competence of economically disadvantaged adolescents

The socialization model of motivation and achievement that focuses on the role of parents’ beliefs and behaviours suggested by Eccles and her colleagues

(Eccles, 1993; Eccles et al. 1998, 2006), and the social capital theory suggested by Coleman (1988, 1990), provide a systematic theoretical framework for understanding the mechanisms of how parental beliefs influence achievement motivation and psychological competence of economically disadvantaged adolescents via family processes.

4.2.1 Expectancy-value theory on motivation

The expectancy-value theory on motivation suggested by Eccles et al. (1998, 2006) gives us some insight on the mechanisms and development of achievement choice. The theory is rooted in Rotter's social learning theory (1966), which suggested that motivated behavioural choice is a function of reward expectancies and value of reinforcement to the individuals. The theory further conceptualizes locus of control into dimensions of personal control (internal locus of control) and environmental control (external locus of control) (Rotter, 1966). Eccles et al. (1998, 2006) expanded this idea by developing the expectancy-value model of achievement-related choices. It emphasizes the social-cognitive influences on choice and persistence of individuals. The theory works on the principle that choices are directly determined by the relative value and probability of success of various options (expectancies). The expectancies and values are influenced by beliefs such as perceptions of competence, perceptions of task difficulty, individual's goals and self-schemas. These social cognitive variables are in turn influenced by other peoples' beliefs and expectations (Eccles et al., 1998).

Regarding parental influences on children's motivation and achievement, Eccles et al. (1998) proposed an extensive model linking family demographic characteristics with parental beliefs, parenting practices and children's motivational and performance outcomes (Eccles et al., 1998). The influences of family demographic characteristics (parents' education and occupation, family income, ethnicity) on children's motivation and performance are mediated by parental beliefs, parenting practices, and psychological resources. Parents, influenced by their culture and experiences, develop their worldviews and cultural beliefs, which influence their child-specific beliefs about their children's abilities. The parents' general beliefs, together with child-specific beliefs, directly link to their parenting strategies for the expected outcomes of their children.

On socialization of children's motivation and achievement, four components of parenting are worth highlighting: (1) developmentally appropriate timing of achievement demands/pressure, (2) high confidence in children's abilities; (3) a supportive affective family climate, and (4) highly motivated role models (Eccles et al. 1998, p. 1052). The first and second components relate to the expectations, standards and demands of parents for their children. These contribute to parenting styles and qualities. The third component relates to parenting qualities and home environment for socialization. The fourth component relates to parents' role modelling.

In summary, the theory proposes that the cultural milieu influences the socializers' (parents') beliefs, expectations and behaviours, which in turn influence the children's perceptions and expectations. These perceptions and expectations are the driving force for children in their motivation towards success.

The strength of the model is that it gives a clear and systematic account on how parental beliefs and demographic characteristics influence child motivation. However, the model employs the social cognitive theory and emphasizes mainly children's achievement goals, motivation and cognitive performance. The other dimensions of children's development, such as psychological and social outcomes, are unexplored.

4.2.2 Social capital theory of the family

Social capital theory outlines the relationships among distal social spaces, family settings, and individual's behaviours (Schlee et al., 2009). Coleman (1988, 1990) suggested that family influences on individual's behaviours are defined into three distinct components – financial, human, and social capital. In the family system, financial capital represents the wealth or income of the families. These are the physical resources that enhance learning, including secure physical environment for studying, materials for stimulation and learning, and financial resources to cater for material needs. Human capital is measured by a parent's education and provides the potential for a cognitive environment that facilitates learning. Social capital is the set of resources that family members access through social ties; they “inhere in family relations and in community social organizations and that are useful for the cognitive and social development of a

child or a young adult” (Coleman, 1990, p. 300). Thus, social capital can be identified as “the quantity and quality of networks that connect the children with resources of the parents” (Schlee et al., 2009, p.227). Social capital serves as the medium for children to assess parents’ financial and human capital.

In addition, Coleman (1988) highlighted three essential forms of social capital: (1) obligations and expectations of family members; (2) information channels, and (3) norms and effective sanctions (Coleman, 1988). In a family system, they represent the beliefs and values of the family, expectations and obligations among family members, the relational qualities among family members, communication patterns within the family, and family norms. Furstenberg et al. (1999) used the term “family management” to describe the process by which parents “build, invest, and deploy social capital – drawing upon social knowledge, information, and resources – in the interest of protecting and providing their children and fostering their long-term prospects” (p. 13). Gofen (2009) further elaborated the conceptualization of family capital as “the ensemble of means, strategies, and the resources embodied in the family’s way of life that influences the future of their children. Family capital is implicitly and explicitly reflected through behaviour, emotional processes, and core values” and emphasises “the contextual setting of the family in which aspects of social capital, human capital, and cultural capital intersect” (Gofen, 2009, p. 115). In social capital theory within the family, parental involvement is highlighted as an essential component that facilitates children’s access to human capital (Coleman, 1990; Schlee, et al., 2009).

The social capital theory translates family resources into financial, human, social and cultural capital which shed light on the family’s contribution to children and adolescents’ cognitive and social development. Family capital is becomes an asset of the family. However, the pathways of social capital in linking the financial, human and cultural capital of the family with adolescents’ development are unclear.

The expectancy-value theory of motivation identifies the socio-cognitive mechanism of parental beliefs influencing children’s motivation and achievement, whereas the social capital theory emphasizes quantity and quality of family networks that link family demographic characteristics to children’s development.

The theories share common characteristics. First, both address the contributions of parents to the development of children. Second, both acknowledge that family processes, family resources and family involvement are mediating variables linking parental influences to child development. Third, both theories recognize the influence of cultural contexts and demographic characteristics on parenting values, practices and resources. Fourth, both models reflect the characteristics of the ecological perspective, with the emphasis on adolescents' developmental outcomes as a function of humans interacting with the environment. Thus, both theories are helpful in examining the influence of parental beliefs of poor families on adolescents' motivation and development.

4.3 Influences of Chinese culture on parental beliefs, family processes and development of adolescents

As maintained by the ecological perspective, culture is an important ecological context encompassing ideological values, norms, and beliefs that make up the “blueprints” of society (Boss et al., 1993). The influence of Chinese culture on parental beliefs, family processes and adolescent development is salient. It affects the conceptualization of measuring constructs such as parental beliefs, family processes, achievement motivation etc. Furthermore, it sketches the pathways for Chinese cultural beliefs of parents, via family processes, to influence adolescents' achievement motivation and psychological development. Thus, it is essential to discuss Chinese philosophies and culture as a contextual “prologue” of the research. In this section, we first introduce the fundamental philosophies that influence Chinese culture. Then, we highlight the tenets of Chinese philosophies and culture on parental beliefs, family processes and adolescent development.

4.3.1 Chinese philosophies and beliefs

China is one of the four oldest civilized countries, with a history of more than five thousand years of development. Thus, Chinese philosophies are deeply rooted and have significant influence on Chinese people. Social stability in Chinese society is chiefly maintained by a dominant value system and powerful family system influenced by Confucianism, Taoism and Buddhism (Redding,

1990).

The school of thought developed by Confucius becomes a social ethic, a political ideology, and an ideal way of life. Central in his idea are the Three Cardinal Guide (*san gang*) and the Five Constant Relationships (*wu lun*), i.e., the bonds between ruler and subordinate, between father and son, between husband and wife, between brothers and between friends. These hierarchical relationships are governed by humaneness/benevolence (*ren*) and proper conduct/propriety (*ji*). The Confucian ethos becomes the philosophical foundations for the development of self, family and society at large.

In contrast to Confucianism's emphasis on social convention and government rule, Taoism focuses on human communion with nature. To Taoists, a good life is a simple life that maintains harmony with nature, remains unaffected by societal convention, and stays free from desire to achieve social status. Thus, the ideal state is a "selfless" state (Ho, 1995). The concept of duality (such as male and female, "yin" and "yang") is also fundamental in the Taoist paradigm. Duality is important in understanding how activity can be comprehended with tranquillity and the power of passivity. Where nature is subtle and cannot be manipulated by external force, a society benefits from the principle of "*wu-wei*", or active non-doing, for the maintenance of a balanced life with nature and society (Redding, 1990, p. 50). The Taoist idea that life is beyond one's control may attribute to the fatalism prevalent in Chinese people.

The core of the Buddhist philosophy lies on the metaphysical rejection of the ontological reality of the self (Ho, 1995). Buddhists suggest that human life is nothing but an illusion, which is the source of misery. Extrication is possible only through getting rid of the individual self and terminating the reincarnation cycle, which in turn is determined by one's moral action, or karma. Nirvana, literally "blowing out", is the state of being free from ignorance and desire, in which one ceases to accumulate bad moral actions (karma) and achieves liberation from the reincarnation cycle (*samsara*). In Buddhist thought, a state of nothingness or emptiness that resists the world is emancipation from human suffering.

Though Confucianism, Taoism and Buddhism have unique understandings of mankind, they work complementarily in shaping the personality and social behaviours of Chinese people as well as the socio-political institutions of Chinese society. Their persuasive influences continue today in Chinese culture.

4.3.2 Influences of Chinese culture on parental beliefs

4.3.2.1 Perception of life chances and attitudes to cope with adversity

Confucianism has well-defined social hierarchies that must be observed and respected. The Three Cardinal Guide (*san gang*) and the Five Constant Relationships (*wu lun*) clearly define ascribed status as well as hierarchical relationships. The hierarchical relationships are guided by ethics, and the ascribed status is defined by Heaven and should not be challenged. Acceptance of ascribed status and roles is important to the maintenance of social order and social stability. Thus, Chinese are taught to follow the “order of Heaven” (*an yu tian ming*).

Buddhism takes a different view of ascribed status from a metaphysical orientation. The reincarnation cycle (*samsara*) predetermines the status of each person’s life. The outcome of “today” is caused by “yesterday”. People should accept the present, as it is rooted in the acts of the past.

Taoism stresses that life and chances are beyond one’s control. Unlike the Western idea that self is the sovereign, Taoism suggests that “self” is part of nature. Thus, man should act in accordance to nature and accept things are beyond one’s control.

Though Confucianism, Taoism and Buddhism take different perspectives on the ascribed status and life chances of human beings, they have a common view that life trajectories go beyond one’s control and that acceptance of circumstances is important. One should be tranquil in the present situation. Not surprisingly, it has been argued that there is a strong sense of fatalism in Chinese philosophies (Bond, 1986). Rotter (1966) classified two categories of locus of control: internal control, the belief that the outcome is under the control of individuals; and external control, the belief that the outcome is under the control of forces such as fate, luck or chance. It is posited that Chinese people, with their collectivist orientation and the influence of Confucian, Buddhist and Taoist philosophies, possess a stronger belief in external control. However, there is inconsistent empirical evidence for this argument. Some researchers did find that Chinese have stronger belief in luck and fate dimension (Chan, 1989; Hamid, 1994; Hsieh et al., 1969), but others did not show any difference in the chance

dimension when comparing with the Chinese and Westerners (Hung, 1974; Lao, 1977).

Though people may perceive that life chances are beyond their control, their attitudes and strategies of adaptation could be very different according to Chinese philosophies. Chinese may adopt a positive cultural value of adversity, rooted in Confucian thought, with inner strengths and virtues such as perseverance and tolerance (Shek, 2004b, 2005a; Shek et al. 2003b). With the characteristics of modesty and human malleability in Chinese culture, perseverance, forbearance and self-discipline are salient. de Vos (1998) argued that the focus of self-discipline is “to put off present gratification, but with future social purpose and future social and occupational mastery in mind. A sense of mastery ... is the goal of Confucian self-development defined within one’s prescribed social role” (p.332). Thus, perseverance, forbearance and self-discipline are crucial adaptation attitudes for Chinese to face adversity, different to the stereotype of passivity as Confucian “oriental fatalism” (de Vos, 1998). This school of belief is reflected by the Chinese sayings “*You zhi zhe shi jing cheng*” (where there is a will, there is a way), “*Chi de ku zhong ku, fang wei ren shang ren*” (hardship increases stature). On the contrary, Taoist thought would recommend the principle of “*wu-wei*”, or active non-doing, to cope with uncontrollable circumstances (Redding, 1990). Resignation, with a strong sense of fatalism, would result.

4.3.2.2 The importance of education and scholarship with an emphasis on effort

Education has a high status among Chinese values, and children are socialized with sayings like “*wan ban jie xia pin, wei you du shu gao*” (all jobs are low in status, except study which is the highest). According to Chinese philosophy, education is intrinsic to the fulfilment of two fundamental values: human malleability and self-improvement (Chen & Uttal, 1988). The Confucian doctrine of “*Xiu shen, qi jia, zhi guo, ping tian xia*” (cultivate yourself, regulate your family, govern well your state, then order well the kingdom) emphasizes that societal improvement begins with self-improvement, for which education is the direct course. It should be noted that education is not only for ascending the social-hierarchy ladder, it has ultimate function of cultivating a “*chun-tzu*” (man of virtue or noble character), a concept with strong moralistic sentiment (Hau &

Salili, 1996; Ho, 1995). Scholarship, together with virtue and meritorious service, form the “three permanencies” (*san bu xiu lun*) in Confucian thought (Yu, 1996, p.232). Furthermore, it is suggested that the general population should and could be educated; as Confucius wrote, “*you jiao wu lei*” (in teaching there should be no distinction of classes) (Legge, 1966, p.235).

The emphasis of effort in education is embedded in Chinese culture, reflected by the sayings “*qin you gong, xi wu yi*” (reward lies ahead of diligence but nothing is gained by indolence), “*qin neng bu zhou*” (diligence is a means by which one makes up for one’s dullness). Thus, effort is important in determining one’s achievement, according to Chinese philosophy.

4.3.3 Influences of Chinese culture on family processes

The Chinese families have undergone the path from traditionalism to modernism. In particular, the philosophical orientations of Confucianism have constituted the traditional heritage of familial development for more than two thousand years. But with rapid development due to industrialization and globalization, Chinese families are not immune to the influence of Western culture. This requires adaptation to face the new challenges in the modern era.

4.3.3.1 Family hierarchy and ascribed family roles

In Chinese tradition, Confucianism is the foundation for the development of families. As mentioned above, the Three Cardinal Guide (*san gang*) and the Five Constant Relationships (*wu lun*) clearly define ascribed status as well as hierarchical relationships. Traditional families are patriarchal and hierarchical, with power vested in the head of the household to maintain harmony and proper function. Each of the members has an ascribed role in the family, and roles and relationships are clearly defined. Members are obliged to perform the roles in order to maintain harmony and order in the family. The family provides a good training platform for obligation and compliance, but places less focus on provision of affective warmth and emotional support (Ho, 1986). The hierarchy of family structure, locking people into ascribed family roles, provides a self-controlling unit which sustains the development of a patrimonial state (Redding, 1990).

In the modern era, Lau (1982) described the character of Chinese families as

“utilitarian familism”. In utilitarian familism, individuals have a normative and behavioural tendency to place familial interests above the interests of society and of other people. Families are self-sufficient and not fuse naturally with the community. They are highly competitive. Members are highly motivated by the pragmatic demand of protecting and enhancing family resources. However, familial interest is more on material and economic interdependence (c.f. Chan & Lee, 1995, p.88; Lau, 1982, pp.72-93). Chan and Lee (1995) defined the family as a kind of “collective egocentrism” (p. 88). It should be noted that utilitarian familism does not take up the traditional root, and family remains the basic elementary unit of social life. Familism is not replaced by individualism as in Western culture (Chan & Lee, 1995). Family hierarchy and ascribed family roles still remain in the family system, though there may be a decrease of their salience.

No matter whether Chinese families are considered from the traditional or modern point of view, clear hierarchical relationships and well-defined roles within Chinese families have both structural and functional implications for family processes and parent-child interactions. Parents are expected to have clear expectations of their children, with more emphasis on societal and cultural inclinations instead of addressing individual needs. Responding to the ideal of collectivism, the content of socialization is not individualistically but collectively defined (de Vos, 1973). Parents have the responsibility to nurture and prepare their children to reach the socialized goals, and children are obliged to follow the arrangement and rules of their parents. The collective orientation on socialization influences the conceptualization of parenting styles and practice, as distinctive from Western culture where individuality, independence and autonomy are stressed.

4.3.3.2 Socialization of children

Grusec (2002) suggested that socialization is an important process for children’s self-regulation of emotion, thinking, and behaviours; acquisition of a culture’s standards, attitudes and values; role taking; formation of strategies for resolving conflicts, and view of relationships.

As mentioned by Wu (1996), Chinese socialization is described as “training for obedience, for proper conduct, for impulse control, and for the acceptance of

social obligations, while a relative lack of emphasis is given to independence, assertiveness, and creativity” (p. 148). Chinese parents are more restrictive and authoritarian in their child-rearing practices. As suggested by Chao (1994), parental control and authoritarian parenting styles are associated with the concept of “training”, which may be influenced by Confucian ideas. The indigenous Chinese concepts of behavioural control, expressed by the terms “*jiao xun*” (to train) and “*guan*” (to govern), reflect Confucian principles that elders have the responsibilities to teach, discipline, educate and govern. Indeed, children are expected to obey and be loyal to their elders (Chao, 1994). Thus, parental control could be regarded as a distinctive feature of Chinese child-rearing practice. In addition, Yang (1981, 1986) proposed nine features of Chinese socialization practices: (1) dependency training; (2) conformity training; (3) modesty training; (4) self-suppression training; (5) self-contentment training; (6) punishment orientation; (7) shame strategy; (8) parent-centeredness; and (9) multiple parenting (c.f. Yang, 1981, p. 52; 1986, p.162). These socialization practices resemble the Chinese concept of parental control.

4.3.4 Influences of Chinese culture on achievement motivation and psychological competence of adolescents

As mentioned above, Chinese families are characterized by hierarchical relationships, clearly defined parental roles and expectations, emphasis on training, and supervision/monitoring in parenting styles and strategies. Children are socialized to respect parents and follow their instructions. The “relational” self-concept and cardinal virtue of filial piety embedded in Chinese culture influences the conceptualization of achievement motivation and cultivation of competence of Chinese adolescents.

4.3.4.1 The “relational” self concept in Chinese culture

The Chinese concept of achievement should be understood in tandem with the Confucian concern of ideal life goals (Yu, 1996). Confucian doctrine stresses the ultimate goals of social harmony and social order; thus, collectiveness and compliance are important. Rather than focusing on individuality and autonomy as in Western values, the “self” concept in the Confucian context is “interactional and transactional” (de Vos, 1998, p.333). He or she belongs to the society at large

and is embedded in social roles. The individual is identified as *hsiao wo* (smaller self) and the society as *ta wo* (larger self). The *hsiao wo* (smaller self) should serve the *ta wo* (larger self). Hence, as the “self” rooted in Confucianism is a “relational” self; the individual defines his/her identity with the coexistence of others (Ho, 1995). de Vos (1998) explained that Confucian self-definition is found “in the behaviour that unites one with others as well as in activities that distinguish the ‘we’ from the ‘they’” (p. 333). The realization of self occurs through harmonizing relationships (Ho, 1995).

With the conceptualization of “relational” self, Yang and Yu (1988) suggested that the content and characteristics of Chinese achievement motivation include an external determined goal or standard of excellence that is socially defined and approved. Yu (1996) found that success of individuals resulted in affective reactions from socially-oriented attributions, including feelings of “face-enhancement” (socially-oriented self-esteem), collective pride, gratitude to others and release from shame and anxiety (Yu, 1996), all of which have implications for individuals, their families and their clans. There is thus theoretical support that in Chinese culture, individuals’ achievement goals and motivation are greatly influenced by the expectations of the families and significant others. Chinese culture significantly influences the conceptualization of achievement motivation of Chinese adolescents.

4.3.4.2 Cardinal virtue of filial piety

Filial piety (*Xiao*) has been the guiding principle directing the Chinese pattern of socialization, as well as the rule governing intergenerational conduct (Ho, 1987). It can be regarded as a behavioural code that descendants should follow, a mental and emotional state of love towards parents that is different from other sorts of attachment, and a system of values that should be cultivated (Jordan, 1998).

The most prominent characteristic of filial piety is the subordination of the will and welfare of individual to the will of parents/ancestors (Jordan, 1998). As Tzeng and Hsu (1972) wrote, “The virtue of filial piety, as understood by the Chinese, consists of several qualities, including unquestioning obedience to the parents and concern for and understanding of their needs and wishes with the intention of pleasing and comforting them” (p. 28). Other features of filial piety

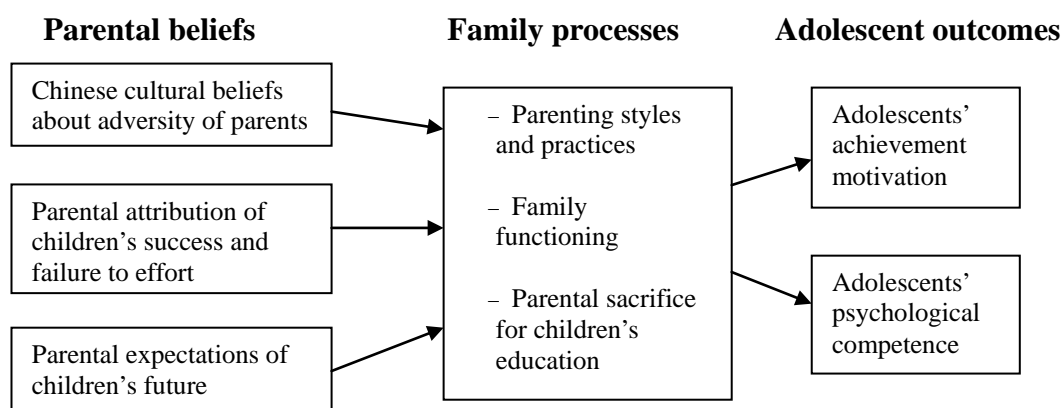
include: filial obedience, that children should respect and follow the will and instructions of the parents; filial nurturance, that children should provide sustenance of parental welfare; filial attitudes, such as bringing glory to one's parents; and filial behaviours such as worshiping one's ancestors during rituals (c.f. Ho, 1996; Jordan, 1998).

Filial obligation is the fulfilment of children's responsibilities to the family. Children, socialized with Confucian thoughts on filial piety, develop filial obligations. de Vos (1973) argued that duties and roles in one's family and clan constitute Chinese achievement goals, and that individuals will pay any price for familial benefits. Filial obligations include fulfilling the expectations of parents, gaining pride for the family, reducing parents' stress and anxiety, which drive children to achievement and competence. Fuligni and Yoshikawa (2003), in their study of low-income immigrant families in the United States, found that the filial obligation motivated the children and adolescents to achieve academically and avoid problem behaviours.

4.4 Conceptual model of the study

Based on the ecological perspective and taking into consideration expectancy theory on motivation (Eccles et al, 1998, 2003), social capital theory of the family (Coleman, 1988, 1990), and Chinese philosophies and culture, a conceptual model illustrating the relationships of parental beliefs, family processes, achievement motivation and psychological competence of economically disadvantaged adolescents is presented. Figure 4.1 illustrates this model.

Figure 4.1: Conceptual model of this study



In the model, three parental beliefs are emphasized: (1) Chinese cultural beliefs about adversity; (2) attribution of children's success and failure to effort; and (3) expectations of children's future. The first is concerned with parents' attitudes about adverse situations (such as poverty), while the latter two constructs deal with the parents' child-specific beliefs about the capabilities of their children. It is expected that parental beliefs would be positively related to achievement motivation and psychological competence of economically disadvantaged adolescents. Besides, it is hypothesized that family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education mediate the influences of parental beliefs on the achievement motivation and psychological competence of economically disadvantaged adolescents.

4.5 Proposed mechanisms in the conceptual model

The model illustrated in Figure 4.1 has eight constructs to be studied. The antecedent factors include three constructs – parents' cultural beliefs about adversity, parents' causal attributions of children's success and failure to effort; and parents' expectations of children's future. The outcomes consist of two constructs – adolescents' achievement motivation and psychological competence. It is suggested that the influences of parental beliefs on achievement motivation and psychological competence of adolescents are via family processes. There are three mediating factors – parenting styles and practices; family functioning; and parental sacrifice for children's education. The sections below will discuss the conceptual model of the study.

Although parental differences on family processes and parent-adolescent discrepancies on perceptions of family processes may have direct implications on building achievement motivation and psychological competence of economically disadvantaged Chinese adolescents, they are unexplored in the literature. Therefore, these will also be discussed.

4.5.1 Antecedent factors influencing motivation and competence of economically disadvantaged adolescents – Parental beliefs

As defined by Lazarus and Folkman (1984), beliefs are “personally formed or culturally shared cognitive configurations (Wrubel et al., 1981). They are pre-existing notions about reality ... Beliefs determine what is fact, that is, ‘how things are’ in the environment, and they shape the understanding of its meaning” (p. 63).

In studying how parental beliefs influence children’s motivation and development in poor families, three aspects – cultural beliefs about adversity, causal attribution of children’s success and failure to effort and expectations of children’s future – were examined. The choice of these three parental beliefs was due to four considerations. First, they may have vital influence on enhancing children’s motivation and development in poor families. Parents’ cultural beliefs about adversity determine the family’s schema on how they define and perceive the meaning of poverty and adversity, as well as shape the family’s responses to and strategies for handling life situations. Parents’ child-specific beliefs, indexed by attributions of children’s success and failure to effort, and expectations of children’s future, relate to parents’ perceptions and expectations of their children’s abilities and performance, and would determine parents’ ways of motivating their children to achievement. Second, parental beliefs influence parents’ roles and strategies in order to internalize values to children. This is of critical importance to families in poverty, as internalized beliefs and values become the driving force of children to strive for success and break through the cycle of intergenerational poverty. Third, there is evidence that parental beliefs influence adolescents’ cognitive and psychological competence. Fourth, the three parental beliefs carry clear traces of Chinese beliefs and culture. The focus on persistence and tolerance, together with the emphasis on education, are important elements of Confucian beliefs.

4.5.1.1 Chinese cultural beliefs about adversity

Cultural beliefs contribute to the belief systems of parents about adversity. According to the resiliency model of family adjustment and adaptation, cultural beliefs have fundamental impacts on two critical levels of family appraisal processes: the family's schema and paradigm. These processes determine how the families give meaning to stressful life events and family struggles, as well as play important roles in shaping the family's responses and strategies (McCubbin et al., 1998a). The idea echoes the suggestion of Shek et al. (2003) that there are two ways cultural beliefs influence individuals experiencing adversity. First, cultural beliefs may influence how adversity is defined and conceptualized. Second, cultural beliefs may shape coping resources and behaviour (Shek et al., 2003). Furthermore, Walsh (2003) found that family beliefs on the meaning of adversity perform two main functions. Through normalizing and contextualizing adversity and distress, family members enlarge their perspective to see that they can overcome difficulties and hurdles. Also, families gain a sense of coherence to define a crisis as a challenge that is manageable and somewhat meaningful (Walsh, 2003).

Developed through five thousand years of history, Confucius, Buddhism and Taoism are deeply embedded in Chinese cultural beliefs. Shek (2004b) classified Chinese cultural beliefs about adversity into two categories: positive and negative. Positive beliefs about adversity are cultural beliefs that emphasize the positive value of adversity and people's capacity to overcome it. These cultural beliefs are shaped by the Confucian emphasis on people's inner strengths and virtues, such as perseverance and tolerance. On the other hand, negative beliefs about adversity are cultural beliefs that suggest impossibility and people's incapability to change adverse situations, as adversity may be due to fate or superstition. Some of these beliefs are also influenced by Buddhist and Taoist thought (Shek, 2004b).

4.5.1.2 Causal attribution of children's success and failure

According to the attributional theory of motivation, causation is inferred from "a systematic covariation of antecedents and consequents" (Weiner, 1992, p. 236). Causal beliefs play an important role in influencing individuals' expectancy

of change, behaviours and performance. Different perceived causal attributions result in different affective and motivational consequences. The theory collides with the expectancy theory of motivation (Atkinson, 1964). If an individual believes that his/her situation has an internal cause (locus) that can be controlled, expectancy of success increases, which in turn increases aspiration. Individuals would be motivated to take actions aiming at the achievement goal. Affective outcomes of hopefulness and pride (self-esteem) follow, which further leads to motivated behaviours. On the contrary, if an individual believes that his/her situation is beyond control, he/she would lower his/her expectancy for a positive outcome. This in turn decreases motivation for action. Affective outcomes such as hopelessness, shame follow, which further results in withdrawal behaviours and resignation (Weiner, 1985).

In understanding causal attributions, Weiner (1985) proposed a three-dimensional taxonomy: (1) locus, the degree to which a person believes the cause is internal or external to the actor; (2) stability, how much the cause varies over time; and (3) controllability, whether the cause can be controlled by one's desire and effort. An extra dimension of globality is added into the structure in analysing the generalizability of the cause across situations (Abramson et al, 1978; Crittenden, 1996). These dimensions have special implications for the motivation of individuals.

Weiner (1985; 1992) suggested four dominant attributions of perceived causes of success and failure that affect achievement motivation and emotion – ability, effort (typical and immediate), influence of others (students, family and teachers) and luck. When analysing the four attributions by the causal dimensions described above, ability and effort are internal loci, with ability being stable and uncontrollable whereas effort is unstable and controllable. Influence of others and luck are external foci, with influences by others being relatively stable but uncontrollable, and luck being unstable and uncontrollable. Table 4.1 lists the causal dimensions of each attribution on children's achievement.

Table 4.1: General causes of attributions for children's achievement

Attributional Causes	Locus	Stability	Controllability
<i>Ability</i>	internal	stable	uncontrollable
<i>Effort</i>	internal	unstable	controllable
<i>Influence by others</i>	external	stable	uncontrollable
<i>Fate</i>	external	unstable	uncontrollable

Besides the dominant attributions of perceived causes of success and failure suggested by Weiner (1985), there are other strands of attributions that have drawn researchers' attention. Strategy attribution has been regarded as an important causal attribution that enhances learning motivation (Borkowski et al. 1988; Chan, 1994, 1996) and has been widely used in measuring Chinese attribution related to motivation and learning (Chan & Moore, 2006).

Regarding Chinese people's causal attributions for academic achievement, parents consistently believe that effort is related to academic achievement. Hess et al. (1987) compared Caucasian-American, Chinese-American and mainland Chinese mothers' attributions of children's performance in mathematics. When asking their parents to explain why their children did not do better than they did, mainland Chinese mothers were more likely to attribute academic limitation to a lack of effort. Stevenson and Lee (1990) found that Chinese parents in Taiwan put more stress on the importance of hard work, and less on the importance of ability.

However, studies about parental causal attributions of children's academic achievement in economically disadvantaged Chinese families are minimal and inconsistent. On one side, Bempechat et al. (1999), in their cross-cultural study of perceived parents' educational socialization practices, perceived parental attributions for child's success and failure, and mathematics achievement of adolescents, found that low mathematics scores of Indo-Chinese were associated with reports of parental emphasis on the value of effort. This suggested that parents made reference to the importance of effort in their children's school performance (Bempechat et al., 1999). However, the research took the result of adolescent's perceived attribution of the parents without considering the real perception of parents. On the other side, Phillipson (2006) studied parental and child attributions of child achievement in poor families in Hong Kong and found that parental attributions did not yield significantly in mathematics and language

achievement of children with low socio-economic status. But the study was cross-sectional and limited by a small and non-representative sample, and it had a data set with a hierarchical nesting structure (a school) that typically results in an increase of Type I error.

There are three justifications for the study of parents' causal attributions of children's success and failure. First, parental attributions affect socialization strategies as well as parental investment. It is posited that attribution of children's success and failure to effort would foster parental involvement and investment. On the contrary, if parents attribute success to luck and fate, they would put less effort into nurturing a better environment for their children's learning and development. Second, parents' beliefs are socialized and "transmitted" to children, which further affects children's motivation for further achievement. Third, parental attributions affect their own emotional and psychological well-being. If parents believe that success and failure is due to their children's ability, i.e., something internal and uncontrollable, this may result in distress and despair. On the contrary, if the attribution is something controllable such as effort, parents may put more expectations on their children and pay more attention to their education. The effects on parental attributions of children's achievement need to be researched.

4.5.1.3 Parental expectations of children's future

Bandura's self-efficacy theory (1994) focuses on expectancies for success. Two kinds of expectancy beliefs are differentiated: outcome expectations versus efficacy expectations. Outcome expectations are beliefs regarding which behaviours lead to specific outcomes, whereas efficacy expectations are beliefs about whether one can effectively perform the behaviours necessary to produce the outcome. In fact, Bandura suggested that it is efficacy expectations that are the major determinants of goal setting, activity choice, willingness to exercise effort, and persistence (Bandura, 1994). Both competence and future prospects of adolescents are important domains expected by parents.

There is ample evidence that Chinese parents have high expectations of their children's education (Blair & Qian, 1998; Fuligni, 1997; Goyette & Xie, 1999; Lee, 1987; Slaughter-Defoe et al., 1990, Stevenson & Lee, 1990, Yao, 1985). Lee (1987) explained the academic success of Chinese-American,

Japanese-American and Korean-American students in terms of high expectations of parents, instead of other ex-familial factors such as teacher and peer relations. Similar results were obtained by Goyette and Xie (1999), who found that parental expectations explained a majority of children's high educational expectations, even more than did socio-economic and other demographic factors. Fuligni (1997) compared adolescents from East Asia (Chinese, Japanese, and Koreans) and found that their parents had high values for academic success, education aspirations and expectations of academic achievement. Blair and Qian (1998) found that parental expectation of education attainment influenced high school students' educational performance positively after accounting for other socio-economic factors.

The high parental expectations of Chinese reflect both cultural and practical values. "Cultural value" refers to the emphasis on education and high respect for scholarship embedded in Chinese culture. "Practical value" lies in the belief that good educational attainment implies good future prospects and economic success in a highly competitive metropolitan environment. Echoing previous studies, Chao and Sue (1996) suggested that high parental expectations of children's school performance and future prospects are closely related to two important values underlining Chinese culture: bringing honour to the family, and ensuring future success, i.e., a good job and a good income.

In reviewing research on parental expectations of children's future, three observations were identified. First, research on parental expectation has focused only on the dimension of education, and parents' expectation of children's completion of schooling is the sole indicator in most research (Davis-Kean, 2005; Hao & Bonstead-Bruns, 1998; Kim et al., 1998; Peng & Wright, 1994; Spera et al. 2009). Other dimensions such as occupation, economic standard, family obligations and moral character have been ignored.

Second, the majority of research on domains and aspects of parental expectations is qualitative in nature. In her qualitative study of parental expectations in Chinese immigrant families in Canada, Li (2004) uncovered a folk theory grounded in Chinese immigrant families – parental expectations emphasize school achievement, science-related career aspirations, moral character and cultural integration in response to acculturative struggles. Shek and Chan (1999), in their qualitative study of Hong Kong parental perceptions of an

“ideal child”, discovered that Chinese parents stress the importance of “family-related” attributes (maintaining good parent-child relations and fulfilling family obligations); “academic-related” attributes, (good academic achievement and high educational attainment); and “conduct-related” attributes, (good character and compliance with the law) (p. 300).

Third, domains and themes of parental expectations are different between the Chinese community and the Western world, which implies that an indigenous Chinese concept of parental expectations is needed. In her qualitative study of 48 Chinese and 50 European-American mothers’ childrearing beliefs, Chao (1995) discovered that Chinese mothers value education, obedience and respect for parents, good personality and adaptability, good character, morals and ethics, importance of independence and self-reliance, and maintain Chinese culture. European-American mothers emphasize building self-esteem and self-confidence of children, stressing independence and individualism, and providing a good environment for learning and exploration. Similar findings were obtained by Padmawidjaja and Chao (2010), who found that there were ethnic-group differences on Confucian goals and child-centred goals reported by Chinese-American parents and European-American parents. The difference implies that cultural specificity was manifested in the conception of parental expectations.

The tenets of Confucian thought and qualitative studies on parental expectations of children’s development (Chao, 1995; Li, 2004; Shek & Chan, 1999) bring insights on the domains of Chinese parental expectations for children’s future. In short, congruent with Confucian ideas and research findings, there are three domains – education attainment, family obligations, and moral character – of parental expectations for children’s future. Attributes such as occupation, self-reliance, adaptability and cultural integration may also be relevant.

However, we should be aware that parents’ ability to form “accurate” beliefs and expectations regarding children’s performance is essential. Alexander et al. (1994) found that low-income families with high expectations and performance beliefs do not correlate with children’s actual performance, perhaps because parents take less account of performance feedback and evaluation. Chow and Chu (2007), in a study of parental involvement and achievement motivation in

Hong Kong, reached a similar conclusion. They found that parental expectation can be a discouraging factor, if inadequate constructive and affective feedback is offered. Thus, parents' knowledge of children's performance and communication with the children about their performance are both important.

4.5.2 Outcomes of economically disadvantaged adolescents being studied – achievement motivation and psychological competence

As the present study is concerned with the influence of parental beliefs on adolescents' motivation and development in poor families, two important constructs, achievement motivation and psychological competence of adolescents, were explored. There are three reasons for choosing these constructs. First, they directly reflect the psychological resilience of economically disadvantaged adolescents. Second, for these adolescents to break through the odds of poverty, motivational force, a sense of mastery and future aspirations are important ingredients. The two constructs, which focus on adolescents' assets and potential, are essential in striking for future success. Third, instead of focusing on personal traits, both constructs can be "nurtured" and "cultivated" with appropriate socialization strategies. The emphasis of the "person-in-environment" model can thus be applied.

4.5.2.1 Achievement motivation

Achievement motivation is defined as "attention to a need of achievement" (Weiner, 1992, p. 168). It originates from Atkinson's theory of achievement, which suggests that the desire for an achievement-oriented activity is determined by the tendency to approach success of an achievement-related goal, tendency to avoid failure, as well as the positive extrinsic tendency to perform the activity (Atkinson, 1964). He attempted to derive a mathematical model that specified the relationships of different determinants of behaviours. Hence, achievement motivation is the measure of the desire to achieve success. It should be noted that achievement motivation mainly concerns subjective rather than objective reality. It is a "hope-oriented" (not fear-oriented) attribute, as people mainly weigh their subjective probability of success (Feather, 1965).

As achievement motivation is a concept developed in Western society, it has a strong flavour of individualism. This individualistic orientation may influence

the determination of achievement goals, incentive value of success, standard of excellence and criteria of evaluation. Yu (1996) classified this achievement motivation as “individual-oriented achievement motivation” (IOAM). However, many scholars criticized the concept of achievement motivation for not being culturally specific (de Vos, 1973; Yu, 1980; Yang & Yu, 1988) and for being unsuitable for Chinese people, who are rooted in collectivist orientation of Confucian philosophy. Thus, the conceptualization and measurement of achievement motivation should reflect a Chinese cultural orientation.

As mentioned in Section 4.3.4.1, the Chinese concept of achievement should be understood with the “relational” self-concepts of the Confucian context. Yang and Yu (1988) suggested that the content and characteristics of Chinese achievement motivation should include externally determined goals or standards of excellence that are socially defined and approved (Yang & Yu, 1988). They proposed the concept of “social-oriented achievement motivation” (SOAM), which reflects Chinese cultural values.

4.5.2.2 Psychological competence

In the literature, resilience is defined as “successful adaptation, despite challenging or threatening circumstances” (Masten et al., 1990, p.426). Luthar et al. (2000) gave a more detailed account of resilience – “a dynamic process encompassing positive adaptation within the context of significant adversity” (p. 543). Two critical conditions are found: (1) an exposure to significant threat or adversity, and (2) achievement of positive adaptation despite major assaults on the developmental process (Luthar et al., 2000). Masten and Garmezy (1985) argued that resilience is the outcome of repeated experiences with active coping and stress-buffering processes. Thus, resilience can be viewed as an outcome of an active coping process against adversity.

As suggested by Masten et al. (1990), resilience involves successful adaptation and usually includes internal states of well-being, effective functioning in the environment, or both. To operationalize the concept of resilience, adolescents’ psychological competence is emphasised. Psychological competence stresses positive mental-health attributes such as self-esteem, sense of mastery and purpose of life that represent adolescents’ psychological capacities. Instead of using a “deficit” based approach focusing on the

internalizing and externalizing behavioural outcomes of economically disadvantaged adolescents, psychological competence employs the “positive youth development” paradigm emphasising the assets, abilities, and potential of adolescents (Damon, 2004; Shek et al., 2007). Thus, psychological competence allows a holistic view on adolescents’ psychological capabilities for facing poverty and adversity.

Benson (1997) employed the asset-building paradigm and classified the assets of human development into two main categories: external and internal. Each category is further sub-divided into four types. External assets include support, empowerment, boundaries and expectations, and constructive use of time. Internal assets contain commitment to learning, positive values, social competencies, and positive identity. Each sub-category consists of a series of asset constructs, totalling forty developmental assets (Benson, 1997). Benson gave a comprehensive view of adolescent assets that are too complex to be measured.

Weissberg and O’Brien (2004) classified five core social-emotional competencies that are essential in youth development: (1) self-awareness (understanding one’s feeling and thinking, realistic assessment of one’s ability, self-confidence); (2) social awareness (understanding other’s feelings and thoughts, interacting positively with diverse groups); (3) self-management (handling one’s emotions, setting and accomplishing goals, persevering when frustrations occur; (4) relationship skills (establishing and maintaining healthy relationships, clear communication, cooperation, negotiation skills in conflicts, resistance to inappropriate social pressure, help-seeking); and (5) responsible decision-making (making choices with accurate considerations, respecting others, taking responsibility for decisions) (c.f. Weissberg & O’Brien, 2004, p. 89). However, the categorization focuses only on social-emotional competencies and ignores other domains of psychological competence.

Catalano et al. (2002) highlighted 15 positive youth-development constructs to assess adolescents’ assets and abilities. These include (1) bonding (relationships with healthy adults, positive peers, school, community and culture); (2) resilience (psychological flexibility and capacities for adapting coping responses to changes and stress); (3) social competence (interpersonal skills like communication, assertiveness, refusal and resistance, conflict-resolution, and

interpersonal negotiation strategies with peers and adults); (4) emotional competence (skills for identifying feelings in self or others, managing emotional reactions or impulses, and building self-management strategies, empathy, self-soothing, or frustration tolerance); (5) cognitive competence (cognitive abilities, processes, or outcomes, including academic performance, logical and analytic thinking, problem-solving, decision-making, planning, goal-setting, and self-talk skills); (6) behavioural competence (skills for effective behaviour choices and action patterns, both nonverbal and verbal); (7) moral competence (a sense of right and wrong, a sense of moral or social justice, respect for cultural or societal rules and standards); (8) self-determination (capacity for empowerment, autonomy, independent thinking, self-advocacy, and ability to live and grow by self-determined internal standards and values); (9) self-efficacy (personal goal-setting, coping and mastery skills, and techniques to change negative self-efficacy expectancies or self-defeating cognitions); (10) spirituality (beliefs in a higher power, sense of spiritual identity, purpose and meaning in life); (11) beliefs in the future (future potential, goals, options, choices, or long-range hopes and plans); (12) clear and positive identity (healthy identity formation and achievement, healthy sense of self); (13) recognition of positive behaviour (response systems for rewarding, recognizing, or reinforcing positive behaviour); (14) prosocial involvement (activities and events for youth to participate in, make positive contributions, and experience positive social exchanges); and (15) prosocial norms (development of clear and explicit standards to minimize health risks and support prosocial involvement) (Catalano et al., 2002).

Table 4.2 summarises different conceptualizations of positive youth development.

Table 4.2: Positive youth development constructs

	Benson (1997)	Weissberg and Brien (2004)	Catalano et al. (2002)
<i>Paradigm</i>	Asset-building of human development	Social-emotional competencies	Prevention-science perspectives (with identification of risk and positive factors)
<i>Construct categorization</i>	2 main categories, each subdivided into 4 types, totalling 40 constructs	5 core social-emotional competencies	15 constructs
<i>Construct</i>	Support (external asset)		Bonding
	Boundaries and expectations (external asset)		
			Resilience
	Social competencies (internal asset)	Social awareness	Social competence
		Relationship skills	
			Emotional competence
	Commitment to learning (internal asset)		Cognitive competence
			Behavioural competence
	Positive values (internal asset)	Responsible decision making	Moral competence
			Self-determination
		Self-management	Self-efficacy
	Positive identity (internal asset)		Spirituality
		Self-awareness	Clear and positive identity
			Beliefs in the future
			Recognition of positive behaviours
	Empowerment (external asset)		Prosocial involvement
			Prosocial norms
	Constructive use in time (external asset)		

It appears that Catalano et al. (2002) proposed the most systematic and comprehensive framework on adolescents' positive development constructs. For this study, with a focus on psychological competence of adolescents facing

poverty and adversity, seven constructs on positive youth development developed by Catalano et al. (2002) were chosen. They were: resilience; cognitive competence; self-determination; self-efficacy; spirituality; beliefs in the future; and clear and positive identity.

4.5.3 Familial pathways for the influences of parental beliefs on children's motivation and competence

Sigel and McGillicuddy-De Lisi (2002) suggested that parental beliefs affect children's development through parental behaviours by two pathways: (1) fostering attitudes in the children through expectations, encouragement, and the like; and (2) creating different learning environments for children within the context of the family. It is important to study family environment as the pathway through which parental beliefs influence achievement motivation and psychological competence of economically disadvantaged adolescents. In combination with the components of parenting for socialization of child's motivation proposed by Eccles et al (1998) (described in Section 4.2.1), we now discuss three socialization pathways: (1) parenting styles and practices; (2) family functioning, and (3) parental sacrifice for children's education.

4.5.3.1 Parenting styles and practices

Parenting style is defined as “a constellation of attitudes toward the child that are communicated to the child and that, taken together, create an emotional climate in which the parents' behaviours are expressed. These behaviours include both the specific, goal-directed behaviours through which the parents perform their parental duties (to be referred as parenting practices) and non-goal-directed parental behaviours, such as gestures, changes in tone of voice, or the spontaneous expression of emotion” (Darling & Steinberg, 1993, p.488). It is suggested that parenting style is “most usefully conceptualized as a characteristic of the parent that alters the efficacy of the parent's socialization efforts by moderating the effectiveness of particular practices and by changing the child's openness to socialization” (Darling & Steinberg, 1993, p.488).

Baumrind (1967) operationalized parenting styles into three qualitatively different types of parental attitudes and practices: authoritative, authoritarian and permissive. These are derived from different patterns of the child-rearing

dimensions of parental control, maturity demands, parent-child communication, and nurturance (Baumrind, 1971). Authoritarian parents shape, control and monitor children's behaviours and attitudes according to an absolute standard of conduct. They exert control over their children and handle power and decision-making in an autocratic manner. Warmth and support to children are seldom exhibited. Under authoritarian parenting, children are expected to be obedient. In contrast, authoritative parents exert high parental control along with warmth. They are rational and firm, but at the same time responsive to children's needs. They have firm expression but encourage sharing and communication based on reasons. They allow children autonomy with expressive conformity. Authoritative parenting is considered a democratic parenting style. Permissive parents have low control over their children and permit their children to act on their own will (Baumrind, 1971; Chao & Sue, 1996). Among the three parenting styles, it is expected that authoritative parenting would be the most related to children's competence and achievement (Chao & Sue, 1996, Spera, 2005; Steinberg et al., 1989, 1992).

There are different models of categorizing parenting styles. Maccoby and Martin (1983) transformed Baumrind's typology of parenting style into two-dimensional framework: parental demandingness and parental responsiveness. Baumrind (1991) later elaborated: "demandingness refers to the claims parents make on the child to become integrated into the family whole by their maturity demands, supervision, disciplinary efforts and willingness to confront the child who disobeys. Responsiveness refers to actions which intentionally foster individuality, self-regulation and self-assertion by being attuned, supportive and acquiescent to the child's special needs and demands" (p.748). Shek (1995a) suggested two dimensions of parenting qualities: concern and restrictiveness. Concern entails qualities of sensitivity, warmth, encouragement and closeness, whereas restrictiveness involves qualities of sternness, hardness and tenseness.

Regarding Chinese culture, Chao and her colleagues (Chao 1994; Chao & Sue 1996) have found that the concepts of authoritarian and authoritative parenting styles do not truly capture what is important in Chinese child-rearing. It has been commented that "'authoritarian' is an incomplete concept for characterization of Chinese parenting" (Chao & Sue 1996). As suggested by

Chao (1994), parental control and authoritarian parenting styles are associated with the concept of “training”, which may be influenced by Confucian ideas (p.1117). Chinese parenting uses indigenous concepts of behavioural control, expressed by the terms “*jiao xun*” (to train) and “*guan*” (to govern). Padmawidjaja and Chao (2010) further elaborated the concept of “*guan*” (to govern) to include setting of expectations and “contingent autonomy”, i.e., “monitoring and giving autonomy only when you act responsibly” (p. 41). Empirical studies support that Chinese are high in parental control and restrictiveness. Lin and Fu (1990) investigated four specific child-rearing variables, namely parental control, encouragement of independence, expression of affection, and emphasis of achievement on Chinese in Taiwan, immigrant Chinese in the United States, and Caucasian-American parents. It was found that Chinese in Taiwan and immigrant Chinese were higher in parental control and emphasis of achievement than the Caucasian-American parents. Echoing the idea, Chiu (1987) reviewed the literature of child-rearing attitudes of Chinese American and Caucasian-American mothers and concluded that “traditional Chinese socialization practices appear to be more restrictive and controlling” (p. 411).

Bempechat et al. (1999) integrated the concept of interdependence into the educational socialization strategies of parents in fostering achievement of poor children. They performed a cross-cultural study of four groups of poor fifth and sixth graders (African American, Latino, Indo-Chinese, and Caucasian) who were ages 10-14. The study examined children’s perceptions of their parents’ educational socialization practices and attributions for success and failure, and determined the impact of those variables on mathematics achievement. Indo-Chinese students had stronger perceptions of parental shame about poor performance than the other groups. They also exhibited greater feelings of guilt about parental sacrifices (Bempechat et al., 1999). This guilt and shame reflected their interdependent orientation toward socialization (Bempechat et al., 1999). The results also echo Yang’s observation that shame strategy is indigenous to Chinese socialization practices (Yang, 1981; 1986).

Though parenting control may be viewed as a distinctive characteristic in Chinese parenting, it does not mean that there is a lack of warmth. Two types of parental control, “domineering control” and “organizational control or

family-based control”, are differentiated (Lau & Cheung, 1987; Lau et al., 1990). The former reflects an authoritarian parenting style, where parents are strict, harsh and hostile and there is a lack of warmth, whereas the latter stresses parental control associated with parental warmth. Lau and Cheung (1987) argued that parental control in Chinese culture belongs to “organizational control or family-based control” and that parental control is associated with great maternal sacrifice, involvement and support. The “family-based” type of parental control is important for the maintenance of harmony and integrity of the family unit (Lau & Cheung, 1987). Chao and Sue (1996) suggested that family-based control and supportive parent-child relationship contribute to school achievement. This was also supported by Cheung and McBride-Chang (2008). They found that although the two dimensions of parenting style – concern and restrictiveness – are theoretically independent, they are highly associated in Chinese parents. A mother could perceive herself as both warm and controlling. In addition, they found that academic motivation is explained by maternal support and encouragement, but actual academic performance is explained by achievement demands, together with restrictive parenting.

As suggested by Eccles et al. (1998), parental beliefs influence children’s motivation through achievement demands and a supportive and affective family climate. Likewise, parental demandingness and responsiveness are important qualities for building up adolescents’ achievement motivation and resilience, which in turn enhance those children’s competence to escape from poverty. Thus, it is hypothesized that parental control with parental warmth would predict achievement motivation and resilience of economically disadvantaged adolescents.

4.5.3.2 Family functioning

Family functioning is a complex construct and generally refers to “the quality of family life at the systemic level, such as wellness, competence, strengths, and weaknesses of a family” (Shek, 2005b, p.518). In the conceptualization of family functioning, it is worth noting that different theories hold different foci. For instance, the systemic approach concentrates on the generational hierarchy of the family with an emphasis on strong parental authority. The boundaries are clear, but with flexibility for autonomy and interdependence of the subsystems. The

developmental approach focuses on fulfilment of developmental tasks in the life course of family members, and on the family members' roles of caring, supporting, nurturing and socialization. The ecological approach concentrates on the adaptability of the families in handling internal demands and external changes, and on families' resources problem-solving capability and resources (Boss et al., 1993; White & Klein, 2008).

To understand family functioning, Walsh (1993, 2003) identified three models (summarised in Table 4.3 below) that emphasise “normal” and “healthy” family processes. The Beaver Systems Model (Beavers & Hampson, 2003; Beavers et al., 1985, 1990) focuses on family competence, which defines how well the family performs nurturing tasks. A competent family is characterized by clear orientation for needs to be identified and satisfied in family relationships, clear boundaries among family members, contextual clarity, relatively equal power with the process of intimacy, autonomy of individual family members, joy and comfort in family transactions, skilled negotiation and significant transcendent values shared among members (Beavers & Hampson, 2003).

The Circumplex Model of Marital and Family Systems (Olson & Gorall, 2003; Olson et al., 1989) focuses on the dimensions of family cohesion, flexibility, and communication. The McMaster Model of Family Functioning (MMFF) (Epstein, Bishop & Levin, 1978; Epstein et al., 2003) focuses on dimensions of functioning that are the most affected by family members' emotional and physical health. Six dimensions of family functioning are suggested: problem solving, communication, roles, affective responsiveness, affective involvement, and behavioural control (Epstein et al., 2003).

Table 4.3: Different models of family functioning identified by Walsh (2003)

	The Beaver Systems Model	Circumplex Model of Marital and Family Systems	McMaster Model of Family Functioning (MMFF)
<i>Central focus</i>	Family competence	“Relational diagnosis” of the family grounded in systems theory	Effectiveness of family, which affects physical and emotional health of family members
<i>Dimensions</i>	<ul style="list-style-type: none"> ◆ Systems orientation that needs are and satisfied in family relationships ◆ Clear boundaries ◆ Contextual clarity ◆ Relatively equal power and intimacy ◆ Autonomy ◆ Joy and comfort in relating ◆ Skilled negotiation ◆ Significant transcendent values and beliefs 	<ul style="list-style-type: none"> ◆ Cohesion <ul style="list-style-type: none"> – Emotional bonding – Family involvement – Marital relationship – Parent-child relationship – Internal boundaries – External boundaries ◆ Flexibility <ul style="list-style-type: none"> – Leadership – Discipline – Negotiation – Roles – Rules ◆ Communication <ul style="list-style-type: none"> – Listener’s skills – Speaker’s skills – Self-disclosure – Clarity – Continuity/tracking – Respect and regard 	<ul style="list-style-type: none"> ◆ Problem-solving ◆ Communication ◆ Roles ◆ Affective responsiveness ◆ Affective involvement ◆ Behavioural control
<i>Measurement tools</i>	<ul style="list-style-type: none"> ◆ Self-Report Family Inventory (SFI) 	<ul style="list-style-type: none"> ◆ Family Adaptability and Cohesion Evaluation Scales (FACES) ◆ Clinical Rating Scale (CRS) 	<ul style="list-style-type: none"> ◆ McMaster Family Assessment Device (FAD) ◆ McMaster Clinical Rating Scale (MCRS)
<i>Sources</i>	Beavers & Hampson, 2003; Beavers, et al., 1985, 1990	Olson & Gorall, 2003; Olson, Russell, & Sprenkle, 1989	Epstein, Bishop & Levin, 1978; Epstein et al., 2003

Walsh (1993) summarized the conceptual models of family functioning and identified 10 important processes for a healthy functioning of a family: (1) connectedness and commitment of members as a caring, mutually supportive relationship unit; (2) respect for individual differences, autonomy, and separate needs; (3) positive couple relationship characterized by mutual respect, support, and equitable sharing of power and responsibilities; (4) nurturance, protection, and socialization of children and care-taking of vulnerable family members; (5) organizational stability with clarity, consistency, and predictability in patterns of interaction; (6) adaptability, with flexibility to meet internal and external demands and cope effectively with stresses and problems; (7) open communication with clear rules and expectations, pleasurable interaction, emotional expression and empathic responsiveness; (8) effective problem-solving and conflict-resolution processes; (9) a shared belief system with mutual trust, ethical values and concern with human community; and (10) adequate resources for basic security and psychosocial support from extended kin, friends and community (c.f. Walsh, 1993, pp. 38-39).

Quatman (1997) suggested that emotional bondedness, mutuality, expressive communication, time together and love are important attributes for high family functioning. As for the Chinese community, Shek and Chan (1998) conducted a study to find out the attributes of happy families in Hong Kong. Parents and their adolescent children of 416 families were involved in semi-structured interviews. Results showed that Chinese parents and their children regarded the absence of conflict, interpersonal harmony, mutuality, connectedness, and positive parent-adolescent relationships as major attributes of happy family. Emotional expressiveness and communication were less likely to be regarded as attributes of a happy family.

Theoretical accounts and empirical evidence support that family functioning has direct and indirect impacts on cognitive and psychological development of children. As mentioned above, Eccles et al. (1998) suggested that a supportive and affective family climate is important in building up adolescents' achievement motivation and resilience, which in turn enhances their competence to face adversity. There is empirical evidence that positive family functioning results in better adolescent adjustment (Bosma & Gerrits, 1985; Shek, 1995b, Street et al., 2009). Bosma and Gerrits (1985) found a positive relationship between family

functioning and identity status of adolescents. Street et al. (2009), in their study of the relationship between family environment and psychological outcomes of African American adolescents, suggested that levels of cohesion and conflicts in family environment predict adolescents' mental health.

For economically disadvantaged Chinese families, Shek (2002b) found that family functioning was associated with adolescent psychological symptoms, positive mental health (including existential well-being, life satisfaction, self-esteem, and sense of mastery), academic performance, substance abuse, and delinquency. In terms of the relative strength of association between family functioning and adolescent adjustment measures, the magnitude of the correlation coefficients in economically disadvantaged adolescents was found to be stronger than in those without economic disadvantage. Shek (1995b) also found that positive family functioning was related to better adolescent adjustment. Another longitudinal study of the relationship between perceived family functioning and adolescent psychological well-being and problem behaviours found that the relationship between perceived family functioning and adolescent psychological well-being and problem behaviours is bi-directional in nature. Also, there were gender differences in the longitudinal linkages between family functioning and adolescent adjustment for economically disadvantaged Chinese adolescents, with the linkages stronger in girls than in boys (Shek, 2005b).

4.5.3.3 Parental sacrifice for education of adolescent children

Parental sacrifice has been regarded as an important contribution to children's education, especially in Asian culture (Chao, 1994). Parental sacrifice for children's education is a process by which parents give up their personal needs for the sake of their children's educational needs. The process involves three important components. First, children's education requires parents to mobilize different family resources, such as money, time and effort. Second, due to the limited resources within the family, mobilization and distribution of resources is a struggle. Third, parents prioritize the educational needs of children over their own personal needs; thus there is mobilization of resources for children's education instead of parents fulfilling their own needs.

Parental sacrifice has been regarded as a central feature in the Chinese conception of familism. In Chinese culture, family members are supposed to

subordinate their personal interests and goals to the glory and welfare of the family as a whole (Yeh & Yang, 1997). In particular, for the sake of their children's future, parents sacrifice personal needs and interests. Lam (2005) also suggested that the Chinese meaning of parenthood is "associated with the notion of 'responsibility for children' and 'making sacrifice for the benefit of children'" (p. 118). With the ideal of collectivism in Chinese society, interdependent orientation in family socialization practices is stressed (Bempechat et al., 1999). Parents are expected to nurture their children unconditionally and be ready to "pay" for the development of their children. Children are socialized to behave according to parents' expectations and exhibit feelings of guilt and shame if they fail (Bempechat et al., 1999). Thus, the indigenous Chinese concept of parental sacrifice makes parental contribution to children's education more sentimental (i.e. affective) and less calculative (i.e. rational) in nature (Lau, 1981).

As mentioned in the literature review (Section 2.3.2), to fulfil the educational needs of adolescents requires parents experiencing economic disadvantage to struggle for more resources and sacrifice their own needs. To understand parents' sacrifice for education of their children, an understanding of family resources for adolescents' education is important.

According to the family investment model, there are four dimensions of family resources that foster competent physical, cognitive and psychological development: (1) availability of learning materials; (2) stimulation of learning by direct support and indirect means such as tutoring; (3) family's standard of living, such as food, housing, clothing and medical care; and (4) location of residence (Conger & Donnellan, 2007, p.181). Van Horn et al. (2001) identified three components of family resources: adequacy of basic needs, money, and time. They further emphasized that it is parents' subjective assessment of resources that determines parental behaviours, rather than external, objective availability of the resources.

In general, there are two broad categories commonly used in describing family resources: (1) home environment and (2) family involvement. Home environment is the physical and cognitive environment for the stimulation of children and adolescents in their homes and communities. In the Western literature, the Home Observation for Measurement of the Environment (HOME) Inventory has been widely used to assess the quality and quantity of stimulation

and support available to children and adolescents in their home environment (Caldwell & Bradley, 2003). The Early Adolescent version (ages 10-14) of HOME inventory (EA-HOME) has seven dimensions: physical environment, learning materials, modelling, instructional activities, regulatory activities, variety of experience and acceptance, and responsivity (c.f. Bradley & Corwyn, 2006, p. 498).

Another aspect of parental resources is parental involvement in children's schooling and activities. Grolnick and Slowiaczek (1994) defined parent involvement as "the dedication of resources by the parent to the child within a given domain" (p. 238). Parental involvement can be illustrated in two settings: school and home. For the home setting, Kellaghan et al. (1993) highlighted five main categories: (1) work habits of the family, (2) academic guidance and support; (3) stimulation to explore and discuss ideas and events; (4) language environment; and (5) academic aspirations and expectations. For the school setting, Epstein (1987, 1992) identified six opportunities for parental involvement: (1) assisting parents in child-rearing skills, (2) school-parent communication, (3) involving parents in school volunteer opportunities, (4) involving parents in home-based learning, (5) involving parents in school decision-making, and (6) involving parents in school-community collaborations. Furthermore, Grolnick et al. (1997) portrayed three categories that generally summarize the operationalization of parental involvement: (1) school involvement, e.g., attending parent-teacher conferences at schools, getting involved in school events, talking to teachers before and after school; (2) cognitive involvement, e.g., exposing the child to intellectually stimulating activities such as going to the library, talking about current events; and (3) personal involvement, being aware of what is happening with the child in school. Grolnick et al. employed an ecological hierarchical model to study the individual, contextual and institutional levels of factors that affect parent involvement. Family socio-economic status was found to be a strong predictor of parents' school and cognitive involvement. But the category of personal involvement was not associated with socio-economic status, suggesting that parents across different income, occupational and educational levels show acquaintance with and affective involvement in children's school experience (Grolnick et al., 1997).

For measuring parental involvement in school, there are cultural differences

with age of children. Parents' involvement in homework and school-related performance occurs at an earlier age for Chinese than Western students (Chao & Sue, 1996). When Chinese students reach adolescence, the roles of parents in helping with schoolwork may be diminished relative to parents' roles in Western countries.

Unfortunately, research on family sacrifice for children's education is minimal, which hinders the conceptualisation of this aspect in the Chinese context. Tools to measure parental sacrifice for children's education are rare. Chao and Kaeochinda (2010) developed a six-item scale of parental sacrifice that contained two components: parents' sacrifice and hard work to assure children a better life, and children's gratitude for and recognition of parental sacrifice. However, the measurement tool has several limitations. First, parental sacrifice is considered a dimension of parental support instead of an independent construct with unique dimensions. Second, as the scale was developed and used among Chinese immigrants in the United States, the migration experience itself would constitute ideas on parental sacrifice, and thus the items and scale may not be suitable for Chinese living in their hometowns. Third, the scale was developed only according to the perceptions of adolescents, ignoring parents' perceptions of parents. The gross conceptualization of the concept as well as the scarcity of relevant measurement tools highlight the need for a clear conceptualization and operationalization of the concept of parental sacrifice in the Chinese context.

4.5.4 Parental differences in family processes

Though research on parental differences in family processes of Chinese families in the context of poverty is almost non-existent, there is some theoretical support for parental differences in family processes of economically disadvantaged Chinese families in both qualitative and quantitative dimensions.

As mentioned in Section 2.4.1, psychoanalytic theory (Hosley & Montemayor, 1997), sex-role theory (Bem, 1974), the gender-ideology approach (Coverman, 1985; Kluwer et al., 2000), and the resource perspective (Presser, 1994) suggests role differentiation between fathers and mothers in family processes and parenting practices. Moreover, these theories suggest that fathers may be less involved than mothers in socialization of children, which is further reinforced in economically disadvantaged families. The physically demanding

jobs and long and non-standard hours of work bring structural constraints for fathers experiencing economic disadvantage to be involved in parenting.

Generally speaking, under the role theory of cultural perspective, fathers and mothers in Chinese culture (influenced by Confucian thought) have different roles in family processes. Fathers are culturally defined as providers and disciplinarians in the family, responsible for mobilizing resources for the family and exercise “training” of children (*jiao*), whereas mothers are caregivers of the family, responsible for nurturing and caring of the children. The father is considered a “harsh disciplinarian” whereas the mother is considered kind and affectionate (Shek, 2002c, p. 193). This sustains the “strict fathers, kind mothers” thesis.

However, that thesis is challenged by some Chinese family research (Shek, 1998c, 2007a, 2008b), which provides empirical support for the “strict mothers, kind fathers” thesis, or even “stricter mothers and kinder mothers” with fathers having a detached role (Shek, 2007a, 2008b). The inconsistent results about fathers’ role and involvement in parenting in Chinese families call for more research in this area.

4.5.5 Parent-adolescent discrepancies in perceptions of family processes

Though research on parent-adolescent discrepancies in perceived family processes of economically disadvantaged Chinese families is almost non-existent, there is some theoretical support for parent-adolescent discrepancies in perceptions of family processes in Chinese families in the context of poverty.

As suggested in Section 2.4.2, three theoretical models that account for parent-adolescent differences on the perceptions of family processes. These include individuation of adolescents as a normative developmental process (Grotevant & Cooper, 1986); the “generational stake” hypothesis in which parents tend to maximize parent-child similarities, whereas adolescents have a stake to minimize the similarities (Bengtson & Kuypers, 1971); and the conflictual interactions between parents and adolescents that may reflect family disorganization, maladaptive family interaction patterns, and a lack of cohesion (Minuchin, 1985; Olson et al., 1983). The empirical support for these parent-adolescent differences in the Chinese community (Padmawidjaja & Chao, 2010; Shek, 1995) suggests that the phenomena are consistent across different

cultures.

However, there is no related research predicting parent-adolescent discrepancies in perception of family processes for adolescent development in Chinese culture. Nor there is any research on parent-adolescent discrepancies in perceptions of family processes in economically disadvantaged families. From the cross-cultural perspective, the lack of related Chinese research prompts the question of whether such parent-child discrepancies are predictive of poor adolescent development in Chinese families. With the Chinese family's collectivist orientation, harmonious family functioning and interdependent relationships between parents and adolescents are building blocks for emotional adjustment and development of self-identity of Chinese adolescents. While establishing social ties under collectivist orientation would imply strong attachment of adolescents with their families, parent-child discrepancies in perception will lead to miscommunication and a loss of affection in the family, which in turn would result in emotional disturbance on adolescents. Moreover, it is suggested that the "self" concept rooted in Confucian thought is a "relational" self (de Vos, 1973; Ho, 1985). Chinese adolescents develop their identities in coexistence with others; the realization of self occurs through harmonizing relationships with others, including family members (Ho, 1995). Thus, parent-adolescent discrepancies in perceptions of family processes imply social disapproval and may adversely affect adolescents' psychological competence. The situation will further be intensified in economic disadvantaged families, as parent-adolescent discrepancies in perceptions of family processes may include disagreement on allocation of scarce and vulnerable family resources.

4.6 Summary

The ecological perspective of human development is the employed as the theoretical perspective of the current study. This perspective demonstrates good properties in (1) structure and consistency; (2) empirical support; (3) heuristic value and sensitivity; and (4) usefulness. In understanding the relationships of parental beliefs, family processes, and motivation and competence of economically disadvantaged adolescents, the expectancy-value theory on motivation (Eccles et al., 1998, 2006) and the social capital theory of the family

(Coleman, 1988, 1990) construct the theoretical framework of the study. While Western theories are the skeleton of the study, Chinese philosophies and culture are also emphasised for their important roles in shaping the conceptualization of parental beliefs, family process and adolescent development. Examples are Chinese attitudes on and strategies for adaptation to adversity, the importance of education and scholarship with the emphasis on effort, clear hierarchical family relationships, well-defined family roles, more restrictive and authoritarian socialization practice of children, “relational” self-concept and cardinal virtue of filial piety embedded in Chinese culture.

With the above considerations, a hypothetical model illustrating the relationships of parental beliefs, family processes and achievement motivation and competence of economically disadvantaged adolescents has been proposed. Three parental beliefs, namely Chinese cultural beliefs about adversity, attribution of children’s success and failure to effort, and expectations of children’s future are predictor variables, whereas adolescents’ achievement motivation and psychological competence are outcome variables. Parenting styles and practices, family functioning, and parental sacrifice for children’s education are mediating variables that mediate the influences of parental beliefs on achievement motivation and psychological competence. Finally, there is theoretical support for parental differences and parent-adolescent discrepancies in perceptions of family processes, and for the proposition that such discrepancies adversely influence the psychological development of economically disadvantaged adolescents.

Chapter Five: Research questions and hypotheses

In this study, seven research questions are addressed:

1. Among economically disadvantaged parents, are there any relationships between Chinese cultural beliefs about adversity and child-specific beliefs, including attribution of children's success and failure to effort, and expectations of children's future?
2. Do parental beliefs (Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, and expectations of children's future) influence parenting styles and practices, family functioning, and parental sacrifice for children's education in economically disadvantaged families?
3. Do parenting styles and practices, family functioning, and parental sacrifice for children's education influence achievement motivation and psychological competence of economically disadvantaged adolescents?
4. Do the family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education mediate the influence of parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs (attribution of children's success and failure to effort, and expectations of children's future) on achievement motivation and psychological competence of economically disadvantaged adolescents?
5. Are there any differences in family processes between fathers and mothers?
6. Are there any differences in the perceptions of family processes between parents and adolescents?
7. Do parent-child discrepancies in perceptions of family processes influence adolescents' achievement motivation and psychological competence in economically disadvantaged families?

The research questions involve three units of analysis: fathers, mothers and adolescents; thus, the questions should be investigated from both parents' and adolescents' perspectives. For a clearer framework, the background of each research question is presented in the following sections.

Research question 1

Among economically disadvantaged parents, are there any relationships between

Chinese cultural beliefs about adversity and child-specific beliefs, including attribution of children's success and failure to effort, and expectations of children's future?

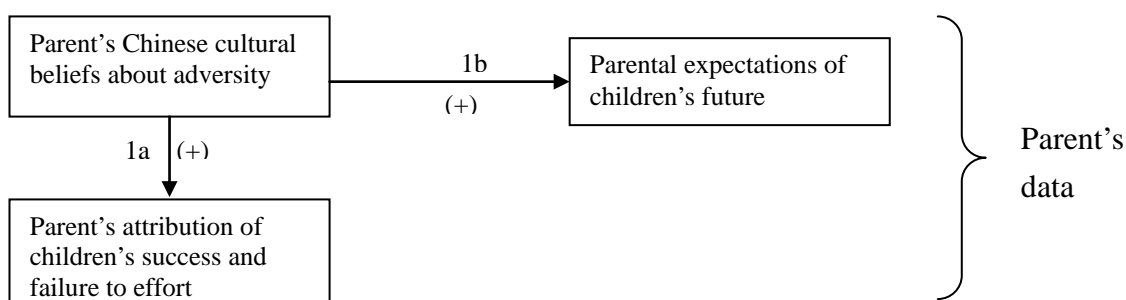
The first research question addresses the inter-relationships among parents' beliefs. According to the ecological perspective (Section 4.1.1) and the expectancy-value theory on motivation (Section 4.2.1), Hypotheses 1a and 1b are proposed:

Hypothesis 1a: Parents' stronger endorsement of positive Chinese cultural beliefs about adversity is related to stronger attribution of their children's success and failure to effort.

Hypothesis 1b: Parents' stronger endorsement of positive Chinese cultural beliefs about adversity is related to stronger expectations of their children's future.

Hypotheses 1a and 1b are illustrated in Hypothetical Model 1.

Figure 5.1: Hypothetical Model 1



Research question 2

Do parental beliefs (Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, and expectations of children's future) influence parenting styles and practices, family functioning, and parental sacrifice for children's education in economically disadvantaged families?

To address Research Question 2, two relevant questions were asked:

Research Question 2.1: Are there any relationships between parental beliefs

(Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, and expectations of children's future) and the family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education in economically disadvantaged families?

Research Question 2.2: Among parental beliefs, what are the predictors of family processes based on parents' data?

According to the expectancy-value theory on motivation (Section 4.2.1) and the discussion in Section 4.5.1, Hypotheses 2.1a to 2.1i are proposed from the parent's perspective.

Hypotheses 2.1a, 2.1b, and 2.1c describe relationships between parents' Chinese cultural beliefs about adversity and family processes:

Hypothesis 2.1a: Parents' stronger endorsement of positive Chinese cultural beliefs about adversity is related to higher parental endorsement of positive parenting styles and more parental control.

Hypothesis 2.1b: Parents' stronger endorsement of positive Chinese cultural beliefs about adversity is related to a higher level of family functioning.

Hypothesis 2.1c: Parents' stronger endorsement of positive Chinese cultural beliefs about adversity is related to more parental sacrifice for children's education.

Hypotheses 2.1d, 2.1e, and 2.1f describe relationships between family processes and parents' attribution of children's success/failure to effort:

Hypothesis 2.1d: Parents' stronger attribution of children's success and failure to effort is related to stronger endorsement of positive parenting styles and more parental control.

Hypothesis 2.1e: Parents' stronger attribution of children's success and failure to effort is related to a higher level of family functioning.

Hypothesis 2.1f: Parents' stronger endorsement of children's success and failure

to effort is related to more parental sacrifice for children's education.

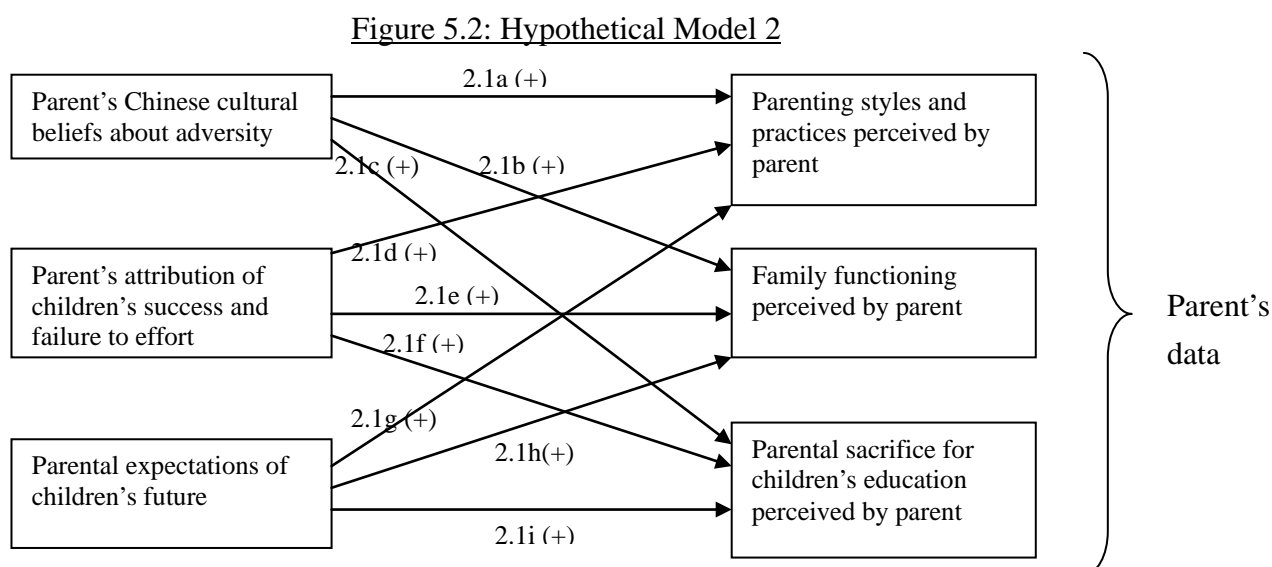
Hypotheses 2.1g, 2.1h, and 2.1i describe relationships between parents' expectations of children's future and family processes:

Hypothesis 2.1g: Higher parents' expectations of children's future are related to stronger endorsement of positive parenting style and more parental control.

Hypothesis 2.1h: Higher parents' expectations of children's future are related to a higher level of family functioning.

Hypothesis 2.1i: Higher parents' expectations of children's future are related to more parental sacrifice for children's education in economically disadvantaged families.

Hypotheses 2.1a to 2.1i are illustrated in Hypothetical Model 2.



Research question 3

Do parenting styles and practices, family functioning, and parental sacrifice for children's education influence achievement motivation and psychological competence of economically disadvantaged adolescents?

To address Research Question 3, two relevant questions were asked.

Research Question 3.1: Are there any relationships between family processes (endorsement of positive parenting styles and practices, family functioning, and parental sacrifice for children's education) and achievement motivation and psychological competence of economically disadvantaged adolescents?

Research Question 3.2: Among different family processes, what are the predictors of achievement motivation and psychological competence of economically disadvantaged adolescents?

According to the expectancy-value theory on motivation (Section 4.2.1), the social capital theory in the family (Section 4.2.2), and the discussion in Sections 4.5.2 and 4.5.3, Hypotheses 3.1a to 3.1f are proposed from the perspective of economically disadvantaged adolescents.

Hypotheses 3.1a and 3.1b describe relationships between parenting styles and practices and outcomes of adolescents:

Hypothesis 3.1a: Stronger parental endorsement of positive parenting styles and more parental control are related to higher achievement motivation of adolescents.

Hypothesis 3.1b: Stronger parental endorsement of positive parenting styles and more parental control are related to better psychological competence of adolescents.

Hypotheses 3.1c and 3.1d describe relationships between family functioning and outcomes of adolescents:

Hypothesis 3.1c: A higher level of family functioning is related to higher achievement motivation of adolescents.

Hypothesis 3.1d: A higher level of family functioning is related to better psychological competence of adolescents.

Hypotheses 3.1e and 3.1f describe relationships between parental sacrifice for

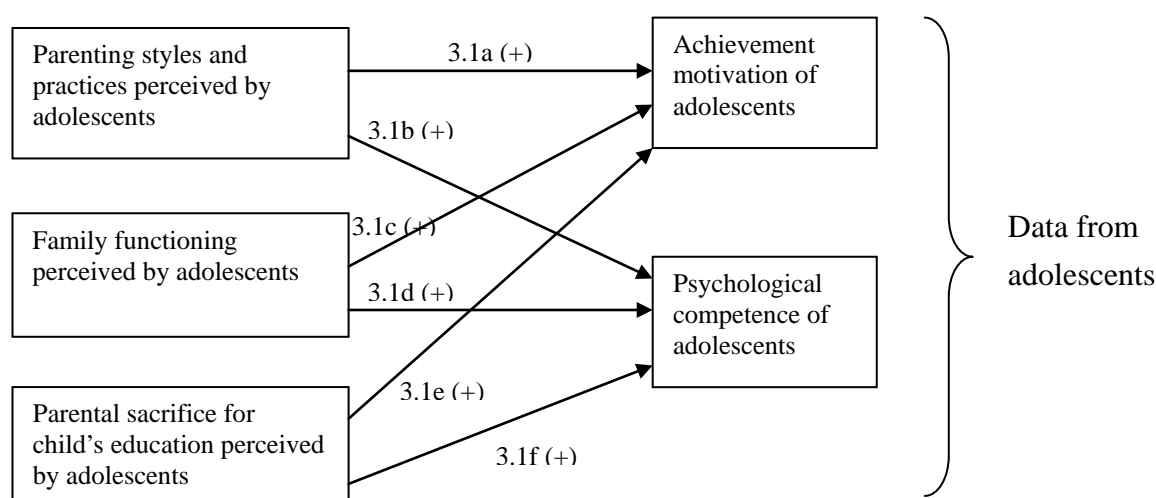
children's education and outcomes of adolescents:

Hypothesis 3.1e: More parental sacrifice for children's education is related to higher achievement motivation of adolescents.

Hypothesis 3.1f: More parental sacrifice for children's education is related to better psychological competence of adolescents.

Hypotheses 3.1a to 3.1f are illustrated in Hypothetical Model 3.

Figure 5.3: Hypothetical Model 3



Research question 4

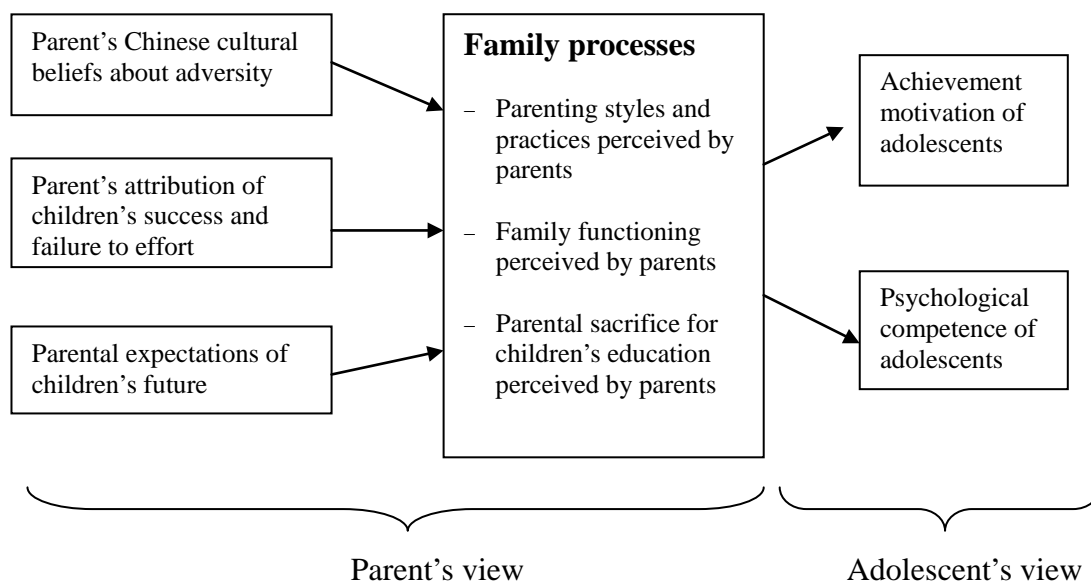
Do the family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education mediate the influence of parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs (attribution of children's success and failure to effort, and expectations of children's future) on achievement motivation and psychological competence of economically disadvantaged adolescents?

Regarding parenting styles and practices, family functioning, and parental sacrifice for the children's education from the parent's perspective, the adolescent's perspective and a combination of both, three possible models (Hypothetical Model 4a, Hypothetical Model 4b and Hypothetical Model 4c) were proposed:

Hypothetical Model 4a takes the *parent's* perspective on perceived parenting

styles and practices, as well as on family functioning and parental sacrifice for children's education.

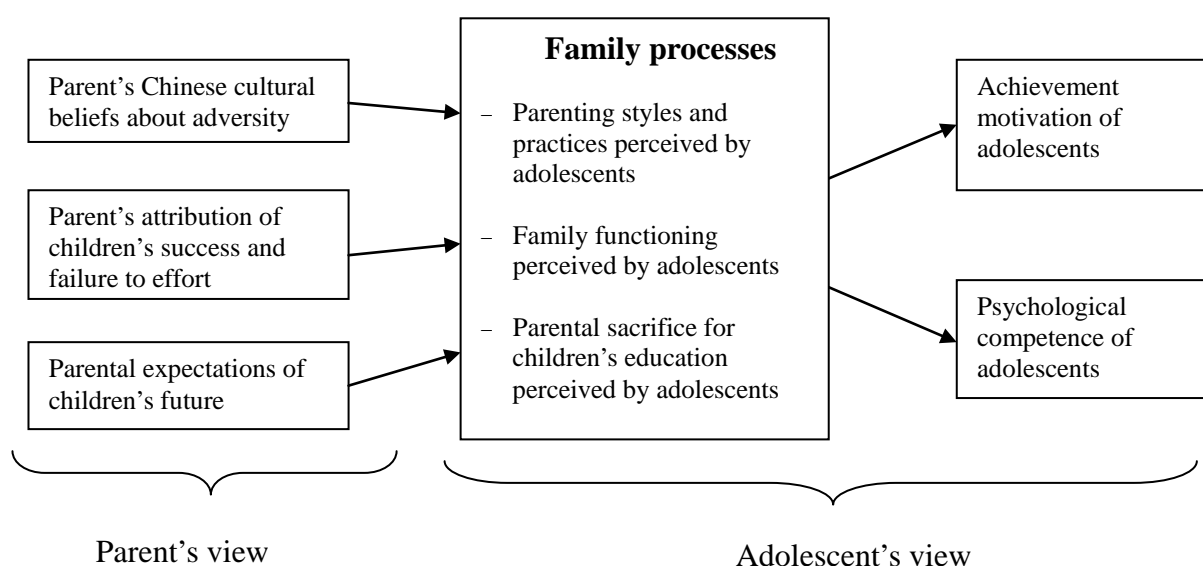
Figure 5.4a: Hypothetical Model 4a



Hypotheses 4a: Family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education as perceived by *parents* mediate the influence of parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs (attribution of children's success and failure to effort, and expectations of children's future) on achievement motivation and psychological competence of economically disadvantaged adolescents.

Hypothetical Model 4b takes the *adolescent's* perspective on perceived parenting styles and practices, family functioning and parental sacrifice for the children's education in the model.

Figure 5.4b: Hypothetical Model 4b



Hypotheses 4b: Family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education as perceived by *adolescents* mediate the influence of parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs (attribution of children's success and failure to effort, and expectations of children's future) on achievement motivation and psychological competence of economically disadvantaged adolescents.

Hypotheses 4c

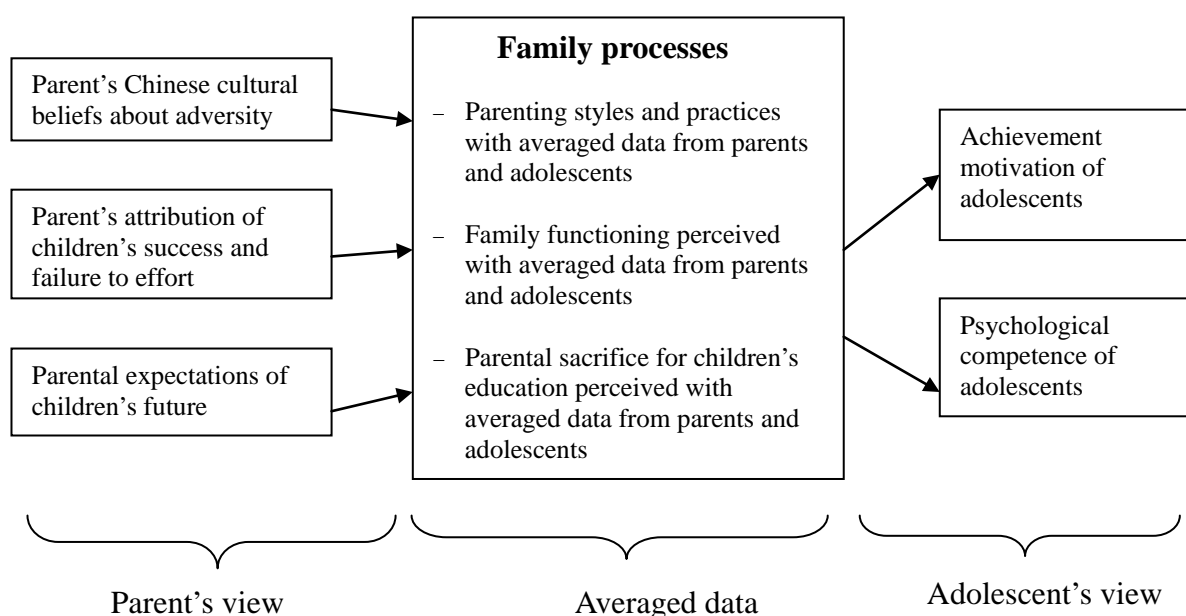
Since the perceptions of family processes may be different from different members within the family (Noller & Collan, 1986; Ohannessian et al., 1995), assessment of data from different sources will give us a more complete picture on how family processes influence adolescent development. Also, employment of a single perspective to understand the association will confine the findings by response set, a multiple perspective to study family processes can give us a broader scope. In the research, perceptions of parents and perceptions of adolescents are different. An integrative perception of family processes could be arrived by combining the perspectives (Shek, 1998a).

The integrative perception of family processes can be done by averaging the scores of each scale from data of adolescents and parents. There are justifications for the practice. First, each family member may have some bias in perceiving parenting styles, practices, family functioning and parental sacrifice for children's education, so averaging their scores on each scale will give us an

integrative (though artificial) picture of family processes. This allows triangulation of different data sources. By averaging the scores of different data sources, the problem of individual response bias could be minimized. Also, this practice has been used in research on family processes: studying family functioning by averaging the scores of adolescents', mothers' and fathers' perceptions to get an integrative perspective (Shek, 1998a); and studying parenting styles by aggregating and averaging fathers' and mothers' scores of perception to get an overall parental measure (Lamborn et al, 1991; Steingberg et al., 1992; Stice & Barrera, 1995) etc. However, for further justification of the practice, it is necessary to investigate the data of each source on their correlations amongst others. If the data of different sources are significantly correlated amongst themselves, the practice of averaging the responses is empirically supported.

Hypothetical Model 4c takes the *averaged* data of parents' and adolescents' perceived parenting styles and practices, family functioning, and parental sacrifice for children's education in the model.

Figure 5.4c: Hypothetical Model 4c



Hypotheses 4c: Family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education (with *averaged* data from parents and adolescents) mediate the influence of parents' Chinese cultural

beliefs about adversity and parents' child-specific beliefs (attribution of children's success and failure to effort, and expectations of children's future) on achievement motivation and psychological competence of economically disadvantaged adolescents.

Research question 5

Are there any differences in family processes between fathers and mothers?

Based on Section 4.5.4, Hypotheses 5.1 to 5.4 are proposed.

Hypothesis 5.1: Mothers display more positive parenting attributes than do fathers.

Hypothesis 5.2: Mothers display more parental control than do fathers.

Hypothesis 5.3: Mothers show more sacrifice for children's education than do fathers.

Hypothesis 5.4: Fathers perceive higher level of family functioning than do mothers.

Research question 6

Are there any differences in the perception of family processes between parents and adolescents?

Based on Section 4.5.5, Hypotheses 6.1 to 6.4 are proposed.

Hypothesis 6.1: Adolescents perceive weaker paternal endorsement of positive parenting styles than do fathers.

Hypothesis 6.2: Adolescents perceive weaker maternal endorsement of positive parenting styles than do mothers.

Hypothesis 6.3: Adolescents perceive less parental control than do fathers.

Hypothesis 6.4: Adolescents perceive less maternal control than do mothers.

Hypothesis 6.5: Adolescents perceive less paternal sacrifice for children's education do fathers.

Hypothesis 6.6: Adolescents perceive less maternal sacrifice for children's education than do mothers.

Hypothesis 6.7: Adolescents perceive lower level of family functioning than do fathers.

Hypothesis 6.8: Adolescents perceive lower level of family functioning than do mothers.

Research question 7

Do parent-child discrepancies in perceptions of family processes influence adolescents' achievement motivation and psychological competence in economically disadvantaged families?

To address Research Question 7, two relevant questions were proposed:

Research Question 7.1: Are there any relationships between parent-child discrepancies in family processes (endorsement of positive parenting styles and practices, family functioning, and parental sacrifice for children's education) and achievement motivation and psychological competence of economically disadvantaged adolescents?

Research Question 7.2: Among different parent-child discrepancies in family processes, what are the predictors of achievement motivation and psychological competence of economically disadvantaged adolescents?

Based on Section 4.5.5, Hypotheses 7.1a to 7.1f were proposed.

Hypothesis 7.1a: Greater discrepancies between parents and adolescents on positive parenting styles and parental control are related to lower achievement motivation of adolescents.

Hypothesis 7.1b: Greater discrepancies between parents and adolescents on positive parenting styles and parental control are related to poorer psychological competence of adolescents.

Hypothesis 7.1c: Greater discrepancies between parents and adolescents on family functioning are related to lower achievement motivation of adolescents.

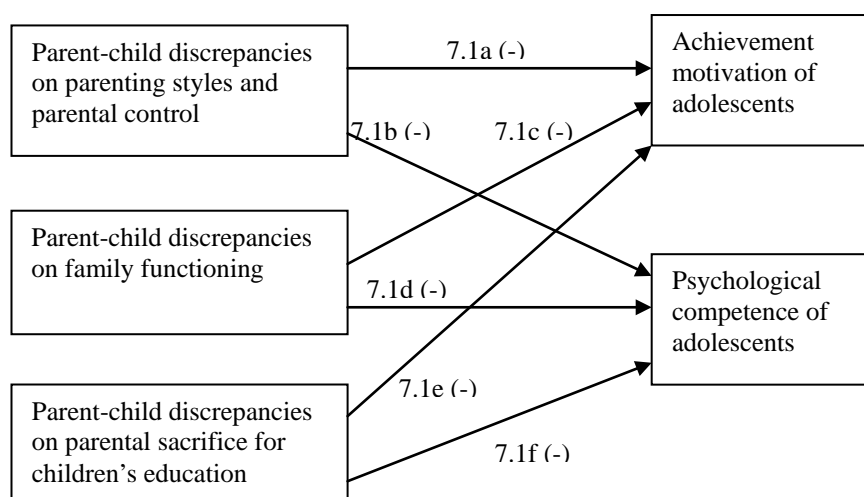
Hypothesis 7.1d: Greater discrepancies between parents and adolescents on family functioning are related to poorer psychological competence of adolescents.

Hypothesis 7.1e: Greater discrepancies between parents and adolescents on parental sacrifice for children's education are related to lower achievement motivation of adolescents.

Hypothesis 7.1f: Greater discrepancies between parents and adolescents on parental sacrifice for children's education are related to poorer psychological competence of adolescents.

Hypotheses 7.1a to 7.1f are illustrated in Hypothetical Model 5.

Figure 5.5: Hypothetical Model 5



Chapter Six: Research design and methodology

In this section, research design and methodology are discussed in three parts. The first part highlights the proposed research design with philosophical orientation and justifications. The second part outlines the measurement tools used in the study. The third part covers the two implementation phases – the validation of the instruments, and the main study.

6.1 Research design – philosophical orientation and justifications

A quantitative research design with the philosophical orientation of post-positivism was adopted for this study. Post-positivism stems from the paradigm of positivism and thus shares some of its fundamental principles. Post-positivism believes that objective reality is ‘out there’, has an identity of its own, and is governed by strict, natural laws. The knowledge of these laws can help us predict and control the outcomes of human actions. Causes produce effects under certain conditions, and predictions can be controlled by the occurrence of such conditions (Sarantakos, 2005). However, post-positivism exhibits some alternations from positivism when dealing with ontological, epistemological and methodological inquiries. Post-positivism shares the ontology of “critical realism”, acknowledging the existence of real reality but only as “imperfectly and probabilistically apprehendable” (Lincoln & Guba, 2000, p. 168); that is, post-positivism acknowledges the fact that the objective world is imperfectly known and measurable. Thus, claims to reality are subject to critical examination of whether they approximate reality as closely as possible. Epistemologically, post-positivism takes the “modified dualist/objectivist” view (Lincoln & Guba, 2000, p. 168) which suggests that it is impossible to remove entirely the influence of the subject from the object of analysis, and thus objectivity is considered as regulatory ideals (Philips, 1990). Methodologically, post-positivism proposes the idea of “critical multiplism” (Lincoln & Guba, 2000, p. 168) that suggests the use of multiple methods of inquiry and different sources of information. Post-positivists permit social scientists to discover reality utilizing quantitative methods in combination with qualitative methods. This allows more room for researchers to approach reality.

Sharing the above philosophical orientation of post-positivism, the

quantitative approach to research design has several further characteristics. First, it relies on empirical methods with clear rules and procedures. Deductive methods such as hypothesis testing are employed. Accuracy and precision in measurement is required to ensure reliability and validity. Second, value neutrality is required throughout. The researcher should be an objective, neutral and 'disinterested' scientist. Distance between researchers and subjects should be maintained so as to reduce personal bias. Third, representativeness and generalization of the findings to explain social phenomena and predict outcomes are essential. Fourth, quantification of the results is emphasized with the use of mathematical models, statistical procedures and presentations. Fifth, reliability, validity and objectivity are stressed as quality criteria.

The quantitative research approach has several merits. One important strength is its power to explain social phenomena and predict outcomes. The clear rules and requirements on methodology and sampling; the reliability, validity and accuracy on measurement tools; the systematic procedures of data collection and analysis; and the nomothetic commitment provide precise and reliable evidence for understanding social reality. Furthermore, the paths of effects are portrayed and the outcomes are predicted more accurately and reliably. As suggested by Outhwaite (1987), any propositions which cannot be tested and verified are "literally meaningless" (p. 6). Quantitative research allows propositions to be tested and verified. Besides, quantitative research enhances objectivity which is important in scientific research. Manicas (2007) suggested that quantitative approach "eschewed subjectivity [and] theorized society as an objective method to identify objective 'social fact'" (p.8). In addition, parsimony, precision and ease of analysis also characterize quantitative methodology. Last but not least, quantitative research allows statistical inferences, making generalization of the findings possible.

Inevitably, the quantitative approach has been criticized for its ontological assumptions as well as its methodology. Ontologically, it is argued that the propositions "reality is 'out-there'" and "the human world is governed by absolute laws" are debatable. The philosophical assumptions of positivism are rejected by the proponents of constructivism. Constructivists believe that reality is created, constructed and enacted by human beings. As each person has his/her own experience and unique interpretation of the meanings of his/her own actions,

the scope of findings on research should be idiographic rather than nomothetic, i.e., stressing the uniqueness of every individual. Thus, it is impossible and unrealistic to understand reality through quantitative methods.

As a methodology, quantitative research relies heavily on accurate and quantified measurements as well as quantification of results through the use of mathematical models and statistical procedures. However, it is criticized that quantitative research is too restrictive to understand the complex, ever-changing social world; thus, it is “methodologically inadequate” (Peile, 1988, p. 2). This echoes Patton’s (1990) criticism on quantitative approach, that it “(1) oversimplifies the complexities of real-world experiences; (2) misses major factors of importance that are not easily quantified, and (3) fails to portray a sense of the program and its impacts as a ‘whole’ ” (pp. 50-51).

Critics of quantitative research also query whether quantitative research can “measure” the essence of human life. With the restrictions of deductive logic for hypothesis testing, social phenomena and human actions are measured “variables”. The subjective experiences and interpreted meanings of the ‘actors’ are neglected. In addition, the positions and roles of researchers and respondents in quantitative research are also questioned. As the researcher determines the variables to be studied, sets the hypotheses, decides the research design and measurement tools, and controls the context, manipulation of the study could be enormous. Last but not least, respondents are turned into ‘units’ or ‘objects’ of study. Lofland (1971) criticized the statistical portrayal of humans and their actions by describing “those people appearing as numbers in their [statistical sociologists’] tables and as correlations in their matrices!” (p.3).

Though there are limitations to the quantitative approach, it was chosen as the methodology of this study for four reasons. One important reason is its power to understand the relationships among economic disadvantage, parental beliefs, family processes and adolescent development, to predict outcomes that are more systematic, accurate and reliable. Second, the literature and theoretical models provide us with rich ground for the portrayal of pathways between parental beliefs, family processes and adolescent development. A quantitative research design allows us to test and verify the hypothetical relationships among economic disadvantage, parental beliefs, family processes and adolescent development. Third, objectivity, parsimony, precision, and ease of analysis are

essential for this study. Fourth, validated and indigenous developed measurement tools are available for measuring the constructs presented in the study. This enhances the possibility of implementation.

A correlational approach was chosen from the possible quantitative research designs. Gravetter and Forzano (2006) described correlational research strategy: “two variables are measured and recorded for each individual. The measurements are then reviewed to identify any patterns of relationship that exist between the two variables and to measure the strength of the relationship” (p.308). As the purpose of the research is to understand the pathways through which parental beliefs influence achievement motivation and psychological competence of economically disadvantaged adolescents, the correlational approach is the most suitable to examine the relationships among the relevant variables.

The cross-sectional approach was employed because of resource constraints. Cross-sectional study examines a phenomenon by taking a cross-section at one point in time. The limitation lies in the inherent problem of drawing casual inferences without taking the time order into account.

6.2 Measurement tools

Measurement tools are important in quantitative data collection. Therefore, validated psychometric scales were used. Table 6.1 highlights these measurement instruments.

Table 6.1: The measurement instruments used in the study

Variables	Respondents	Instrument	No. of items	Sources
Chinese cultural beliefs about adversity	Father	Chinese Beliefs about Adversity Scale (CBA)	9	Shek, 2004b
	Mother			
Parental attribution of children's success and failure to effort	Father	Parents' Attributions Questionnaire (PAQ)	24	Phillipson, 2006
	Mother			
Parental expectations of children's future	Father Mother	Development of a new scale		

Parenting styles	Father	Paternal Parenting Style Scale (FPS) (modelled after the items of the adolescent version)	20	Shek, 1999b
	Mother	Maternal Parenting Style Scale (MPS) (modelled after the items of the adolescent version)	20	
	Adolescent	Paternal Parenting Style Scale (APPS)	20	
		Maternal Parenting Style Scale (AMPS)	20	
Parental control	Father	Chinese Paternal Control Scale (FCS) (modelled after the items of the adolescent version)	12	Shek, 2007d
	Mother	Chinese Maternal Control Scale (MCS) (modelled after the items of the adolescent version)	12	
	Adolescent	Chinese Paternal Control Scale (APCS)	12	
		Chinese Maternal Control Scale (AMCS)	12	
Family functioning	Father	Chinese Family Assessment Instrument (C-FAI)	33	Shek, 2002a
	Mother			
	Adolescent			
Parental sacrifice for children's education	Father	Development of a new scale		
	Mother			
	Adolescent			
Achievement motivation	Adolescent	Social Oriented Achievement Motivation scale (SOAM)	30	Yu & Yang, 1989

Psychological competence	Adolescent	Short-form of Chinese Positive Youth Development Scale (CPYDS): Resilience subscale (RE), Cognitive competence subscale (CC), Self-determination subscale (SD), Self-efficacy subscale (SE), Spirituality subscale (SP), Beliefs in the future subscale (BF), Clear and positive identity subscale(CPI)	20	Shek et al., 2007
Demographic data	Father, Mother, Adolescent	Self-devised questions (sex, age, duration of stay in Hong Kong, education standard, employment status, income, marital status, number of family members, composition of family members, types of accommodation)	11 for parents, 14 for adolescents	

Chinese Beliefs about Adversity Scale (CBA). Shek (2004b) developed a nine-item Chinese Beliefs about Adversity Scale with a group of psychologists and social workers. The scale attempts to measure the cultural beliefs of Chinese people about adversity. While two items (item 2 and item 5) are concerned with negative cultural beliefs about adversity, the rest assess positive cultural beliefs. For each item, the respondents are asked to rate their degree of agreement with the item on a 6-point scale. Examples of the items are “*Chi de ku zhong ku, fang wei ren shang ren*” (hardship increases stature); “*Hao chou ming sheng cheng*” (whether a life is good or bad depends on fate). Factor analysis was performed to determine the factor structure and internal consistency of the scale (Shek, 2004b). Two factors – positive Chinese beliefs about adversity (PCBA) and negative Chinese beliefs about adversity (NCBA) – were extracted. Reliability analysis showed that the two subscales were reliable (Cronbach’s alpha of PCBA = .88, Cronbach’s alpha of NCBA = .60) (Shek, 2004b). Higher CBA scores indicate a higher degree of agreement with positive Chinese beliefs about adversity.

Parents' Attributions Questionnaire (PAQ). The scale was based on the Causal Attribution Scale Questionnaire (CASQ) developed by Chan (1994), revised by Chan and Moore (2006), and standardized in Hong Kong (Mok et al., 2002). The CASQ was developed within the framework of Weiner's (1974, 1985) theory of attribution of one's success/failure and the literature on strategy attributes (Borkowski et al. 1988; Chan, 1994, 1996). Four attributes – effort, ability, strategy use and luck – were identified for success and failure in school children in relation with their schoolwork (Chan & Moore, 2006). The Parents' Attributions Questionnaire contains 24 items based on the items of the CASQ. There are 12 statements reflecting success and 12 reflecting failure. Each statement is representative of one of the four causes (effort, ability, strategy use and luck). Parents are requested to rate their agreement with each statement on a Likert scale ranging from “Strongly disagree” to “Strongly agree”. Some example items are: “If my child completes a worksheet well, it is most likely because he/she is lucky”; “When my child does well in exams, it is most likely because he/she has effective strategies”. Factor analysis was performed to obtain validity of the scale with the parental data from three schools in Hong Kong (Phillipson, 2006). Six factors – attributing child success to effort and strategy, attributing child achievement to luck, attributing child success to ability; attributing child failure to strategy, attributing child failure to ability, and attributing child failure to effort – were extracted. Internal consistency of the scale was obtained, with Cronbach's alpha = .79 (Phillipson, 2006).

Parental Expectations of Children's Future Scale (PECF). Most research on parental expectations of children's future has focused on expected completion of schooling as the sole indicator (Davis-Kean, 2005; Hao & Bonstead-Bruns, 1998; Kim et al., 1998; Peng & Wright, 1994; Spera et al. 2009). Other dimensions of parental expectations, including educational aspiration, occupation, economic standard and family obligations, have been ignored. Thus, development and validation of a new measurement tool on assessing parental expectations of children's future was suggested.

Paternal Parenting Style Scale (FPS) and Maternal Parenting Style Scale (MPS). Base on the framework of Maccoby and Martin (1983) and parenting assessment work of Lamborn et al. (1991), Shek (1999b) developed a

modified version of the Paternal Parenting Style Scale (FPS) and the Maternal Parenting Style Scale (MPS). There are two subscales: Paternal Demandingness Scale (FDEM)/ Maternal Demandingness Scale (MDEM), to assess the demandingness of the father and mother towards the child's behaviours; and Paternal Responsiveness Scale (FRES)/ Maternal Responsiveness Scale (MRES), to assess the responsiveness of the father and mother to the child's behaviours. There are 7 items in the Demandingness Scale and 13 in the Responsiveness Scale. The scales were found valid and reliable in the Chinese culture with internal consistency, test-retest reliability, and concurrent validity (Shek, 1998d, 1999b, 2003a; Shek et al., 1995). Higher levels on the Paternal/Maternal Parenting Style Scale indicate more positive parental attributes.

Chinese Paternal Control Scale (CPCS) and Chinese Maternal Control Scale (CMCS). Based on a review of the literature, Shek (2005e, 2007d) developed a twelve-item Chinese Paternal/Maternal Control Scale to assess control based on indigenous Chinese cultural beliefs. Parents are requested to rate the degree of agreement with each item on a 4-point scale ranging from "Strongly agree" to "Strongly disagree". Examples of the items are "My father expects me to be mature (*sheng xing*)"; "My father expects me to have good behaviour so that I will not bring dishonor to the family (*you ru jia sheng*)". The CPCS and CMCS showed internal consistency, with Cronbach's $\alpha = .86$ and $.85$, respectively. The mean inter-item correlation coefficients of the two scales were also acceptable ($.35$ for CPCS, $.33$ for CMCS). CPCS and CMCS scores were also significantly related to measures of psychological control, parental expectations, and strict disciplines, thus providing support for the construct validity of the two scales (Shek, 2007d). The total score of the items in each scale is an indicator of the degree of parental control based on Chinese concepts, with a higher score indicating a higher level of Chinese parental control.

The Chinese Family Assessment Instrument (C-FAI). The C-FAI is an indigenous 33-item self-report instrument to assess family functioning in Chinese populations. The C-FAI has five subscales – mutuality, communication, conflict and harmony, parental concern, and parental control. Higher scores indicate higher level of family functioning. Shek and his colleagues (Shek,

2002a, 2003b; Siu & Shek, 2005a; Shek & Ma, 2010) have performed a series of validity studies that examined the factor structure, reliability, concurrent, and discriminant validity of C-FAI and showed that the scale was a valid and reliable measure of family functioning in the Chinese community.

Parental Sacrifice for Children's Education Scale (SA). As mentioned in Section 4.5.3.3, research into the concept of parental sacrifice for children's education is underdeveloped, and tools for measuring the concept are likewise rare. The measurement tool developed by Chao and Kaeochinda (2010) faces several limitations, especially in its suitability to be used with Chinese in their native places, as the measurement was deliberately developed to measure parental sacrifice of Chinese adolescent immigrants in the United States. An indigenous scale assessing parental sacrifice for children's education was developed and validated for this study.

Social Oriented Achievement Motivation (SOAM) scale. Social Oriented Achievement Motivation (SOAM) Scale is a self-reported culture-specific measure of Chinese achievement tendencies developed by Yu and Yang (1989). The SOAM scale contains 30 items that measures four aspects of achievement motivation: achievement value, achievement goal, achievement related behaviours and outcome evaluation. The SOAM scale emphasises goals and evaluation criteria defined by significant others, groups and society (Yu, 1996). Examples of SOAM scale items are "In order not to disappoint my parents, I always try to do what they expect" and "The main goal of my life is to do things that will make my parents feel proud". Responses to the item statements are reported on a 6-point Likert scale where 1= totally disagree and 6= totally agree. The scale has good reliability in Cronbach's coefficient alphas ranging .88 to .92 (Yu, 1991). Test-retest correlations over two weeks also obtained good reliability results of .84 to .86 (Yu & Yang, 1989). The scale also provided preliminary evidence on factor analysis, as well as convergent validity and discriminant validity with correlation of the scores of Edwards Personal Preference Scale (EPPS) (Yu & Yang, 1989). The total score of the items in the scale is an indicator of the degree of social-oriented achievement motivation, with higher scores indicating higher levels.

Chinese Positive Youth Development Scale (CPYDS). Shek et al. (2007) developed a 90-item Chinese Positive Youth Development Scale (CPYDS) that contains 15 aspects of positive youth development. Among the 15 aspects, 7 subscales measure the psychological competence of adolescents:

- The resilience subscale (RE) is a six-item subscale that measures the capacity to adapt to changes and stressful events in healthy and adaptive ways. Some items were modelled after the items of the *Chinese Beliefs about Adversity Scale* (Shek, 2004b).
- The cognitive competence subscale (CC) is a six-item subscale that measures cognitive skills such as problem solving and goal setting, with some items modelled after the Chinese version of the *Social Problem-solving Inventory* (Siu & Shek, 2005b).
- The self-determination subscale (SD) is a 5-item subscale that measures the sense of autonomy, independent thinking and self-advocacy.
- The self-efficacy subscale (SE) is a 2-item subscale that measures skills for coping and mastery.
- The spirituality subscale (SP) is a 7-item subscale that measures sense of purpose and meaning in life, hope, and beliefs in a higher power. The items were modelled after the *Purpose in Life Questionnaire* (Shek, 1992).
- The “Beliefs in the future” subscale (BF) is a 3-item subscale that measures the ability to develop future goals and choices.
- The “Clear and positive identity” subscale (CPI) is a 7-item subscale that measures the development of healthy identity formation and achievement.

The CPYDS showed acceptable internal consistency. The scale also showed evidence of criterion-related validity, construct validity and convergent validity with scores of *Thriving Scale (TH)*, *Life Satisfaction Scale (LIFE)* and *Perceived Academic Performance Scale (PAP)* as well as discriminant validity with scores of *Substance Abuse Scale (SA)*, *Delinquency Scale (DE)* and *Behavioural Intention Scale (BI)* (Shek et al., 2007). A Short-Form of CPYDS was developed with the items of 3, 3, 3, 3, 3, 3 and 2 for RE, CC, SD,

SP, BF, CPI and SE respectively.

6.3 Phases of implementation

The research was implemented in two phases: (1) instrument formulation and validation; and (2) the main study on the relationships of parental beliefs, family processes, and achievement motivation and psychological competence of economically disadvantaged adolescents. This section provides an outline of the validation study and the main study. Further details are provided in Chapter Seven (validation study) and Chapter Eight (main study).

6.3.1 Validation study

Two measurement tools were developed and validated in the study: Parental Expectations of Children's Future Scale (PECF) and Parental Sacrifice for Children's Education Scale (SA). The development process of the measurement tools covered three stages: (1) formulation, (2) content validation by experts, and (3) validation.

To formulate the instruments, a survey of Western literature on parental expectations of children's future and parental sacrifice for children's education was performed. Furthermore, two focus groups of parents and adolescents were arranged and interviewed separately. These interviews sought to understand participants' interpretations and experiences of parental expectations and parental sacrifice. The researcher conducted both interviews, which were audio recorded.

While focus groups can yield rich information for the construction of measurement tools, content validation is important to see whether the measure is valid. Experts were invited to participate in the content-validation process. They were requested to examine (1) relevance of the test items to the construct or subscales measured in the instruments; (2) clarity (i.e., whether the wordings were clear and concise), and (3) representativeness of the items to a particular content domain (i.e., how far the domains covered all the facets of the targeted constructs) (Haynes et al., 1995; Rubio et al. 2003). The experts used a self-administered questionnaire to assess the relevance, clarity and representativeness of the items as well as to give qualitative feedback such as recommendations for modification.

To validate the instruments, two aspects of the scales' psychometric properties were examined. First, reliability, including internal consistency and test-retest reliability, was assessed. Second, validity, including convergent validity and factorial validity, was examined. The validation study not only assessed the instruments' psychometric properties but also provided evidence for further utilization of the scales in the main study.

To assess the psychometric properties of the Parental Expectations of Children's Future Scale (PECF), a convenience sample of 125 parents with children ages 11-16 was performed. To assess the Parental Sacrifice for Children's Education Scale (SA), two separate studies were performed – first, of 125 parents with children ages 11-16, and second, of 373 adolescents aged 11-16.

6.3.2 Main study

The main study aimed to study the relationships of parental beliefs, family processes, achievement motivation and psychological competence of economically disadvantaged adolescents. A sample of 275 intact but economically disadvantaged families was recruited, with at least one adolescent aged 11-16 in each family. The relative poverty concept – 50% of median monthly domestic household income as determined in the 2006 Population By-census – was employed as the poverty threshold. Participating families were recruited through 24 service units of 10 non-governmental organizations located in different districts in Hong Kong. The father, mother and adolescent of each family were requested to complete the Father Questionnaire, the Mother Questionnaire and the Adolescent Questionnaire containing the related validated psychometric measurement scales. The families took around 45 minutes to complete the questionnaires. The data were computed in SPSS for data analysis.

Chapter Seven: Validation Study

The validation study aimed to develop and validate two instruments to measure parental expectations of children's future and parental sacrifice for children's education. The two instruments are Parental Expectations of Children's Future Scale (PECF) and Parental Sacrifice for Children's Education Scale (SA).

The validation study covered three stages: (1) formulation of the instruments, (2) content validation of the instruments by experts, and (3) validation of the instruments. The methods, profile of participants and results of each stage are presented and discussed.

7.1 Formulation of the instruments

As there was no tool in the Chinese context for measuring parental expectations of children's future or parental sacrifice for children's education, there was a need to develop two new measurement tools.

7.1.1 Method

To formulate the instruments, a survey of the Western literature on parental expectations of children's future and parental sacrifice for children's education was performed. (See sections 4.5.1.3 and 4.5.3.3).

With the very limited literature in the Chinese context pertaining to these two areas, it was essential to understand the phenomena directly from the stakeholders. The process is of special importance for an indigenous study where cultural specificity is emphasised. Qualitative study allows researchers to grasp the native meanings and characteristics of the phenomenon, so as to make indigenous conceptualization of the phenomenon possible (Yang, 1999). To construct the measurement tools, two focus groups of parents and adolescents were recruited from two children and youth units in Hong Kong, and then arranged and interviewed separately. Written consent from parents was obtained in both groups. The interviews sought to understand participants' interpretations and experiences of parental expectations of children's future and parental sacrifice for children's education. The interview guides were prepared by the researcher (Appendix 1). The researcher conducted both interviews and the

processes were audio recorded. The focus groups lasted for one hour for adolescents and one hour and fifteen minutes for parents.

7.1.2 Participants

The adolescent group consisted of two boys and six girls, aged 12-16 ($M = 14.13$, $SD = 1.25$). Two of them were studying in Secondary One, two in Secondary Two, and four in Secondary Three. One of them came from a single-parent family and the others from intact families. Family size ranged from 3 to 6 persons ($M = 4.25$, $SD = 1.16$). Four of them came from economically disadvantaged families. The economically disadvantaged participants were recruited to solicit their interpretations and views of the measuring constructs in the context of poverty.

The parent group consisted of seven parents with at least one child aged 11-15. One was a father and six were mothers. The age ranged from 40 to 52 ($M = 46.0$, $SD = 4.32$). Their children were studying in Secondary Two to Secondary Four. There were three intact families, two divorced families, and two widowed families. There were four parents experiencing economic disadvantage.

7.1.3 Results

The content of the interview was fully transcribed by the researcher. Pattern coding was carried out with the transcripts of both focus groups. Miles and Huberman (1994) suggested that pattern coding is “a way of grouping those summaries into a small number of sets, themes, or constructs...it’s an analogue to the cluster-analytic and factor-analytic devices use in statistical analysis” (p 69).

7.1.3.1 Parental Expectations of Children’s Future Scale (PECF)

Analyses of the focus-group narratives showed five categories of responses (educational achievement, self-reliance, occupation, family obligation and conduct). Table 7.1 lists the domains and themes of parental expectations of children’s future.

Adolescents were more ready than parents to suggest parental expectations of education, especially completion of schooling. Adolescents clearly stated that parents expected them to reach university. On the other hand, only one parent had that suggestion, though parents said they would save for their children to

study in university. The unpredictability and uncontrollability of the outcome may constrain parents' suggestion in expecting their children to enter university.

Similarly, adolescents were more ready to suggest parental expectations of family obligation, such as earning enough money to support the family and taking care of parents. Parents mentioned this domain less.

Both parents and adolescents suggested self-reliance was an important attribute of parental expectations of children's future. The domain was also salient in economically disadvantaged families.

On domain of occupational aspirations, adolescents tended to focus on instrumental themes such as income, occupational status and nature of work, whereas parents focused on attitudinal themes such as attitudes to work, interest and prospects on work.

Finally, parents focused heavily on the domain of conduct in their expectations of children's future, especially on being law-abiding. Adolescents also mentioned the theme as a parental expectation, but it was less salient.

Based on the domains and themes suggested in the focus groups, a scale for parental expectations of children's future was developed (Table 7.2).

7.1.3.2 Parental Sacrifice for Children's Education Scale (SA)

Analyses of parents' and adolescents' focus groups showed five categories of responses (striving for financial resources, time spent for education of children, restructuring of daily routines, sacrifice of lifestyle and aspiration, and shielding from worries). Table 7.3 lists the domains and themes of parental sacrifice for children's education.

The focus-group data provided insights on the attributes of the concept of parental sacrifice. Apart from the dimensions of financial resources and time involvement mentioned in the literature on family resources, other domains such as restructuring of daily routine, sacrifice of lifestyle and aspiration, and shielding from worries were suggested by parents or adolescents.

Adolescents were more ready than parents to voice out their experiences of parental sacrifice of financial resources for educational needs. Also, economically disadvantaged adolescents shared in detail their experiences of parents' prioritization of educational provision over personal needs, whereas

adolescents in better economic situations did not.

Besides, parents took time involvement as a major sacrifice for education of adolescents, especially supervising schoolwork. However, adolescents did not regard this as a parental sacrifice. In contrast, some took it as a parental restriction of their freedom, a lack of trust and/or a source of embarrassment.

A scale of parental sacrifice for children's education was developed according to the domains and themes suggested in the focus groups (Table 7.4).

7.2 Content validation of the instruments by experts

While focus groups yield rich information for the construction of the measurement tools, content validation of the measure is important to see whether the measure is valid. As suggested by Haynes et al. (1995), content validity is “the degree to which elements of an assessment instrument are relevant to and representative of the targeted construct for a particular assessment purpose” (p. 238). Relevance refers to “the appropriateness of its elements for the targeted construct” (p. 239), whereas representativeness refers to “the degree to which its elements are proportional to the facets of the targeted construct” (p. 239). Hence, content validity is important for the determination of content relevance and representativeness of the elements of an instrument.

In this study, content validity was determined by the judgments of experts and researchers to assess whether the elements or items were relevant to and covered the relevant facets of the construct (Rubin & Babbie, 2008).

7.2.1 Method

Experts who had more than five years of experience in providing social work or counselling services for adolescents and families, or had substantial knowledge of parent education and parent-adolescent relationships, were invited to participate in the content-validation process. They were requested to examine (1) relevance of the test items for the construct or subscales measured in the instruments (i.e., the appropriateness of its elements for the construct); (2) clarity (i.e., whether the wording was clear and concise), and (3) representativeness of the items to a particular content domain (i.e., how well the domains covered all the facets of the targeted constructs).

A self-administered questionnaire was used to collect the views of the experts, who were informed of the definitions, related literature and domains of the construct, as well as of the assessment instrument. They were requested to fill in the questionnaire to judge the content validity of the instruments. Regarding “relevance” of the test items to the construct, a 4-point rating scale (1 = irrelevant, 2 = unable to assess the relevance without item revision or item is irrelevant unless it is revised, 3 = relevant but needs minor amendment, 4 = relevant) was used. Justifications were requested for items considered irrelevant, and recommendations on revision were also requested. Regarding “clarity” of the items, a 4-point Likert scale (1 = very unclear, 2 = unclear, 3 = clear, 4 = very clear) was used to see whether the wording was concise and clearly presented. Again, recommendations on modification were requested in case an item was perceived as unclear. For “representativeness” of items to the domains, a 4-point Likert scale (1 = very inadequate, 2 = inadequate, 3 = adequate, 4 = very adequate) was used to evaluate how well the items covered the facets of the domains. Recommendations were requested if aspects were under-presented. Overall, the representativeness of the domains to the targeted construct was also evaluated by a 4-point Likert scale. An open-ended question was used to examine the overall representativeness of the domains in covering the facets of the targeted construct. The questionnaire is presented in Appendix 2.

The evaluation of content validity was performed using two analytical strategies: (1) calculation of Content Validity Index (CVI) on aspects of relevance, clarity and representativeness, and (2) analysis of feedback and recommendations of the experts for the improvement of the items and the scales.

Content Validity Index (CVI) was calculated in the aspects of relevance, clarity and representativeness. The method suggested by Rubio et al. (2003) was used in the calculation of CVI. First, CVI was computed for each item by counting the number of experts who rated 3 or 4 on the evaluating aspect of the item and dividing that number by the total number of experts. This provided the proportion of experts who agreed the item was as content valid. The CVI for the measure was estimated by calculating the average CVI across the items. A CVI of .80 is recommended as an indicator of content validity for new measures (Davis, 1992).

In addition, experts were asked to give feedback on justification for “poorly

designed” items, as well as recommendations for improvement of the items and the scales. This feedback also underwent content analysis.

7.2.2 Profile of experts

There were 15 experts involved in the content validation. They were all social workers, and 14 of them were working in children and youth services or family services, while one was a full-time PhD student. Of the 15 experts, one had worked as a social worker for 5-10 years, eight for 10-15 years, three for 16-20 years, and three for more than 20 years. As for educational level, one was a PhD student, 10 had master’s degrees and four had bachelor’s degrees.

7.2.3 Results

7.2.3.1 Parental Expectations of Children’s Future Scale (PECF)

The results showed good content validity for the Parental Expectations of Children’s Future Scale (PECF) in the aspects of relevance, clarity and representativeness.

7.2.3.1.1 Relevance and clarity of PECF

Regarding the relevance, the items and the scale showed good content validity. All items had $CVI_{(relevance)}$ over .80, and the $CVI_{(relevance)}$ of each item ranged from .87 to 1.0. There were 15 items with CVI 1.0, suggesting that all experts agreed that the items were relevant (i.e., rated 3 or 4). The overall $CVI_{(relevance)}$ was .97, which suggested good content validity as judged by the experts. Table 7.5 lists the ratings of the experts and $CVI_{(relevance)}$ of each item.

For clarity, all items had $CVI_{(clarity)}$ over .80 except Items 3 and 4. The overall $CVI_{(clarity)}$ was .90, which showed good content validity of the scale in the aspect of clarity. The $CVI_{(clarity)}$ of each item ranged from .73 to 1.0. Items 3 and 4 both had $CVI_{(clarity)}$.73, which suggested that modification would be necessary. Table 7.6 lists the ratings of the experts and $CVI_{(clarity)}$ of each item.

Apart from rating relevance and clarity, the experts also suggested some recommendations for improvement, which provided valuable information for modification of the measurement tool.

For Item 2, six experts suggested that “good academic performance” (“*xue*

shang you hao de biao xian” 學業上有好的表現) was vague. They suggested that using “good academic results” (“*you hao de xue ye cheng ji*”, 有好的學業成績) would be more concrete and clear.

For Item 3, it was suggested that “how long he/she wants to study” (“*xiang du ji duo jiu du ji duo*”, 想讀幾多就讀幾多) was difficult to understand. There were two experts who suggested to use a more straight forward phrase like “I let my child set his/her educational expectations/level” (“*wo you zi nu jue ding zi ji de xue ye gi wang/jiao yu cheng du*”, 我由子女決定自己的學業期望/教育程度).

For Item 4, some experts suggested that “child’s academic achievement” (“*xue ye cheng jiu*”, 學業成就) and “clear expectations” (“*ming que de yao qiu*”, 明確的要求) needed further clarification or elaboration. Some suggested using academic result or educational level (“*xue ye cheng ji/xue li cheng du*” 學業成績/學歷程度) as a more concrete term to replace “child’s academic achievement” (“*xue ye cheng jiu*”, 學業成就). It was suggested that “child’s academic achievement” (“*xue ye cheng jiu*”, 學業成就) be changed to “academic performance” (“*xue ye shang de biao xian*”, 學業上的表現) to avoid confusion.

For Item 7, some experts suggested that “stand out from the crowd” (“*chu ren tou di*”, 出人頭地) could be related to aspects other than job/career. Suggestions for clarification included “stand out from the crowd at work” (“*zai shi ye shang chu ren tou di*” 在事業上出人頭地).

For Item 16, it was suggested that “rear his/her family” (“*yang huo yi jia*”, 養活一家) should specify the child’s *future* family, not family of origin. To avoid confusion, the child’s future family (“*wo xi wang zi nu jiang lai neng yang huo zi ji de jia ting*”, 我期望子女將來能養活自己的家庭) was indicated.

For Item 19, some experts suggested that it was misleading to compare “down to earth” (“*jiao ta shi di*”, 腳踏實地) and “earning money” (“*zhuan qian*”, 賺錢). To highlight the domain of “conduct”, some elaboration such as “not greedy” (“*bu cun tan nian*”, 不存貪念) or “unrealistic expectations” (“*hao gao wu yuan*”, 好高騖遠) were needed. The item was changed to “I hope that

my child can be down to earth in the future, without unrealistic expectations” (“*wo xi wang zi nu jiang lai jiao ta shi di, bu yao hao gao wu yuan*”, 我期望子女將來腳踏實地，不要好高騖遠).

7.2.3.1.2 Representativeness of PECF

The experts were also requested to rate the representativeness of the subscale and the scale as a whole, that is, to assess the degree to which the domains were proportional to the facets of the construct. Again, the $CVI_{(representativeness)}$ of each domain was calculated, and the overall $CVI_{(representativeness)}$ was obtained by averaging the CVI of the domains. It was found that the domains of educational achievement, self-reliance, occupation and family obligations generally showed good validity, with $CVI_{(representativeness)}$ greater than .80. However, the domains of conduct and overall comment had $CVI_{(representativeness)}$ of only .73, suggesting under-representation or over-representation. Furthermore, the calculated overall $CVI_{(representativeness)}$ and the rated overall $CVI_{(representativeness)}$ of the scale (rated by experts directly), were .82 and .80 respectively, suggesting that PECF had an acceptable degree of representativeness for the measured construct. Table 7.7 lists the experts' ratings for representativeness of the domains and the scale as a whole.

Again, the experts also gave important feedback on improving the representativeness of the scale.

For educational achievement, three experts suggested that items on diverse development and skill acquisition (“*yi ji zhi chang*”, 一技之長) were important to improve the representativeness of the scale.

For self-reliance, though the $CVI_{(representativeness)}$ was .93, a relatively high level of representativeness, 3 experts still recommended adding one item concerning “self-reliance without the financial support of the family” (“*bu yong fu mu gong yang*”, 不用父母供養), as parents often worry that their children will be dependent on their support. This recommendation was also mentioned by parents in the focus group. Thus, the item “I hope my child will not need my financial support when he/she grows up” (“*wo xi wang zi nu zhang da hou bu yong wo gong yang*”, 我期望子女長大後不用我供養) was added.

For occupation, some experts suggested that some themes overlapped. For

instance, Item 7 and Item 12 seemed very similar; therefore, with consideration of parsimony, Item 12 was deleted.

For family obligations, experts suggested that the domain should not be restricted to “family obligations”, but should be expanded to cover themes such as “marriage”, “creation of family” and “filial obligation”. As Items 15 and 17 contained the element of “filial obligation”, the theme “filial obligation” was mentioned in the subscale. The item “I hope my child can create a new family” (“*wo xi wang zi nu jiang lai cheng jia li shi*”, 我希望子女將來成家立室) was added.

For the “conduct” domain, experts suggested highlighting positive attributes such as “be a useful person” and “contribute positively to society”. Thus, the item “I always remind my child to contribute to society in the future” (“*wo jing chang ti xing zi nu jiang lai yao hui kui she hui*” 我經常提醒子女將來要回饋社會) was added.

7.2.3.1.3 Summary

The modifications of PECF are illustrated in Table 7.8, and the revised scale is indicated in Table 7.9.

7.2.3.2 Parental Sacrifice for Children’s Education Scale (SA)

The expert content validation showed that SA had good content validity in relevance, clarity and representativeness.

7.2.3.2.1 Relevance and clarity of SA

The $CVI_{(relevance)}$ values showed that the items and the scale obtained good content validity in the aspect of relevance. Except for Item 16, all items had $CVI_{(relevance)}$ greater than .80, ranging from .73 to 1.0. Among the 23 items, 20 items obtained $CVI_{(relevance)}$ of 1.0, indicating that all experts agreed the items appropriately described the measured construct. Furthermore, the overall $CVI_{(relevance)}$ of the scale was .98. Item 16 obtained a $CVI_{(relevance)}$ of .73, suggesting that modification would be necessary. Table 7.10 lists the ratings of the experts on relevance of the items and the calculated CVI.

For clarity of items and the scale, the $CVI_{(clarity)}$ values also indicated a good content validity – all items had $CVI_{(clarity)}$ greater than .80, ranging from .87 to 1.0. Of the 23 items, 17 had with $CVI_{(clarity)}$ of 1.0, indicating that all experts agreed the items were clearly presented. Moreover, the overall $CVI_{(clarity)}$ was .98, showing a good content validity of the scale in the aspect of clarity. Table 7.11 illustrates the ratings of the experts with respect of clarity and the calculated $CVI_{(clarity)}$.

Experts also gave feedback and recommendations that provided qualitative data for improvement of the items.

For Item 14, 2 experts recommended highlighting the intent behind “when my child studies at midnight, I will never sleep”. The wordings “support”, “accompany” and “take care of” were suggested. However, parents may in fact just stand by instead of truly accompanying or taking care of their child at midnight. Thus, the item remained unchanged.

For Item 15, 2 experts suggested using “adjusting the routine” instead of “structuring the routine”. The suggestion is accepted and thus the item changes to “My life routine is adjusted according to the educational needs of my child (“*wo de qi ju zuo xi du hui gen ju zi nu de xue xi xu yao er zuo chu tiao jie*”, 我的起居作息都會根據子女的學習需要而作出調節。)

For Item 16, 5 experts suggested deleting the item because it was not related to education but to parents’ caring and nurturing. Thus, the item was deleted.

7.2.3.2.2 Representativeness of the scale

The $CVI_{(representativeness)}$ suggested good content validity of the domains as well as the scale. All five domains (striving for financial resources, spending time on educational needs of children, restructuring of family routines, making personal sacrifices, and shielding from worries) had $CVI_{(representativeness)}$ greater than .80, showing good content validity of the items in representing the domains. Furthermore, the calculated overall $CVI_{(representativeness)}$ and the $CVI_{(representativeness)}$ of the scale as rated by the experts were .91 and 1.0 respectively, suggesting a good degree of representativeness of the measured construct. Table 7.12 illustrates the experts’ ratings on representativeness of the domains and the scale as well as the calculated CVI.

The experts also gave many suggestions on improving the representativeness of the scale.

Regarding “spending of time on educational needs of children”, there were many suggestions from the experts. However, the suggestions were all different, and many belonged to the concept of “parental involvement” instead of to “parental sacrifice”. As there were already four items concerning time involvement with schoolwork, and as the $CVI_{(representativeness)}$ of the domain was already .87, according to the rule of parsimony in the interest of conciseness, no item is added.

For personal sacrifice, three experts suggested adding items on parental sacrifice of social life. Thus, one item “I give up my social life for the education of my child” (“*wei le zi nu de xue ye, wo xi sheng wo de she jiao sheng huo*”, 為了子女的學業，我犧牲我的社交生活。) was added. Besides, two experts suggested adding items about sacrificing a job/career. However, this suggestion was judged too specific to housewives and was not considered.

7.2.3.2.3 Summary of the modifications of the scale

In summary, the modifications of the scale of parental sacrifice for children’s education would be illustrated in Table 7.13. The revised scale is indicated in Table 7.14.

7.3 Validation of the instruments

Before the scale can be objectively used in research and practice contexts, its psychometric properties must be established. Typically, two aspects of the psychometric properties of the scale should be examined: reliability of the measure should be assessed. Second, validity of the scale should be examined.

7.3.1 Test for reliability

Reliability refers to “the degree to which test scores are free from errors of measurement” (American Psychological Association, 1985, p. 19). Reliability works on the estimates of non-systematic errors. When we say that a measurement instrument is reliable, we mean that the instrument yields

consistent scores when measuring the same object repeatedly. In the study, test-retest reliability and internal consistency of the scales were evaluated to assess reliability.

To assess test-retest reliability, the scales were administered by a group of parents. After two weeks, the parents administered the scales again. The correlation coefficient, the Pearson product moment correlation (r) between the two equivalent tests was taken as an estimate of reliability. Besides test-retest reliability, the internal-consistency approach was used to estimate the reliability of the instruments. This works on the notion that the items, or subparts, of the instrument also measure the same domain. Cronbach's alpha (α) was used to estimate the internal consistency of the instruments, which indicated the average inter-correlation among the items. In evaluating individual items, the item-total correlation, which defines the correlation between individual response scores on the item and the total score of the instrument, was also assessed (Black, 1999).

7.3.2 Test for validity

Validity refers to “the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration” (Rubin & Babbie, 2008, p.184). To see whether the instrument adequately measures the intended variable, assessing the validity of the measurement is needed. To assess the validity of the Parental Expectations of Children's Future Scale (PECF) and the Parental Sacrifice for Children's Education Scale (SA), construct validity and factorial validity were assessed.

Construct validity works on the principle that a measure is related to other variables within a system of theoretical relationships. Thus, a measure is tested for its fitness to theoretical expectations (Rubin & Babbie, 2008). Singleton et al. (1993) suggested three common approaches for assessing construct validity: (i) *correlations with related variables* – if a measure is valid, it should be correlated with measures of other theoretical related variables; (ii) *consistency across indicators and different measurement* – when one measure of a concept is associated with different types of measures of the same concept, there is convergent validity; when the measure to be validated is not associated strongly with the measures of unrelated concepts, there is discriminant validity; and (iii) *differences among known groups* – when certain groups are expected to differ on

the measure of a concept, one path to validity would be a comparison of the groups' responses (c.f. Singleton et al. 1993, pp.127-128). In the study, convergent validity was examined.

Factorial validity assesses the theoretical constructs (factors) of an instrument and evaluates the factors or dimensions that make up the constructs in view of empirical data. Factor analysis is used to indicate the subsets of items that strongly correlate with each other and with other subsets. This subset would constitute a factor. Factorial validity is achieved when the items making up the factor are what the researcher intends to measure and correlate (Rubin & Babbie, 2008).

7.3.3 Samples for the validation

As the Parental Expectations of Children's Future Scale (PECF) was used to measure parents' expectations of children's future in the main study, a parent sample in the Chinese communities was recruited. Parents with children aged 11-16 were invited to participate in the validation study. The Parental Sacrifice for Children's Education Scale (SA) was used to measure parental sacrifice for children's education perceived by both parents and adolescents. Thus, in addition to the parents who were recruited, adolescents ages 11-16 were also invited to participate in the validation study. Convenience sampling was used to recruit these participants.

To determine sample size for testing reliability and validity of the instruments, adequate power is essential. Power is the direct function of sample size, alpha value and effect size (Allison et al., 1993). A power level of .80 is accepted by most researchers (Cohen, 1988). Friedman (1982) identified the indicator of effect size, r_m , which is conceptually equivalent to a product moment correlation coefficient. Cohen (1988) defined a moderate effect as equivalent to r_m of .30. Taking r_m of .30, with power level agrees at .80 and α at .05, entering into Friedman's power tables (1982), the required sample size for reliability and validity tests is 82 (Allison et al., 1993).

Regarding factor analysis, large validation samples are needed to maintain stability of the tests. Tabachnick and Fidell (2007) suggested that, as a general rule of thumb, at least 300 cases would be adequate. Hair et al. (2010) suggested that the minimum sample size is at least five times as many observations as the

number of variables to be analysed. An even more acceptable sample size would have a 10:1 ratio. Stevens (2002) suggested that, for stable factor analysis, a ratio of five subjects per variable (item) would be required. For this study, setting the subject to variable ratio at 5:1, with there were 23 items in PECF and SA, the minimum sample size for factor analysis is 115.

In this validation study, a sample of 125 parents with children ages 11-16 were recruited from eight children and youth service units in Hong Kong, and a sample of 373 adolescents (also ages 11-16) were recruited from two secondary schools.

7.3.4 Method

Two separate studies were conducted to validate of the PECF and SA. The parent study evaluated the reliability and validity of PECF and SA from the parents' perspective. The adolescent study assessed the psychometric properties of SA from the adolescents' perspective.

7.3.4.1 The parent study

Parents with at least one child aged 11-16 were recruited to participate in testing the reliability of the instruments. During data collection, parents were requested to complete the Parent Questionnaire (containing the related instruments and some questions for demographic information) in a self-administered format. The purpose of the study was described to parents and confidentiality of the data was emphasized. The parents were informed that they could choose not to participate in the study if they did not want to (i.e., "passive" informed consent was obtained). Adequate time was provided, and parents took around 20 minutes to complete the questionnaire. For parents who had difficulty in comprehending the questions, social workers read out the questions in an interview format. There were 125 parents who participated in the study. Internal consistency, convergent validity and factor analysis were carried out to examine the psychometric properties of PECF and SA using the parent sample.

For assessing convergent validity of the Parental Expectations of Children's Future Scale (PECF), it was expected that the instrument scores would be correlated with the scores of Parental Knowledge Scale (KNO), Parental Demandingness Scale (DEM) and Parental Expectation Scale (EXP). If the scale

was significantly related with Parental Knowledge Scale (KNO), Parental Demandingness Scale (DEM) and Parental Expectation Scale (EXP), convergent validity was obtained. Three hypotheses were proposed:

Hypothesis 1a: The total score of PECF would show a positive relationship with the total score of Parental Knowledge Scale (KNO).

Hypothesis 1b: The total score of PECF would show a positive relationship with the total score of Parental Demandingness Scale (DEM).

Hypothesis 1c: The total score of PECF would show a positive relationship with the total score of Parental Expectation Scale (EXP).

Similarly, for assessing the convergent validity of the Parental Sacrifice for Children's Education Scale (SA), the measure would be correlated with Parental Support Scale (SUP) and Parental Responsiveness Scale (RES). Two hypotheses were proposed:

Hypothesis 2a: The total score of SA would show a positive relationship with the total score of Parental Support Scale (SUP).

Hypothesis 2b: The total score of SA would show a positive relationship with Parental Responsiveness Scale (RES).

The psychometric properties of the measures used for correlating and assessing the convergent validity of the instruments are listed in Section 7.3.5.

Test-retest reliability was also performed to assess the temporal stability of the measures. Two weeks after parents took the Parent Questionnaire, they were invited to fill it again, and the results of the two equivalent tests were collected and analysed. There were 25 parents who participated in the test-retest reliability test.

7.3.4.2 The adolescent study

Students from two secondary schools were invited and 373 students participated in the study.

During data collection, the purpose of the study was described to students and confidentiality of the data was emphasized. The students were informed that

they could choose not to participate in the study (i.e., “passive” informed consent was obtained). All students responded to the Adolescent Questionnaire (containing the related instruments and some questions for demographic information) in a self-administered format. Adequate time was provided, and the students took around 20 minutes to complete the questionnaires. Internal consistency, convergent validity and factor analysis were carried out to examine the psychometric properties of SA in the adolescent sample.

7.3.5 Instruments

The Parent Questionnaire contains the 23-item Parental Expectations of Children’s Future Scale (PECF), the Parental Knowledge Scale (KNO), the Parental Demandingness Scale (DEM), the Parental Expectation Scale (EXP), the 23-item Parental Sacrifice for Children’s Education Scale (SA), the Parental Responsiveness Scale (RES), the Parental Support Scale (SUP), and some questions on the demographic background. KNO, DEM, and EXP were used for the assessment of the convergent validity of the Parental Expectations of Children’s Future Scale (PECF), whereas RES and SUP were used for the assessment of the convergent validity of Parental Sacrifice for Children’s Education Scale (SA).

The psychometric properties of the measurements used for correlating with the assessed instruments were:

Parental Knowledge Scale (KNO). On the basis of review of literature (Kerr & Stattin, 2000), Shek (2005e) developed this scale to measure parental knowledge of children’s behaviour. Shek (2006b) showed that the measure was significantly correlated with measures of behavioural control and parent-child relational qualities, thus providing support for construct validity of the measure. Reliability analysis showed that Paternal Knowledge Scale (PKNO) and Maternal Knowledge Scale (MKNO) were reliable ($\alpha = .82$ for PKNO and $\alpha = .82$ for MKNO) (Shek, 2005e). There are 7 items in the scale, and the total score of the items serves as an indicator of the level of parental knowledge of children’s behaviour, with a higher score indicating a higher level of parental knowledge of child’s behaviour.

Parental Demandingness Scale (DEM). Based on the framework of Maccoby

and Martin (1983) and the parenting assessment work of Lamborn et al. (1991), Shek (1999b) developed a modified version of the Parental Demandingness Scale (DEM) to assess parents' demandingness towards children's behaviour. The scale was found to be valid and reliable in Chinese culture with support of internal consistency, test-retest reliability, and concurrent validity (Shek, 1998d, 1999b, 2003a; Shek et al., 1995). There are 7 items in the Demandingness Scale, and the total score of the items serves as an indicator of the level of parental demandingness, with a higher score indicating a higher level of parental demandingness.

Parental Expectation Scale (EXP). Based on the review of literature (Crouter & Head, 2002), Shek (2005e) developed this scale to measure parental expectation of children's behaviour. Shek, Lee and Chow (2006) showed that the scale was significantly correlated with other measurement tools of behavioural control and parent-child relational qualities, thus providing support for construct validity of the scale. Reliability analysis showed that Paternal Expectation Scale (PEXP) and Maternal Expectation Scale (MEXP) were reliable ($\alpha = .76$ for PEXP and $\alpha = .75$ for MEXP) (Shek, 2007c). There are 7 items on the scale, and the total score of the items of the scale serves as an indicator of the level of parental expectation of children's behaviour, with a higher score indicating a higher level of expectation and requirement of child's behaviour.

Parental Support Scale (SUP). Shek (2002e) developed the Parental Support Scale (SUP), with three items in each scale. The scales showed internal consistency ($\alpha = .89$ and $.86$ for PSUP and MSUP, respectively) in a longitudinal study (Shek, 2002e). Higher PSUP and MSUP indicate more support from the father and the mother respectively.

Parental Responsiveness Scale (RES). Based on the framework of Maccoby and Martin (1983) and parenting assessment work of Lamborn et al. (1991), Shek (1999b) developed a modified version of the Paternal Responsiveness Scale (PRES) and Maternal Responsiveness Scale (MRES) to assess parents' responsiveness to children's behaviour. The scales were found valid and reliable in Chinese culture with support of internal consistency, test-retest reliability, and concurrent validity (Shek, 1998d, 1999b, 2003a; Shek et al., 1995). There are 13 items in the Responsiveness Scale, and the

total score of the items serves as an indicator of the level of parental responsiveness, with a higher score indicating a higher level of parental responsiveness.

To assess adolescents' perceptions of both paternal and maternal sacrifice for children's education, the Adolescent Questionnaire contained the Chinese Paternal and Maternal Sacrifice for Children's Education Scale (PSA and MSA), each consisting of 23 items, Paternal and Maternal Responsiveness Scale (PRES and MRES), Paternal and Maternal Support Scale (PSUP and MSUP), and some questions on demographic background. Both PRES/MRES and PSUP/MSUP were used to evaluate the convergent validity of PSA/MSA.

7.3.6 Participants

7.3.6.1 The parent study

There were 125 parents participating in the study, eight fathers (6.4%) and 117 mothers (93.6%). The age of parents ranged from 31 to 60, with majority between the ages of 36 and 40 ($N = 26$, 20.8%), 41 and 45 ($N = 56$, 44.8%) or 46 and 50 ($N = 30$, 24%). There were 35 parents with one child (28.0%), 66 with two children (52.8%) and 23 with three children (18.4%). These children were 62 boys (49.6%) and 60 girls (48.0%), with a mean age of 13.49 ($SD = 1.77$).

7.3.6.2 The adolescent study

There were 373 students participating in the study, with 65 students studying in Secondary One, 90 in Secondary Two, and 218 in Secondary Three. There were 216 boys (57.9%), 153 girls (41.05%), and 4 students did not indicate gender. The mean age was 14 years ($SD = 1.00$).

7.3.7 Results

7.3.7.1 Measurement of parental expectations of children's future

7.3.7.1.1 The Parental Expectations of Children's Future Scale (PECF)

The data showed that PECF scores were not significantly related to either parent's gender, age, educational level, occupation, family income or number of children, or to children's gender, age or educational level.

1. Reliability of PECF

1(i) *Internal consistency of PECF*

The overall Cronbach's α of PECF was .829, showing good internal consistency. The mean inter-item correlations was .200, which had small to moderate effect size. The range of corrected item-total correlation was .094 to .688, with the mean corrected item-total correlation at .406. Items 3, 8, 14, 15, 16 and 23 had corrected item-total correlations below .30 (.094, .226, .244, .170, .245, .252 respectively). When deleting the items, the Cronbach's α was improved (.839, .829, .832, .831, .829, .831 respectively). Table 7.15 lists the item-total statistics of PECF.

1(ii) *Test-retest reliability of PECF*

In order to assess the temporal stability of the measure, test-retest reliability was performed. Test-retest reliability, in terms of Pearson's r , was .774 ($p < .001$). The scale showed good test-retest reliability.

2. Validity of PECF

2 (i) *Convergent Validity*

It was found that the PECF scores showed a significantly positive relationship with the score of Parental Knowledge Scale (KNO). The Pearson r was .345 ($p < .001$), which was considered a moderate effect size according to Cohen's (1988) suggestion. The PECF scores also showed a significantly positive relationship with that of Parental Demandingness Scale (DEM). The Pearson r was .357 ($p < .001$), which was considered a moderate effect size. Furthermore the PECF scores showed a significantly positive relationship with the score of Parental Expectation Scale (EXP). The Pearson r was .573 ($p < .001$), which was considered a large effect size according to Cohen's suggestion (1988).

In a summary, PECF showed good convergent validity when correlated with DEM, KNO and EXP. Table 7.16 lists the correlations of PECF with other measures on parenting.

2 (ii) *Factor analysis*

To examine factorial validity, factor analysis was performed. However, it

should be noted that sample size was a consideration in the study. As the measure contained 23 items; therefore, following Hair et al. (2010) and Stevens (2002), a minimum of 115 cases was required. The sample size of the study was 125, which was merely adequate for factor analysis.

In identifying the factor structure of the PECF, principal component analysis with varimax rotation was performed. From the initial factors extraction on PECF, the change of eigenvalue and the scree plot suggested a six-factor solution. All six factors had eigenvalue greater than unity, and the solution explained 61.95% of the total variance. However, the six factors were unclear and not interpretable, except Factor 1 (“occupation”) and Factor 3 (“personal conduct”). Table 7.17 shows the rotated component matrix for the six-factor solution of PECF.

The unsatisfactory six-factor solution may be due to inadequate sample size to maintain stable factor structure, as well as the poor interrelationships of some items. Table 7.18 lists the inter-correlations among the items.

7.3.7.1.2 Revised Scale of Parental Expectation of Children’s Future (Revised-PECF)

With the problems relating to internal consistency and factor analysis, it was suggested that the Parental Expectations of Children’s Future Scale (PECF) should be revised. To revise the scale, two steps were involved. First, items which had low corrected item-total correlations were deleted to improve the internal consistency of the scale. The revised scale was then assessed for reliability and validity.

Items 3, 8, 14, 15, 16 and 23 had corrected item-total correlations below .30 (.094, .226, .244, .170, .245, .252 respectively). After deleting the items, the Cronbach’s α was improved (.839, .829, .832, .831, .829, .831 respectively). The revised version of Parental Expectations of Children’s Future Scale (Revised-PECF) then contained 17 items (Items 1, 2, 4, 5, 6, 7, 9, 10, 11, 12, 13, 17, 18, 19, 20, 21, 22), which were assessed for reliability and validity.

1. Reliability of Revised-PECF

1(i) Internal consistency of Revised-PECF

The overall Cronbach’s α of Revised-PECF was .866, which showed

improved internal consistency. The mean inter-item correlations was .283, which had moderate effect size. The range of corrected item-total correlation was .379 to .700, with the mean corrected item-total correlation at .494. If one particular item was deleted, Cronbach's alpha ranged from .850 to .862, suggesting that no particular item greatly altered the alpha value. The revised measure was improved and showed good internal consistency. Table 7.19 lists the item-total statistics of Revised-PECF.

1(ii) Test-retest reliability of Revised-PECF

The test-retest reliability coefficient of Revised-PECF between two equivalent tests, in terms of Pearson's r , was .765 ($p < .001$). The revised scale also showed good test-retest reliability.

2. Validity of Revised-PECF

2(i) Convergent validity

The scores of the Revised-PECF showed significantly positive relationships with the scores of Parental Knowledge Scale (KNO) ($r = .353$, $p < .001$); the Parental Demandingness Scale (DEM) ($r = .348$, $p < .001$); and the Parental Expectation Scale (EXP) ($r = .577$, $p < .001$), thus the Revised-PECF showed good convergent validity when correlated with these other parenting measures DEM, KNO and EXP. Table 7.20 lists these correlations.

2(ii) Factor analysis of Revised-PECF

An identical procedure, i.e., principal component analysis with varimax rotation, was performed to identify the factor structure of the Revised-PECF. From the initial factors extraction on Revised-PECF, the change of eigenvalue and the scree plot suggested a five-factor solution. All five factors had eigenvalue greater than unity, and the solution explained 64.45% of the total variance. The loadings of all items exceeded .40. The first factor was "occupation", which accounted for 32.07% of the total variance and had 5 items (Items 9, 10, 11, 12, 13). This resembled the same dimension in content validation. The second factor was "personal conduct", which explained 12.18% of the total variance and had 5 items (Items 6, 7, 20, 21, 22). The second factor combined the dimensions of "conduct" and "self-reliance" described in content validation. The third factor

was “family”, which accounted for 7.69% of the variance and had 3 items (Items 17, 18, 19). The fourth factor was “educational attainment”, which accounted for 6.62% of the total variance and had 2 items (Items 1, 2). The fifth factor was “educational expectation” and also had 2 items (Items 4, 5). The fourth and fifth factors belonged to similar aspects. Table 7.21 illustrates the rotated component matrix of Revised-PECF.

As the sample size was just merely adequate for factor analysis, the factor structure may not be stable at relatively small sample size. Factor analysis would be performed in the main study

7.3.7.1.3 Summary of PECF validation

From the data of 125 parents, the Parental Expectations of Children’s Future Scale (PECF) showed good internal consistency, test-retest reliability and convergent validity. However, the result of factor analysis was unsatisfactory. This may be due to the limitation of sample size. Besides, some items had low corrected item-total correlations, so modification of the measure was necessary.

Items with low corrected item-total correlations ($< .30$) in the Revised Parental Expectations of Children’s Future Scale (Revised-PECF) were deleted, with a total of six items. The Revised-PECF resulted in improvement in internal consistency. The revised measure also showed good test-retest reliability and convergent validity. Besides, the revised measure showed acceptable factor structure, explaining 64.45% of the total variance in a five-factor solution. The result was much improved comparing with the original version of PECF. Table 7.22 compares the psychometric properties of PECF and Revised-PECF.

In summary, the Revised Parental Expectations of Children’s Future Scale (Revised-PECF) showed good psychometric properties and could be used to measure parental expectations of children’s future in the main study. The total score of Revised-PECF (instead of that of its subscales) would be used in the main study. The Revised-PECF is listed in Table 7.23.

7.3.7.2 Measurement of parental sacrifice for children’s education

7.3.7.2.1 The Parental Sacrifice for Children’s Education Scale (SA)

The validation of the Parental Sacrifice for Children’s Education Scale (SA)

involved two studies, the adolescent study and the parent study. The results of each study are presented.

7.3.7.2.1.1 The adolescent study

The adolescents' data showed that the scores of the Paternal Sacrifice for Children's Education Scale (PSA) were not significantly related to most demographic variables except educational level of adolescents ($r = .12, p < .05$) and father's educational level ($r = .11, p < .05$). The Maternal Sacrifice for Children's Education Scale (MSA) was only significantly related to marital status of parents ($r = .13, p < .05$). As the amount of overlapping on the correlation of PSA and educational levels of adolescents and fathers were low (1.44% and 1.21% of the variance respectively), no separated analyses of PSA scores by educational levels of adolescents and fathers were carried out. The same arrangement with MSA and marital status of parents was suggested because the amount of variance overlapping was low (1.74% of the variance).

1. Reliability of PSA and MSA

1(i) Internal consistency of PSA and MSA

The internal consistency of the Paternal Sacrifice for Children's Education Scale (PSA) was high, with overall Cronbach's α of .955. The Cronbach's α if one particular item was deleted ranged from .952 to .954, suggesting that no particular item altered the alpha value greatly. The mean inter-item correlations was .480 and the mean corrected item-total correlation was .677. PSA showed excellent internal consistency.

For the Maternal Sacrifice for Children's Education Scale (MSA), the overall Cronbach's α was .952, which suggested very good internal consistency, as did the mean inter-item correlations (.493) and the mean overall corrected item-total correlation (.684). Except Item 21, which when deleted improved overall Cronbach's α to .958, any other item being deleted did not alter the alpha value greatly (.949 to .951). For Item 21, the mean inter-item correlation was .288 and corrected item-total correlation was .396, which was lower than the other items on the Scale. Table 7.24 listed the item-total statistics of PSA and MSA (adolescents sample) respectively.

2. *Validity of PSA and MSA*

2(i) *Convergent Validity of PSA and MSA*

PSA was positively correlated with the Paternal Support Scale (PSUP), with Pearson r at .419 ($p < .001$), which was considered a moderate to large effect size according to Cohen's suggestion (1988). It was also significantly positively correlated with the Paternal Responsiveness Scale (PRES) with Pearson r at .580 ($p < .001$), which was considered a large effect size. Furthermore, MSA was also positively correlated with the Maternal Support Scale (MSUP), with Pearson r at .355 ($p < .001$), which was considered a moderate to large effect size. MSA was also positively correlated with the Maternal Responsiveness Scale (MRES) with Pearson r was .552 ($p < .001$), which was also considered a large effect size. Table 7.25 lists the correlation coefficients between PSA, MSA and other parenting measures.

2(ii) *Factor Analysis of PSA and MSA*

To examine the factorial validity of PSA and MSA, factor analysis of principal component analysis with varimax rotation was performed. From the initial factors extraction on PSA using the adolescents' data, the change of eigenvalue and the scree plot suggested a three-factor solution. All three factors had eigenvalue greater than unity, and the solution explained 67.61% of the total variance. The loadings of all items exceeded .40. The first factor was "striving for financial resources", which accounted for 50.53% of the total variance and had 9 items (Items 1, 2, 3, 4, 5, 6, 7, 8, 9). This resembled the same dimension in content validation. The second factor was "accommodation of daily routine and lifestyle", which explained 11.60% of the total variance and had 8 items (Items 15, 17, 18, 19, 20, 21, 22, 23). The second factor combined the dimensions of "restructuring of family routine", "personal sacrifice" and "shielding from worries", as suggested in content validation. The third factor was "time spent on children's education", which accounted for 5.47% of the total variance and had 6 items (Items 10, 11, 12, 13, 14, 16). The third factor also corresponded to "time spent on educational needs of children" from content validation. Table 7.26 shows the rotated component matrix for the 3-factor solution of PSA.

For the MSA, an identical procedure of principal component analysis with varimax rotation was performed.

The result was very similar to that of PSA – a three-factor solution of MSA was obtained with reference to the change of eigenvalue and the scree plot. All three factors had eigenvalue greater than unity, and the solution explained 67.51% of the total variance. The loadings of all items exceeded .40. Three factors, namely (1) “striving for financial resources” [accounted for 51.35% of variance, including 9 items (Items 1, 2, 3, 4, 5, 6, 7, 8, 9)]; (2) “accommodation of daily routine and lifestyle” [explained 9.75% of variance, 9 items (Items 14, 15, 17, 18, 19, 20, 21, 22, 23)]; and (3) “time spent on children’s education” [explained 6.42% of variance, 5 items (Items 10, 11, 12, 13, 16)]. Table 7.26 shows the rotated component matrix for the 3-factor solution of MSA.

Both factor structures of PSA and MSA reflected the conceptual model of parental sacrifice for children’s education. Three factors, “striving for financial resources”, “time spent on children’s education” and “accommodation of daily routine and lifestyle”, were extracted. Furthermore, it was found that adolescents’ perceptions of paternal and maternal sacrifice for children’s education were very similar. Except Item 14, all items fell into the same factors as in PSA and MSA. It was found that Item 14 (“when my child studies at mid-night, I will never sleep”) belonged to the factor “accommodation of daily routine and lifestyle” in MSA but to “time spent on children’s education” in PSA.

7.3.7.2.1.2 The Parent Study

The parents’ data showed that Parental Sacrifice for Children’s Education Scale (SA) scores were not significantly related to their gender, educational status, occupation, duration of stay in Hong Kong, marital status, family income or number of children, or to the gender, age, or educational level of their children under study. However, it was significantly related to parental age ($r = -.28$, $p < .01$), suggesting that parents of older age had relatively lower levels of parental sacrifice. The influence of parent’s age on the SA correlational study was considered, and partial correlation of SA scores by parent’s age was suggested.

1. Reliability of SA

1(i) Internal consistency of SA

With reference to the parent data, internal consistency of SA was high, with the overall Cronbach’s α of .935. The mean inter-item correlations was .387 and

the mean corrected item-total correlation was .601, which was considered high. The Cronbach's α if one particular item being deleted ranged from .930 to .931, suggesting that no particular item altered the alpha value greatly. The SA had good internal consistency. Table 7.27 lists the item-total statistics of SA (parents' sample).

1(ii) Test-retest reliability of SA

In order to assess the temporal stability of the measure, test-retest reliability was performed with the parent sample. Test-retest reliability, in terms of Pearson's r , was .815 ($p < .001$). The scale showed good test-retest reliability.

2. Validity of SA

2(i) Convergent Validity of SA

It was found that SA was significantly positively related with Parental Support Scale (SUP), with Pearson's r at .260 ($p < .01$). When parent's age was controlled, the Pearson's r between SA and SUP was .272 ($p < .01$). Also, SA was significantly positively related with Parental Responsiveness Scale (RES) with Pearson's r at .266 ($p < .01$). When parent's age was controlled, the Pearson's r between SA and RES was .238 ($p < .01$). Table 7.28 lists the correlation coefficient between SA and other parenting measures.

2(ii) Factor Analysis of SA

Sample size was again a consideration in the study. The measure contained 23 items; therefore, following Hair et al. (2010) and Stevens (2002), a minimum of 115 cases was required. The sample size of the parent sample in the study was 125, which was merely adequate for factor analysis. For the initial factors extraction on SA using the data of parents, the change of eigenvalue and the scree plot suggested a five-factor solution. All five factors had eigenvalue greater than unity, and the solution explained 70.13% of the total variance. The loadings of all items exceeded .40. The first factor was "accommodation of daily routine and lifestyle", which accounted for 41.55% of the total variance and had 9 items (Items 10, 14, 15, 16, 17, 18, 19, 20, 21). The second factor was "hardship on striving for financial resources", which explained 9.69% of the variance and had 4 items (Items 1, 2, 3, 6). The third factor was "precedence of children's

education over family expense”, which accounted for 8.72% of the variance and had 5 items (Items 4, 5, 7, 8, 9). The second and third factors constituted the “financial resources for children’s education” in the conceptual model. The fourth factor was “time spent on children’s education”, which accounted for 5.75% of the total variance and had 3 items (Items 11, 12, 13). The factor corresponded to “time spent on “educational needs of children” from content validation. The fifth factor was “shielding from worries”, which accounted for 4.42% of the total variance and had 2 items (Items 22, 23). The factor resembled to the same dimension of “shielding from worries” in content validation. The five-factor structure of SA reflected the conceptual model of parental sacrifice for children’s education. Table 7.29 lists the rotated component matrix of SA using the parents’ data.

Factor structures from the parent sample (five-factor solution) and the adolescent sample (three-factor solution) were different. As the size of parent sample was small and merely adequate for factor analysis, it was preferred to determine the dimensionality of the Parental Sacrifice for Children’s Education Scale together with the data of the main study.

7.3.7.2.1.3 Summary of SA validation

The validation studies of Parental Sacrifice for Children’s Education Scale (SA) generated empirical evidence for the psychometric properties of the scale of parental sacrifice for children’s education. The scale showed good results in internal consistency, test-retest reliability, convergent validity and factorial validity, suggesting that the scale possessed good psychometric properties of reliability and validity. Table 7.30 summarizes these psychometric properties. The measurement tool could be used in the main study to measure parental sacrifice for children’s education perceived by parents and adolescents. In the main study, the total score of SA instead of subscale scores would be used.

7.3.7.3 Summary of validation studies

Overall, both the Revised Parental Expectations of Children’s Future Scale (Revised-PECF) and the Parental Sacrifice for Children’s Education Scale (SA) were constructed on the basis of a survey of literature and qualitative analyses of parent and adolescent focus groups. Both measurement tools showed good

psychometric properties in internal consistency, test-retest reliability, content validity, convergent validity and factor analysis. In the main study, the Revised-PECF and SA total scores would be used to measure parental expectations of children's future and parental sacrifice for children's education, respectively.

From the findings of these validation studies, four papers were generated and published (Leung & Shek, 2011a, 2011b, 2011c, 2011d).

Table 7.1. Domains and themes of parental expectations of children's future from focus groups

Domain	Themes	Example narratives	No. of participants mentioning (numbers in parentheses are those experiencing economic disadvantage)
<u>Educational achievement</u>	<i>Entering university</i>	"It is good if he (my son) can make it to university, as this is a big achievement for his future. It can help him get a job. At present, the minimum requirement to get a job is at least secondary education level... As there are 12 years of free education, that means that everyone is a graduate of secondary school, so having a bachelor's degree, or a university degree, would be important to earn a living and find a job." (C, male, 48 years old, paragraph 49p).	Adolescent: 4 (3) Parent: 1(0)
	<i>Fulfilling responsibility in studying</i>	"The minimum requirement is to complete the 3,3,4 level to Form Six. But she (my daughter) should try her best to fulfil her responsibility. She should bear her responsibility, not being irresponsible in completing Form Six. This is my minimum wish." (Y, female, 50 years old, paragraph 79p)	Parent: 2(0)
	<i>Diverse development</i>	"Other than academic results, [my parents] hope that I can learn other things... that I can have diverse development." (M, female, 14 years old, F.3, paragraph 225a) "It's not a problem if she (my daughter) fails in her study. If she has a second interest, she can have other roads to choose." (Y, mother, 50 years old, paragraph 81p)	Adolescent: 1(1) Parent: 1(0)
<u>Self-reliance</u>	<i>Earn adequately to support oneself</i>	"When I grow up, I need not strive." (F, male, 15 years old, F.2, paragraph 45a) "But there will still be one day I won't be able to take care of him (my son). Thus, he must be self-reliant." (C, father, 48 years old, paragraph 91p). "I cannot take care of him forever; he (my son) must learn how to survive." (T, female, 44 years old, having a son, paragraph 228p).	Adolescent: 3(2) Parent: 4(2)
<u>Occupation</u>	<i>Have good and stable income</i>	"[My parents want me to] have a good salary in the future." (H, male, 14 years old, F. 3, paragraph 46a) "[My parents want me to] study more, and have a stable salary." (D, female, 14 years old, F.3, paragraph 47a).	Adolescent: 2(1) Parent: 1(1)
	<i>Decent job</i>	"[My parents want me to] have a decent job." (F, male, 15 years old, F.2, paragraph 79a).	Adolescent: 1(0)
	<i>Less hard work</i>	"[My parents expect me to choose] work that is not hard...not washing dishes." (K, female, 16 years old, F.3, paragraph 81a and 84a)	Adolescent: 2(2)
	<i>Climbing up the social ladder</i>	"[My parents expect me not to be] lower class." (S, female, 14 years old, F.2, paragraph 86a) "Don't stay in this [social] class. I think that my situation is not good. I hope that he (my son) will be better off." (T, mother, 44 years old, paragraph 160p).	Adolescent: 3(2) Parent: 1(1)

<u>Family obligation</u>	<i>Fit one's interest</i>	"In Form 4, he is still fond of aeroplanes. Because he has such an interest, he might think of it for a career. I had a similar experience when I started working – I chose my job according to my interest. And from the interest I developed my career." (C, father, 48 years old, paragraph 119p)	Parent: 1(0)
	<i>Good attitudes towards work</i>	"The most important [attribute] is hard work. Children nowadays are not willing to work hard... If you don't work hard, you can say nothing... If you are willing to work hard, you will easily get a suitable job." (L, mother, 42 years old, paragraphs 138p and 140p). "If she (my daughter) strives hard even in difficult environment, and continues for advancement, she definitely has good prospects." (Y, mother, 50 years old, paragraph 168p)	Parent: 2(0)
	<i>Have good prospect</i>	"I hope that he (my son) can have his own career and his own aspirations." (T, mother, 44 years old, paragraph 160p)	Parent: 1(1)
	<i>Earn adequately for the family</i>	"[My parents expect me to] earn adequately to 'rear' the whole family." (H, male, 14 years old, F. 3 paragraph 67a) "[My parents expect that I] can 'rear' them." (F, male, 15 years old, F.2 paragraph 75a)	Adolescent: 4(2) Parent: 1(1)
	<i>Take care of parents</i>	"If you earn money in the future, you should not neglect them (your parents)." (M, female, 14 years old, F.3, paragraph 62a) "[You] should not kick your father and mother out from your home." (F, male, 15 years old, F.2 paragraph 63a) "[You] should not kick your father and mother into the elderly home." (M, female, 14 years old, F.3, paragraph 65a)	Adolescent: 2(1)
	<i>Avoid breaking law and misconduct</i>	"[My parents expect me] not to go down the wrong track." (K, female, 16 years old, F.3, paragraph 102a) "Mother expects me more on the conduct, she expects me to go step by step in the future." (S, female, 14 years old, F.2, paragraph 213a) "At least [my son] would not do something indecent, that is, not go down the wrong track, or go astray." (C, father, 48 years old, paragraph 45p)	Adolescent: 3(2) Parent: 6(4)
<u>Conduct</u>	<i>Be a good person</i>	"What I expect her is life attitude... I have taught her to be kind to others, and not to be idle." (M, mother, 46 years old, paragraph 112p)	Parent: 1(1)

Table 7.2. The original scale of Parental Expectation of Children's Future

1.	I expect my child to complete university.
2.	I expect my child to have good academic performance.
3.	I let my child decide how long he/she wants to study.
4.	I have clear expectations of my child's academic achievement.
5.	I always remind my child to be self-reliant in the future.
6.	I expect my child to not need financial assistance from the Government.
7.	I hope that my child can stand out from the crowd in the future.
8.	The way out for my child's future is to find a good job.
9.	I hope that my child can find a job so that he/she can rise out of our current situation.
10.	I expect my child to have a good salary in the future.
11.	I hope that my child's future job can keep him/her free from anxiety about daily necessities.
12.	I expect my child to have a good career.
13.	My child can do whatever he/she wants; I have no expectations for his/her career.
14.	I hope that my child's future job will fit his/her interest.
15.	I expect my child to rear me in the future.
16.	I expect my child to rear his/her whole family.
17.	I expect my child to take care of me in the future.
18.	I always remind my child not to act indecently in the future.
19.	For my child, being down to earth in the future is more important than earning money.
20.	As I cannot control the future development of my child, I do not have any expectations of my child's future.

Table 7.3. Domains and themes of parental sacrifice for children's education

Domain	Themes	Example Narratives	No. of participants mentioning (numbers in parentheses are those experiencing economic disadvantage)
<u>Strive for financial resources</u>	<i>Work hard for a living</i>	<p>“At least I know that he (my father) works hard but never complains. He is very tired after work.” (F, 15 years old, male, paragraph 443a - 445a).</p> <p>“He (my husband) spends much time (on work); he never gets a rest. Except for a short holiday, he spends the whole year on his work without rest. I find that in supporting the family, he sacrifices his whole life, including his health...Long hours of work, he is a taxi driver and goes out for work at four-something. I am still sleeping and I hardly know the exact time that he is out. He is under much more pressure than I am.” (L, mother, 42 years old, paragraphs 473p-475p).</p>	Adolescent: 2(1) Parent: 3(1)
	<i>Priority of provision for education over personal needs</i>	<p>“No matter how expensive the things are, my father buys them for us. In contrast, he finds that his own things are unnecessary and thus he does not buy anything for himself ...Once I needed to buy some things for school, such as an electronic dictionary, and he bought them for me, regardless of the price. But his bag was torn, and he continued to use it. He only purchased a new one only when the bag could not be used. He bought a cheap one.” (S, 14 years old, female, paragraphs 324a & 329a).</p> <p>“My father has only two pairs of trousers and he wears them alternately. Even when they are torn, he continues to wear them. He says that they are usable... We usually buy stuff for school, such as electronic dictionaries and books. He gives us money, and never asks the price.” (M, 14 years old, female, paragraph 332a)</p>	Adolescent: 3(3)
	<i>Strive for savings for children to study in university and other educational expenses</i>	<p>“He (my father) is saving money for us to attend university. He needs to save for three of us. It will be hard.” (T, 13 years old, female, paragraph 283a)</p> <p>“They (my parents) say that no matter how hard their lives were, they will save money for us to attend university.” (M, 14 years old, female, paragraph 398a)</p> <p>“The expense of the whole family is great, but still you have to save some money, bit by bit...By now when the son needs more money for education, we can manage.” (L, mother, 42 years old, paragraph 359p).</p>	Adolescent: 3(1) Parent: 2(0)

	<i>Borrow money to fulfil educational needs of children</i>	“My mother was afraid. She was afraid that we could not continue our education with the lack of money. She borrowed money from our relatives. I felt embarrassed.” (S, 14 years old, female, paragraph 312a)	Adolescent: 1(1)
<u>Time spent on educational needs of children</u>	<i>Involvement in school activities</i>	“For parent-teacher conferences, or other matters, she (my mother) takes leave.” (M, 14 years old, female, paragraph 366a).	Adolescent: 3(2)
	<i>Supervision of children’s school work</i>	“(During examination) when he (my son) knows that someone is there, he will not be so lazy... He will say, ‘OK Mum, you can check the pages to see whether I know the answers.’” (L, mother, 42 years old, paragraph 361p-371p) “Though I am very tired, I would still stay with him (my son) during revision... I would do other work at home, to keep myself awake... I do not know how to give him hints in his study; all I can do is that, when he needs my help in revision, I am here.” (L, mother, 42 years old, paragraphs 421p-423p) “He (my son) does his homework until midnight, and you have to stay with him till midnight. It is unreasonable to go to sleep while he is still reading.” (G, mother, 40 years old, paragraph 427p).	Adolescent: 1(0) Parent: 3(1)
<u>Restructuring of daily routine</u>	<i>Caring for children’s schooling and daily needs</i>	“As I have to attend school, she (my mother) needs to wake up early.” (K, 16 years old, female, paragraph 277a).	Adolescent: 2(1) Parent: 3(1)
<u>Sacrifice of lifestyle and aspiration</u>	<i>Sacrifice of career aspiration</i>	“I made up the decision to leave the job and rear my child. Now I have not worked for 20 years. ... If we talk sacrifice, I sacrificed my career.” (C, father, 48 years old, paragraph 449p).	Parent: 1(0)
	<i>Sacrifice of leisure</i>	“He (my father) does not use money for entertainment, nor does he go on holidays.” (T, 13 years old, female, paragraph 283a).	Adolescent: 1(0)
	<i>Reduced social life</i>	“Her (my wife’s) social circle is smaller. She always stays at home and seldom goes out.” (C, father, 48 years old, paragraph 488p).	Parent: 1(0)
<u>Shielding from worries</u>	<i>Shielding from illness</i>	“In case she (my mother) gets sick she seldom lets us know. She just endures it... She is scared that we would worry.” (T, 13 years old, female, paragraph 463a and 467a).	Adolescent: 1(0)

Table 7.4. The modified scale according to the results of content validation by experts

1.	To fulfil the educational needs of my child, I eat and wear less.
2.	I save money for my child to study in university, despite the difficulty of the work.
3.	The expenses of my child's education are more important than my personal expenses.
4.	If my child needs tutoring, I will fulfil his/her needs even if family expenses have to be tightened.
5.	If my child needs to join extra-curricular activities, I will fulfil his/her needs even if family expenses have to be tightened.
6.	I save rigorously to reserve funds for my child's education.
7.	Even if the family faces financial stress, I will not cut any educational expenses of my children.
8.	If my child needs to buy reference books, I will fulfil his/her needs even if family expenses have to be tightened.
9.	If the family faces financial stress, I will borrow money to fulfil the educational needs of children.
10.	During the examination period, I will try my best to stay at home with my child.
11.	If the teacher calls me to discuss my child's schooling, I will stop work and see the teacher even I am busy.
12.	I always reserve time for participating in the school's parent day.
13.	Even I am tired, I try my best to understand my child's school life.
14.	When my child studies at midnight, I will never sleep.
15.	My life routine is structured according to the educational needs of my child.
16.	I keep taking care of my child even when I am sick.
17.	During the examination period, I am more conscious of taking care of my children.
18.	I will change family habits in order to fit the educational needs of my child.
19.	In order to have a silent environment for my child to study, I give up family entertainment.
20.	I give up my hobbies for the education of my child.
21.	I sacrifice my aspirations for the education of my child.
22.	I hide family worries in front of my child in order not to disturb his/her studies.
23.	In order not to affect my child's studies, I hide being sick when it happens.

Table 7.5: Ratings on degree of relevance of PECF by the experts

Domain	Item No.	Item	Median	No. of experts rated the scale (Percent)				CVI
				Irrelevant	Unable to assess the relevance without item revision or item is irrelevant unless it is revised	Relevant but needs minor alternations	Relevant	
				1	2	3	4	
Educational achievement	1.	I expect my child to complete university.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00
	2.	I expect my child to have good academic performance.	4	0 (0.0)	1 (6.7)	4 (26.7)	10 (66.7)	0.93
	3.	I let my child decide how long he/she wants to study.	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
	4.	I have clear expectations of my child's academic achievement.	4	0 (0.0)	0 (0.0)	4 (26.7)	11 (73.3)	1.00
Self reliance	5.	I always remind my child to be self-reliant in the future.	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
	6.	I expect my child to not need financial assistance from the Government.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00
Occupation	7.	I hope that my child can stand out from the crowd in the future.	4	0 (0.0)	2 (13.3)	2 (13.3)	11 (73.3)	0.87
	8.	The way out for my child's future is to find a good job.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	9.	I hope that my child can find a job so that he/she can rise out of our current situation.	4	0 (0.0)	0 (0.0)	4 (26.7)	11 (73.3)	1.00
	10.	I expect my child to have a good salary in the future.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00
	11.	I hope that my child's future job can keep him/her free from anxiety about daily necessities.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
	12.	I expect my child to have a good career.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
	13.	My child can do whatever he/she wants; I have no expectations for his/her career.	4	0 (0.0)	1 (6.7)	1 (6.7)	13 (86.7)	0.93
	14.	I hope that my child's future job will fit his/her interest.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
Family obligation	15.	I expect my child to rear me in the future.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00
	16.	I expect my child to rear his/her whole family.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
	17.	I expect my child to take care of me in the future.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00
Conduct	18.	I always remind my child not to act indecently in the future.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
	19.	For my child, being down to earth in the future is more important than earning money.	4	0 (0.0)	2 (13.3)	1 (6.7)	12 (80.0)	0.87
Overall comment	20.	As I cannot control the future development of my child, I do not have any expectations of my child's future.	4	1 (6.7)	1 (6.7)	3 (20.0)	10 (66.7)	0.87

N=15

Overall CVI_(relevance)**0.97**

Table 7.6. Ratings on degree of clarity of PECF by the experts

Domain	Item No.	Item	Median	No. of experts rated the scale (Percent)				CVI
				Very unclear	Unclear	Clear	Very clear	
				1	2	3	4	
Educational achievement	1.	I expect my child to complete university.	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
	2.	I expect my child to have good academic performance.	3	0 (0.0)	2 (13.3)	9 (60.0)	4 (26.7)	0.87
	3.	I let my child decide how long he/she wants to study.	3	0 (0.0)	4 (26.7)	6 (40.0)	5 (33.3)	0.73
	4.	I have clear expectations of my child's academic achievement.	3	0 (0.0)	4 (26.7)	4 (26.7)	7 (46.7)	0.73
Self reliance	5.	I always remind my child to be self-reliant in the future.	4	0 (0.0)	3 (20.0)	3 (20.0)	9 (60.0)	0.80
	6.	I expect my child to not need financial assistance from the Government.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
Occupation	7.	I hope that my child can stand out from the crowd in the future.	4	0 (0.0)	1 (6.7)	6 (40.0)	8 (53.3)	0.93
	8.	The way out for my child's future is to find a good job.	4	0 (0.0)	1 (6.7)	4 (26.7)	10 (66.7)	0.93
	9.	I hope that my child can find a job so that he/she can rise out of our current situation.	3	0 (0.0)	2 (13.3)	8 (53.3)	5 (33.3)	0.87
	10.	I expect my child to have a good salary in the future.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	11.	I hope that my child's future job can keep him/her free from anxiety about daily necessities.	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
	12.	I expect my child to have a good career.	4	0 (0.0)	2 (13.3)	3 (20.0)	10 (66.7)	0.87
	13.	My child can do whatever he/she wants; I have no expectations for his/her career.	3	0 (0.0)	2 (13.3)	6 (40.0)	7 (46.7)	0.87
	14.	I hope that my child's future job will fit his/her interest.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
Family obligation	15.	I expect my child to rear me in the future.	4	0 (0.0)	0 (0.0)	4 (26.7)	11 (73.3)	1.00
	16.	I expect my child to rear his/her whole family.	4	0 (0.0)	3 (20.0)	3 (20.0)	9 (60.0)	0.80
	17.	I expect my child to take care of me in the future.	4	0 (0.0)	1 (6.7)	3 (20.0)	11 (73.3)	0.93
Conduct	18.	I always remind my child not to act indecently in the future.	4	0 (0.0)	0 (0.0)	4 (26.7)	11 (73.3)	1.00
	19.	For my child, being down to earth in the future is more important than earning money.	4	0 (0.0)	2 (13.3)	5 (33.3)	8 (53.3)	0.87
Overall comment	20.	As I cannot control the future development of my child, I do not have any expectations of my child's future.	4	1 (6.7)	1 (6.7)	4 (26.7)	9 (60.0)	0.87

N=15

Overall CVI_(clarity)**0.90**

Table 7.7. Ratings on degree of representativeness of PECF by the experts

Domain	No. of items	Median	No. of experts rated the scale (Percent)				CVI
			Very unrepresentative	unrepresentative	representative	Very representative	
			1	2	3	4	
Educational achievement	4	3	0 (0.0)	2 (13.3)	9 (60.0)	4 (26.7)	0.87
Self reliance	2	3	0 (0.0)	1 (6.7)	9 (60.0)	5 (33.5)	0.93
Occupation	8	3	0 (0.0)	2 (13.3)	6 (40.0)	7 (46.7)	0.87
Family obligation	3	3	0 (0.0)	3 (20.0)	7 (46.7)	5 (33.3)	0.80
Conduct	2	3	0 (0.0)	4 (26.7)	8 (53.3)	3 (20.0)	0.73
Overall comment	1	3	1 (6.7)	3 (20.0)	6 (40.0)	5 (33.3)	0.73
Overall CVI_(representativeness)							0.82
Overall representativeness	5 domains	3	0 (0.0)	3 (20.0)	9 (60.0)	3 (20.0)	0.80

N=15

Table 7.8. Modifications of PECF

Item No.	Item	Problem and suggestions made	Modifications suggested
2	I expect my child to have good academic performance.	“Good academic performance” was vague as “performance” can be interpreted in different aspects, such as participation, conduct, behaviours etc.	Use “good academic results” (“ <i>you hao de xue ye cheng ji</i> ”, 有好的學業成績)
3	I let my child decide how long he/she wants to study.	“How long he/she wants to study” is difficult to understand	Use a more straightforward phrase like “I let my child decide his/her educational attainment” (“ <i>wo you zi nu jue ding zi ji de xue ye gi wang/jiao yu cheng du</i> ”, 我由子女決定自己的學業期望/教育程度)
4	I have clear expectations of my child’s academic achievement.	“Child’s academic achievement” and “clear expectations” needed further clarification	Change “child’s academic achievement” to “academic performance” (“ <i>xue ye shang de biao xian</i> ”, 學業上的表現)
7	I hope that my child can stand out from the crowd in the future.	“Stand out from the crowd” could relate to aspects other than job/career.	Change “stand out from the crowd” into “stand out from the crowd in his/her career” (“ <i>zai shi ye shang chu ren tou di</i> ” 在事業上出人頭地)
12	I expect my child to have a good career.	Overlaps with Item 7	Delete Item 12
16	I expect my child to rear his/her whole family.	The phrase “rear his/her family” does not specify that it means the child’s future family.	Change the phrase from “his/her family” to “his/her future family” (“ <i>wo xi wang zi nu jiang lai neng yang huo zi ji de jia ting</i> ”, 我期望子女將來能養活自己的家庭)
19	For my child, being down to earth in the future is more important than earning money.	It is misleading to compare “down to earth” with “earning money”. Items on diverse development and skill acquisition were important but were ignored. The theme of self-reliance needs to be expanded to include “independence from parent’s support”. The domain of family obligation should be expanded to include more family aspects of “marriage”, “creation of new family” etc.	Change the item to, “I hope that my child will be down to earth, without unrealistic expectations” (“ <i>wo xi wang zi nu jiang lai jiao ta shi di, bu yao hao gao wu yuan</i> ”, 我期望子女將來腳踏實地, 不要好高騖遠). Add the item, “I expect my child to learn a specific work skill” (“ <i>wo xi wang zi nu xue de yi ji zhi chang</i> ”, 一技之長). Add the item, “I expect my child to not rely on me for financial support when he/she grows up” (“ <i>wo xi wang zi nu zhang da hou bu yong wo gong yang</i> ”, 我期望子女長大後不用我供養). Add an item “I hope that my child can create a new family” (“ <i>wo xi wang zi nu jiang lai cheng jia li shi</i> ”, 我希望子女將來成家立室)

Table 7.9. The modified PECF according to the results of content validation by experts

1.	I expect my child to complete university.
2.	I expect my child to have good academic results.
3.	I let my child decide his/her educational attainment.
4.	I have clear expectations of my child's academic performance.
5.	I expect my child to learn a specific skill.
6.	I always remind my child to be self-reliant in the future.
7.	I expect my child to not need financial assistance from the Government.
8.	I expect my child to not rely on me for financial support when he/she grows up
9.	I hope that my child can stand out from the crowd in his/her career.
10.	The way out for my child's future is to find a good job.
11.	I hope that my child can find a job so that he/she rise out of our current situation.
12.	I expect my child to have a good salary in the future.
13.	I hope that my child's future job can keep him/her free from anxiety about daily necessities.
14.	My child can do whatever he/she wants; I have no expectations of his/her career.
15.	I hope that my child's future job will fit his/her interest.
16.	I expect my child to rear me in the future.
17.	I expect my child to rear his/her future family.
18.	I expect my child to take care of me in the future.
19.	I hope that my child can create a new family.
20.	I always remind my child not to act indecently in the future.
21.	I hope that my child will be down to earth, without unrealistic expectations.
22.	I always remind my child to contribute to the society in the future.
23.	As I cannot control the future development of my child, I do not have any expectations of my child's future.

Table 7.10: Ratings on degree of relevance of SA by the experts

Domain	Item No.	Item	Median	No. of experts rated the scale (Percent)				CVI
				Irrelevant	Unable to assess the relevance without item revision or item is irrelevant unless it is revised	relevant but minor alternations	Relevant	
				1	2	3	4	
Strive for financial resources	1.	To fulfil the educational needs of my child, I eat and wear less.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
	2.	I save money for my child to study in university, despite the difficulty of the work.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
	3.	The expenses of my child's education are more important than my personal expenses.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00
	4.	If my child needs tutoring, I will fulfil his/her needs even if family expenses have to be tightened.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00
	5.	If my child needs to join extra-curricular activities, I will fulfil his/her needs even if family expenses have to be tightened.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
	6.	I save rigorously to reserve funds for my child's education.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00

	7.	Even if the family faces financial stress, I will not cut any educational expenses of my children.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00
	8.	If my child needs to buy reference books, I will fulfil his/her needs even if family expenses have to be tightened.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00
	9.	If the family faces financial stress, I will borrow money to fulfil the educational needs of children.	4	0 (0.0)	1 (6.7)	0 (0.0)	14 (93.3)	0.93
Spending of time on education of children	10.	During the examination period, I will try my best to stay at home with my child.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
	11.	If the teacher calls me to discuss my child's schooling, I will stop work and see the teacher even I am busy.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	12.	I always reserve time for participating in the school's parent day.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	13.	Even I am tired, I try my best to understand my child's school life.	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
Restructuring of daily routines	14.	When my child studies at midnight, I will never sleep.	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
	15.	My life routine is structured according to the educational needs of my child.	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
	16.	I keep taking care of my child even when I am sick.	4	1 (6.7)	3 (20.0)	2 (13.3)	9 (60.0)	0.73
	17.	During the examination period, I am more conscious of taking care of my children.	4	0 (0.0)	2 (13.3)	0 (0.0)	13 (86.7)	0.87
	18.	I will change family habits in order to fit the educational needs of my child.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
	19.	In order to have a silent environment for my child to study, I give up family entertainment.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
Sacrifice of lifestyle and aspiration	20.	I give up my hobbies for the education of my child.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	21.	I sacrifice my aspirations for the education of my child.	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
Shielding from worries	22.	I hide family worries in front of my child in order not to disturb his/her studies.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00
	23.	In order not to affect my child's studies, I hide being sick when it happens.	4	0 (0.0)	0 (0.0)	0 (0.0)	15 (100.0)	1.00

N=15

Overall CVI_(relevance)**0.98**

Table 7.11. Ratings on degree of clarity of SA by the experts

Domain	Item No.	Item	Median	No. of experts rated the scale (Percent)				CVI
				Very unclear	Unclear	Clear	Very clear	
				1	2	3	4	
Strive for financial resources	1.	To fulfil the educational needs of my child, I eat and wear less.	4	0 (0.0)	1 (6.7)	2 (13.3)	12 (80.0)	0.93
	2.	I save money for my child to study in university, despite the difficulty of the work.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
	3.	The expenses of my child's education are more important than my personal expenses.	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
	4.	If my child needs tutoring, I will fulfil his/her needs even if family expenses have to be tightened.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	5.	If my child needs to join extra-curricular activities, I will fulfil his/her needs even if family expenses have to be tightened.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	6.	I save rigorously to reserve funds for my child's education.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
	7.	Even if the family faces financial stress, I will not cut any educational expenses of my children.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	8.	If my child needs to buy reference books, I will fulfil his/her needs even if family expenses have to be tightened.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	9.	If the family faces financial stress, I will borrow money to fulfil the educational needs of children.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
Spending of time on education of children	10.	During the examination period, I will try my best to stay at home with my child.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	11.	If the teacher calls me to discuss my child's schooling, I will stop work and see the teacher even I am busy.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	12.	I always reserve time for participating in the school's parent day.	4	0 (0.0)	0 (0.0)	2 (13.3)	13 (86.7)	1.00
	13.	Even I am tired, I try my best to understand my child's school life.	4	0 (0.0)	1 (6.7)	3 (20.0)	11 (73.3)	0.93
Restructuring of daily routines	14.	When my child studies at midnight, I will never sleep.	4	0 (0.0)	1 (6.7)	3 (20.0)	11 (73.3)	0.93
	15.	My life routine is structured according to the educational needs of my child.	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
	16.	I keep taking care of my child even when I am sick.	4	0 (0.0)	0 (0.0)	5 (33.3)	10 (66.7)	1.00
	17.	During the examination period, I am more conscious of taking care of my children.	4	0 (0.0)	0 (0.0)	4 (26.7)	11 (73.3)	1.00
	18.	I will change family habits in order to fit the educational needs of my child.	4	0 (0.0)	1 (6.7)	1 (6.7)	13 (86.7)	0.93
	19.	In order to have a silent environment for my child to study, I give up family entertainment.	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
Sacrifice of lifestyle and aspiration	20.	I give up my hobbies for the education of my child.	4	0 (0.0)	1 (6.7)	2 (13.3)	12 (80.0)	0.93
	21.	I sacrifice my aspirations for the education of my child.	4	0 (0.0)	2 (13.3)	2 (13.3)	11 (73.3)	0.87
Shielding from worries	22.	I hide family worries in front of my child in order not to disturb his/her studies.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00

23.	In order not to affect my child's studies, I hide being sick when it happens.	4	0 (0.0)	0 (0.0)	1 (6.7)	14 (93.3)	1.00
-----	---	---	------------	------------	------------	--------------	------

N=15

Overall CVI_(clarity)**0.98**

Table 7.12. Ratings on degree of representativeness of SA by the experts

Domain	No. of items	Median	No. of experts rated the scale (Percent)				CVI
			Very unrepresentative	unrepresentative	representative	Very representative	
			1	2	3	4	
Strive for financial resources	9	4	0 (0.0)	0 (0.0)	3 (20.0)	12 (80.0)	1.00
Spending of time on education of children	4	3	0 (0.0)	2 (13.3)	6 (40.0)	7 (46.7)	0.87
Restructuring of daily routines	6	4	0 (0.0)	1 (6.7)	5 (33.3)	9 (60.0)	0.93
Sacrifice of lifestyle and aspiration	2	3	0 (0.0)	3 (20.0)	6 (40.0)	6 (40.0)	0.80
Shielding from worries	2	4	0 (0.0)	1 (6.7)	5 (33.3)	9 (60.0)	0.93
Overall CVI_(representativeness)							0.91
Overall representativeness	5 domains	3	0 (0.0)	0 (0.0)	10 (66.7)	5 (33.3)	1.00

N=15

Table 7.13. Modifications of the SA

Item No.	Problem and suggestions made	Modifications suggested
15	Use “adjusting the routine” instead of “structuring the routine”	The item changed to “My life routine is adjusted according to the educational needs of my child” (“ <i>wo de qi juzuo xi du hui gen ju zi nu de xue xi xu yao er zuo chu tiao jie</i> ”, 我的起居作息都會根據子女的學習需要而作出調節。)
16	The item was not related to education. It focuses on the caring and nurturing roles of parents. Adding items on parental sacrifice of social life so as to improve the representativeness of “personal sacrifice” domain	Delete the item Add an item: “I give up my social life for the education of my child” (“ <i>wei le zi nu de xue ye, wo xi sheng wo de she jiao sheng huo</i> ” 為了子女的學業，我犧牲我的社交生活。)

Table 7.14. The modified SA according to the results of content validation by experts

1.	To fulfill the educational needs of my child, I eat and wear less.
2.	I save money for my child to study in university, despite how hard the work I face.
3.	The expense of child's education is more important than my personal expenses.
4.	If my child needs tutoring, I would fulfill his/her needs even if family expenses have to be tightened.
5.	If my child needs to join extra-curricular activities, I would fulfill his/ her needs even if family expenses have to be tightened.
6.	I save rigorously as to reserve funds for child's education.
7.	Even if the family faces financial stress, I will not stop any educational expenses of children.
8.	If my child needs to buy reference books, I would fulfill his/ her needs even if family expenses have to be tightened.
9.	In case the family faces financial stress, I will borrow money to fulfill the educational needs of children.
10.	During the examination period, I will try my best to stay at home and accompany with my child.
11.	If the teacher calls me to discuss about my child, I will stop my work and see the teacher even I am busy at the time.
12.	I always reserve the time for participating in the parent day of school.
13.	Even I am tired, I try my best to understand the school life of my child.
14.	When my child studies at mid-night, I will never sleep.
15.	My life routine is adjusted according to the educational needs of my child.
16.	During the examination period, I am more conscious in taking care of my children.
17.	I will change the family habits in order to fit the educational needs of my child.
18.	In order to have a silent environment for the study of my child, I give up family entertainment.
19.	I give up my hobbies for the education of my child.
20.	I sacrifice my aspiration for the education of my child.
21.	I give up my social life for the education of my child
22.	I will hide the family worries in front of my child in order not to disturb his/her studying.
23.	In order not to affect the study of my child, I will hide my sickness when it happens.

Table 7.15. Item-total statistics of PECF

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PECF1	.521	.818
PECF2	.531	.818
PECF3	.094	.839
PECF4	.356	.823
PECF5	.483	.820
PECF6	.376	.822
PECF7	.390	.822
PECF8	.226	.829
PECF9	.637	.811
PECF10	.499	.816
PECF11	.497	.816
PECF12	.538	.814
PECF13	.688	.810
PECF14	.244	.832
PECF15	.170	.831
PECF16	.245	.829
PECF17	.418	.822
PECF18	.402	.821
PECF19	.438	.821
PECF20	.451	.820
PECF21	.408	.822
PECF22	.474	.819
PECF23	.252	.831

Note. PECF=Parental Expectations of Children's Future Scale

Table 7.16. Correlations of PECF with other measures on parenting

	KNO	DEM	EXP
PECF	.345***	.357***	.573***

*** $p < .001$

Note. PECF = Parental Expectations of Children's Future Scale. KNO = Parental Knowledge Scale. DEM = Parental Demandingness Scale. EXP = Parental Expectation Scale (EXP).

Table 7.17. Rotated Component Matrix for six-factor solution of PECF

		Component					
		1	2	3	4	5	6
PECF1	I expect my child to complete university.	.156	.494	.207	.486	.270	.004
PECF2	I expect my child to have good academic results.	.410	.271	.188	.537	.080	-.075
PECF3	I let my child decide his/her educational attainment.	.004	.674	-.024	-.011	-.012	-.064
PECF4	I have clear expectations of my child's academic performance.	.090	.123	.249	.192	.064	.456
PECF5	I expect my child to learn a specific skill.	.341	.241	.131	.403	-.014	.179
PECF6	I always remind my child to be self-reliant in the future.	.052	-.052	.342	.717	.003	.093
PECF7	I expect my child to not need financial assistance from the Government.	.255	-.143	.226	.405	-.236	.226
PECF8	I expect my child to not rely on me for financial support when he/she grows up	.018	-.234	-.201	.552	.373	.322
PECF9	I hope that my child can stand out from the crowd in his/her career.	.743	.208	.062	.126	.162	.164
PECF10	The way out for my child's future is to find a good job.	.817	-.041	.049	.218	-.106	-.038
PECF11	I hope that my child can find a job so that he/she rise out of our current situation.	.755	-.142	.260	.056	.024	.034
PECF12	I expect my child to have a good salary in the future.	.751	.022	-.015	.037	.370	.088
PECF13	I hope that my child's future job can keep him/her free from anxiety about daily necessities.	.812	.178	.083	.053	.204	.156
PECF14	My child can do whatever he/she wants; I have no expectations of his/her career.	.114	.756	.148	.005	-.108	-.113
PECF15	I hope that my child's future job will fit his/her interest.	.084	-.211	.059	-.022	-.071	.825
PECF16	I expect my child to rear me in the future.	.216	-.142	.021	.009	.805	-.028
PECF17	I expect my child to rear his/her future family.	.078	.073	.222	.242	.235	.606
PECF18	I expect my child to take care of me in the future.	.149	-.022	.182	.072	.831	.183
PECF19	I hope that my child can create a new family.	.211	.092	.534	-.115	.160	.427
PECF20	I always remind my child not to act indecently in the future.	.159	-.068	.684	.393	-.078	.039
PECF21	I hope that my child will be down to earth, without unrealistic expectations.	.030	.038	.811	.135	.025	.150
PECF22	I always remind my child to contribute to the society in the future.	.117	.164	.659	.152	.157	.145
PECF23	As I cannot control the future development of my child, I do not have any expectations of my child's future.	.007	.849	-.003	.000	-.090	.158

Note. The highest loading obtained by a variable among the factors is marked in bold. PECF=Parental Expectations of Children's Future Scale completed by parents.

Table 7.18: Inter-correlations of items of PECF

	PECF1	PECF2	PECF3	PECF4	PECF5	PECF6	PECF7	PECF8	PECF9	PECF10	PECF11	PECF12	PECF13	PECF14	PECF15	PECF16	PECF17	PECF18	PECF19	PECF20	PECF21	PECF22	PECF23
PECF1																							
PECF2	.514**																						
PECF3	.222*	.099																					
PECF4	.195*	.135	.000																				
PECF5	.358**	.334**	.083	.310**																			
PECF6	.253**	.380**	-.004	.306**	.276**																		
PECF7	.145	.258**	-.066	.094	.212*	.289**																	
PECF8	.159	.097	-.109	.136	.039	.345**	.168																
PECF9	.340**	.483**	.095	.163	.270**	.168	.145	.177*															
PECF10	.194*	.402**	-.029	.179*	.297**	.199*	.268**	.110	.600**														
PECF11	.135	.255**	-.042	.171	.305**	.257**	.215*	.117	.465**	.570**													
PECF12	.235**	.313**	.008	.172	.307**	.053	.172	.220*	.551**	.490**	.527**												
PECF13	.313**	.422**	.171	.152	.339**	.171	.208*	.102	.666**	.565**	.582**	.672**											
PECF14	.348**	.194*	.297**	.082	.159	.023	.020	-.188*	.161	.144	.051	.070	.138										
PECF15	-.038	-.011	-.210*	.183*	.082	.032	.200*	.275**	.201*	.095	.108	.041	.110	-.204*									
PECF16	.139	.086	-.166	.079	.060	.049	.001	.272**	.229*	.162	.230**	.394**	.225*	-.095	.021								
PECF17	.299**	.224*	-.013	.299**	.267**	.324**	.207*	.185*	.195*	.049	.187*	.238**	.297**	.014	.370**	.149							
PECF18	.245**	.188*	.005	.179*	.196*	.110	.045	.330**	.263**	.090	.153	.378**	.354**	-.070	.139	.626**	.336**						
PECF19	.196*	.199*	.055	.324**	.161	.251**	.278**	.050	.235**	.100	.281**	.237**	.345**	.061	.241**	.130	.315**	.302**					
PECF20	.266**	.275**	.023	.228*	.353**	.423**	.377**	.106	.171	.271**	.295**	.125	.197*	.054	.169	.040	.239**	.170	.230*				
PECF21	.291**	.230**	-.017	.256**	.185*	.326**	.209*	.063	.165	.152	.214*	.067	.109	.145	.201*	.023	.301**	.191*	.405**	.563**			
PECF22	.325**	.332**	.072	.243**	.165	.334**	.163	.099	.360**	.095	.236**	.151	.241**	.189*	.198*	.081	.275**	.245**	.328**	.438**	.462**		
PECF23	.289**	.181*	.466**	.115	.210*	.001	-.012	-.119	.199*	-.003	-.081	-.011	.116	.646**	-.008	-.061	.037	-.076	.108	.021	.085	.122	

**Correlation is significant at the 0.01 level (two-tailed)

*Correlation is significant at the 0.05 level (two-tailed).

Note. PECF=Parental Expectations of Children's Future Scale completed by parents

Table 7.19. Item-total statistics of Revised-PECF

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PECF1	.446	.861
PECF2	.553	.857
PECF4	.381	.863
PECF5	.497	.860
PECF6	.423	.862
PECF7	.379	.863
PECF9	.632	.852
PECF10	.558	.856
PECF11	.584	.855
PECF12	.566	.856
PECF13	.700	.850
PECF17	.438	.861
PECF18	.383	.864
PECF19	.444	.861
PECF20	.502	.859
PECF21	.439	.861
PECF22	.474	.860

Table 7.20. Correlations of Revised-PECF with other measures on parenting

	KNO	DEM	EXP
Revised-PECF	.353***	.377***	.577***

*** $p < .001$

Note. Revised-PECF = Revised Parental Expectations of Children's Future Scale. KNO = Parental Knowledge Scale. DEM = Parental Demandingness Scale. EXP = Parental Expectation Scale (EXP).

Table 7.21. Rotated component matrix of Revised-PECF

		Component				
		1	2	3	4	5
PECF1	I expect my child to complete university.	.087	.142	.201	.781	.186
PECF2	I expect my child to have good academic results.	.341	.231	-.018	.721	.127
PECF4	I have clear expectations of my child's academic performance.	.050	.176	.334	-.036	.632
PECF5	I expect my child to learn a specific skill.	.262	.069	.020	.324	.673
PECF6	I always remind my child to be self-reliant in the future.	.043	.527	-.019	.237	.450
PECF7	I expect my child to not need financial assistance from the Government.	.257	.492	-.164	-.051	.310
PECF9	I hope that my child can stand out from the crowd in his/her career.	.726	.102	.183	.388	-.077
PECF10	The way out for my child's future is to find a good job.	.800	.163	-.206	.133	.144
PECF11	I hope that my child can find a job so that he/she rise out of our current situation.	.758	.273	.059	-.096	.142
PECF12	I expect my child to have a good salary in the future.	.765	-.096	.321	.099	.122
PECF13	I hope that my child's future job can keep him/her free from anxiety about daily necessities.	.801	.032	.293	.208	.094
PECF17	I expect my child to rear his/her future family.	.039	.177	.540	.163	.442
PECF18	I expect my child to take care of me in the future.	.189	-.016	.726	.177	.065
PECF19	I hope that my child can create a new family.	.206	.433	.571	-.137	.130
PECF20	I always remind my child not to act indecently in the future.	.131	.752	-.011	.148	.227
PECF21	I hope that my child will be down to earth, without unrealistic expectations.	-.001	.763	.281	.117	.018
PECF22	I always remind my child to contribute to the society in the future.	.085	.616	.363	.347	-.150

Note. The highest loading obtained by a variable among the factors is marked in bold. PECF=Parental Expectations of Children's Future Scale completed by parents.

Table 7.22. Summary of reliability and validity statistics of PECF and Revised-PECF

			PECF	Revised-PECF
<i>No. of items</i>			23	17
<i>Reliability</i>	<i>Internal Consistency</i>	Cronbach's α	.829	.866
		Mean inter-item correlations	.200	.283
<i>Validity</i>	<i>Test-retest reliability</i>	Mean corrected item-total correlations	.406	.494
		Test-retest reliability coefficient	.774***	.765***
		Correlation coefficients with KNO	.345***	.353***
	<i>Convergent validity</i>	Correlation coefficients with DEM	.357***	.377***
		Correlation coefficients with EXP	.573***	.577***
		No. of factors extracted	6	5
	<i>Factor analysis</i>	% of total variance explained	61.95%	64.45% (in 5-factor model)
		Factors	Unclear and not interpretable	Quite clear in 4-factor model: Occupation, Personal conduct, Family and Educational attainment

*** $p < .001$

Note. PECF = Parental Expectations of Children's Future Scale. Revised-PECF = Revised Parental Expectations of Children's Future Scale. KNO = Parental Knowledge Scale. DEM = Parental Demandingness Scale. EXP = Parental Expectation Scale (EXP).

Table 7.23. Revised-PECF

PECF1	I expect my child to complete university.
PECF2	I expect my child to have good academic results.
PECF3	I have clear expectations of my child's academic performance.
PECF4	I expect my child to learn a specific skill.
PECF5	I always remind my child to be self-reliant in the future.
PECF6	I expect my child to not need financial assistance from the Government.
PECF7	I hope that my child can stand out from the crowd in his/her career.
PECF8	The way out for my child's future is to find a good job.
PECF9	I hope that my child can find a job so that he/she rise out of our current situation.
PECF10	I expect my child to have a good salary in the future.
PECF11	I hope that my child's future job can keep him/her free from anxiety about daily necessities.
PECF12	I expect my child to rear his/her future family.
PECF13	I expect my child to take care of me in the future.
PECF14	I hope that my child can create a new family.
PECF15	I always remind my child not to act indecently in the future.
PECF16	I hope that my child will be down to earth, without unrealistic expectations.
PECF17	I always remind my child to contribute to the society in the future.

Table 7.24. Item-total statistics of PSA and MSA

Item	PSA		MSA	
	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	.590	.954	.694	.950
2	.612	.954	.554	.951
3	.531	.955	.678	.950
4	.665	.953	.728	.949
5	.664	.953	.658	.950
6	.677	.953	.735	.949
7	.545	.954	.710	.950
8	.704	.953	.723	.949
9	.560	.954	.728	.949
10	.705	.953	.718	.949
11	.674	.953	.669	.950
12	.625	.954	.631	.950
13	.761	.952	.679	.950
14	.727	.952	.669	.950
15	.727	.952	.750	.949
16	.757	.952	.725	.949
17	.749	.952	.785	.948
18	.703	.953	.691	.950
19	.765	.952	.771	.949
20	.768	.952	.745	.949
21	.751	.952	.396	.958
22	.684	.953	.676	.950
23	.627	.954	.630	.950

Note. PSA = Paternal Sacrifice for Children's Education Scale (adolescent's sample). MSA = Maternal Sacrifice for Children's Education Scale (adolescent's sample).

Table 7.25 Correlation coefficient between PSA, MSA and other parenting measures in adolescent study

	PSUP	MSUP	PRES	MPES
PSA	.42***		.58***	
MSA		.36***		.55***

***p < .001

Note. PSA = Paternal Sacrifice for Children's Education Scale. MSA = Maternal Sacrifice for Children's Education Scale. PSUP = Paternal Support Scale. MSUP = Maternal Support Scale. PRES = Paternal Responsiveness Scale. MPES = Maternal Responsiveness Scale.

Table 7.26. Rotated component matrix for 3-factor solution of PSA and MSA

Item	PSA			MSA		
	Component			Component		
	1	2	3	1	2	3
1 To fulfill my educational needs, my father/mother eats and wears less.	0.70	0.22	0.15	0.75	0.29	0.16
2 My father/mother saves money for me to study in university, despite how hard the work he/she faces.	0.78	0.12	0.22	0.67	0.13	0.20
3 The expense of my education is more important than my father's/mother's personal expenses.	0.64	0.24	0.09	0.76	0.28	0.14
4 If I need tutoring, my father/mother would fulfill my needs even if family expenses have to be tightened.	0.76	0.22	0.21	0.78	0.26	0.23
5 If I need to join extra-curricular activities, my father/mother would fulfill my needs even if family expenses have to be tightened.	0.76	0.17	0.27	0.69	0.14	0.38
6 My father/mother saves rigorously as to reserve funds for my education.	0.74	0.18	0.30	0.71	0.24	0.36
7 Even if the family faces financial stress, my father/mother will not stop any educational expenses of me.	0.77	0.10	0.14	0.77	0.24	0.24
8 If I need to buy reference books, my father/mother would fulfill my needs even if family expenses have to be tightened.	0.83	0.21	0.22	0.79	0.20	0.29
9 In case the family faces financial stress, my father/mother will borrow money to fulfill my educational needs.	0.61	0.39	0.03	0.65	0.42	0.18
10 During the examination period, my father/mother will try his/her best to stay at home and accompany with me.	0.22	0.33	0.75	0.29	0.39	0.68
11 If the teacher calls my father/mother to discuss about me, he/she will stop his/her work and see the teacher even he/she is busy at the time.	0.26	0.23	0.76	0.41	0.16	0.74
12 My father/mother always reserves the time for participating in the parent day of school.	0.20	0.16	0.80	0.33	0.14	0.78
13 Even my father/mother is tired, he/she tries his/her best to understand my school life.	0.32	0.35	0.70	0.31	0.26	0.75
14 When I study at mid-night, my father/mother will never sleep.	0.19	0.52	0.60	0.11	0.70	0.39
15 My father's/mother's life routine is adjusted according to my educational needs.	0.16	0.59	0.57	0.19	0.72	0.43
16 During the examination period, my father/mother is more conscious in taking care of me.	0.21	0.47	0.69	0.20	0.53	0.63
17 My father/mother will change the family habits in order to fit my educational needs.	0.22	0.62	0.51	0.23	0.73	0.43
18 In order to have a silent environment for my study, my father/mother gives up family entertainment.	0.20	0.66	0.41	0.23	0.68	0.31
19 My father/mother gives up his/her hobbies for my education.	0.23	0.77	0.37	0.30	0.81	0.20
20 My father/mother sacrifices his/her aspiration for my education.	0.23	0.81	0.33	0.25	0.84	0.17
21 My father/mother gives up his/her social life for my education.	0.20	0.82	0.32	0.10	0.54	0.07
22 My father/mother will hide the family worries in front of me in order not to disturb my studying.	0.32	0.71	0.20	0.42	0.69	0.03
23 In order not to affect my study, my father/mother will hide his/her sickness when it happens.	0.28	0.71	0.13	0.39	0.65	0.02
Variance explained	50.53	11.60	5.47	51.35	9.75	6.42
Total variance	67.61%			67.51%		

Note. The highest loading obtained by a variable among the factors is marked in bold. PSA=Paternal Sacrifice for Children's Education Scale completed by adolescents. MSA=Maternal Sacrifice for Children's Education Scale completed by adolescents.

Table 7.27: Item-total statistics of SA

Item	SA	
	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	.500	.934
2	.561	.933
3	.589	.932
4	.583	.932
5	.686	.931
6	.637	.932
7	.638	.932
8	.705	.931
9	.573	.933
10	.613	.932
11	.450	.934
12	.430	.934
13	.503	.934
14	.622	.932
15	.629	.932
16	.687	.931
17	.699	.931
18	.614	.932
19	.737	.930
20	.640	.932
21	.666	.931
22	.491	.934
23	.573	.933

Note. SA = Parental Sacrifice for Children's Education Scale (parent's sample).

Table 7.28. Correlation coefficient between SA and other parenting measures

	SUP	RES
SA	.26** (.27**) ^a	.27** (.24**) ^a

**p < .01

^a The correlation coefficient was calculated with parent's age having controlled.

Note. SA = Parental Sacrifice for Children's Education Scale. SUP = Parental Support Scale. RES = Parental Responsiveness Scale.

Table 7.29. Rotation Component matrix of SA using parent's data

		SA				
		Component				
	Item	1	2	3	4	5
1	To fulfill the educational needs of my child, I eat and wear less.	0.06	0.79	0.11	0.13	0.18
2	I save money for my child to study in university, despite how hard the work I face.	0.20	0.71	0.21	0.18	-0.02
3	The expense of child's education is more important than my personal expenses.	0.08	0.69	0.37	0.12	0.20
4	If my child needs tutoring, I would fulfill his/her needs even if family expenses have to be tightened.	0.19	0.47	0.55	0.08	0.01
5	If my child needs to join extra-curricular activities, I would fulfill his/ her needs even if family expenses have to be tightened.	0.34	0.26	0.70	0.08	0.13
6	I save rigorously as to reserve funds for child's education.	0.17	0.73	0.34	0.21	0.04
7	Even if the family faces financial stress, I will not stop any educational expenses of children.	0.23	0.13	0.83	0.19	0.12
8	If my child needs to buy reference books, I would fulfill his/ her needs even if family expenses have to be tightened.	0.30	0.26	0.65	0.30	0.11
9	In case the family faces financial stress, I will borrow money to fulfill the educational needs of children.	0.11	0.32	0.67	0.05	0.23
10	During the examination period, I will try my best to stay at home and accompany with my child.	0.62	0.24	0.17	0.35	-0.09
11	If the teacher calls me to discuss about my child, I will stop my work and see the teacher even I am busy at the time.	0.16	0.17	0.15	0.74	0.03
12	I always reserve the time for participating in the parent day of school.	0.08	0.14	0.18	0.87	-0.02
13	Even I am tired, I try my best to understand the school life of my child.	0.23	0.16	0.09	0.80	0.10
14	When my child studies at mid-night, I will never sleep.	0.60	-0.01	0.37	0.23	0.10
15	My life routine is adjusted according to the educational needs of my child.	0.76	-0.10	0.23	0.32	0.12
16	During the examination period, I am more conscious in taking care of my children.	0.77	0.08	0.23	0.22	0.12
17	I will change the family habits in order to fit the educational needs of my child.	0.75	0.04	0.30	0.17	0.20
18	In order to have a silent environment for the study of my child, I give up family entertainment.	0.53	0.46	0.01	0.40	-0.04
19	I give up my hobbies for the education of my child.	0.71	0.40	0.09	0.01	0.35
20	I sacrifice my aspiration for the education of my child.	0.72	0.39	0.05	-0.11	0.26
21	I give up my social life for the education of my child	0.66	0.30	0.18	-0.08	0.36
22	I will hide the family worries in front of my child in order not to disturb his/her studying.	0.19	0.09	0.22	0.06	0.87
23	In order not to affect the study of my child, I will hide my sickness when it happens.	0.36	0.15	0.15	0.03	0.78
Variance explained		41.55.	9.69	8.72	5.75	4.42
Total variance		70.13%				

Note. The highest loading obtained by a variable among the factors is marked in bold. SA=Parental Sacrifice for Children's Education Scale completed by parents.

Table 7.30 Summary of psychometric properties of SA, PSA and MSA

			SA	PSA	MSA
			Parent	Adolescent	
<i>Sample</i>					
<i>Sample size (n)</i>			125		373
<i>Reliability</i>	<i>Internal Consistency</i>	Cronbach's α	.935	.955	.952
		Mean inter-item correlations	.387	.480	.493
	<i>Test-retest reliability</i>	Mean corrected item-total correlations	.601	.677	.684
		Test-retest reliability coefficient	.815***	/	/
		Test-retest reliability coefficient			
<i>Validity</i>	<i>Convergent validity</i>	Correlation coefficients with RES/PRES/MRES	.266** (.235**) ^a	.580***	.522***
		Correlation coefficients with SUP/PSUP/MSUP	.260** (.272**) ^a	.419***	.355***
		Correlation coefficients with SUP/PSUP/MSUP			
	<i>Factor analysis</i>	No. of factors extracted	5	3	3
		% of total variance explained	70.13%	67.61%	67.51%

** $p < .01$, *** $p < .001$

^a The correlation coefficient was calculated with parent's age having controlled.

Note. SA = Parental Sacrifice for Children's Education Scale. PSA = Paternal Sacrifice for Children's Education Scale. MSA = Maternal Sacrifice for Children's Education Scale. SUP = Parental Support Scale. PSUP = Paternal Support Scale. MSUP = Maternal Support Scale. RES = Parental Responsiveness Scale. PRES = Paternal Responsiveness Scale. MRES = Maternal Responsiveness Scale.

Chapter Eight: Main Study

The main study aimed at studying the relationships amongst parental beliefs, family processes, achievement motivation and psychological competence of economically disadvantaged adolescents. This chapter covers four sections. It starts with a description of the research methodology, including the sampling strategy and data collection methods. The second part highlights the profile of the study sample. The third part reports the psychometric properties of the instruments in the main study. The final section presents the major findings addressing the research questions and hypotheses from Chapter Five.

8.1 Method

8.1.1 Sampling strategies in main study

A purposeful sampling strategy was used to recruit economically disadvantaged families for the study. Understanding that non-random sampling would limit generalization of research findings, purposeful sampling was used due to five practical difficulties in recruiting members of Chinese economically disadvantaged families. First, it was difficult and impossible to obtain a complete list of such families in Hong Kong. Second, Chinese people often perceive their lives in poverty as inglorious and dishonouring to the family; thus, they are unwilling to reveal their identities and experiences to others. Third, the strong stigmatization attached to poverty and to receiving cash assistance discouraged economically disadvantaged families from participating in the study. Fourth, the research required multiple family members (father, mother and adolescent) to participate, this brought more obstacles for recruiting the families to participate in the research. Last but not least, as the research recruited only intact economically disadvantaged families, a large proportion of single-parent families were excluded. Purposeful sampling seemed to be the most practical and comprehensible alternative for recruiting respondents with these restrictions. Though purposeful sampling was employed, the sampled families were recruited from different districts to reduce systematic errors.

Defining “economically disadvantaged families” was important. It was found that there is problem in adopting the concept of ‘absolute poverty’ in Hong Kong. As Hong Kong has been considered as an affluent city which ranked 21st out of

169 countries on Human Development Index (United Nations Development Programme, 2010b), the basic standards adopted by World Summit on Social Development in Copenhagen (United Nations, 1995) and the World Bank (Ravallion et al., 2009) may not be applicable in Hong Kong situation. To determine the poverty threshold using the concept of absolute poverty, calculation of the cost of basic necessities that a Hong Kong adult/family should need for a subsistence level of living is essential. Unfortunately, the studies on basic necessities in Hong Kong is severely lacking. One remarkable study is the review study on the adequacy rates of Comprehensive Social Security Assistance (CSSA) in 1995-96 (Research and Library Services Division, the Legislative Council Secretariat, September, 1996). The basic need budget (BN budget) was calculated to determine the minimum standard rate of CSSA for maintaining a subsistence level of living. However, the budget has been constructed 15 years ago and many necessary commodities may not be included in the basket. Also, the BN budget did not include commodities and services covered by special grants (e.g. rent) and by the Government free of charge to CSSA recipients (e.g. medical expense). Thus, the BN budget may not truly reflect the minimum cost for maintaining the basic needs of individuals/ families in Hong Kong.

In contrast, the Gini Coefficient of Hong Kong in 2006 was .533, which was ranked the first among 42 highly developed countries in 2010 (United Nations Development Programme, 2010a), suggesting that Hong Kong has the largest income inequality among the developed countries. The concept of relative poverty carries an important meaning in respect to the special Hong Kong social and economic context.

The relative poverty concept – 50% of the median monthly domestic household income as determined in the 2006 Population By-census – was employed as the poverty threshold in the study. The criterion was based on five considerations. First, relative poverty is grounded and calculated in the national economic context, which gives relevance to the social and economic situation of Hong Kong. Second, low-income working families, not just recipients of Comprehensive Social Security Assistance (CSSA), could be included. Third, the criterion was easily administered. Fourth, 50% of the median monthly domestic household income was endorsed as the poverty threshold by the Commission on Poverty in Hong Kong (Subcommittee to Study the Subject of Combating

Poverty, Legislative Council of the Hong Kong Special Administrative Region, 2006). Fifth, the criterion of 50% of the median monthly domestic household income to be the poverty threshold is commonly adopted in poverty research (Oxfam Hong Kong & Policy 21, 2011; Smeeding et al., 2001). Table 8.1 shows the poverty threshold with reference to household size reported in the 2006 Population By-census.

Intact families under the poverty threshold, i.e., 50% of median monthly domestic household income, were recruited as respondents of the study. As differences in beliefs and parenting practices between fathers and mothers were expected, intact families were selected as the respondents of the study. The father, mother and one adolescent aged 11-16 from each family were recruited to participate in the study.

Sample size is important to give reliable results for statistical analyses. In this study, correlation and multiple regression analyses were the main statistical analytical methods to study the relationships among variables. The sample size should be large enough to get reliable regression analyses. Tabachnick and Fidell (2007) suggested that, assuming a medium-size relationship between independent variables and dependent variables with α at .05 and β at .20, the simplest rules of thumb are $N \geq 50 + 8m$ (m is the number of independent variables) for testing multiple correlation and $N \geq 104 + m$ for testing individual predictors (Tabachnick & Fidell, 2007, p. 123). A more precise determination of sample size relies on a number of parameters: the number of predictors, the loss of predictive power (the alpha level) (ϵ), expected effect size (expected population square multiple correlation) (ρ^2), and the desired power (γ). With reference to Stevens' (2002) suggestion for a reliable prediction equation with 3-25 predictors, setting ϵ at 0.05, ρ^2 at 0.50 and γ at 0.90 would be optimal for social science research (Stevens, 2002). Taking Stevens' suggestion as the reference criteria, referring to the tables of sample size estimates for regression models based on a cross-validation approach presented by Park and Dudycha (1974), an estimation of 214 and 335 subjects would be determined for a maximum of 15 and 25 predictor variables respectively. Stevens (2002) further indicated a general rule of 15 subjects per predictor for a reliable regression equation in social science. In the study, though a large set of predictor variables was under investigation, the sample size of 275 was considered adequate for

performing multiple regression analysis.

8.1.2 Data collection method in main study

The respondents were recruited from school social work service units, children and youth service units and community service units of non-governmental organizations in different districts. Invitation letters were sent to the agency directors, service coordinators and units-in-charge to invite them to participate in the study. Letters were also sent to the Projects-in-charge of Child Development Projects, government programs recently launched in two phases, 2007 to 2010 and 2010 to 2013 (Child Development Fund, 2010). Follow-up calls were made to introduce the purpose of the research and clarify any queries. Social workers from the participating units helped recruit the respondents, explain and clarify the purpose and operation of the research, and help in the data collection process. For those units that had difficulties in managing the data collection process, they would help in the identification and invitation processes. In case a family agreed to participate in the study, a consent form was filled out by the parent respondent and was sent to the researcher. The researcher followed up with the respondents and home visits were arranged by the researcher.

The researcher or trained social workers of the participating service units were responsible for data collection. Training was given to social workers by the researcher before data collection and guidelines on the implementation of data collection were distributed to the involved social workers.

The respondents were invited to participate in the study. Parents and adolescents were given explanations about the purpose of the research, the procedure of data collection, the rights of respondents to voluntarily participate and withdraw from the study, as well as the use of the data in the study. Consent forms were given to parents and adolescents. Signed consent from parents and adolescents was expected.

Interviews with fathers, mothers and adolescents were arranged. Validated psychometric scales were used in the design. Fathers and mothers were requested to complete Parent Questionnaires with the psychometric scales of Chinese Parental Beliefs about Adversity Scale (CBA), Parents' Attributions Questionnaire (PAQ), Parental Expectations of Children's Future Scale (PECF), Parenting Style Scale (PPS), Chinese Parental Control Scale (PCS), Chinese

Family Assessment Inventory (FAI) and Parental Sacrifice for Children's Education Scale (SA) separately. The Parent Questionnaire is presented in Appendix 3. The questionnaires were completed in a self-administration format. Adolescents were requested to complete Adolescent Questionnaires which contained the psychometric scales of Paternal Parenting Style Scale (APPS), Maternal Parenting Style Scale (AMPS), Chinese Paternal Control Scale (APCS), Chinese Maternal Control Scale (AMCS), Chinese Family Assessment Inventory (AFAI), Paternal Sacrifice for Children's Education Scale (APSA), Maternal Sacrifice for Children's Education Scale (AMSA), Social-Oriented Achievement Motivation Scale (SOAM) and the seven subscales of Chinese Positive Youth Development Scale (PYD). The Adolescent Questionnaire is presented in Appendix 4. The questionnaire was also administered in a self-administered format. The background and psychometric properties of the measurement tools are outlined in Section 6.2. To ensure confidentiality, the questionnaire was completed by each participant separately. Adequate time was provided for each participant to complete the questionnaires. In case the participants had difficulties in comprehending the questionnaires, the researcher would read out questions or items in an interview format. The questionnaires were collected by the researcher for analysis. Each participating family was given a \$100 supermarket coupon as compensation for their time and transportation expenses.

There were 10 non-governmental organizations and 24 service units involved in the study. The recruitment process was more difficult than expected. Service units reported that their service users who experienced economic disadvantage were mainly single-parent families receiving Comprehensive Social Security Assistance (CSSA). Intact families, especially low-income working ones, were fewer, as they request less tangible services. Moreover, the long and irregular working hours restricted the participation of parents, especially fathers. Social stigmatization perceived by parents and adolescents further resulted in reluctance to participate. Last but not least, the complication of home visits and interviews caused reservations about participation in the study. It was difficult for father, mother and adolescent to come to units for interviews, but it was also inconvenient and embarrassing for the researcher to visit homes that were congested, messy and dilapidated. With the above-mentioned difficulties, the data collection process lasted for seven months (September 2010 to March 2011).

A total of 276 families responded to the questionnaires. There was one questionnaire found to be defective, as an adolescent responded to the parent questionnaire.

A pre-test was performed to find problems in the implementation of the study. Five economically disadvantaged families were recruited from children and youth service units and community service units. The researcher conducted the interviews and collected the data from the fathers, mothers and adolescents. Assessment of the feasibility of the data collection process was made. It was found that the parents took 45 minutes to one hour to complete the Parent Questionnaires, depending on the literacy level of the parents. It was quite common for the researcher or social workers to ask questions as some parents were illiterate and some were old. The adolescents took 30 to 45 minutes to complete the Adolescent Questionnaires. The process was smooth and parents and adolescents found the questions were not difficult.

The data of the questionnaires were entered by the researcher to SPSS for analysis. To ensure the accuracy in the data entry, the researcher checked the data twice, and further examined the ranges of the data to make sure that they were within the acceptable ranges.

8.2 Profile of the study sample

There were 276 intact economically disadvantaged families that participated in the study. However, as one set of questionnaires was invalid (with the adolescent child filling in the questionnaire of the parent), that questionnaire was deleted. Thus, 275 sets of questionnaires were analysed.

The age of the fathers ranged from 34 to 85 with an overall mean of 49.94 ($SD = 9.28$). It was noteworthy that there were 32 fathers (11.6%) over 60 years old. The age of mothers ranged from 29 to 57 with an overall mean of 42.18 ($SD = 4.97$). The mean age of fathers was greater than that of mothers. It is a social phenomenon in Hong Kong that some men have married younger women from mainland China and later applied for Hong Kong residency for their wives and children. The phenomenon appeared in the statistics on duration of stay in Hong Kong. Most fathers were born in Hong Kong ($n = 98$, 35.6%) or had resided in Hong Kong for more than 20 years ($n = 115$, 41.8%), whereas the mode of

duration of stay of mothers in Hong Kong was 6-10 years ($n = 103$, 37.5%). Table 8.2 and Table 8.3 list the age distribution of fathers and mothers and their duration of stay in Hong Kong.

Regarding the educational standard of fathers, a majority were of low educational standard, with 205 fathers (74.5%) at the junior secondary level or lower. There were 211 (76.7%) fathers who had a job, 30 (10.9%) were unemployed, and 26 (9.5%) were retired. Due to the low educational standard, 86 fathers (31.3%) were engaged in unskilled jobs and 98 (35.6%) were in skilled jobs.

Regarding the educational standard of mothers, a majority were also of low educational standard, with 204 mothers (74.2%) at the junior secondary level or lower. A large proportion of mothers had received their education in mainland China. For occupation, a high proportion of mothers were housewives ($n = 199$, 72.4%). For those who were working, 39 (60.9%) were unskilled labourers. Table 8.4 and Table 8.5 list the educational standard and occupations of fathers and mothers.

Though non-random sampling was employed in the study, the geographical locations of the participating families were spread across different districts in Hong Kong. The recruitment also reflected the substantial allocation of economically disadvantaged families in Hong Kong. According to the 2006 Population By-census, there were 238,046 children aged 0-14 living in poverty, or 25.4% of the total children population in Hong Kong. The poor children aged 0-14 were mainly located in Yuen Long, Kwun Tong, Kwai Tsing, and Tuen Mun. When considering the percentage of poor children in proportion to the whole children population in Hong Kong, it was found that Yuen Long, Kwai Tsing, Sham Shui Po and Islands (including Tung Chung) had the highest concentration of poor children (Hong Kong Council of Social Service, 2008). Table 8.6 illustrates the geographical distribution of poor children aged 0-14 according to the 2006 Population By-census. The sample of the study covered families in 14 districts with the largest samples recruited from Kwai Tsing, Islands (including Tung Chung), Tuen Mun, Yau Tsim Mong, Tai Po and Kwun Tong. Table 8.7 lists the geographical distribution of the family samples in the study.

As many economically disadvantaged families live in public-housing estates in remote areas such as Tung Chung and Tin Shui Wai, or in urban slums such as

Sham Shui Po and Kwun Tong, it was not surprising that the majority of the families lived in public housing ($n = 207$, 75.3%) or rented flats ($n = 32$, 11.7%). Table 8.8 lists the types of housing of the participating families.

As intact families were selected for the research, a vast majority of the couples were married ($n = 261$, 98.2%). However, of these, 27 couples (9.8%) were in their second marriage. These couples were mostly among fathers over 60 years old. Table 8.9 lists the marital status of the families.

The average number of children in the families was 2.34 ($SD = .90$), which was higher than the average number of children in domestic households with children aged under 15 as reported in the 2006 Population By-census (mean = 1.4) (Census and Statistics Department, 2007a, p.58). The median and mode of number of children in the sampled families were 2 and 2 respectively. Table 8.10 lists the distribution of numbers of children in the families.

As families with monthly income less than 50% of median monthly domestic household income according to the 2006 Population By-census were selected to participate in the study, their income level was not high. There were 25 (9.3%) with income less than \$5,000 (US\$641.0), 161 (59.6%) with income between HK\$5,001 and HK\$10,000 (US\$641.1 to US\$1,282.1), and 81 (30.0%) with income between HK\$10,001 and HK\$20,000 (US\$1,282.2 to US\$2,564.1). To have a clearer picture of the economic situation of the families, the monthly household income with respect to Comprehensive Social Security Assistance (CSSA) status and number of children was investigated. The families with monthly household income less than \$5,000 could be considered the poorest in Hong Kong society. Among them, 72.0% of the families were CSSA recipients; 16.0% had one child, 56.0% had two children, 4.0% had three children and 24.0% had four children or more. For families with income between HK\$5,001 and HK\$10,000, 42.9% were CSSA recipients; 14.3% had one child, 50.3% had two children, 26.1% had three children and 9.3% had four children or more. For families with income between HK\$10,001 and HK\$20,000, 8.8% were CSSA recipients; 8.6% had one child, 61.7% had two children, 19.8% had three children, and 9.9% had four children or more. Table 8.11 and Table 8.12 list monthly household income with reference to CSSA recipient status and number of children. As shown in Table 8.13, there were 96 families receiving CSSA, 34.8% of the sample. It should be noted that among those receiving CSSA, 9

fathers and 13 mothers were not eligible to apply for CSSA because they did not meet the seven-year residence requirement. Though their families were receiving CSSA, they were getting less than the actual head count. This made the families fall into severe poverty.

Table 8.14 lists the number of families receiving Textbook Allowance (TBA) from the Student Financial Assistance Agency of the Hong Kong Government. The Textbook Allowance was offered to low-income working families and was categorized into full TBA and half TBA according to their income levels. There were 125 (45.5%) families receiving full TBA and 89 (32.4%) receiving half TBA. Normally, those receiving CSSA are not entitled to TBA. However, 54 families reported that they received both CSSA and TBA. The misinterpretation may be due to difficulty differentiating between CSSA textbook supplements and the actual Textbook Allowance.

Regarding the adolescent profile, 134 boys (48.7%) and 141 girls (51.3%) participated in the study. The ratio was close to that of secondary schools (51.3:48.7) in Hong Kong according to the 2006 Population By-census. The mean age of the adolescents was 13.56 ($SD = 1.54$), with the mean of boys at 13.40 ($SD = 1.60$) and the mean of girls at 13.71 ($SD = 1.47$). Table 8.15 lists the age distribution of adolescents with respect to gender. On educational level, 18 adolescents (6.5%) were studying in Primary Five or below, 47 (17.1%) in Primary Six, 63 (22.9%) in Secondary One, 46 (16.7%) in Secondary Two, 42 (15.3%) in Secondary Three, 28 (10.2%) in Secondary Four, and 29 (10.5%) in Secondary Five and above (Table 8.16). Regarding duration of stay in Hong Kong, 144 adolescents (52.4%) had been born in Hong Kong, and 74 (27.0%) had resided in Hong Kong for more than 7 years. But still, 24 (8.7%) adolescents had resided in Hong Kong for less than 3 years. Many of them (having received much of their previous education in mainland China) were studying at lower levels in order to catch up the educational standard. Table 8.17 lists the duration of stay in Hong Kong for adolescents.

As intact families were selected for the study and both parents were requested to participate, it was not surprising that almost all adolescents lived with both parents, with very few exceptions of adolescents living with only one parent ($n = 14$, 5.1%) or with relatives instead of parents ($n = 1$, 0.4%).

As a summary, the study sample reflects the demographic characteristics of

poor families in Hong Kong. A majority of parents were of low educational standard, with fathers occupying unskilled jobs or as skilled labourers, and mothers were mostly housewives. A high proportion of mothers were new immigrants from mainland China. They lived in public houses or rented flats in the urban slums. Their household income was low, and most of them either received Comprehensive Social Security Assistance (CSSA) or Textbook Allowance (TBA).

8.3 Psychometric properties of the measurement tools

Before analysing the relationships among parental beliefs, family processes and adolescent psychological development, reliability and validity of the measurement tools used in the study were assessed within the samples of the main study.

8.3.1 New measurement tools developed in the study

8.3.1.1 Parental Expectations of Children's Future Scale (PECF)

Parental Expectations of Children's Future Scale (PECF) was a new psychometric scale developed and validated in the study. With reference to the literature review on parental expectations (Section 4.5.1.3) as well as the qualitative data from the focus groups of parents and adolescents (Section 7.1.3.1), the scale was developed and validated with 17 items measuring parents' expectations of children's future on the dimensions of occupation, personal conduct (including self-reliance and conduct in the conceptual model), family and educational achievement (including educational attainment and educational expectation in the validation study). Higher score of Parental Expectations of Children's Future Scale indicates higher expectations of parents for the future of their children. The background and validation findings were presented in Chapter Four and Chapter Seven.

8.3.1.1.1 Reliability

It was found that the Cronbach's alpha of fathers' responses and mothers' responses of Parental Expectations of Children's Future Scale (PECF) were .883 and .879, which showed good reliability. The mean inter-item correlations of

fathers' responses and mothers' responses were .325 and .315, which had medium effect size. The average item-total correlation of FECF and MECF were .534 and .524. Table 8.18 lists the item-total statistics of fathers' responses and mothers' responses of PECF.

From the father sample, it was found that Item 13 (I expect my child to take care of me in the future) had an item-total correlation of .324, with the Cronbach's alpha improved to .886 if the item was deleted. For the mother sample, it was found that Item 6 (I expect my child to not need financial assistance from the Government) had an item-total correlation of .324, with the Cronbach's alpha improved to .884 if the item was deleted. As these mean item-total correlation coefficients were not low and the alpha values were acceptable, these items were retained.

8.3.1.1.2 Construct validity

To examine the validity of the Parental Expectations of Children's Future Scale, construct validity was determined. Construct validity is established when the variables of the measure relate to one another within a system of theoretical relationships (Rubin & Babbie, 2008). With reference to the qualitative study of ideal child and parental expectations (Shek & Chan, 1999; Li, 2004) as well as the data from the focus groups of parents and adolescents, five dimensions were proposed. They were "educational achievement" (Items 1, 2, 3, 4); "self-reliance" (Items 5 and 6); "occupation" (Items 7, 8, 9, 10, 11); "family" (Items 12, 13, 14) and "moral conduct" (Items 15, 16, 17). Thus, the Father's and Mother's Expectations of Children's Future Scales (FECF & MECF) were assessed on their fitness in terms of the theoretical expectations.

To examine the correlations among the subscales and measures of FECF, correlational analyses were performed. In order to decrease the chance of committing Type I error, a conservative alpha level based on Bonferroni correction was adopted. The Bonferroni correction was calculated by dividing the normal alpha level (0.05) by the number of hypotheses/comparisons being tested (Darlington, 1990). As there were 15 hypotheses being tested, the alpha was determined with the formula of $.05/15$, i.e. .003. Correlation coefficients on the inter-relationships among the conceptual dimensions of FECF are shown in Table 8.19. The findings showed that there were significant correlations among

the dimensions of education achievement, self-reliance, occupation, family and moral conduct, and the measure of FECF, suggesting FECF showed good construct validity in the main study.

Identical procedures were performed with Parental Expectations of Children's Future Scale completed by mothers (MECF). Correlation coefficients on the inter-relationships among the subscales of MECF are shown in Table 8.20. It was found that there were significant correlations among different subscales and the measure of MECF. The findings suggested that MECF showed good construct validity in the main study.

8.3.1.1.3 Factor analysis

Besides construct validity, factor analysis of principal component analysis with varimax rotation was performed. Regarding the father sample, from the initial factors extraction on FECF, the change of eigenvalue and the scree plot suggested a three-factor solution. All three factors had eigenvalue greater than unity. The solution explained 54.65% of the total variance. The loadings of all items exceeded .40. The first factor was "occupation and financial security" which accounted for 38.21% of the total variance. There were 7 items included in the factor (Items 7, 8, 9, 10, 11, 13, 17). The second factor was "education achievement" which explained 8.63% of the total variance. There were 5 items (Items 1, 2, 3, 4, 5) included in the second factor. The third factor was "personal conduct and family" which accounted for 7.81% of the variance. It combined the "personal conduct" and "family" in the conceptual model. There were 5 items (Items 6, 12, 14, 15, 16) included in the factor.

From the initial factors extraction on MECF from the mother sample, the change of eigenvalue and the scree plot also suggested a three-factor solution. All three factors had eigenvalue greater than unity. The solution explained 53.38% of the total variance. The loadings of all items exceeded .40. The first factor was "occupation and financial security" which accounted for 36.22% of the total variance. There were 6 items included in the factor (Items 7, 8, 9, 10, 11, 13). The second factor was "personal conduct and family" which explained 10.15% of the total variance. There were 7 items (Items 5, 6, 12, 14, 15, 16, 17) included in the second factor. The second factor combined "self-reliance", "moral conduct" and "family" in the conceptual model. The third factor was

“educational achievement” which accounted for 7.01% of the variance. There were 4 items (Items 1, 2, 3, 4) included in the factor.

The results from the father sample and the mother sample showed similar factor structure, with “occupation and financial security”, “personal conduct and family” and “educational achievement” as the three factors. However, there were grouping differences of items between the two samples. Items 5 and 17 belonged to different factors in the two samples. Item 5 (I always remind my child to be self-reliant in the future) belonged to “educational achievement” in the father sample and “personal conduct and family” in the mother sample. Item 17 (I always remind my child to contribute to society in the future) belonged to “occupation and financial security” in the father sample and “personal conduct and family” in the mother sample. Furthermore, it was noteworthy that the “family” dimension was not distinguished in the present study that would be extracted out as an independent factor.

The factor structures of the present study were different to that of the validation study where a five-factor solution was extracted. However, the sample size for the validation study was relatively small ($n = 125$), so the factor structure based on the validation study may not be stable.

To assess whether the factor structure was congruent across FECF and MECF, Harman (1976) suggested that coefficient of congruence (ϕ) could be calculated for the factor congruence across different studies. Thus, coefficients of congruence were calculated for the factor congruence across FECF and MECF with the following formula:

$$\phi = \frac{\sum_{j=1}^n {}_1a_{jp} \cdot {}_2a_{jq}}{\sqrt{\left(\sum_{j=1}^n {}_1a_{jp}^2 \right) \left(\sum_{j=1}^n {}_2a_{jq}^2 \right)}}$$

where ${}_1a_{jp}$ and ${}_2a_{jq}$ are the factor loadings matrix from the present study

There were differences on categorization of Item 5 and Item 17 between FECF and MECF. It was suggested that Item 5 and Item 17 were put under “personal conduct and family” dimension as proposed in the conceptual model. Thus, the three dimensions of Parental Expectations of Children’s Future Scale

were “occupation and financial security” (Items 7, 8, 9, 10, 11, 13), “personal conduct and family” (Items 5, 6, 12, 14, 15, 16, 17), and “educational achievement” (Items 1, 2, 3, 4).

The coefficients of congruence among the three factors of “occupation and financial security”, “personal conduct and family”, and “educational achievement” were acceptable, showing that the three-factor solution of the measures was congruent between FECF and MECF. The Cronbach’s alpha of “occupation and financial security”, “personal conduct and family”, and “educational achievement” of FECF were .777, .813, and .747, and those of MECF were .811, .785, and .742, showing that there were acceptable internal consistencies across the sub-scales in both fathers’ and mothers’ responses (Table 8.21).

As a summary, FECF and MECF showed good internal consistency and construct validity in the main study. Factor analysis also showed generally stable three-factor structure on FECF and MECF, though they were different to the results of the validation study.

In the main study, the total scores of FECF and MECF were used to indicate levels of fathers’ and mothers’ expectations of children’s future in economically disadvantaged families.

8.3.1.2 Parental Sacrifice for Children’s Education Scale (SA)

An indigenous scale assessing parental sacrifice for children’s education was developed and validated in the study. The scale was developed with 23 items measuring dimensions of sacrifice in terms of financial resources, time on children’s education, reorganization of daily routine, sacrifice of lifestyle and aspiration, and shielding from worries. Higher scores indicate greater parental sacrifice for children’s education.

8.3.1.2.1 Reliability

The Cronbach’s alpha of fathers’ responses to the Parental Sacrifice for Children’s Education Scale (FSA) was .932, which showed excellent reliability. The Cronbach’s alpha of mothers’ responses to the Parental Sacrifice for Children’s Education Scale (MSA) was .922, which also showed sound reliability. The mean inter-item correlations of FSA and MSA were .380 and .348,

which had medium to great effect size. The average item-total correlation of FSA and MSA were .595 and .565. In the father sample, the Cronbach's alpha if one particular item was deleted ranged from .926 to .931, suggesting that no particular item would alter the α value greatly. In the mother sample, the Cronbach's alpha if one particular item was deleted ranged from .916 to .921, suggesting that no particular item would alter the α value greatly.

The Cronbach's alpha of adolescents' responses to the Paternal Sacrifice for Children's Education Scale (APSA) and Maternal Sacrifice for Children's Education Scale (AMSA) were .938 and .942, which showed excellent reliability. The mean inter-item correlations of APSA and AMSA were .350 and .398, which had medium to great effect size. The average item-total correlation of APSA and AMSA were .610 and .624. For APSA, the Cronbach's alpha if one particular item was deleted ranged from .934 to .937, suggesting that no particular item would alter the α value greatly. In MPSA, the Cronbach's alpha if one particular item was deleted ranged from .938 to .942, suggesting that no particular item would alter the α value greatly.

8.3.1.2.2 Construct validity

To examine the validity of Parental Sacrifice for Children's Education Scale (SA), construct validity was determined. The Parental Sacrifice for Children's Education Scale was developed based on a survey of the literature on family resources for children's education (Section 4.5.3.3), and the qualitative data of two focus groups of parents and adolescents (Section 7.1.3.2). Five dimensions of parental sacrifice for children's education emerged in the qualitative data, including "striving for financial resources" (Items 1, 2, 3, 4, 5, 6, 7, 8, 9), "time spent on children's education" (Items 10, 11, 12, 13, 14, 16), "restructuring of daily routine" (Items 15 and 17), "sacrifice of lifestyle and aspiration" (Items 18, 19, 20, 21) and "shielding from worries" (Items 22 and 23). FSA, MSA, APSA and AMSA of the main study were assessed for their fitness in theoretical expectations.

To examine the correlations among the subscales and measures of FSA, correlational analyses were performed. In order to decrease the chance of committing Type I error, a conservative alpha level based on Bonferroni correction was performed. As there were 15 hypotheses being tested, the alpha

was determined with the formula of $.05/15$, i.e. $.003$. Correlation coefficients on the inter-relationships among the conceptual dimensions and measure of FSA are shown in Table 8.22. The findings suggested that there were significant correlations among the dimensions “striving for financial resources”, “time spent on children’s education”, “restructuring of daily routine”, “sacrifices of lifestyle and aspirations” and “shielding from worries”, and the measure of FSA, suggesting FSA showed good construct validity in the main study.

Identical procedures were performed with MSA, APSA and AMSA. Correlation coefficients on the inter-relationships among the subscales of MSA, APSA and AMSA are shown in Table 8.23, Table 8.24 and Table 8.25. It was found that there were significant correlations among different dimensions and the measures. The findings suggested that MSA, APSA and AMSA showed good construct validity in the main study.

FSA, MSA, APSA and AMSA showed good construct validity. Thus, it was concluded that the Parental Sacrifice for Children’s Education Scale demonstrated good construct validity across different samples.

8.3.1.2.3 Factor analysis

Besides, factor analysis of principal component analysis with varimax rotation was performed. Regarding the father sample, from the initial factors extraction on FSA, the change of eigenvalue and the scree plot suggested a four-factor solution. All four factors had eigenvalues greater than unity. The solution explained 61.31% of the total variance. The loadings of all items exceeded $.40$. The first factor was “striving for financial resources”, which accounted for 41.12% of the total variance. There were 9 items included in the factor (Items 1, 2, 3, 4, 5, 6, 7, 8, 9). The second factor was “time spent on children’s education”, which explained 9.72% of the total variance. There were 7 items (Items 10, 11, 12, 13, 14, 15, 16) included in the second factor. The third factor was “accommodation of daily routine and lifestyle”, which accounted for 5.86% of the variance. There were 5 items (Items 17, 18, 19, 20, 21) included in the factor. The fourth factor was “shielding from worries”, which explained 4.62% of the total variance. There were 2 items (Items 22 and 23) included in the fourth factor. The factor loadings resembled the conceptual model.

From the initial factors extraction on MSA from the mother sample, the

change of eigenvalue and the scree plot also suggested a five-factor solution. All five factors had eigenvalues greater than unity. The solution explained 66.09% of the total variance. The loadings of all items exceeded .40. The first factor was “accommodation of daily routine and lifestyle”, which accounted for 39.69% of the total variance. There were 7 items included in the factor (Items 14, 15, 17, 18, 19, 20, 21). The second factor was “time spent on children’s education”, which explained 9.45% of the total variance. There were 5 items (Items 10, 11, 12, 13, 16) included in the second factor. The third factor was “precedence of children’s education over family expenses”, which accounted for 7.30% of the variance. There were 4 items (Items 5, 7, 8, 9) included in the factor. The fourth factor was “hardship in striving for financial resources”, which explained 5.30% of the total variance. There were 5 items (Items 1, 2, 3, 4, 6) included in the fourth factor. The fifth factor was “shielding from worries”, which explained 4.35% of the total variance. There were 2 items (Items 22 and 23) included in the fifth factor.

Regarding perceived paternal sacrifice for children’s education in the adolescent sample, from the initial factors extraction on APSA, the change of eigenvalue and the scree plot suggested a four-factor solution. All four factors had eigenvalues greater than unity. The solution explained 65.35% of the total variance. The loadings of all items exceeded .40. The first factor was “time spent on children’s education and accommodation of daily routine” which accounted for 42.73% of the total variance. There were 9 items included in the factor (Items 10, 11, 12, 13, 14, 15, 16, 17, 18). The second factor was “sacrifice of lifestyle and aspirations and shielding from worries” which explained 7.06% of the total variance. There were 5 items (Items 19, 20, 21, 22, 23) included in the second factor. The third factor was “precedence of children’s educational needs over personal needs” which accounted for 5.91% of the variance. There were 4 items (Items 1, 2, 3, 6) included in the factor. The fourth factor was “precedence of children’s educational needs over family expenses” which explained 4.43% of the total variance. There were 5 items (Items 4, 5, 7, 8, 9) included in the fourth factor. In fact, the fourth and fifth factors reflected the factor of “striving for financial resources” in the conceptual model.

From the initial factors extraction on AMSA from the adolescent sample, the change of eigenvalue and the scree plot also suggested a four-factor solution. All four factors had eigenvalues greater than unity. The solution explained 66.03% of

the total variance. The loadings of all items exceeded .40. The first factor was “accommodation of daily routine and lifestyle” which accounted for 44.33% of the total variance. This factor combined the dimensions of “restructuring of daily routine, sacrifice of lifestyle and aspiration” and “shielding from worries” in the conceptual model. There were 7 items included in the factor (Items 17, 18, 19, 20, 21, 22, 23). The second factor was “time spent on children’s education” which explained 9.09% of the total variance. There were 7 items (Items 10, 11, 12, 13, 14, 15, 16) included in the second factor. The third factor was “precedence of children’s educational needs over family expenses” which accounted for 7.77% of the variance. There were 5 items (Items 4, 5, 7, 8, 9) included in the factor. The fourth factor was “precedence of children’s educational needs over personal expenses” which explained 4.84% of the total variance. There were 4 items (Items 1, 2, 3, 6) included in the fourth factor. The third and fourth factors reflected the factor of “striving for financial resources” in the conceptual model.

To make comparisons of factor solutions of Parental Sacrifice for Children’s Education Scale, including fathers’ response (FSA), mothers’ response (MSA) on parental sacrifice for children’s education, adolescents’ response on paternal sacrifice (APSA) and maternal sacrifice (AMSA) for children’s education in the present study, as well as parents’ report on parental sacrifice for children’s education (SA), adolescents’ response on paternal sacrifice (APSA) and maternal sacrifice (AMSA) for children’s education in the validation study, the three-factor model (Table 8.26), four-factor model (Table 8.27) and five-factor model (Table 8.28) were analysed and discussed.

For the three-factor model, though the variances explained were the least among different models, the variances explained were kept as acceptable level (ranged from 56.69% to 67.61%). Moreover, all eigenvalues among different factors were greater than unity. When viewing the items and factors, it was found that the factor “striving for financial resources” (Items 1, 2, 3, 4, 5, 6, 7, 8, 9) was stable among different measures. However, “restructuring of daily routine” combined with “time spent on children’s education” in FSA, MSA, and APSA in the present study, but it integrated with “sacrifice of lifestyle and aspiration and shielding from worries” in AMSA in the present study, and SA, APSA and AMSA in the validation study.

Though the four-factor model explained greater variance, the fourth factors

of APSA and AMSA in the validation study had eigenvalues less than unity. Furthermore, the four factors extracted from different measures across the studies showed some differences.

Regarding the five-factor model, five measures had factors with eigenvalues less than unity. Furthermore, the five factors extracted from different measures across the studies showed some differences.

To assess the factor congruence of the measurement across studies, a more conservative selection of three-factor model was adopted with three justifications. First, the variances explained by the three-factor solution among the measures were considered acceptable (ranged from 56.44% to 67.61%). Second, all eigenvalues of factors in the three-factor model exceeded unity. Third, 18 out of 23 items were categorized into the same factors among seven measures in different studies (Items 1-9 fell into “striving for financial resources”, Items 10-13 fell into “time spent for children’s education” and Items 19-23 fell into “sacrifice of lifestyle and aspiration/shielding from worries”).

Among the seven measures, APSA of the validation study was used as the reference structure for three reasons. First, the amount of variance of APSA explained in the validation study was the largest among the measures (67.61%). Second, the factor structure of APSA of the validation study resembled most of the factor structures of the other measures. Third, the sample size of the validation study was 373, which was greater than that of the main study, suggesting a more stable factor structure. A three-factor structure of “striving of financial resources” (Items 1, 2, 3, 4, 5, 6, 7, 8, 9), “time spent on children’s education” (Items 10, 11, 12, 13, 14, 16) and “accommodation of daily routine and lifestyle” (Items 15, 17, 18, 19, 20, 21, 22, 23) was adopted. Table 8.29 lists the factor loadings of SA in the present study and the validation study in the suggested three-factor model.

To assess whether the factor structure was congruent in different studies, coefficients of congruence were calculated and compared for the factor congruence across fathers’ responses to the FSA, mothers’ responses to the MSA, adolescents’ responses to the APSA and AMSA in the present study and parents’ sample of SA, adolescents’ responses to the APSA and AMSA in the validation study. Table 8.30 lists the coefficients of congruence across the four measures (FSA, MSA, APSA, AMSA) in the present study and the three measures (SA,

APSA, AMSA) in the validation study. It was found that the three-factor solution of the measures was congruent across the studies. Besides, the factors of all measures showed good internal consistencies. Thus, the factors obtained good reliability across all measures.

As a conclusion, the Parental Sacrifice for Children's Education Scale showed good reliability, validity and dimensionality and can be used in measuring parental sacrifice for children's education in Chinese communities. In the main study, the total score of SA was used to indicate the level of parental sacrifice for children's education perceived by economically disadvantaged fathers, mothers and adolescents.

8.3.2 Existing Measurement Tools

8.3.2.1 Chinese Beliefs about Adversity Scale (CBA)

Shek (2004b) developed a nine-item Chinese Beliefs about Adversity Scale with a group of psychologists and social workers. The scale attempts to measure the Chinese beliefs of people about adversity and has two factors – positive Chinese beliefs about adversity (PCBA) and negative Chinese beliefs about adversity (NCBA). Higher CBA scores indicate higher degrees of agreement with positive Chinese beliefs about adversity.

From the data of parent sample, it was found that the Cronbach's alpha of fathers' responses of Chinese Beliefs about Adversity Scale (FCBA) was .661, which was considered acceptable reliability. The Cronbach's alpha of mothers' responses of Chinese Beliefs about Adversity Scale (MCBA) was .610, which also showed acceptable reliability. The mean inter-item correlations of FCBA and MCBA were .243 and .231, which had small to medium effect size. The average item-total correlation of FCBA and MCBA were .392 and .362. To assess the properties of unique items, the corrected item-total correlation and improvement of Cronbach's α when deleting the items were studied. It was found that Item 2 and Item 5 had low item-total correlations in FCBA, and Item 2, Item 5 and Item 7 had low item-total correlations in MCBA. Table 8.31 lists the item-total statistics of FCBA and MCBA.

To assess validity, factor analysis of principal component analysis with varimax rotation was performed. Two factors were extracted from FCBA and MCBA, with the factors explaining 52.87% and 54.72% of total variance of

FCBA and MCBA. The two factors of FCBA were positive Chinese beliefs about adversity (Items 1, 3, 4, 6, 7, 8, 9) and negative Chinese beliefs about adversity (Items 2 and 5). The same factors were also extracted from MCBA. However, Item 7 of MCBA had factor loading of less than .40. Table 8.32 lists the factor loadings of FCBA and MCBA.

Though deleting Item 2 and Item 5 would improve the alpha value of FCBA and MCBA, the second factor (negative Chinese beliefs about adversity) would be removed. As the second factor explained 15.19% and 16.92% of variance in FCBA and MCBA respectively, the removal of the second factor did not only affect the factor structure of the measure, it also reduced its factorial validity. Furthermore, the inter-item correlation matrices of FCBA (Table 8.33) and MCBA (Table 8.34) suggested that Item 2 and Item 5 were largely correlated with each other, though their correlations with other items were low. Schmitt (1996) reminded us that “in correcting for attenuation due to unreliability, use of alpha as an estimation of reliability is based in the notion that the measures involved are unidimensional” (p. 353). Thus, Item 2 and Item 5 were retained in the measure.

In summary, it was found that both FCBA and MCBA showed acceptable internal consistency and factorial validity from the data of the main study. In the main study, the total scores of FCBA and MCBA were used to indicate the level of fathers' and mothers' cultural beliefs about adversity in economically disadvantaged families.

8.3.2.2 Parental Attribution Questionnaire (PAQ)

The scale was based on the Causal Attribution Scale Questionnaire (CASQ) developed by Chan (1994), revised by Chan and Moore (2006), and standardized in Hong Kong (Mok et al., 2002). Parents' Attributions Questionnaire contains 24 items that are based on the items of CASQ. There are 12 statements that reflect success and 12 reflecting failure, attributing to the four causes of effort, ability, strategy use, and luck.

From the parent sample, it was found that the Cronbach's alpha of fathers' responses of Parental Attribution Questionnaire (FAQ) was .835, which showed good reliability. The Cronbach's alpha of mothers' responses of the Parental Attribution Questionnaire (MAQ) was .848, which also showed sound reliability.

The mean inter-item correlations of FAQ and MAQ were .174 and .187, which had small to medium effect size. The average item-total correlations of FAQ and MAQ were .381 and .398.

To examine the validity of PAQ, construct validity was determined. The Parents' Attributions Questionnaire contains 24 items that are based on the items of the Causal Attribution Scale Questionnaire (CASQ) with the framework of Weiner's (1974, 1985) theory of attribution of one's success and failure, which identified four attributes for success and failure: strategy use (Items 1, 2, 8, 12, 22, 23), ability (Items 4, 9, 16, 17, 18, 19), effort (Items 3, 11, 13, 15, 21, 24) and luck (Items 5, 6, 7, 10, 14, 20). Thus, the Fathers' Attributions Questionnaire (FAQ) and the Mothers' Attributions Questionnaire (MAQ) were assessed on their fitness in theoretical expectations.

To examine the correlations among the subscales and measures of the Fathers' Attributions Questionnaire (FAQ), correlational analyses were performed. In order to decrease the chance of committing Type I error, a conservative alpha level based on Bonferroni correction was performed. As there were 10 hypotheses being tested, the alpha was determined with the formula of $.05/10$, i.e. .005. Correlation coefficients on the inter-relationships among the subscales and measure of FAQ are shown in Table 8.35. Except the correlation coefficient between "Attribution to Effort" and "Attribution to Luck" had insignificant effect, others showed significant correlations among "Attribution to strategy use", "Attribution to ability", "Attribution to effort", "Attribution to luck". It was noteworthy that four attributions of children's success and failure had great correlations with the Fathers' Attributions Questionnaire (FAQ).

Identical procedures were performed with the Mothers' Attributions Questionnaire (MAQ). Correlation coefficients on the inter-relationships among the subscales of MAQ are illustrated in Table 8.36. It was found that "Attribution to Luck" was not significantly correlated with "Attribution to Effort" and related to "Attribution to Strategy Use" with borderline significance. But others subscales showed significant correlations among each other. Also, all subscales showed significant correlations with the measure of MAQ.

As the research was concerned with parents' attribution of children's success and failure to effort, only the factor "attribution of children's success and failure to effort" (Items 3, 11, 13, 15, 21, 24) was considered. To assess the

reliability of “Parental Attribution of Children’s Success and Failure to Effort” subscale (PAQ-E), Cronbach’s alpha of fathers’ and mothers’ response were calculated. It was found that of “Paternal Attribution of Children’s Success and Failure to Effort” subscale (FAQ-E) was .697, which showed acceptable reliability. The Cronbach’s alpha of mothers’ responses of “Maternal Attribution of Children’s Success and Failure to Effort” subscale (MAQ-E) was .743, which also showed acceptable reliability. The mean inter-item correlations of FAQ-E and MAQ-E were .277 and .325, which had medium effect size. The average item-total correlation of FAQ-E and MAQ-E were .428 and .481. For FAQ-E, the Cronbach’s alpha if one particular item was deleted ranged from .640 to .683, suggesting that no item would alter the α value greatly. For MAQ-E, the Cronbach’s alpha if one particular item was deleted ranged from .680 to .730, suggesting that no item would alter the α value greatly.

To assess the validity of “Parental Attribution of Children’s Success and Failure to Effort” subscale, factor analysis of principal component analysis with varimax rotation was performed. Two factors were extracted from FAQ-E and MAQ-E, with the factors explaining 58.73% and 53.07% of the total variance of FAQ-E and MAQ-E. For FAQ-E, the first factor was “attribution of children’s success to effort” (Items 3, 11, 21), which accounted for 39.78% of variance. The second factor was “attribution of children’s failure to effort” (Items 13, 15, 24), which accounted for 18.96% of variance. The same factors were also extracted from MAQ-E. The first factor was “attribution of children’s failure to effort” (Items 13, 15, 24), which accounted for 44.46% of variance. The second factor was “attribution of children’s success to effort” (Items 3, 11, 21), which accounted for 18.61% of variance.

To assess the factor congruence across FAQ-E and MAQ-E, the coefficients of congruence (ϕ) of the factors were calculated. It was found that the coefficients of congruence of “parental attribution to children’s success to effort” and “parental attribution to children’s failure to effort” were .992 and .998, suggesting that the two-factor solution of the measures was congruent across FAQ-E and MAQ-E. The Cronbach’s alpha of “parental attribution to children’s success to effort” of FAQ-E and MAQ-E were .610 and .684, and of “parental attribution to children’s failure to effort” of FAQ-E and MAQ-E were .669

and .713. Thus, it was concluded that both FAQ-E and MAQ-E had acceptable factorial validity.

As “Parental Attribution of Children’s Success and Failure to Effort” subscale (FAQ-E and MAQ-E) showed acceptable reliability and validity, the scores of the subscale were used as indicators of paternal and maternal attribution of children’s success and failure to effort, with higher total scores of FAQ-E and MAQ-E indicating higher endorsement of paternal and maternal attribution of children’s success and failure to effort. In the main study, the total scores of FAQ-E and MAQ-E were used to indicate the level of fathers’ and mothers’ attribution of children’s success and failure to effort in economically disadvantaged families.

8.3.2.3 Parenting style Scale (PPS)

Based on the framework of Maccoby and Martin (1983) and parenting assessment work of Lamborn et al. (1991), Shek (1999b) developed a modified version of Paternal Parenting Style Scale (PPS) and Maternal Parenting Style Scale (MPS). There are two dimensions of Parenting Style Scale: parental demandingness and parental responsiveness. There are 7 items in the Demandingness Scale and 13 items in the Responsiveness Scale. Higher levels indicate more positive parental attributes.

The Cronbach’s alpha of fathers’ responses of Parenting Style Scale (FPS) was .807, which showed good reliability. The Cronbach’s alpha of mothers’ responses of Parenting Style Scale (MPS) was .701, which also showed acceptable reliability. The mean inter-item correlations of FPS and MPS were .183 and .126, which had small to medium effect size. The average item-total correlations of FPS and MPS were .383 and .293. In the father sample, the Cronbach’s alpha was improved if Items 1, 2, 3, 13 were deleted (.815, .811, .808 and .810). In the mother sample, the Cronbach’s alpha was improved if Items 1, 2, 13 were deleted (.713, .708 and .718).

The Cronbach’s alpha of adolescents’ responses to the Paternal Parenting Style Scale (APPS) and Maternal Parenting Style Scale (AMPS) were .856 and .834, which showed good reliability. The mean inter-item correlations of APPS and AMPS were .273 and .239, which had small to medium effect size. The average item-total correlation of APPS and AMPS were .479 and .438. For

APPS, the Cronbach's alpha was improved if Items 12 and 13 were deleted (.863 and .862). In AMPS, the Cronbach's alpha was improved if Items 12 and 13 were deleted (.832 and .834).

To examine the validity of PPS, construct validity was determined. Shek (1999b) performed factor analysis on the data of 429 adolescents in Hong Kong by stratified-cluster sampling method. There were two stable factors extracted from the modified version of Parenting Style Scale: parental demandingness and parental responsiveness. There are 7 items in the Demandingness Scale (Items 12, 13, 14, 15, 17, 18, 20) and 13 items in the Responsiveness Scale (Items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 19). FPS (Paternal Parenting Style Scale completed by fathers), MPS (Maternal Parenting Style Scale completed by mothers), APPS (Paternal Parenting Style Scale completed by adolescents) and AMPS (Maternal Parenting Style Scale completed by adolescents) were assessed on their fitness in theoretical expectations.

To examine the correlations among the subscales and measures of Paternal Parenting Style Scale completed by fathers (FPS), correlational analyses were performed. In order to decrease the chance of committing Type I error, a conservative alpha level based on Bonferroni correction was performed. As there were 3 hypotheses being tested, the alpha was determined with the formula of $.05/3$, i.e. .017. Correlation coefficients on the inter-relationships among the subscales and measure of FPS are shown in Table 8.37. The findings suggested that there were significant correlations among Parental Responsiveness subscale (RES), Parental Demandingness subscale (DEM), and the measure of FPS, suggesting FPS showed good construct validity in the main study.

Identical procedures were performed with the Maternal Parenting Style Scale completed by mothers (MPS), the perceived Paternal Parenting Style Scale (APPS) and Maternal Parenting Style Scale (AMPS) completed by adolescents. Correlation coefficients of the inter-relationships among the subscales of MPS, APPS and AMPS are illustrated in Table 8.38, Table 8.39 and Table 8.40. All measures showed significant correlations among different subscales of parental responsiveness and parental demandingness, together with the measures as a whole. As theoretical relationships among the variables and the measure were established in MPS, APPS and AMPS, the measures showed good construct validity.

In summary, FPS, MPS, APPS and AMPS showed acceptable internal consistency and good construct validity from the samples of the main study. In the main study, the total scores of FPS, MPS, APPS and AMPS were used to indicate the levels of positive parenting attributes of fathers, mothers and adolescents in economically disadvantaged families.

8.3.2.4 Parental Control Scale (PCS)

Based on a review of the literature, Shek (2005e, 2007d) developed a twelve-item Chinese Parental Control Scale to assess parental control based on indigenous Chinese cultural concepts. The total score of the items in each scale is used as an indicator of the degree of parental control based on Chinese concepts, with a higher score indicating a higher level of Chinese parental control on children's behaviours.

It was found that the Cronbach's alpha of fathers' responses of Parental Control Scale (FCS) was .850, which showed good reliability. The Cronbach's alpha of mothers' responses of Parental Control Scale (MCS) was .872, which also showed sound reliability. The mean inter-item correlations of FCS and MCS were .332 and .372, which had medium effect and medium to great effect size. The average item-total correlations of FCS and MCS were .528 and .567. In the father sample, the Cronbach's alpha if one particular item was deleted ranged from .832 to .845, suggesting that no particular item would alter the α value greatly. In the mother sample, the Cronbach's alpha if one particular item was deleted ranged from .858 to .869, suggesting that no particular item would alter the α value greatly.

The Cronbach's alpha of adolescents' responses to the Paternal Control Scale (APCS) and Maternal Control Scale (AMCS) were .870 and .876, which showed sound reliability. The mean inter-item correlations of APCS and AMCS were .367 and .393, which had medium to great effect size. The average item-total correlation of APCS and AMCS were .561 and .583. For APCS, the Cronbach's alpha if one particular item was deleted ranged from .856 to .864, suggesting that no particular item would alter the α value greatly. In AMCS, the Cronbach's alpha if one particular item was deleted ranged from .861 to .873, suggesting that no particular item would alter the α value greatly.

To examine the validity of PCS, construct validity was determined. As the

total score of the items in the scale is used as an indicator of the degree of parental control based on Chinese concepts, the inter-relationships among the items and measure of PCS were examined to assess the construct validity of FCS, MCS, APCS and AMCS. To examine the correlations among the items and measure of Paternal Control completed by fathers (FCS), correlation analyses were performed. The two-tailed multistage Bonferroni procedure (Larzelere & Mulaik, 1977) was carried out to guard against inflated Type I error. Correlation coefficients on the inter-relationships among the items of FPS are shown in Table 8.41. Except three correlations of items that were not significant, there were significant relationships among nearly all items and the measure of FCS. Thus, FCS demonstrated theoretical relationships among the items and measure, thus suggesting good construct validity.

Identical procedures were performed with the Maternal Control Scale completed by mothers (MCS), the perceived Paternal Control Scale (APCS) and the Maternal Control Scale (AMCS) completed by adolescents. Correlation coefficients on the inter-relationships among the items and measure of MCS, APCS and AMCS are illustrated in Table 8.42, Table 8.43 and Table 8.44. All measures showed significant correlations among the items and the measure as a whole. As theoretical relationships among items and the measure were established in MCS, APCS and AMCS, the measures showed good construct validity.

In summary, FCS, MCS, APCS and AMCS showed good internal consistency and construct validity from the samples of the main study. In the main study, the total scores of PCS were used to indicate the level of parental control perceived by economically disadvantaged fathers, mothers and adolescents.

8.3.2.5 Chinese Family Assessment Inventory (FAI)

The Chinese Family Assessment Inventory (FAI) is an indigenous 33-item self-report instrument to assess family functioning in Chinese populations (Shek, 2002a). The FAI has five dimensions, including mutuality, communication, conflict and harmony, parental concern, and parental control. A higher total score on the subscales indicated a higher level of family functioning.

From the data of parent sample, it was found that the Cronbach's alpha of

fathers' responses of Chinese Family Assessment Inventory (FFAI) was .943, which showed excellent reliability. The Cronbach's alpha of mothers' responses of Chinese Family Assessment Inventory (MFAI) was .940, which also showed sound reliability. The Cronbach's alpha of adolescents' responses of Chinese Family Assessment Inventory (AFAI) was .949, which also showed excellent reliability. The mean inter-item correlations of FFAI, MFAI and AFAI were .364, .350 and .377, which had medium to great effect size. The average item-total correlation of FFAI, MFAI and AFAI were .586, .573 and .598. In the father sample, the Cronbach's alpha was improved if Items 3, 14, 23, 31 were deleted (.944, .946, .944 and .946). In the mother sample, the Cronbach's alpha was improved if Items 14 and 31 were deleted (.943 and .943). In adolescent sample, the Cronbach's alpha was improved if Items 13, 14, 23 and 31 were deleted (.950, .950, .950 and .950).

To examine the validity of FAI, construct validity was determined. In evaluating the psychometric properties of Chinese Family Assessment Inventory (FAI), Shek (2002a) performed factor analysis from the data of 3,649 adolescents in Hong Kong by the multiple stage stratified random sampling method. Five stable factors of mutuality (Items 1, 2, 4, 5, 6, 15, 17, 18, 19, 20, 21, 32), communication (Items 7, 8, 9, 10, 11, 25, 26, 27, 28), conflict and harmony (Items 3, 12, 13, 14, 16, 33), parental concern (Items 22, 23, 24), and parental control (Items 29, 30, 31) were extracted. FFAI, MFAI and AFAI were assessed on their fitness in theoretical expectations.

To examine the correlations among the subscales of Family Assessment Inventory completed by fathers (FFAI), correlational analyses were performed. In order to decrease the chance of committing Type I error, a conservative alpha level based on Bonferroni correction was performed. As there were 15 hypotheses being tested, the alpha was determined with the formula of $.05/15$, i.e. .003. Correlation coefficients on the inter-relationships among the subscales and measure of FFAI are shown in Table 8.45. The findings suggested that there were significant correlations among the different subscales and the measure of FFAI, suggesting FFAI showed good construct validity in the main study.

Identical procedures were performed with the Family Assessment Inventory completed by mothers (MFAI) and adolescents (AFAI). Correlation coefficients on the inter-relationships among the subscales of MFAI and AFAI are shown in

Table 8.46 and Table 8.47. Except for correlation of Communication and Parental Control, which that was not significant ($r = .175$, $p > .003$), there were significant correlations among different subscales and the measure of MFAI. For AFAI, there were significant correlations among the different subscales and the measure of AFAI. The findings suggested that MFAI and AFAI showed good construct validity in the main study.

In summary, FFAI, MFAI and AFAI showed good internal consistency and construct validity from the samples of the main study. In the main study, the total scores of FFAI, MFAI and AFAI were used to indicate the levels of family functioning perceived by economically disadvantaged fathers, mothers and adolescents respectively.

8.3.2.6 Social Oriented Achievement Motivation Scale (SOAM)

From the adolescent sample, the Cronbach's alpha of Social Oriented Achievement Motivation Scale (SOAM) was .944, which showed excellent reliability. The mean inter-item correlations of SOAM was .363, which had medium to great effect size. The average item-total correlation of SOAM was .585. The Cronbach's alpha if one particular item was deleted ranged from .941 to .945. Except Item 29, which resulted in improvement of Cronbach's alpha (.945), no other item altered the α value greatly.

To examine the validity of SOAM, construct validity was determined. The inter-relationships among the items and measure of SOAM were assessed. To examine the correlations among the items and measure of SOAM, correlational analyses were performed. The two-tailed multistage Bonferroni procedure (Larzelere & Mulaik, 1977) was carried out to guard against inflated Type I error. Correlation coefficients on the inter-relationships among the items and measure of SOAM are shown in Table 8.48. Except Item 29 (Without others' encouragement, I would think of giving up a difficult task), which had poor inter-relationships with other items, there were significant relationships among other items and SOAM. Thus, SOAM demonstrated theoretical relationships among the items and measure, thus suggesting good construct validity.

As a whole, SOAM showed good internal consistency and construct validity from the adolescent sample of the main study. In the main study, the total score of SOAM was used to indicate the level of social oriented achievement

motivation of economically disadvantaged adolescents.

8.3.2.7 Psychological competence in the Chinese Positive Youth Development Scale (PYD)

Shek et al. (2007) developed a 90-item Chinese Positive Youth Development Scale (CPYDS) that contains 15 aspects of positive youth development. Among 15 aspects, 7 subscales are chosen to measure the psychological competence of adolescents. They are: resilience subscale (RE), cognitive competence subscale (CC), self-determination subscale (SD), self-efficacy subscale (SE), spirituality subscale (SP); beliefs in the future subscale (BF), and clear and positive identity subscale (CPI). A Short-Form of PYD was developed with the items of 3, 3, 3, 3, 3, 3 and 2 on RE, CC, SD, SP, BF, CPI and SE respectively.

From the adolescent sample, the Cronbach's alpha of the Positive Youth Development Scale (PYD) was .941, which showed excellent reliability. The mean inter-item correlation of PYD was .450, which had medium to great effect size. The average item-total correlation of PYD was .650. The Cronbach's alpha if one particular item was deleted ranged from .936 to .940, suggesting that no item would alter the α value greatly.

To examine the validity of PYD, construct validity was determined. Among 15 aspects of Chinese Positive Youth Development Scale, 7 subscales were chosen to measure the psychological competence of adolescents. They were: spirituality subscale (Items 1, 2, 3); resilience subscale (Items 4, 5, 6); cognitive competence subscale (Items 7, 8, 9); self-determination subscale (Items 10, 11, 12); clear and positive identity subscale (Items 13, 14, 15); beliefs in the future subscale (Items 16, 17, 18), and self-efficacy subscale (Items 19 and 20). PYD was assessed on its fitness in theoretical expectations.

To examine the correlations among the subscales, correlational analyses were performed. The two-tailed multistage Bonferroni procedure (Larzelere & Mulaik, 1977) was carried out to guard against inflated Type I error. Correlation coefficients on the inter-relationships among the subscales of PYD are shown in Table 8.49. The findings showed significant correlations among the different subscales and the measure of PYD, suggesting PYD had good construct validity.

As a whole, PYD showed good internal consistency and construct validity

from the adolescent sample of the main study. In the main study, the total score of PYD was used to indicate the level of psychological competence of economically disadvantaged adolescents.

8.4 Research questions and hypotheses – Results

8.4.1 Relationships between parents' Chinese cultural beliefs about adversity and parents' child specific beliefs

This section addresses Research Question 1: Among economically disadvantaged parents, are there any relationships between Chinese cultural beliefs about adversity and child-specific beliefs, including attribution of children's success and failure, and expectations of children's future? The hypothetical model is listed in Chapter Five (Figure 5.1) with the following hypotheses:

Hypothesis 1a: Parents' stronger endorsement of positive Chinese cultural beliefs about adversity is related to stronger attribution of their children's success and failure to effort.

Hypothesis 1b: Parents' stronger endorsement of positive Chinese cultural beliefs about adversity is related to stronger expectations of their children's future.

Results

To understand the relationships between fathers' and mothers' beliefs, bivariate relationships of fathers' and mothers' reports of Chinese cultural beliefs about adversity (FCBA and MCBA), parental expectations of children's future (FECF and MECF) and parents' attribution of children's success and failure to effort (FAQ-E and MAQ-E) were separately analysed using Pearson correlation analyses. In order to decrease the chance of committing Type I error, a conservative alpha level based on Bonferroni correction was performed. As there were 4 hypotheses being tested, the alpha was determined with the formula of $.05/4$, i.e. $.0125$. Regarding the effect size, the suggestion of Cohen (1988) was employed, that is, Pearson's r at $.50$ represents large effect, $.30$ represents medium effect and $.10$ represents the small effect (Cohen, 1988).

Results showed that the scores of scales on parental beliefs (Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, expectations of children's future) were neither significantly related to any demographic variables of fathers' and mothers' personal background such as age, educational standard, occupations, duration of stay in Hong Kong, nor were they related to family demographic variables such as marital status, family income, number of children, types of accommodation etc.

From the data of the father sample, it was found that fathers' endorsement of positive Chinese cultural beliefs about adversity was positively correlated with fathers' attribution of children's success and failure to effort ($r = .192, p = .001$), with effect size between small to medium effect. The positive value of Pearson's r indicated the positive relationship between fathers' endorsement of positive Chinese cultural beliefs about adversity and fathers' attribution of children's success and failure to effort. Fathers' endorsement of positive Chinese cultural beliefs about adversity was also significantly correlated with fathers' expectations of children's future ($r = .282, p < .001$), with medium effect. Besides, it was found that fathers' expectations of children's future were significant correlated with fathers' attribution of children's success and failure to effort ($r = .310, p < .001$), with medium effect size.

From the data based on the mother sample, it was found that mothers' endorsement of positive Chinese cultural beliefs about adversity was positively correlated with mothers' attribution of children's success and failure to effort ($r = .268, p < .001$), with effect size also near to medium effect. Moreover, mothers' endorsement of positive Chinese cultural beliefs about adversity was positively correlated with mothers' expectations of children's future ($r = .278, p < .001$), with effect size near medium effect.

Table 8.50 lists the correlations between fathers' and mothers' Chinese cultural beliefs about adversity and fathers' and mothers' specific beliefs of their children, as indexed by expectations of children's future and attribution of children's success and failure to effort. In summary, Hypotheses 1a and 1b were supported. The findings addressing Research Question 1 are summarized below:

Summary of findings addressing Research Question 1

Research question	Hypothesis	Status
<u>Research question 1</u>	<u>Hypothesis 1a(i)</u>	Supported
Among economically disadvantaged parents, are there any relationships between Chinese cultural beliefs about adversity and child-specific beliefs, including attribution of children's success and failure, and expectations of children's future?	Fathers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to stronger paternal attribution of children's success and failure to effort.	
	<u>Hypothesis 1a(ii)</u>	Supported
	Mothers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to stronger maternal attribution of children's success and failure to effort.	
	<u>Hypothesis 1b(i)</u>	Supported
	Fathers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to stronger paternal expectations of children's future.	
	<u>Hypothesis 1b(ii)</u>	Supported
	Mothers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to stronger maternal expectations of children's future.	

8.4.2 Influences of parental beliefs on family processes

This section addresses Research Question 2: Do parental beliefs (Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, and expectations of children's future) influence parenting styles and practices, family functioning, and parental sacrifice for children's education in economically disadvantaged families?

To address Research Question 2, two related questions were proposed: (1) Are there any relationships between parental beliefs (Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, and expectations of children's future) and the family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education in economically disadvantaged families? (Question 2.1); and (2) among parental beliefs, what are the predictors of family processes based on parents' data? (Question 2.2).

8.4.2.1 Relationships between parental beliefs and family processes

To address Question 2.1, nine hypotheses (2a and 2i) were set from the parents' perspective. The Hypothetical Model was listed in Chapter Five (Figure 5.2).

Hypothesis 2.1a: Parents' stronger endorsement of positive Chinese cultural beliefs about adversity is related to higher levels of parental endorsement of positive parenting styles and more parental control.

Hypothesis 2.1b: Parents' stronger endorsement of positive Chinese cultural beliefs about adversity is related to higher levels of family functioning.

Hypothesis 2.1c: Parents' stronger endorsement of positive Chinese cultural beliefs about adversity is related to more parental sacrifice for children's education.

Hypothesis 2.1d: Parents' stronger attribution of children's success and failure to effort is related to higher levels of parental endorsement of positive parenting styles and more parental control.

Hypothesis 2.1e: Parents' stronger attribution of children's success and failure to effort is related to higher levels of family functioning.

Hypothesis 2.1f: Parents' stronger attribution of children's success and failure to effort is related to more parental sacrifice for children's education.

Hypothesis 2.1g: Parents' higher expectations of children's future are related to higher parental endorsement of positive parenting styles and more parental control.

Hypothesis 2.1h: Parents' higher expectations of children's future are related to higher levels of family functioning.

Hypothesis 2.1i: Parents' higher expectations of children's future are related to more parental sacrifice for children's education.

Results

To analyse the relationships between various parental beliefs and different family processes, Pearson correlation analyses were performed. The relationships

of paternal beliefs and maternal beliefs with various family processes were examined separately. In order to decrease the chance of committing Type I error, a conservative alpha level based on Bonferroni correction was performed. As there were 12 hypotheses being tested, the alpha was determined with the formula of $.05/12$, i.e. $.0042$.

When assessing the correlations of demographic data with parental beliefs and family processes, it was found that paternal parenting style (FPS) was significantly associated with age of adolescents ($r = -.294, p < .001$), educational level of adolescents ($r = -.275, p < .001$) and number of children ($r = -.217, p < .001$), suggesting that the older the adolescents, the higher educational level of adolescents and the more the children would have relatively less endorsement of positive parenting style of fathers. The amount of overlapping on the correlation of FPS and age of adolescents, educational levels of adolescents and number of children were 8.64%, 7.56% and 4.71% of the variance. Thus, partial correlations of FPS scores by age of adolescents, educational levels of adolescents and number of children were carried out. Similarly, maternal parenting style (MPS) was significantly associated with age of adolescents ($r = -.282, p < .001$) and educational level of adolescents ($r = -.237, p < .001$), suggesting that the older and the higher educational level of adolescents would have relatively less endorsement of positive parenting style of mothers. The amount of overlapping on the correlation of MPS and age of adolescents and educational level of adolescents were 8.41%, and 6.05% of the variance, so partial correlations of MPS scores by age of adolescents and educational levels of adolescents were recommended. Last but not least, maternal sacrifice for children's education (MSA) was significantly related to mothers' duration of stay in Hong Kong ($r = -.282, p < .001$), suggesting that the longer the mothers had stayed in Hong Kong, the less sacrifice for children's education they offered. The amount of overlapping on the correlation of MSA and mothers' duration of stay in Hong Kong was 7.90% of the variance, so partial correlation of MSA scores by mothers' duration of stay in Hong Kong was suggested.

Hypothesis 2.1a

From fathers' reports, it was found that fathers' Chinese cultural beliefs about adversity were significantly related to fathers' positive parenting style, with

Pearson's r at .238 ($p < .001$). The effect size was considered small to medium. With age, educational level of adolescents and number of children controlled, Pearson's r was .207 ($p < .001$) and a significant relationship was maintained. However, fathers' Chinese cultural beliefs about adversity did not correlate significantly with paternal control ($r = .081, p > .004$).

From mothers' reports, it was found that mothers' Chinese cultural beliefs about adversity did not correlate significantly with mothers' positive parenting style ($r = .147, p > .004$) and maternal control ($r = .141, p > .004$). When age and educational level of adolescents were controlled, the relationship between mothers' Chinese cultural beliefs about adversity and parenting style was also not significant. Thus, for Hypothesis 2.1a, only stronger endorsement of paternal positive Chinese cultural beliefs about adversity was associated with higher level of paternal positive parenting style in economically disadvantaged families.

Hypothesis 2.1b

From fathers' reports, it was found that fathers' Chinese cultural beliefs about adversity were significantly related to family functioning, with Pearson's r at .256 ($p < .001$), and the effect size between small and medium.

From mothers' reports, it was found that mothers' Chinese cultural beliefs about adversity were significantly related to mothers' perception of family functioning, with Pearson's r at .249 ($p < .001$), and the effect size was between small and medium.

Thus, Hypothesis 2.1b was supported, showing that parents' stronger endorsement of positive Chinese cultural beliefs about adversity was associated with higher level of family functioning in economically disadvantaged families.

Hypothesis 2.1c

From fathers' reports, it was found that fathers' Chinese cultural beliefs about adversity were significantly related to paternal sacrifice for children's education, with Pearson's r of .197 ($p < .004$), with effect size small to medium.

From mothers' reports, it was found that mothers' Chinese cultural beliefs about adversity were significantly related to maternal sacrifice for children's education, with Pearson's r at .172 ($p < .004$), the effect size was between small and medium. When duration of stay of mothers in Hong Kong was controlled,

maternal sacrifice for children's education was marginally significantly related to maternal sacrifice for children's education ($r = .168, p < .01$).

Thus, Hypothesis 2.1c was supported, with fathers' stronger endorsement of positive Chinese cultural beliefs about adversity associated with higher level of paternal sacrifice for adolescents' education in economically disadvantaged families.

Hypothesis 2.1d

From fathers' reports, it was found that fathers' attribution of children's success and failure to effort was significantly related to fathers' positive parenting style, with Pearson's r at .201 ($p < .004$), indicating small to medium effect size. With the control of adolescents' age, adolescents' educational level, and number of children, Pearson's r was .202 ($p < .004$). Fathers' attribution of children's success and failure to effort was also correlated with paternal control, with Pearson's r at .303 ($p < .001$), indicating medium effect size.

From mothers' reports, it was found that mothers' attribution of children's success and failure to effort was not significantly related to mothers' positive parenting style ($r = .039, p > .004$). With the control of adolescents' age and educational level, the relationship was also not significant. However, mothers' attribution of children's success and failure to effort was significantly correlated with maternal control with Pearson's r at 2.99 ($p < .001$), indicating medium effect size.

Thus, Hypothesis 2.1d was supported, with higher paternal attribution of children's success and failure to effort associated with more positive endorsement of positive paternal parenting style and paternal control, whereas higher maternal attribution of children's success and failure to effort was associated with more maternal control in economically disadvantaged families.

Hypothesis 2.1e

From fathers' reports, it was found that fathers' attribution of children's success and failure to effort was significantly related to family functioning, with Pearson's r at .176 ($p < .004$), indicating small and medium effect size. From mothers' reports, it was found that mothers' attribution of children's success and failure to effort was not correlated significantly with mothers' perception of

family functioning ($r = .102, p > .004$).

Thus, Hypothesis 2.1e was partially supported, with higher paternal attribution of children's success and failure to effort associated with higher level of fathers' perception of family functioning in economically disadvantaged families.

Hypothesis 2.1f

From fathers' reports, it was found that fathers' attribution of children's success and failure to effort was significantly related to paternal sacrifice for children's education, with Pearson's r at .301 ($p < .001$), indicating medium effect size. From mothers' reports, it was also found that mothers' attribution of children's success and failure to effort was significantly related to maternal sacrifice for children's education, with Pearson's r at .301 ($p < .001$), indicating medium effect size. When mothers' duration of stay in Hong Kong was controlled, the value of Pearson's r was .283 ($p < .001$).

Thus, Hypothesis 2.1f was supported, with higher paternal and maternal attribution of children's success and failure to effort associated with higher levels of paternal and maternal sacrifice for adolescents' education in economically disadvantaged families.

Hypothesis 2.1g

From fathers' reports, it was found that fathers' expectations of children's future were significantly related to fathers' positive endorsement of parenting style, with Pearson's r at .201 ($p < .004$), indicating small to medium effect size. With the control of adolescents' age, adolescents' educational level, and number of children, Pearson's r was .197 ($p < .004$). Fathers' expectations of children's future were also significantly correlated with paternal control with Pearson's r at .487, ($p < .001$). The effect size was considered large.

From mothers' reports, it was found that mothers' expectations of children's future were not significantly related to mothers' positive endorsement of parenting style, with Pearson's r at .164 ($p > .004$). However, with the control of age and educational level of adolescents, Pearson's r changed to .172 ($p < .004$) and the relationship became significant. Mothers' expectations of children's future were also significantly correlated with maternal control with Pearson's r

at .530, ($p < .001$), indicating a large effect size. Thus, Hypothesis 2.1g was supported.

Hypothesis 2.1h

From fathers' reports, it was found that fathers' expectations of children's future were significantly related to family functioning, with Pearson's r of .313 ($p < .001$), indicating medium effect size. From mothers' reports, it was found that mothers' expectations of children's future were significantly related to mothers' perception of family functioning, with Pearson's r at .223 ($p < .001$), indicating small to medium effect size. Thus, Hypothesis 2.1h was supported.

Hypothesis 2.1i

From fathers' reports, it was found that fathers' expectations of children's future were significantly related to paternal sacrifice for children's education, with Pearson's r at .537 ($p < .001$). The effect size was large. From mothers' reports, it was found that mothers' expectations of children's future were significantly related to maternal sacrifice for children's education, with Pearson's r at .593 ($p < .001$), indicating large effect size. When mothers' duration of stay in Hong Kong was controlled, Pearson's r changed to .586 ($p < .001$). Thus, Hypothesis 2.1i was supported.

Table 8.51 lists the correlations of paternal beliefs (Chinese cultural beliefs about adversity, expectations of children's future, and attribution of children's success and failure to effort) and various family processes (paternal parenting style, paternal control, paternal sacrifice, and family functioning) reported by fathers. Table 8.52 lists the correlations of maternal beliefs (Chinese cultural beliefs about adversity, expectations of children's future, and attribution of children's success and failure to effort) and various family processes (maternal parenting style, maternal control, maternal sacrifice, and family functioning) reported by mothers.

Summary

From the fathers' perspective, their endorsement of positive Chinese cultural beliefs about adversity was associated with paternal parenting style,

fathers' perception of family functioning, and paternal sacrifice for children's education. Fathers' attribution of children's success and failure to effort was associated with paternal parenting style, paternal control of children's behaviours, fathers' perception of family functioning, and paternal sacrifice for children's education. Furthermore, fathers' expectations of children's future were associated with paternal parenting style, paternal control of children's behaviours, fathers' perception of family functioning, and paternal sacrifice for children's education.

From the mothers' perspective, mothers' endorsement of positive Chinese cultural beliefs about adversity was associated with mothers' perception of family functioning and maternal sacrifice for children's future. Mothers' attribution of children's success and failure to effort was associated with maternal control and maternal sacrifice for children's education. Furthermore, mothers' expectations of children's future were associated with maternal parenting style, maternal control, mothers' perception of family functioning and maternal sacrifice for children's future. The findings in response to Research Question 2.1 from parents' perspectives are summarized below:

Summary of findings addressing Research Question 2.1 from parents' perspective

Research question	Hypothesis	Status
<u>Research question 2.1</u> Are there any relationships among parental beliefs (Chinese cultural beliefs about adversity, attribution of child success and failure, and expectations of children's future) and family processes of parenting style and practices, family functioning, and parental sacrifice for children's education) in economically disadvantaged families?	<u>Hypothesis 2.1a(i)</u> Fathers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to stronger paternal endorsement of positive parenting styles.	Supported
	<u>Hypothesis 2.1a(ii)</u> Mothers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to stronger maternal endorsement of positive parenting styles.	Not supported
	<u>Hypothesis 2.1a(iii)</u> Fathers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to more paternal control.	Not supported
	<u>Hypothesis 2.1a(iv)</u> Mothers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to more maternal control.	Not supported
	<u>Hypothesis 2.1b(i)</u> Fathers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to higher levels of fathers' perception of family functioning.	Supported
	<u>Hypothesis 2.1b(ii)</u> Mothers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to higher levels of mothers' perception of family functioning.	Supported
	<u>Hypothesis 2.1c(i)</u> Fathers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to more paternal sacrifice for children's education.	Supported
	<u>Hypothesis 2.1c(ii)</u> Mothers' stronger endorsement of positive Chinese cultural beliefs about adversity is related to more maternal sacrifice for children's education.	Supported, but when controlling mothers' duration of stay in Hong Kong, it was marginally supported.

<u>Hypothesis 2.1d(i)</u> Fathers' stronger attribution of children's success and failure to effort is related to stronger paternal endorsement of positive parenting style.	Supported
<u>Hypothesis 2.1d(ii)</u> Mothers' stronger attribution of children's success and failure to effort is related to stronger maternal endorsement of positive parenting style.	Not supported
<u>Hypothesis 2.1d(iii)</u> Fathers' stronger attribution of children's success and failure to effort is related to more paternal control.	Supported
<u>Hypothesis 2.1d(iv)</u> Mothers' stronger attribution of children's success and failure to effort is related to more maternal control.	Supported
<u>Hypothesis 2.1e(i)</u> Fathers' stronger attribution of children's success and failure to effort is related to higher levels of fathers' perception of family functioning.	Supported
<u>Hypothesis 2.1e(ii)</u> Mothers' stronger attribution of children's success and failure to effort is related to higher levels of mothers' perception of family functioning.	Not supported
<u>Hypothesis 2.1f(i)</u> Fathers' stronger attribution of children's success and failure to effort is related to more paternal sacrifice for children's education.	Supported
<u>Hypothesis 2.1f(ii)</u> Mothers' stronger attribution of children's success and failure to effort is related to more maternal sacrifice for children's education.	Supported
<u>Hypothesis 2.1g(i)</u> Fathers' higher expectations of children's future are related to higher levels of paternal endorsement of positive parenting style.	Supported

	<u>Hypothesis 2.1g(ii)</u> Mothers' higher expectations of children's future are related to higher levels of maternal endorsement of positive parenting style.	Not supported, but when controlling adolescents' age and educational level, it was supported.
	<u>Hypothesis 2.1g(iii)</u> Fathers' higher expectations of children's future are related to more paternal control.	Supported
	<u>Hypothesis 2.1g(iv)</u> Mothers' higher expectations of children's future are related to more maternal control.	Supported
	<u>Hypothesis 2.1h(i)</u> Fathers' higher expectations of children's future are related to higher levels of fathers' perception of family functioning.	Supported
	<u>Hypothesis 2.1h(ii)</u> Mothers' higher expectations of children's future are related to higher levels of mothers' perception of family functioning.	Supported
	<u>Hypothesis 2.1i(i)</u> Fathers' higher expectations of children's future are related to more paternal sacrifice for children's education.	Supported
	<u>Hypothesis 2.1i(ii)</u> Mothers' higher expectations of children's future are related to more maternal sacrifice for children's education.	Supported

8.4.2.2 Parental beliefs as predictors of relative family processes

To address Question 2.2, parental beliefs (Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, and expectations of children's future) were taken as predictor variables, and relative family processes (endorsement of positive parenting style, control of children's behaviours, family functioning and sacrifice for children's education) were set as outcome variables. It should be noted that analyses were performed separately between fathers and mothers.

It was found that paternal beliefs, indexed by Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, and expectations of children's future, significantly influenced paternal parenting style (Multiple *R*

= .303, $p < .001$), paternal control (Multiple $R = .519$, $p < .001$), perceived family functioning by fathers (Multiple $R = .364$, $p < .001$), and paternal sacrifice for children's education (Multiple $R = .556$, $p < .001$). Paternal beliefs explained 9.2%, 26.9%, 13.3% and 30.2% of the variance of paternal parenting style, paternal control, fathers' perceived family functioning, and paternal sacrifice respectively. It should be noted that parental beliefs largely predicted paternal control and paternal sacrifice for children's education. Table 8.53 illustrates the multiple regression analysis of paternal beliefs for prediction of paternal parenting style and practices, family functioning and paternal sacrifice for children's education. Among all, it is noteworthy that fathers' Chinese cultural beliefs about adversity significantly predicted paternal parenting style and family functioning, fathers' attribution of children's success and failure to effort influenced paternal parenting style, paternal control and paternal sacrifice for children's education. Last but not least, fathers' expectations of children's future greatly influenced paternal control, perceived family functioning and paternal sacrifice for children's education in economically disadvantaged families.

Maternal beliefs, indexed by mothers' Chinese cultural beliefs about adversity, maternal attribution of children's success and failure to effort, maternal expectations of children's future, significantly predicted maternal parenting style (Multiple $R = .200$, $p < .05$), maternal control (Multiple $R = .542$, $p < .001$), perceived family functioning by mothers (Multiple $R = .296$, $p < .001$), and maternal sacrifice for children's education (Multiple $R = .599$, $p < .001$). Maternal beliefs explained 4.0%, 29.4%, 8.8% and 35.9% of the variance of maternal parenting style, maternal control, mothers' perceived family functioning, and maternal sacrifice for children's education respectively. Similar to paternal beliefs, maternal beliefs largely predicted maternal control and maternal sacrifice for children's education. Table 8.54 illustrates the multiple regression analyses of maternal beliefs for prediction of maternal parenting style, maternal control, family functioning and maternal sacrifice for children's education. It is noteworthy that mothers' expectations of children's future greatly influenced maternal control, maternal sacrifice for children's education, family functioning and maternal parenting style, whereas maternal attribution of children's success and failure to effort influenced maternal control. Moreover, mothers' Chinese

cultural beliefs about adversity greatly predicted family functioning in economically disadvantaged families.

Summary

The predictions of relative parental beliefs for family processes perceived by parents of economically disadvantaged families are listed below:

Summary of predictions of relative parental beliefs for family processes
perceived by parents of economically disadvantaged families

Research Question	Parental beliefs	Predictors	Dependent variable	Findings	% of variance explained
<u>Research question 2.2</u> Among parental beliefs, what are the predictors of family processes perceived by parents?	Paternal beliefs	FCBA, FECF, FAQ-E	FPS	FCBA and FAQ-E predicted FPS	9.2%
			FCS	FAQ-E and FECF predicted FCS	26.9%
			FFAI	FCBA and FECF predicted FFAI	13.3%
			FSA	FAQ-E and FECF predicted FSA	30.9%
	Maternal beliefs	MCBA, MECF, MAQ-E	MPS	MECF predicted MPS	4.0%
			MCS	MAQ-E and MECF predicted MCS	29.3%
			MFAI	MCBA and MECF predicted MFAI	8.8%
			MSA	MECF predicted MSA	35.9%

$p < .05$

FCBA=Chinese Beliefs about Adversity Scale completed by fathers.

FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale.

FECF=Paternal Expectations of Children's Future Scale completed by fathers.

FPS= Paternal Parenting Style Scale completed by fathers.

FCS= Paternal Control Scale completed by fathers.

FFAI=Chinese Family Assessment Inventory completed by fathers.

FSA= Paternal Sacrifice for Children's Education Scale completed by fathers.

MCBA=Chinese Beliefs about Adversity Scale completed by mothers.

MAQ-E=Mothers' Attributions Questionnaire - Effort Subscale.

MECF=Maternal Expectations of Children's Future Scale completed by mothers.

MPS= Maternal Parenting Style Scale completed by mothers.

MCS= Maternal Control Scale completed by mothers.

MFAI=Chinese Family Assessment Inventory completed by mothers.

MSA= Maternal Sacrifice for Children's Education Scale completed by mothers.

8.4.2.3 Relationships of parental beliefs and family processes perceived by adolescents

When looking into the relationships between paternal beliefs reported by parents and family processes perceived by adolescents, a very different picture was presented. It was found that there weren't any significant relationships between fathers' beliefs (Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, or expectations of children's future) and family processes (paternal parenting style, paternal control, family functioning, and paternal sacrifice for children's education) perceived by adolescents. Table 8.55 lists the correlation coefficients of paternal beliefs reported by fathers and family processes perceived by adolescents. Regarding maternal beliefs reported by mothers and family processes perceived by adolescents, a similar picture was presented. There weren't any significant relationships between maternal beliefs (Chinese cultural beliefs about adversity, expectations of children's future, attribution of children's success and failure to effort) and family processes (maternal parenting style, maternal control, family functioning, and maternal sacrifice for children's education) perceived by adolescents. Table 8.56 lists the correlation coefficients of maternal beliefs reported by mothers and family processes perceived by adolescents.

8.4.3 Influences of family processes on achievement motivation and psychological competence of adolescents

This section is related to Research Question 3: Do parenting styles and practices, family functioning, and parental sacrifice for children's education influence achievement motivation and psychological competence of economically disadvantaged adolescents?

To address Research Question 3, two related questions were proposed: (1) Are there any relationships between family processes (endorsement of positive parenting styles and practices, family functioning, and parental sacrifice for children's education) and achievement motivation and psychological competence of economically disadvantaged adolescents? (Question 3.1); and (2) among different family processes, what are the predictors of achievement motivation and

psychological competence of economically disadvantaged adolescents? (Question 3.2).

8.4.3.1 Relationships between family processes perceived by adolescents and adolescent achievement motivation and psychological competence

To address Question 3.1, six hypotheses were set from adolescents' perspectives. Hypothetical Model 3 was listed in Chapter Five (Figure 5.3).

Hypothesis 3.1a: More parental endorsement of positive parenting style and more parental control are related to higher achievement motivation of adolescents.

Hypothesis 3.1b: More parental endorsement of positive parenting style and more parental control are related to better psychological competence of adolescents.

Hypothesis 3.1c: A higher level of family functioning is related to higher achievement motivation of adolescents.

Hypothesis 3.1d: A higher level of family functioning is related to better psychological competence of adolescents.

Hypothesis 3.1e: More parental sacrifice for children's education is related to higher achievement motivation of adolescents.

Hypothesis 3.1f: More parental sacrifice for children's education is related to better psychological competence of adolescents.

Results

To analyse the relationships between family processes and adolescent development, Pearson correlation analyses were performed. In order to decrease the chance of committing Type I error, a conservative alpha level based on Bonferroni correction was performed. As there were 14 hypotheses being tested, the alpha was determined with the formula of $.05/14$, i.e. $.004$.

When assessing the correlations of demographic data with adolescents' perception of family processes and adolescent development, it was found that perceived paternal parenting style (APPS) were significantly associated with age of adolescents ($r = -.275$, $p < .001$) and educational level of adolescents ($r = -.224$, $p < .001$), suggesting that older, more educated adolescents had less

endorsement of perceived positive paternal parenting styles. The amount of overlapping on the correlation of APPS and age of adolescents and educational levels of adolescents were 7.56%, and 5.02% of the variance. Thus, partial correlations of APPS scores by age of adolescents and educational levels of adolescents were carried out. Similarly, perceived maternal parenting style (AMPS) were significantly associated with age of adolescents ($r = -.303, p < .001$) and educational level of adolescents ($r = -.246, p < .001$), suggesting that older, more educated adolescents had less endorsement of positive maternal parenting style. The amount of overlapping on the correlation of AMPS and age of adolescents and educational level of adolescents were 9.18%, and 6.05% of the variance. Therefore, partial correlations of AMPS scores by age of adolescents and educational levels of adolescents were recommended. Furthermore, adolescents' perception of family functioning (AFAI) was significant related to their status of receiving CSSA ($r = -.216, p < .001$), suggesting that those families receiving CSSA would have relatively lower family functioning perceived by adolescents. The amount of overlapping on the correlation of AFAI and status of CSSA recipient was 4.67% of the variance, so partial correlation of AFAI scores by status of CSSA recipient was suggested.

Hypothesis 3.1a

From adolescents' reports, it was found that perceived positive endorsement of paternal parenting style was associated significantly with achievement motivation of economically disadvantaged adolescents, with Pearson's r at .253 ($p < .001$), indicating small to medium effect size. Person's r was reduced to .222 ($p < .001$) when age and educational level of adolescents were controlled. Paternal control was also correlated with achievement motivation of adolescents ($r = .308, p < .001$). The effect size was considered medium. Furthermore, it was found that perceived positive endorsement of maternal parenting style was correlated significantly with achievement motivation of economically disadvantaged adolescents, with Pearson's r at .259 ($p < .001$), indicating small and medium effect size. When age and educational level of adolescents were controlled, Pearson's r changed to .225 ($p < .001$). Maternal control was also correlated with achievement motivation of adolescents ($r = .393, p < .001$). The effect size was between medium to great. Table 8.57 shows the correlations

between relative perceived parenting style and parental control with achievement motivation of economically disadvantaged adolescents.

Thus, Hypothesis 3.1a was supported, with higher levels of positive endorsement of parenting style and parental control perceived by adolescents associated with higher achievement motivation of economically disadvantaged adolescents.

Hypothesis 3.1b

From adolescents' reports, it was found that perceived paternal endorsement of positive parenting style and paternal control were associated significantly with psychological competence of economically disadvantaged adolescents, with Pearson's r of .332 ($p < .001$) and .327 ($p < .001$) respectively. The effect size was medium. Perceived paternal endorsement of positive parenting style was associated significantly with psychological competence of adolescents even when age and educational level of adolescents were controlled ($r = .315$, $p < .001$). Furthermore, it was found that perceived maternal endorsement of positive parenting style was correlated significantly with psychological competence of economically disadvantaged adolescents, with Pearson's r of .298 ($p < .001$), showing medium effect size. When age and educational level of adolescents were controlled, Pearson's r changed to .278 ($p < .001$). Regarding maternal control, it was found that there was significant correlation between perceived maternal control and psychological competence of adolescents, with Pearson's r at .345 ($p < .001$). A medium effect size was indicated. Table 8.57 shows the correlations between relative perceived parenting style and parental control with psychological competence of economically disadvantaged adolescents.

Thus, Hypothesis 3.1b was supported, with higher levels of positive endorsement of parenting style and parental control perceived by adolescents associated with higher psychological competence of economically disadvantaged adolescents.

Hypothesis 3.1c

From adolescents' reports, it was found that perceived family functioning by adolescents was associated significantly with their achievement motivation, with

Pearson's r of .220 ($p < .001$). The effect size was considered small to medium. With the control of status of CSSA recipients, the value of Pearson's r reduced to .203 ($p < .004$), which still indicated significant correlation. Table 8.57 shows the correlations between relative perceived family functioning and achievement motivation of economically disadvantaged adolescents.

Thus, Hypothesis 3.1c was supported, with higher level of family functioning perceived by adolescents associated with higher achievement motivation of economically disadvantaged adolescents.

Hypothesis 3.1d

From adolescents' reports, it was found that perceived family functioning by adolescents was associated significantly with their psychological competence, with Pearson's r at .569 ($p < .001$). The effect size was great. With the control of status of CSSA recipients, the value of Pearson's r was .556 ($p < .001$), indicating that the correlation between perceived family functioning and psychological competence of adolescents were great. Table 8.57 shows the correlations between relative perceived family functioning and psychological competence of economically disadvantaged adolescents.

Thus, Hypothesis 3.1d was supported, with higher level of family functioning perceived by adolescents associated with higher psychological competence of economically disadvantaged adolescents.

Hypothesis 3.1e

From adolescents' reports, it was found that perceived paternal and maternal sacrifice for children's education were associated significantly with achievement motivation of economically disadvantaged adolescents, with Pearson's r of .402 ($p < .001$) and .425 ($p < .001$) respectively. It was noteworthy that the relationships between paternal and maternal sacrifice for children's education and adolescent achievement motivation had effect size of medium to large. Table 8.57 shows the correlations between relative perceived paternal and maternal sacrifice for children's education and achievement motivation of economically disadvantaged adolescents.

Thus, Hypothesis 3.1e was supported, with more parental sacrifice for children's education perceived by adolescents associated with higher

achievement motivation of economically disadvantaged adolescents.

Hypothesis 3.1f

From adolescents' reports, it was found that perceived paternal sacrifice for children's education was associated positively with psychological competence of economically disadvantaged adolescents, with Pearson's r at .381 ($p < .001$), indicating medium to large effect size. Perceived maternal sacrifice for children's education was also associated positively with psychological competence of economically disadvantaged adolescents, with Pearson's r at .281 ($p < .001$), indicating medium large effect size. It was noteworthy that the effect size of relationship between paternal sacrifice for children's education and adolescent psychological competence was stronger than that with maternal sacrifice. Table 8.57 lists the correlations of perceived paternal and maternal sacrifice for children's education and psychological competence of economically disadvantaged adolescents.

Thus, Hypothesis 3.1f was supported, with more parental sacrifice for children's education perceived by adolescents associated with higher psychological competence of economically disadvantaged adolescents.

Summary

The findings related to Research Question 3.1, based on the adolescents' perspectives, are summarized below:

Summary of findings addressing Research Question 3.1 from the adolescents' perspectives

Research question	Hypothesis	Status
Research question 3.1 Are there any relationships between family processes (endorsement of positive parenting style and practices, family functioning, and parental sacrifice for children's education) perceived by adolescents and	<u>Hypothesis 3.1a(i)</u> More paternal endorsement of positive parenting style is related to higher achievement motivation of adolescents.	Supported
	<u>Hypothesis 3.1a(ii)</u> More maternal endorsement of positive parenting style is related to higher achievement motivation of adolescents.	Supported
	<u>Hypothesis 3.1a(iii)</u> More paternal control is related to higher achievement motivation of adolescents.	Supported

achievement motivation/psychological competence of economically disadvantaged adolescents?	<u>Hypothesis 3.1a(iv)</u> More maternal control is related to higher achievement motivation of adolescents.	Supported
	<u>Hypothesis 3.1b(i)</u> More paternal endorsement of positive parenting style is related to better psychological competence of adolescents.	Supported
	<u>Hypothesis 3.1b(ii)</u> More maternal endorsement of positive parenting style is related to better psychological competence of adolescents.	Supported
	<u>Hypothesis 3.1b(iii)</u> More paternal control is related to better psychological competence of adolescents.	Supported
	<u>Hypothesis 3.1b(iv)</u> More maternal control is related to better psychological competence of adolescents.	Supported
	<u>Hypothesis 3.1c</u> A higher level of family functioning is related to higher achievement motivation of adolescents.	Supported
	<u>Hypothesis 3.1d</u> A higher level of family functioning is related to better psychological competence of adolescents.	Supported
	<u>Hypothesis 3.1e(i)</u> A higher level of paternal sacrifice for children's education is related to higher achievement motivation of adolescents.	Supported
	<u>Hypothesis 3.1e(ii)</u> A higher level of maternal sacrifice for children's education is related to higher achievement motivation of adolescents.	Supported
	<u>Hypothesis 3.1f(i)</u> A higher level of paternal sacrifice for children's education is related to better psychological competence of adolescents.	Supported
	<u>Hypothesis 3.1f(ii)</u> A higher level of maternal sacrifice for children's education is related to better psychological competence of adolescents.	Supported

8.4.3.2 Family processes perceived by adolescents as predictors of achievement motivation and psychological competence of adolescents

To address Question 3.2 (What are the family process predictors of achievement motivation and psychological competence of adolescents?), standardized multiple regression was employed. Different family processes perceived by adolescents (endorsement of positive parenting style, parental control of children's behaviours, family functioning and parental sacrifice for children's education) were considered as predictor variables, whereas achievement motivation and psychological competence were set as outcome variables.

To understand the overall influence of paternal and maternal parenting style and practices on achievement motivation of adolescents, standard multiple regression analyses were performed. It was found that parental parenting style and practices, indexed by paternal and maternal endorsement of positive parenting style, as well as paternal and maternal control, significantly predicted the achievement motivation of economically disadvantaged adolescents (Multiple $R = .433$, $p < .001$), which explained 18.8% of the variance of adolescent achievement motivation. Among all, it was noteworthy that maternal control significantly predicted adolescent achievement motivation, with $\beta = .304$ ($p < .001$). Table 8.58 lists the prediction of perceived parenting style and practices on achievement motivation of economically disadvantaged adolescents.

To understand the overall influence of paternal and maternal parenting style and practices on psychological competence of adolescents, again, standard multiple regression was performed. It was found that parental parenting style and practices, indexed by paternal and maternal endorsement of positive parenting style and paternal and maternal control, significantly predicted the psychological competence of economically disadvantaged adolescents (Multiple $R = .440$, $p < .001$), and explained 19.3% of the variance of adolescent psychological competence. Among all, it was noteworthy that maternal control and paternal endorsement of positive parenting style significantly predicted adolescent psychological competence, with $\beta = .219$ ($p < .01$) and $.177$ ($p < .05$) respectively. Table 8.58 lists the prediction of perceived parenting style and practices on psychological competence of economically disadvantaged adolescents.

For family functioning, it was found that family functioning significantly predicted the achievement motivation and psychological competence of economically disadvantaged adolescents (Multiple $R = .220$, $p < .001$ for SOAM and Multiple $R = .569$, $p < .001$ for PYD), explaining 4.8% and 32.4% of the variance of adolescent achievement motivation and psychological competence.

To understand the overall influence of perceived paternal and maternal sacrifice for children's education on achievement motivation of adolescents, standard multiple regression analyses were performed. It was found that parental sacrifice for children's education, indexed by paternal and maternal sacrifice, significantly predicted the achievement motivation of economically disadvantaged adolescents (Multiple $R = .469$, $p < .001$), explaining 22.0% of the variance of adolescent achievement motivation. Table 8.59 indicates the prediction of perceived parental sacrifice for achievement motivation of economically disadvantaged adolescents. Both perceived paternal and maternal sacrifice for children's education significantly and positively predicted adolescent achievement motivation, with $\beta = .239$ ($p < .001$) and $.292$ ($p < .001$) respectively.

To understand the overall influence of perceived paternal and maternal sacrifice for children's education on psychological competence of adolescents, standard multiple regression analyses were performed. It was found that parental sacrifice for children's education, indexed by paternal and maternal sacrifice, significantly predicted the psychological competence of economically disadvantaged adolescents (Multiple $R = .390$, $p < .001$), explaining 15.2% of the variance of adolescent psychological competence. It was found that paternal sacrifice significantly predicted psychological competence of adolescents, with $\beta = .324$ ($p < .001$). Table 8.59 indicates the prediction of perceived parental sacrifice for psychological competence of economically disadvantaged adolescents.

It is important and interesting to predict the influences of the relative paternal and maternal family processes on adolescent achievement motivation and psychological competence perceived by economically disadvantaged adolescents, in order to understand the relative contribution of fathers and mothers to adolescent development. Standard multiple regression with paternal

and maternal family processes (paternal and maternal parenting style, paternal and maternal control, and paternal and maternal sacrifice) as independent variables and adolescent development aspects (achievement motivation and psychological competence) as dependent variables was performed separately.

Fathers and mothers contributed significantly to achievement motivation of adolescents, with Multiple R of .425 ($p < .001$) and .487 ($p < .001$), explaining 18.0% and 23.8% of the variance respectively. It was found that mothers showed greater influences on building achievement motivation of adolescents than did fathers. Fathers and mothers also significantly influenced adolescents' psychological competence, with Multiple R of .427 ($p < .001$) and .409 ($p < .001$), explaining 18.2% and 16.7% of the variance respectively. However, fathers' influence on adolescent psychological competence was slightly greater than mothers'.

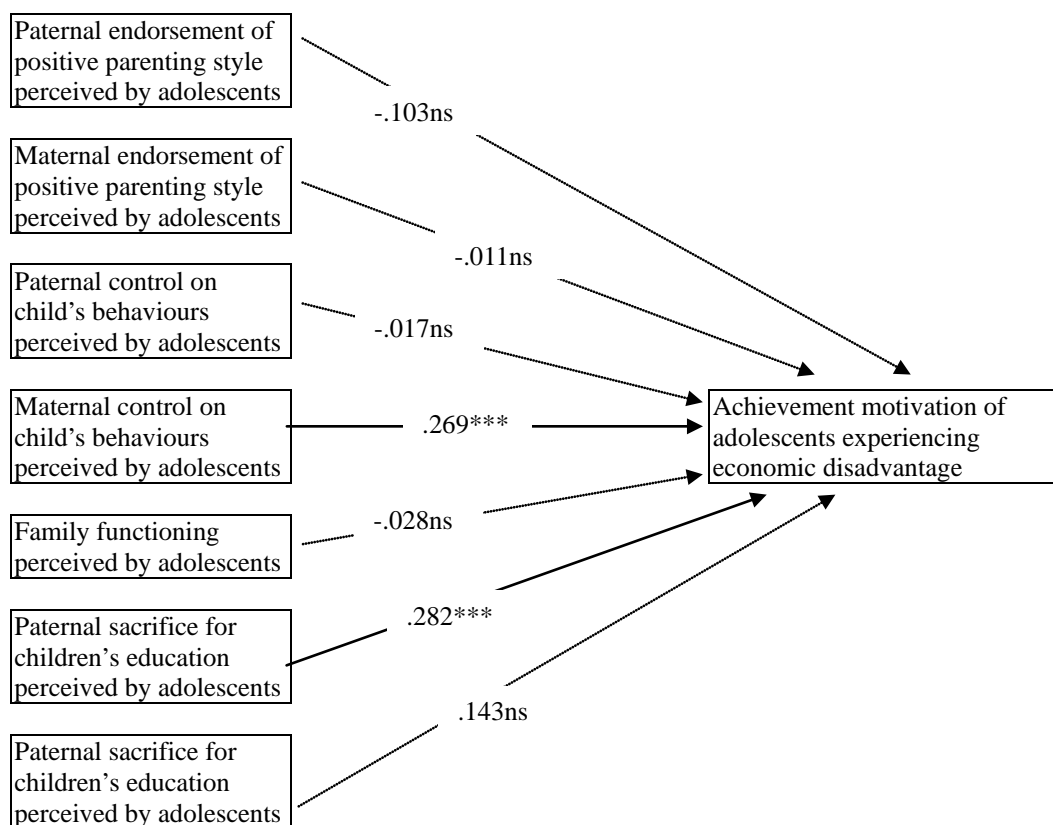
When looking into the aspects of family processes that fathers and mothers contributed to the development of achievement motivation and psychological competence of adolescents, it was found that paternal sacrifice for children's education strongly influenced the achievement motivation and psychological competence of adolescents, with $\beta = .340$ ($p < .001$) and $.231$ ($p < .001$) respectively. Paternal control also added some influences, but less than did paternal sacrifice. Moreover, maternal control ($\beta = .246$, $p < .001$) and maternal sacrifice for children's education ($\beta = .290$, $p < .001$) greatly influenced achievement motivation of adolescents, whereas maternal control ($\beta = .246$, $p < .001$) and endorsement of positive parenting style ($\beta = .184$, $p < .01$) significantly influenced the psychological competence of adolescents. Table 8.60 lists the prediction of paternal and maternal family processes on adolescent development in economically disadvantaged families.

To predict the overall influences of family processes of achievement motivation and psychological competence perceived by these adolescents, standard multiple regression was performed with all facets of family processes (paternal and maternal parenting styles, paternal and maternal control, family functioning, and paternal and maternal sacrifice for children's education) as independent variables, and achievement motivation and psychological competence as dependent variables. It was found that the overall family

processes perceived by adolescents significantly influenced their achievement motivation, with Multiple R equal to .527 ($p < .001$). The family processes explained 27.8% of variance of achievement motivation of economically disadvantaged adolescents. Among all, it was identified that perceived maternal control and paternal sacrifice for children's education influenced strongly on achievement motivation of adolescents. Table 8.61 shows the prediction of overall family processes for adolescent achievement motivation in economically disadvantaged families. Figure 8.1 lists the prediction of different family processes for achievement motivation of adolescents.

Regarding psychological competence of adolescents, the overall family processes perceived by adolescents significantly predicted their psychological competence, with Multiple R equals to .620 ($p < .001$). The family processes explained 38.5% of variance of psychological competence of economically disadvantaged adolescents. It was found that perceived family functioning influenced strongly on psychological competence of adolescents. Maternal control and paternal sacrifice for children's education also contributed significantly to psychological competence of adolescents. Table 8.61 shows the prediction of overall family processes for adolescent psychological competence in economically disadvantaged families. Figure 8.2 lists the prediction of different family processes for psychological competence of adolescents.

Figure 8.1. Predictions of different family processes perceived by adolescents on achievement motivation of adolescents experiencing economic disadvantage

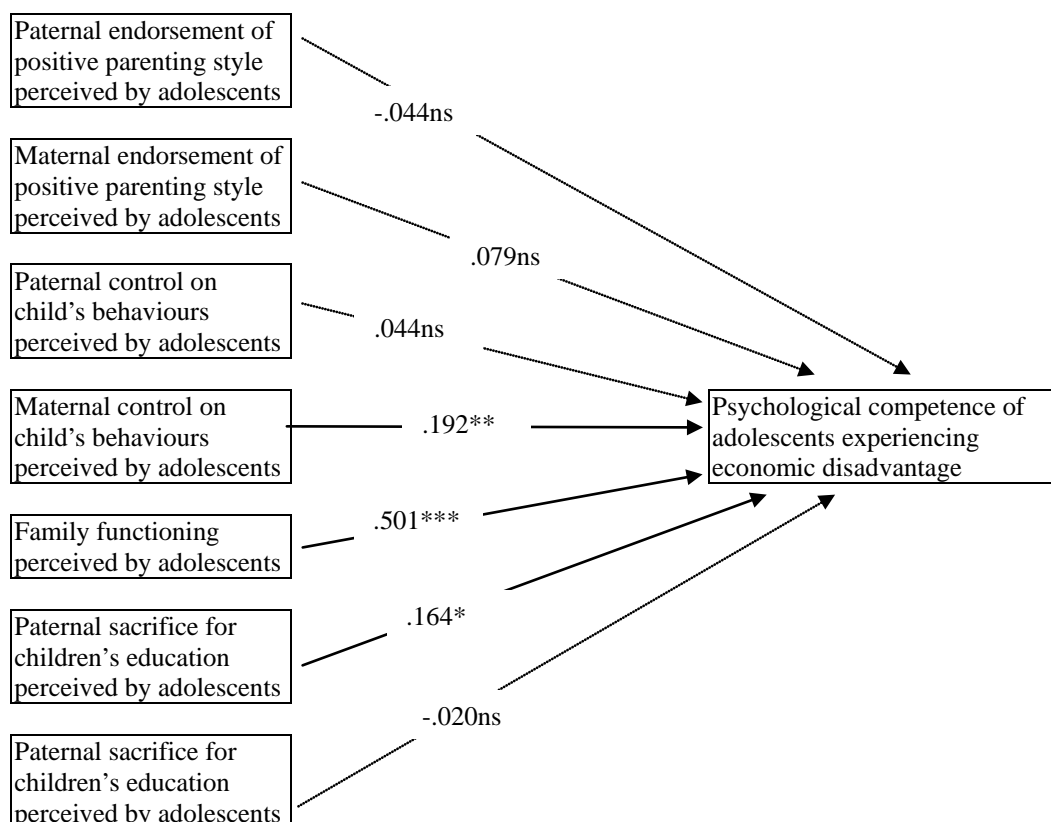


* $p < .05$, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

$R^2 = .278$

Figure 8.2. Predictions of different family processes perceived by adolescents on psychological competence of adolescents experiencing economic disadvantage



* $p < .05$, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

$R^2 = .385$

Summary

In summary, the prediction of relative family processes perceived by adolescents on achievement motivation and psychological competence of adolescents experiencing economic disadvantage is listed below:

Summary of prediction of relative parental beliefs for family processes perceived
by parents of economically disadvantaged families

Research Question	Family processes	Predictors	Dependent variable	Findings	% of variance explained
<u>Research question 3.2</u> Among different family processes perceived by adolescents, what are the predictors of achievement motivation and psychological competence of economically disadvantaged adolescents?	Parenting style and parental control	APPS, AMPS, APCS, AMCS	SOAM	AMCS predicted SOAM	18.8%
			PYD	APPS and AMCS predicted PYD	19.3%
	Family functioning	AFAI	SOAM	AFAI predicted SOAM	4.8%
			PYD	AFAI predicted PYD	32.4%
	Parental sacrifice for children's education	APSA, AMSA	SOAM	APSA and AMSA predicted SOAM	22.0%
			PYD	APSA predicted PYD	15.2%
	Paternal family processes	APPS, APCS, APSA	SOAM	APCS and APSA predicted SOAM	18.0%
			PYD	APCS and APSA predicted PYD	18.2%
	Maternal family processes	AMPS, AMCS, AMSA	SOAM	AMCS and AMSA predicted SOAM	23.8%
			PYD	AMPS and AMCS predicted PYD	16.7%
	Overall family processes	APPS, AMPS, APCS, AMCS, AFAI, APSA, AMSA	SOAM	AMCS and APSA predicted SOAM	27.8%
			PYD	AMCS, AFAI and APSA predicted PYD	38.5%

$p < .05$

APPS= Perceived Paternal Parenting Style Scale completed by adolescents.

AMPS= Perceived Maternal Parenting Style Scale completed by adolescents.

APCS= Perceived Paternal Control Scale completed by adolescents.

AMCS= Perceived Maternal Control Scale completed by adolescents.

APSA= Perceived Paternal Sacrifice for Children's Education Scale by adolescents.

AMSA= Perceived Maternal Sacrifice for Children's Education Scale by adolescents.

AFAI= Perceived Chinese Family Assessment Inventory by adolescents.

SOAM= Social Oriented Achievement Motivation Scale.

PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

8.4.3.3 Influence of family processes on achievement motivation and psychological competence of adolescents based on parents' perspectives

In this section, identical questions are addressed based on the parents' perspectives: Are there any relationships between family processes (endorsement of positive parenting style and practices, family functioning, and parental sacrifice for children's education) and achievement motivation and psychological competence of economically disadvantaged adolescents? Among different family processes perceived by parents, what are the predictors of achievement motivation and psychological competence of economically disadvantaged adolescents? Thus, relationships between family processes perceived by parents and achievement motivation and psychological competence of adolescents were examined. Identical analytical procedures including Pearson correlation analyses and standard multiple regressions were carried out to study the influences.

To look from the parents' perspectives at the influences of family processes on association of achievement motivation and psychological competence of adolescents, Pearson correlation analyses were performed. A two-tailed multistage Bonferroni procedure was carried out to guard against inflated Type I error (Larzelere & Mulaik, 1977). The pT was set at $<.006$ when pFW was $<.05$.

As mentioned, PPS was significantly related to age, educational level of adolescents and number of children; MPS was significantly related to age and educational level of adolescents; and MSA was significantly related to mothers' duration of stay in Hong Kong, so separate correlation analyses were performed with the demographic factors controlled.

It was found that maternal endorsement of positive parenting style, paternal control, maternal control, and paternal sacrifice for children's education were significantly related to achievement motivation of economically disadvantaged adolescents, with Pearson's r at .190 ($p < .006$), .193 ($p < .006$), .171 ($p < .006$) and .231 ($p < .001$) respectively. The effect sizes were between small and medium. After controlling age and educational level of adolescents, maternal endorsement of positive parenting style was not significantly related to adolescent achievement motivation.

Furthermore, it was found that paternal endorsement of positive parenting style, fathers' and mothers' perceptions of family functioning and paternal

sacrifice for children's education were significantly related to psychological competence of economically disadvantaged adolescents, with Pearson's r of .170 ($p < .006$), .185 ($p < .006$), .242 ($p < .001$) and .215 ($p < .001$) respectively. The effect sizes were between small and medium. After controlling age and educational level of adolescents and number of children, paternal endorsement of positive parenting style was not significantly related to adolescent psychological competence. Table 8.62 indicates the correlations between relative family processes perceived by fathers and mothers and adolescent development in economically disadvantaged families.

To predict fathers' and mothers' perspectives of the influences of family processes on adolescent achievement motivation and psychological competence, standard multiple regression analyses with fathers' and mothers' perceptions of family processes as independent variables, and adolescent achievement motivation and psychological competence as dependent variables, were performed separately.

It was found that family processes perceived by fathers significantly predicted achievement motivation of economically disadvantaged adolescents (Multiple $R = .264$, $p < .01$), and explained 7.0% of the variance of adolescent achievement motivation. Among different family processes, paternal sacrifice for children's education significantly predicted achievement motivation of adolescents ($\beta = .203$, $p < .01$). Regarding psychological competence, similar results were obtained. Family processes perceived by fathers significantly predicted psychological competence of economically disadvantaged adolescents (Multiple $R = .250$, $p < .01$), and explained 6.3% of the variance of adolescent psychological competence. Again, paternal sacrifice for children's education significantly predicted psychological competence of adolescents ($\beta = .172$, $p < .05$).

Family processes perceived by mothers significantly predicted achievement motivation of economically disadvantaged adolescents (Multiple $R = .246$, $p < .001$), and explained 6.0% of the variance of adolescent achievement motivation. Different to the fathers' perspective, it was mothers' endorsement of positive parenting style that significantly predicted achievement motivation of adolescents ($\beta = .173$, $p < .01$). Regarding psychological competence, it was

found that family processes perceived by mothers significantly predicted psychological competence of economically disadvantaged adolescents (Multiple $R = .265$, $p < .01$), and explained 7.0% of the variance of adolescent psychological competence. Also, different from the fathers' perspective, it was mothers' perception of family functioning that significantly predicted psychological competence of adolescents ($\beta = .195$, $p < .01$). Table 8.63 indicates the prediction of paternal and maternal family processes for adolescent development in economically disadvantaged families.

To predict the influence of overall family processes perceived by fathers and mothers on adolescent achievement motivation and psychological competence, standard multiple regression analyses were performed with all facets of family processes (paternal and maternal parenting style, paternal and maternal control, fathers' and mothers' perceived family functioning, and paternal and maternal sacrifice for children's education) as independent variables and adolescent achievement motivation and psychological competence as dependent variables. It was found that the overall family processes perceived by parents significantly predicted achievement motivation, with Multiple R equals to .330 ($p < .001$). The family processes explained 10.9% of variance of achievement motivation of economically disadvantaged adolescents. Among all, it was identified that perceived maternal endorsement of positive parenting style ($\beta = .174$, $p < .01$) and paternal sacrifice for children's education ($\beta = .196$, $p < .01$) influenced strongly on achievement motivation of adolescents. Regarding psychological competence of adolescents, the overall family processes perceived by adolescents significantly influenced their psychological competence, with Multiple R equal to .316 ($p < .001$). The family processes explained 10.0% of variance of psychological competence of economically disadvantaged adolescents. It was found that mothers' perceived family functioning ($\beta = .161$, $p < .05$) and paternal sacrifice for children's education ($\beta = .175$, $p < .05$) were strong predictors of psychological competence of adolescents. Table 8.64 lists the prediction of the influences of overall family processes on adolescent development in economically disadvantaged families.

8.4.4 Family processes as mediators of the influence of parental beliefs on achievement motivation and psychological competence of adolescents

This section addresses Research Question 4, i.e. Do the family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education mediate the influence of parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs (attribution of children's success and failure to effort, and expectations of children's future) on achievement motivation and psychological competence of economically disadvantaged adolescents?

Regarding parenting styles and practices, family functioning, and parental sacrifice for children's education from parents' perspectives, adolescents' perspectives and a combination of both, three hypothetical models (Hypothetical Model 4a, Hypothetical Model 4b and Hypothetical Model 4c) were formed and listed in Chapter Five (Figure 5.4a, Figure 5.4b and Figure 5.4c). Hypothetical Model 4a takes the parents' perspectives on perceived family processes, Hypothetical Model 4b takes the adolescents' perspectives on perceived family processes, and Hypothetical Model 4c takes the averaged data from parents and adolescents.

Hypotheses 4a: Family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education *perceived by parents* mediate the influence of parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs (attribution of children's success and failure to effort, and expectations of children's future) on achievement motivation and psychological competence of adolescents.

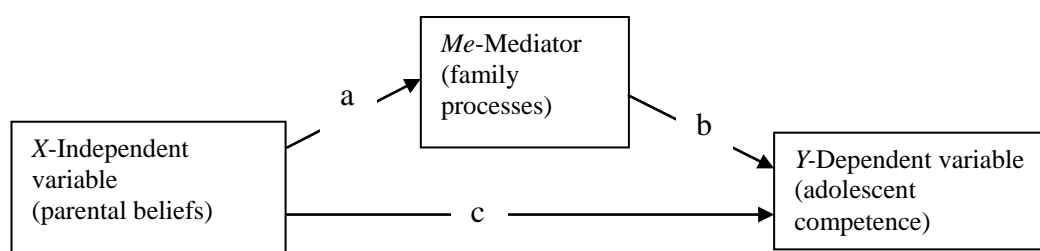
Hypotheses 4b: Family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education *perceived by adolescents* mediate the influence of parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs (attribution of children's success and failure to effort, and expectations of children's future) on achievement motivation and psychological competence of adolescents.

Hypotheses 4c: Family processes of parenting style and practices, family

functioning, and parental sacrifice for children's education with *averaged data from parents and adolescents* mediate the influence of parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs (attribution of children's success and failure to effort, and expectations of children's future) on achievement motivation and psychological competence of adolescents.

To address Research Question 4, the mediating effect of family processes on parental beliefs and achievement motivation/psychological competence of adolescents were assessed. The mediating function of the variable, as described by Baron and Kenny (1986), represents "the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest" (p.1173). Baron and Kenny (1986) suggested that a third variable is a mediator when it meets the following conditions: (1) variations in levels of the independent variable significantly account for variations in the presumed mediator (Path a); (2) variations in the mediator significantly account for variations in the dependent variable (Path b); and (3) when Paths a and b are controlled, a previous significant relation between the independent variable and dependent variable is no longer significant, with the stronger demonstration of mediation occurring when Path c is zero, or when there is a significant reduction of coefficient of Path c (p.1176). Figure 8.3 illustrates the paths of independent variable, mediator variable and dependent variable.

Figure 8.3. The paths of independent variable, mediator and dependent variable



Wu and Zumbo (2008) summarized the work of Kenny and his colleagues (Baron & Kenny, 1986; Judd & Kenny, 1981; Kenny et al., 1998) into a four-step data analytic method to establish a mediation effect. The steps respond to the

variables indicated in Figure 8.3.

Step 1:

$$Y = i + cX + e \quad (1)$$

Equation (1) establishes an overall direct effect of independent variable (X) on dependent variable (Y). Y is predicted by X to estimate effect “ c ”. “ i ” represents the regression intercept and “ e ” represents the regression error.

Step 2:

$$Me = I + aX + e \quad (2)$$

Equation (2) assesses whether the independent variable is correlated with the mediator. The mediator (Me) is predicted by X to test the effect “ a ”.

Step 3:

$$Y = I + c'X + bMe + e \quad (3)$$

Equation (3) indicates the mediator’s effect on dependent variable. Y is predicted by both X and Me to test effect “ b ”. The independent variable must be controlled in establishing the unique effect of the mediator in the dependent variable.

Step 4:

Compare “ c ” in Step 1 and “ c' ” in Step 3.

If the mediator mediates the relationship between X and Y , the effect of c' in Equation (3) would be insignificant, and approaching zero in case of completely mediating effect.

(Wu & Zumbo, 2008, pp. 373-374).

The four-step data analytic method suggested by Wu and Zumbo (2008) was used to assess Hypothetical Models 4a, 4b and 4c mentioned in Chapter Five. Fathers’ and mothers’ Chinese cultural beliefs about adversity, fathers’ and mothers’ attribution of children’s success and failure to effort, and fathers’ and mothers’ expectations of children’s future were independent variables (X), achievement motivation and psychological competence of adolescents were dependent variables (Y), and family processes of parenting styles, parental control, family functioning, and parental sacrifice for children’s education were

mediating variables (*Me*). The data were assessed with the four-step analytical method, and the effect of *c* and *c'* was compared to assess the mediation effect.

A Sobel test was performed to test the indirect effect of the independent variable (*X*) on the dependent variable (*Y*). The Sobel test is a formal significance test of the indirect effect of the independent variable on the dependent variable when the criteria suggested by Baron and Kenny (1986) have been met. To conduct Sobel test, the indirect effect of *X* on *Y* is represented by the product of *ab* where, *a* is the effect of “*X* → *Me*” path and *b* is the effect of “*Me* → *Y*” path. The indirect effect *ab* is divided by *s_{ab}*, that is, the standard error of the indirect effect to yield a critical ratio (*z*-value) for testing of significance. The Sobel test equation is:

$$z\text{-value} = a*b/\text{SQRT}(b^2*s_a^2 + a^2*s_b^2)$$

If the indirect effect is statistically significant in the direction predicted by the mediation hypothesis, the mediation effect is supported (Preacher & Hayes, 2004). The magnitude of indirect effects was computed by using the interactive calculation tool provided by Preacher and Leonardelli (2010, March).

Results

8.4.4.1 Direct effect of parental beliefs on achievement motivation and psychological competence of adolescents

To trace the paths of parental beliefs' influences on achievement motivation and psychological competence of adolescents via different family processes, we first have to identify the direct effect of parental beliefs (endorsement of Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, expectations of children's future) on achievement motivation and psychological competence of adolescents.

It was found that parental beliefs significantly influenced achievement motivation (Multiple *R* = .216, *p* < .05) and psychological competence (Multiple *R* = .183, *p* < .01) of adolescents, explaining 4.7% and 4.9% of the variances of adolescent achievement motivation and psychological competence. Among different parental beliefs, it was found that only paternal expectations of children's future (FECF) predicted both achievement motivation (*β* = .140, *p* < .05) and psychological competence (*β* = .143, *p* < .05) of economically

disadvantaged adolescents (Table 8.65).

To understand the mediating factors of different family processes perceived by different family members, the indirect effect of paternal expectations of children's future (FECF) on achievement motivation and psychological competence of adolescents was explored

8.4.4.2 Hypotheses 4a

Parenting style perceived by parents as the mediating factor

Regarding parenting styles as the mediating factors between parental beliefs and achievement motivation of adolescents, neither paternal nor maternal endorsement of positive parenting styles mediated parental beliefs and adolescent achievement motivation, with regression coefficient (β) of FECF after the input of paternal parenting style (FPS) remaining significant.

Similar results were obtained when viewing paternal and maternal parenting style as the mediating factors between parental beliefs and psychological competence of adolescents. It was found that neither paternal nor maternal endorsement of positive parenting styles mediated parental beliefs and adolescent psychological competence, with regression coefficient (β) of FECF after the input of paternal parenting style (FPS) remaining significant.

In summary, parenting style reported by fathers and mothers did not mediate parental beliefs and achievement motivation/psychological competence of economically disadvantaged adolescents.

Parental control perceived by parents as the mediating factor

Regarding paternal control as the mediating factor between parental beliefs and achievement motivation of adolescents, it was found that paternal control was a mediating factor. Though paternal expectations of children's future (FECF) had a significant direct effect on adolescent achievement motivation (SOAM), the effect of FECF on SOAM became insignificant after the input of paternal control (FCS) into the regression equation (Table 8.66). Besides, Sobel test also indicated an indirect effect of FECF on SOAM via FCS ($z = 2.057$, $p < .05$) (Table 8.67).

However, it was found that maternal control (MCS) did not mediate parental

beliefs and adolescent achievement motivation (SOAM), with regression coefficient (β) of FECF after the input of maternal control (MCS) remaining significant.

Paternal control did not mediate parental beliefs and adolescent psychological competence. Even though the effect of paternal expectations of children's future (FECF) on PYD became insignificant after the input of paternal control (FCS) into the regression equation (Table 8.68), and Sobel test indicated an indirect effect of FECF on PYD via FCS ($z = 2.107, p < .05$) (Table 8.69), the overall regression equation became insignificant after the input of FCS into the model.

Maternal control (MCS) did not mediate parental beliefs and adolescent psychological competence (PYD), with regression coefficient (β) of FECF after the input of maternal control (MCS) remaining significant.

In summary, it was found that paternal control reported by fathers mediated parental beliefs and achievement motivation of economically disadvantaged adolescents, but not psychological competence. Also, maternal control reported by mothers did not mediate parental beliefs and achievement motivation or parental beliefs and psychological competence of economically disadvantaged adolescents.

Family functioning perceived by fathers and mothers as mediating factor

Regarding family functioning as the mediating factor between parental beliefs and achievement motivation of adolescents, it was found that fathers' and mothers' perception of family functioning did not mediate parental beliefs and adolescent achievement motivation. The effect of FECF on SOAM remained significant after the input of FFAI and MFAI.

Regarding psychological competence (PYD) of adolescents, the effect of FECF became insignificant after the input of fathers' perception of family functioning (FFAI) on PYD (Table 8.70). Sobel test indicated that the indirect effect of FECF on PYD via FFAI was significant at one-tailed test ($z = 1.940, p < .05$ for one-tailed test) (Table 8.71). Thus, it was concluded that fathers' perception of family functioning mediated parental beliefs and psychological competence of adolescents.

Regarding mothers' perception of family functioning (MFAI), though the effect of FECF became insignificant after the input of MFAI on PYD (Table 8.72), Sobel test indicated that the indirect effect of FECF on PYD via MFAI was insignificant ($z = 1.288, p > .05$) (Table 8.73). Thus, it was concluded that mothers' perception of family functioning did not mediate parental beliefs or psychological competence of adolescents.

In summary, fathers' and mothers' perception of family functioning (FFAI and MFAI) did not mediate achievement motivation (SOAM) of economically disadvantaged adolescents. However, FFAI mediated psychological competence (PYD) of economically disadvantaged adolescents, while MFAI did not.

Parental sacrifice for children's education reported by parents as mediating factor

Regarding parental sacrifice for children's education as the mediating factor between parental beliefs and achievement motivation of adolescents, it was found that paternal sacrifice for children's education (FSA) mediated parental beliefs and adolescent achievement motivation. Though paternal expectations of children's future (FECF) had significant direct effect on adolescent achievement motivation (SOAM), the effect of FECF on SOAM became insignificant after the input of paternal sacrifice (FSA) into the regression equation (Table 8.74). Besides, Sobel test also indicated an indirect effect of FECF on SOAM via FSA ($z = 2.067, p < .05$) (Table 8.75).

However, it was found that maternal sacrifice for children's education (MSA) did not mediate parental beliefs and adolescent achievement motivation (SOAM), with regression coefficient (β) of FECF after the input of maternal sacrifice for children's education (MSA) remaining significant.

For psychological competence, it was found that paternal sacrifice for children's education (PSA) mediated parental beliefs and adolescent psychological competence. Though paternal expectations of children's future (FECF) had significant direct effect on adolescent psychological competence (PYD), the effect of FECF on PYD became insignificant after the input of paternal sacrifice for children's education (PSA) into the regression equation (Table 8.76). Besides, Sobel test also indicated an indirect effect of FECF on

PYD via FSA ($z = 2.117, p < .05$) (Table 8.77).

However, it was found that maternal sacrifice for children's education (MSA) did not mediate parental beliefs and adolescent psychological competence (PYD), with regression coefficient (β) of FECF after the input of maternal sacrifice for children's education (MSA) remaining significant.

In summary, it was found that paternal sacrifice for children's education reported by fathers mediated the influence of parental beliefs on achievement motivation and psychological competence of economically disadvantaged adolescents, but this was not the case with maternal sacrifice for children's education reported by mothers.

8.4.4.3 Hypotheses 4b

Adolescents' perceptions of parenting styles as mediating factor

As parental beliefs did not significantly predict adolescents' perceived parenting styles of either fathers or mothers, it was concluded that adolescents' perceptions of paternal and maternal parenting styles did not mediate the effect of parental beliefs on achievement motivation or psychological competence of economically disadvantaged adolescents.

Adolescents' perceptions of parental control as mediating factor

As parental beliefs did not significantly predict adolescents' perception of paternal control (APCS), it was concluded that adolescents' perceived paternal control (APCS) did not mediate the effect of parental beliefs on achievement motivation and psychological competence of economically disadvantaged adolescents.

When viewing perceived maternal control by adolescents (AMCS) as a mediating variable between parental beliefs and adolescent achievement motivation (SOAM), maternal attribution of children's success and failure to effort (MAQ-E) became significant when adolescents' perceived maternal control was put into the regression equation (Table 8.78), though the result of Sobel test indicated that the indirect effect of FECF on SOAM as significant via AMCS at one-tailed test ($z = 1.800, p < .05$, one-tailed test) (Table 8.79). Thus, it was suggested that adolescents' perceived maternal control did not mediate the

influence of parental beliefs and adolescent achievement motivation.

Regarding psychological competence of adolescents (PYD), the effect of FECF on PYD became insignificant when adolescents' perceived maternal control (AMCS) was put into the regression equation (Table 8.80), and the result of Sobel test indicated the indirect effect of FECF on PYD via AMCS was significant at one-tailed test ($z = 1.832$, $p < .05$ for one-tailed test) (Table 8.81). Thus, it was suggested that adolescents' perceived maternal control (AMCS) mediated the effect of parental beliefs on psychological competence of adolescents (PYD).

In summary, it was suggested that neither perceived paternal nor maternal control by adolescents mediated the effect of parental beliefs and achievement motivation of economically disadvantaged adolescents. Perceived maternal control by adolescents did mediate the effect of parental beliefs and psychological competence of economically disadvantaged adolescents, but adolescents' perceived paternal control did not.

Adolescents' perception of family functioning as mediating factor

As parental beliefs did not significantly predict adolescents' perceived family functioning, it was concluded that adolescents' perceptions of family functioning did not mediate the effect of parental beliefs on achievement motivation or psychological competence of economically disadvantaged adolescents.

Adolescents' perception of parental sacrifice for children's education as mediating factor

As parental beliefs did not significantly predict adolescents' perceived paternal and maternal sacrifice for children's education, it was concluded that adolescents' perceptions of paternal and maternal sacrifice for children's education did not mediate the effect of parental beliefs on achievement motivation or psychological competence of economically disadvantaged adolescents.

8.4.4.4 Hypotheses 4c

To combine the perceptions of parents and adolescents into an integrated perception of family processes, taking the averaged data of parents' and

adolescents' perceptions of parenting style, parental control, family functioning, and parental sacrifice for children's education was proposed in the model. As mentioned in Chapter Five, it is necessary to investigate the data of each source on their correlations among the others. If the data of different sources are significantly correlated amongst themselves, the practice of averaging the responses is empirically supported. In order to decrease the chance of committing Type I error, a conservative alpha level based on Bonferroni correction was performed. As there were 15 hypotheses being tested, the alpha was determined with the formula of $.05/15$, i.e. $.003$.

Table 8.82 shows the correlations between response measures across fathers, mothers and adolescents. It was found that the scores of responses from fathers, mothers and adolescents on parenting style, parental control, family functioning and parental sacrifice for children's education were correlated. The results support the practice of averaging the responses across fathers, mothers and adolescents to obtain an "integrated" perception of family processes.

Averaged score of measures of paternal and maternal parenting style from father-adolescent and mother-adolescent dyads as mediating factor

As parental beliefs did not significantly predict averaged scores from fathers, mothers and adolescents of paternal and maternal parenting style, it was concluded that averaged scores of measures of paternal and maternal parenting style from father-adolescent and mother-adolescent dyads did not mediate the effect of parental beliefs on achievement motivation and psychological competence of economically disadvantaged adolescents.

Averaged scores of measures of paternal and maternal control from father-adolescent and mother-adolescent dyads as mediating factor

It was found that averaged scores of measures of paternal control from fathers and adolescents mediated parental beliefs and adolescent achievement motivation. Though paternal expectations of children's future (FECF) had a significant direct effect on adolescent achievement motivation (SOAM), the effect of FECF on SOAM became insignificant after the input of averaged measure of paternal control (AVPCS) into the regression equation (Table 8.83). Besides, Sobel test also indicated an indirect effect of FECF on SOAM via

AVPCS ($z = 1.969, p < .05$) (Table 8.84).

For averaged measure of maternal control, it was found that maternal attribution of children's success and failure to effort (MAQ-E) became significant when putting averaged measure of maternal control into the regression equation (Table 8.85). Also, the result of Sobel test indicated that the indirect effect of FECF on SOAM was insignificant via AVMCS ($z = 1.596, p > .05$) (Table 8.86). Thus, it was suggested that averaged measure of maternal control did not mediate the influence of parental beliefs and adolescent achievement motivation.

For psychological competence, it was found that the averaged score of paternal control between fathers and adolescents mediated parental beliefs and adolescent psychological competence. Though paternal expectations of children's future (FECF) had significant direct effect on adolescent psychological competence (PYD), the effect of FECF on PYD became insignificant after the input of averaged measure of paternal control (AVPCS) into the regression equation (Table 8.87). Besides, Sobel test also indicated an indirect effect of FECF on PYD via AVPCS ($z = 2.112, p < .05$) (Table 8.88).

Regarding averaged measure of maternal control (AVMCS), though the effect of FECF became insignificant after inputting averaged measure of maternal control (AVMCS) on PYD (Table 8.89), Sobel test indicated that the indirect effect of FECF on PYD via AVMCS was insignificant ($z = 1.619, p > .05$) (Table 8.90). Thus, it was concluded that averaged measure of maternal control did not mediate parental beliefs and psychological competence of adolescents.

In summary, it was found that averaged score of measures of paternal control between fathers and adolescents mediated the effects of parental beliefs on achievement motivation and psychological competence of economically disadvantaged adolescents, but this was not the case for averaged scores of maternal control.

Averaged score of measure of family functioning as mediating factor

For averaged measure of family functioning (AVFAI) as the mediating variable, though the effect of FECF became insignificant after the input of averaged measure of family functioning (AVFAI) on adolescent achievement motivation (SOAM) (Table 8.91), Sobel test indicated that the indirect effect of

FECF on SOAM via AVFAI was not significant ($z = 1.625, p > .05$) (Table 8.92). Thus, it was concluded that averaged measure of family functioning did not mediate parental beliefs and achievement motivation of adolescents.

For averaged scores of measures of family functioning, the effect of FECF became insignificant after the input of averaged measure of family functioning on adolescent psychological competence (PYD) (Table 8.93). Sobel test indicated that the indirect effect of FECF on PYD via AVFAI was significant for one-tailed test ($z = 1.677, p < .05$; one-tailed test) (Table 8.94). Thus, it was concluded that averaged measure of family functioning mediated parental beliefs and psychological competence of adolescents.

In summary, it was found that averaged scores of measures of family functioning across fathers, mothers and adolescents mediated parental beliefs and psychological competence of economically disadvantaged adolescents, but did not mediate parental beliefs and achievement motivation of adolescents.

Averaged scores of measures of parental sacrifice for children's education from father-adolescent dyad and mother-adolescent dyad as mediating factor

For averaged scores of measures of paternal sacrifice for children's education (AVFSA) between fathers and adolescents as mediating variable, the effect of FECF became insignificant after the input of averaged measure of paternal sacrifice for children's education (AVFSA) on adolescent achievement motivation (SOAM) (Table 8.95), and Sobel test indicated that the indirect effect of FECF on SOAM via AVFAI was significant for one-tailed test ($z = 1.905, p < .05$; for one-tailed test) (Table 8.96). Thus, it was concluded that the averaged score of measures of paternal sacrifice for children's education mediated parental beliefs and achievement motivation of adolescents.

For the averaged score of measures of maternal sacrifice for children's education between mothers and adolescents, it was found that maternal attribution of children's success and failure to effort (MAQ-E) became significant ($\beta = -.129, p < .05$) when putting averaged measure of maternal sacrifice for children's education into the regression equation (Table 8.97). Besides, the result of Sobel test indicated that the indirect effect of FECF on

SOAM as insignificant via AVMPA ($z = 1.080, p > .05$) (Table 8.98). Thus, it was suggested that the averaged score of measures of maternal sacrifice for children's education did not mediate the influence of parental beliefs and adolescent achievement motivation.

For assessing the mediation of parental beliefs and adolescent psychological competence (PYD) via the averaged scores of measures of paternal sacrifice for children's education (AVPSA) of fathers and adolescents, the effect of FECF became insignificant after the input of averaged measure of paternal sacrifice for children's education (AVPSA) on adolescent psychological competence (PYD) (Table 8.99). Sobel test indicated that the indirect effect of FECF on PYD via AVPSA was significant for one-tailed test ($z = 1.944, p < .05$; for one-tailed test) (Table 8.100). Thus, it was concluded that the averaged score of measures of paternal sacrifice for children's education mediated parental beliefs and psychological competence of adolescents.

For the assessing the mediation of parental beliefs and adolescent psychological competence (PYD) via the averaged scores of measures of maternal sacrifice for children's education (AVMSA) between mothers and adolescents, though the effect of FECF became insignificant after the input of averaged measure of maternal sacrifice for children's education (AVMSA) on adolescent psychological competence (PYD) (Table 8.101), Sobel test indicated that the indirect effect of FECF on PYD via AVMSA was not significant ($z = 1.087, p > .05$) (Table 8.102). Thus, it was concluded that the averaged score of measures of maternal sacrifice for children's education did not mediate parental beliefs and psychological competence of adolescents.

In summary, it was suggested that the averaged score of measures of paternal sacrifice for children's education from father-adolescent dyad mediated the effect of parental beliefs on achievement motivation and psychological competence of economically disadvantaged adolescents. But it was not the case for the averaged score of measures of maternal sacrifice for children's education from mother-adolescent dyad

Summary

In assessing the mediation of parental beliefs (endorsement of Chinese cultural beliefs about adversity, attribution of children's success and failure to

effort, expectations of children's future) on achievement motivation and psychological competence of economically disadvantaged adolescents, different family processes (parenting style, parental control, family functioning, parental sacrifice for children's education) from perspectives of different respondents (fathers, mothers, adolescents, averaged measure of parents and adolescents) were explored. It was found that paternal control perceived by fathers (Figure 8.4), paternal sacrifice for children's education perceived by fathers (Figure 8.5), the averaged score of measures of paternal control between fathers and adolescents (Figure 8.6), and the averaged score of measures of paternal sacrifice between fathers and adolescents (Figure 8.7) mediated the effects of parental beliefs on achievement motivation of adolescents. For psychological competence of adolescents, it was found that fathers' perception of family functioning (Figure 8.8), paternal sacrifice perceived by fathers (Figure 8.9), adolescents' perception of maternal control (Figure 8.10), the averaged score of measures of paternal control between fathers and adolescents (Figure 8.11), the averaged score of measures of family functioning across fathers, mothers and adolescents (Figure 8.12), and the averaged score of measures of paternal sacrifice between fathers and adolescents (Figure 8.13), mediated the effects of parental beliefs on psychological competence of economically disadvantaged adolescents.

The results of mediation paths of parental beliefs on achievement motivation and psychological competence of adolescents via different family processes from different perspectives of parents, adolescents and averaged scores between parents and adolescents are summarized below:

Summary of findings of mediation paths of parental beliefs on achievement motivation and psychological competence of adolescents via different family processes from parents' perspectives

Research questions	Hypotheses	Status
<u>Research question 4a</u> Do family processes of parenting styles and practices, family functioning, and parental sacrifice for children's education (as perceived by parents) mediate the influences of parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs (attribution of child success and failure, and expectations of children's future) on achievement motivation and psychological competence of economically disadvantaged adolescents?	<u>Hypothesis 4a(i)</u> Paternal endorsement of positive parenting styles as perceived by fathers mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4a(ii)</u> Maternal endorsement of positive parenting styles as perceived by mothers mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4a(iii)</u> Paternal control as perceived by fathers mediates parental beliefs and achievement motivation of adolescents.	Supported.
	<u>Hypothesis 4a(iv)</u> Maternal control as perceived by mothers mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4a(v)</u> Family functioning as perceived by fathers mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4a(vi)</u> Family functioning as perceived by mothers mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4a(vii)</u> Paternal sacrifice for children's education as perceived by fathers mediates parental beliefs and achievement motivation of adolescents.	Supported.
	<u>Hypothesis 4a(viii)</u> Maternal sacrifice for children's education as perceived by mothers mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4a(ix)</u> Paternal endorsement of positive parenting styles as perceived by fathers mediates parental beliefs and psychological competence of adolescents.	Not supported.

	<u>Hypothesis 4a(x)</u> Maternal endorsement of positive parenting styles as perceived by mothers mediates parental beliefs and psychological competence of adolescents.	Not supported.
	<u>Hypothesis 4a(xi)</u> Paternal control as perceived by fathers mediates parental beliefs and psychological competence of adolescents.	Not supported.
	<u>Hypothesis 4a(xii)</u> Maternal control as perceived by mothers mediates parental beliefs and psychological competence of adolescents.	Not supported.
	<u>Hypothesis 4a(xiii)</u> Family functioning as perceived by fathers mediates parental beliefs and psychological competence of adolescents.	Supported.
	<u>Hypothesis 4a(xiv)</u> Family functioning as perceived by mothers mediates parental beliefs and psychological competence of adolescents.	Not supported.
	<u>Hypothesis 4a(xv)</u> Paternal sacrifice for children's education as perceived by fathers mediates parental beliefs on psychological competence of adolescents.	Supported.
	<u>Hypothesis 4a(xvi)</u> Maternal sacrifice for children's education as perceived by mothers mediates parental beliefs and psychological competence of adolescents.	Not supported.

Summary of findings of mediation paths of parental beliefs on achievement motivation and psychological competence of adolescents via different family processes from adolescents' perspective

Research questions	Hypotheses	Status
<u>Research question 4b</u> Do family processes of parenting style and practices, family functioning, and parental sacrifice for children's education (as perceived by adolescents) mediate the influences of parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs (attribution of child success and failure, and expectations of children's future) on achievement motivation and psychological competence of economically disadvantaged adolescents?	<u>Hypothesis 4b(i)</u> Paternal endorsement of positive parenting styles perceived by adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4b(ii)</u> Maternal endorsement of positive parenting styles perceived by adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4b(iii)</u> Paternal control perceived by adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4b(iv)</u> Maternal control perceived by adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4b(v)</u> Family functioning perceived by adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4b(vi)</u> Paternal sacrifice for children's education perceived by adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4b(vii)</u> Maternal sacrifice for children's education perceived by adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4b(viii)</u> Paternal endorsement of positive parenting styles perceived by adolescents mediates parental beliefs and psychological competence of adolescents.	Not supported.

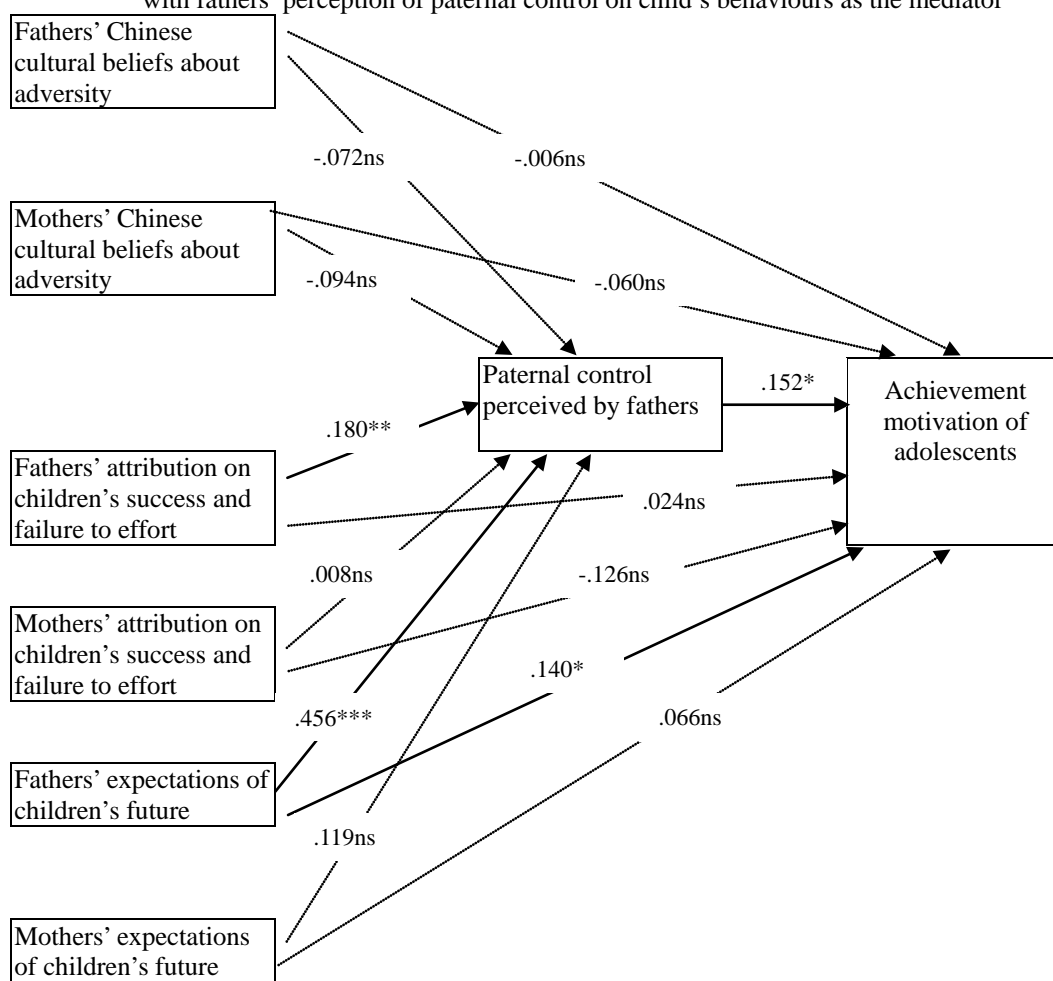
	<u>Hypothesis 4b(ix)</u> Maternal endorsement of positive parenting styles perceived by adolescents mediates parental beliefs and psychological competence of adolescents.	Not supported.
	<u>Hypothesis 4b(x)</u> Paternal control perceived by adolescents mediates parental beliefs and psychological competence of economically disadvantaged adolescents.	Not supported.
	<u>Hypothesis 4b(xi)</u> Maternal control perceived by adolescents mediates parental beliefs and psychological competence of adolescents.	Supported.
	<u>Hypothesis 4b(xii)</u> Family functioning perceived by adolescents mediates parental beliefs and psychological competence of adolescents.	Not supported.
	<u>Hypothesis 4b(xiii)</u> Paternal sacrifice for children's education perceived by adolescents mediates parental beliefs and psychological competence of adolescents.	Not supported.
	<u>Hypothesis 4b(xiv)</u> Maternal sacrifice for children's education perceived by adolescents mediates parental beliefs and psychological competence of adolescents.	Not supported.

Summary of findings of mediation paths of parental beliefs on achievement motivation and psychological competence of adolescents via different family processes from averaged scores between parents and adolescents

Research questions	Hypotheses	Status
<u>Research question 4c</u> Do family processes of parenting style and practices, family functioning, and parental sacrifice for children's education (calculated from averaged scores of measures from fathers, mothers and adolescents) mediate the influences of parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs (attribution of child success and failure, and expectations of children's future) on achievement motivation and psychological competence of economically disadvantaged adolescents?	<u>Hypothesis 4c(i)</u> Paternal endorsement of positive parenting styles calculated from the averaged score of measures from fathers and adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4c(ii)</u> Maternal endorsement of positive parenting styles calculated from the averaged score of measures from mothers and adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4c(iii)</u> Paternal control calculated from the averaged score of measures from fathers and adolescents mediates parental beliefs and achievement motivation of adolescents.	Supported.
	<u>Hypothesis 4c(iv)</u> Maternal control calculated from the averaged score of measures from mothers and adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4c(v)</u> Family functioning calculated from the averaged score of measures from fathers, mothers and adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.
	<u>Hypothesis 4c(vi)</u> Paternal sacrifice for children's education calculated from the averaged score of measures from fathers and adolescents mediates parental beliefs and achievement motivation of adolescents.	Supported.
	<u>Hypothesis 4c(vii)</u> Maternal sacrifice for children's education calculated from the averaged score of measures from mothers and adolescents mediates parental beliefs and achievement motivation of adolescents.	Not supported.

	<u>Hypothesis 4c(viii)</u> Paternal endorsement of positive parenting styles calculated from the averaged score of measures from fathers and adolescents mediates parental beliefs and psychological competence of adolescents.	Not supported.
	<u>Hypothesis 4c(ix)</u> Maternal endorsement of positive parenting styles calculated from the averaged score of measures from mothers and adolescents mediates parental beliefs and psychological competence of adolescents.	Not supported.
	<u>Hypothesis 4c(x)</u> Paternal control calculated from the averaged score of measures from fathers and adolescents mediates parental beliefs and psychological competence of adolescents.	Supported.
	<u>Hypothesis 4c(xi)</u> Maternal control calculated from the averaged score of measures from mothers and adolescents mediates parental beliefs and psychological competence of adolescents.	Not supported.
	<u>Hypothesis 4c(xii)</u> Family functioning calculated from the averaged score of measures from fathers, mothers and adolescents mediates parental beliefs and psychological competence of adolescents.	Supported.
	<u>Hypothesis 4c(xiii)</u> Paternal sacrifice for children's education calculated from the averaged score of measures from fathers and adolescents mediates parental beliefs and psychological competence of adolescents.	Supported.
	<u>Hypothesis 4c(xiv)</u> Maternal sacrifice for children's education calculated from the averaged score of measures from mothers and adolescents mediates parental beliefs and psychological competence of adolescents.	Not supported.

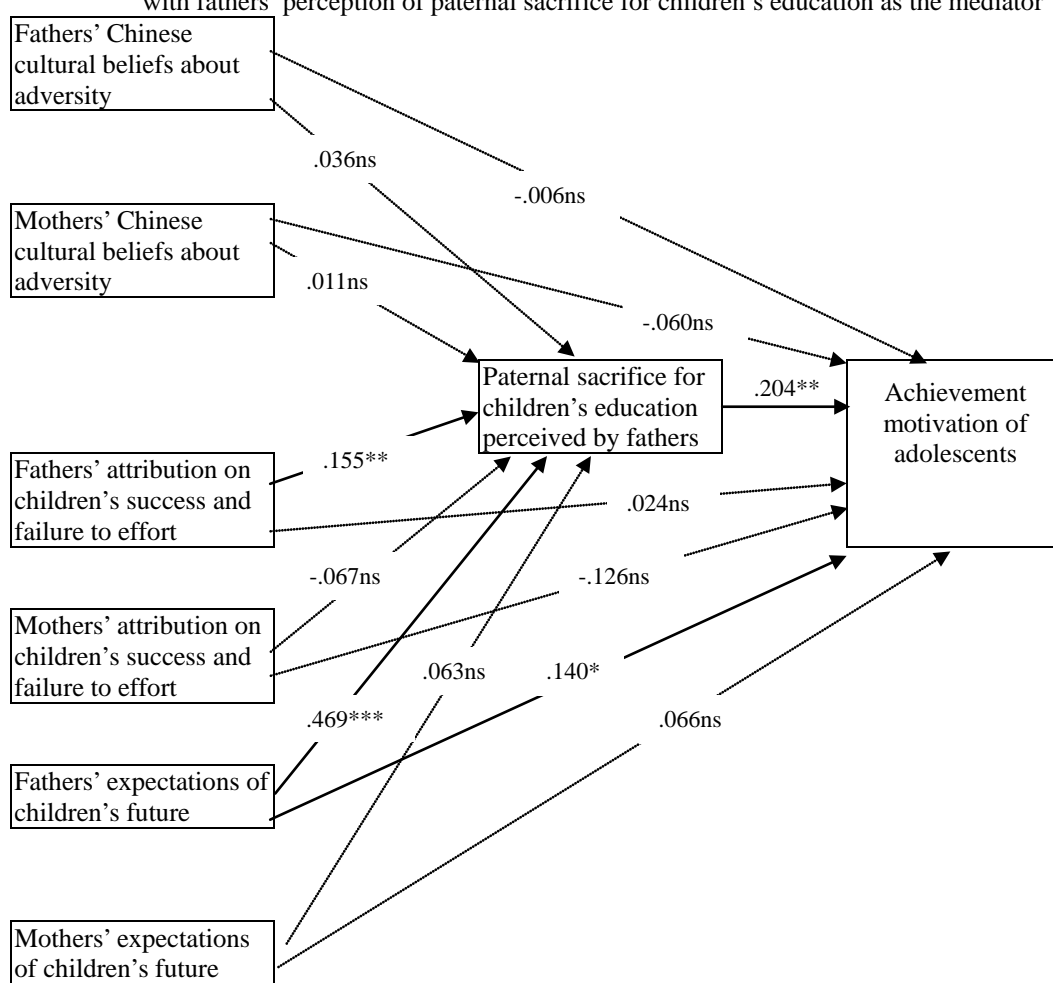
Figure 8.4. Path model of effects of parental beliefs on achievement motivation of adolescents with fathers' perception of paternal control on child's behaviours as the mediator



* $p < .05$, ** $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

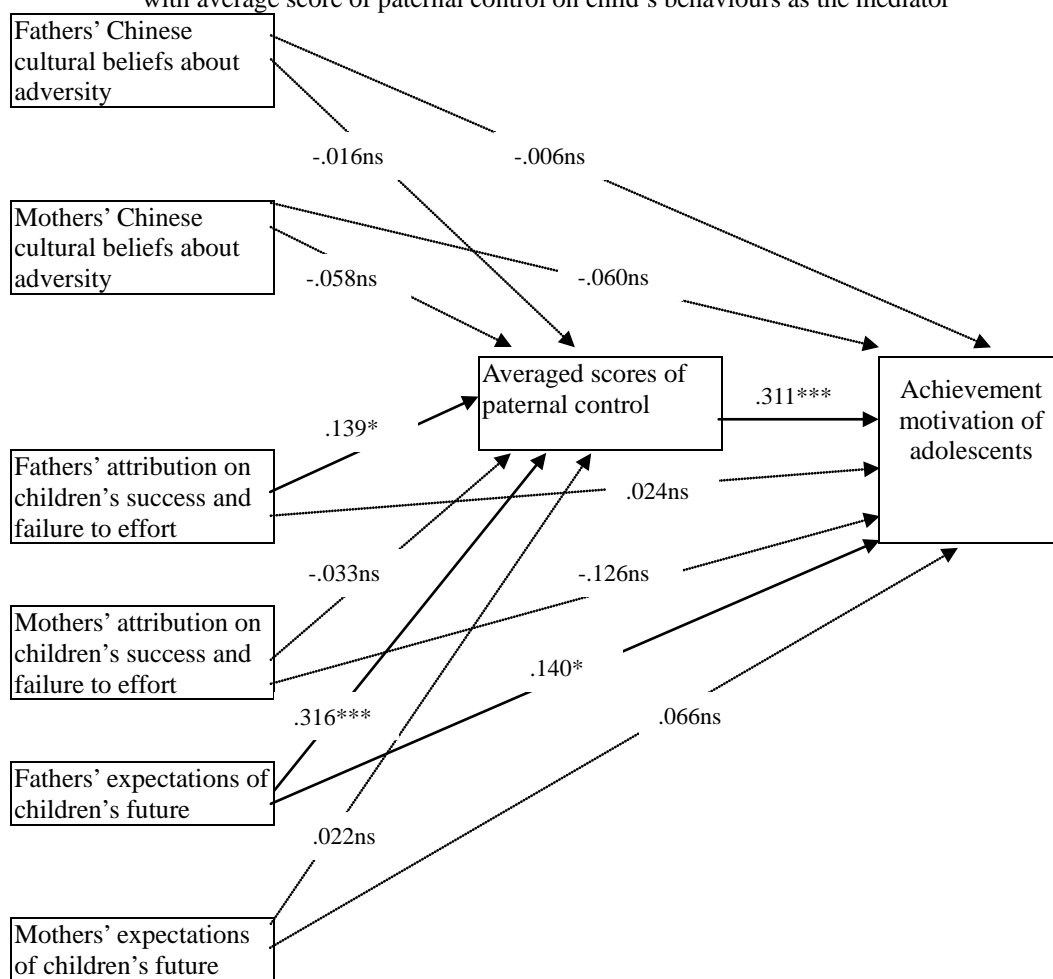
Figure 8.5. Path model of effects of parental beliefs on achievement motivation of adolescents with fathers' perception of paternal sacrifice for children's education as the mediator



* $p < .05$, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

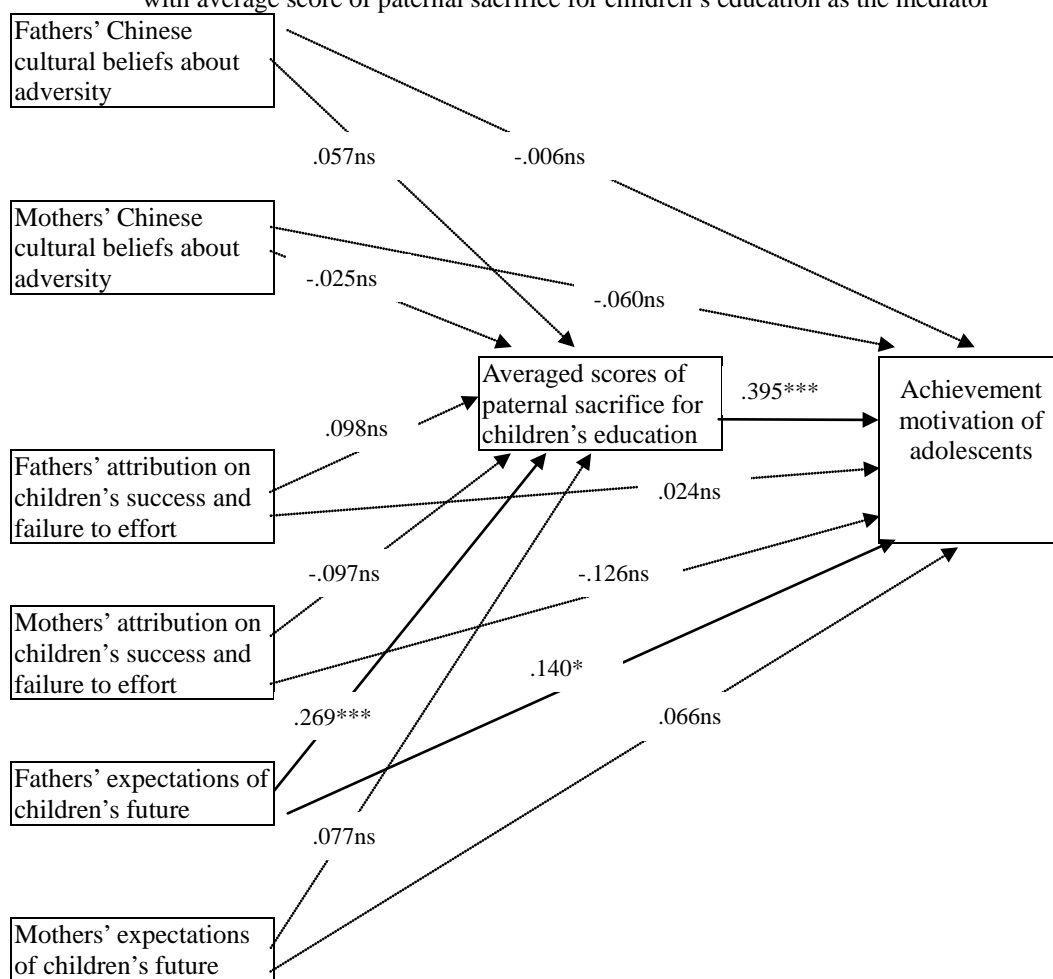
Figure 8.6. Path model of effects of parental beliefs on achievement motivation of adolescents with average score of paternal control on child's behaviours as the mediator



* $p < .05$, ** $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

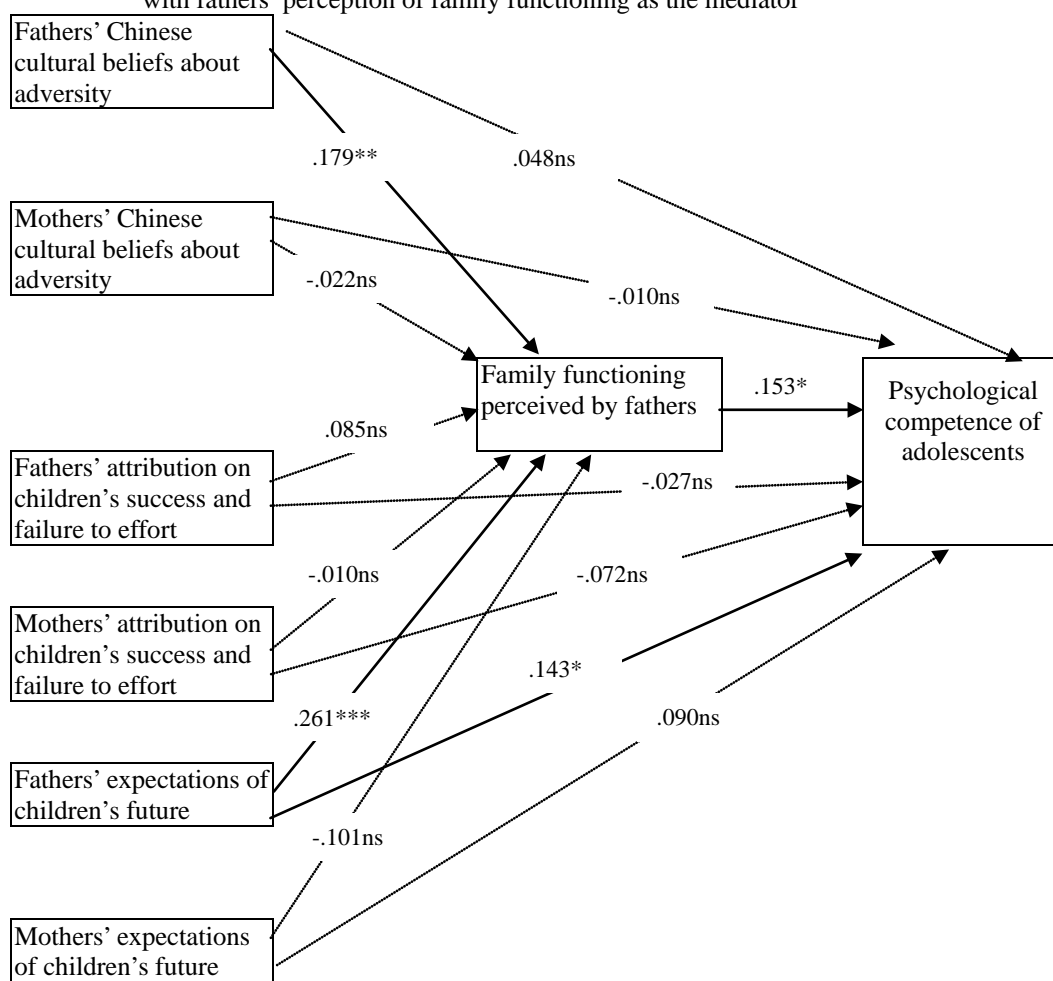
Figure 8.7. Path model of effects of parental beliefs on achievement motivation of adolescents with average score of paternal sacrifice for children's education as the mediator



* $p < .05$ for one-tailed test, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

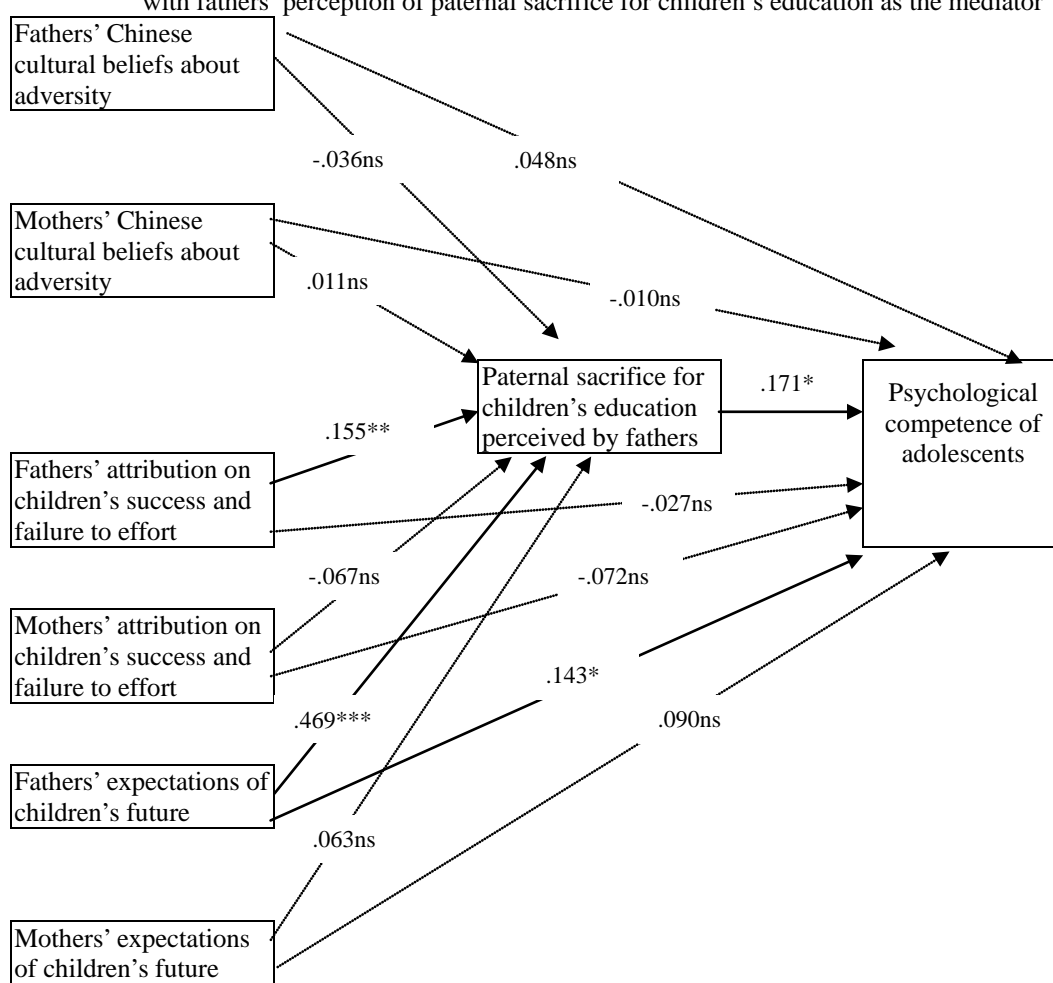
Figure 8.8. Path model of effects of parental beliefs on psychological competence of adolescents with fathers' perception of family functioning as the mediator



* $p < .05$ for one-tailed test, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

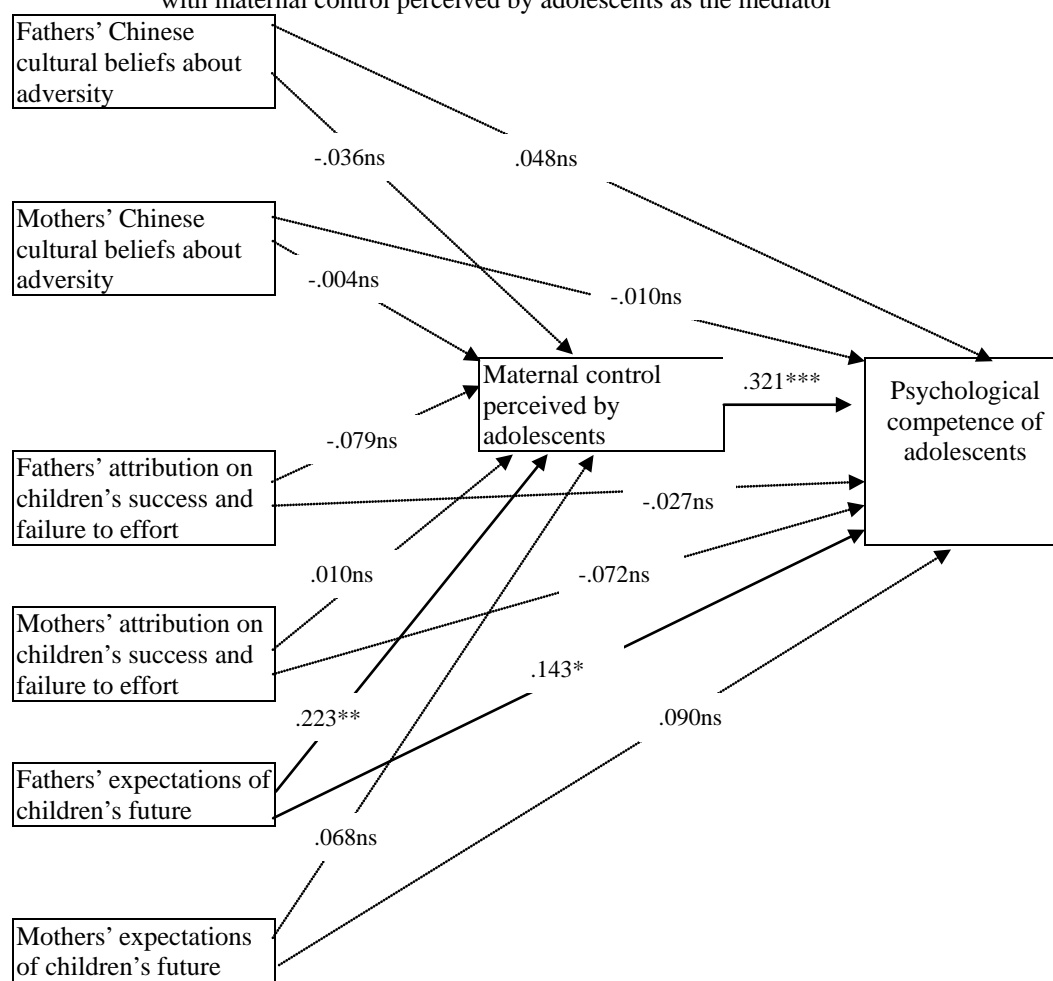
Figure 8.9. Path model of effects of parental beliefs on psychological competence of adolescents with fathers' perception of paternal sacrifice for children's education as the mediator



* $p < .05$, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

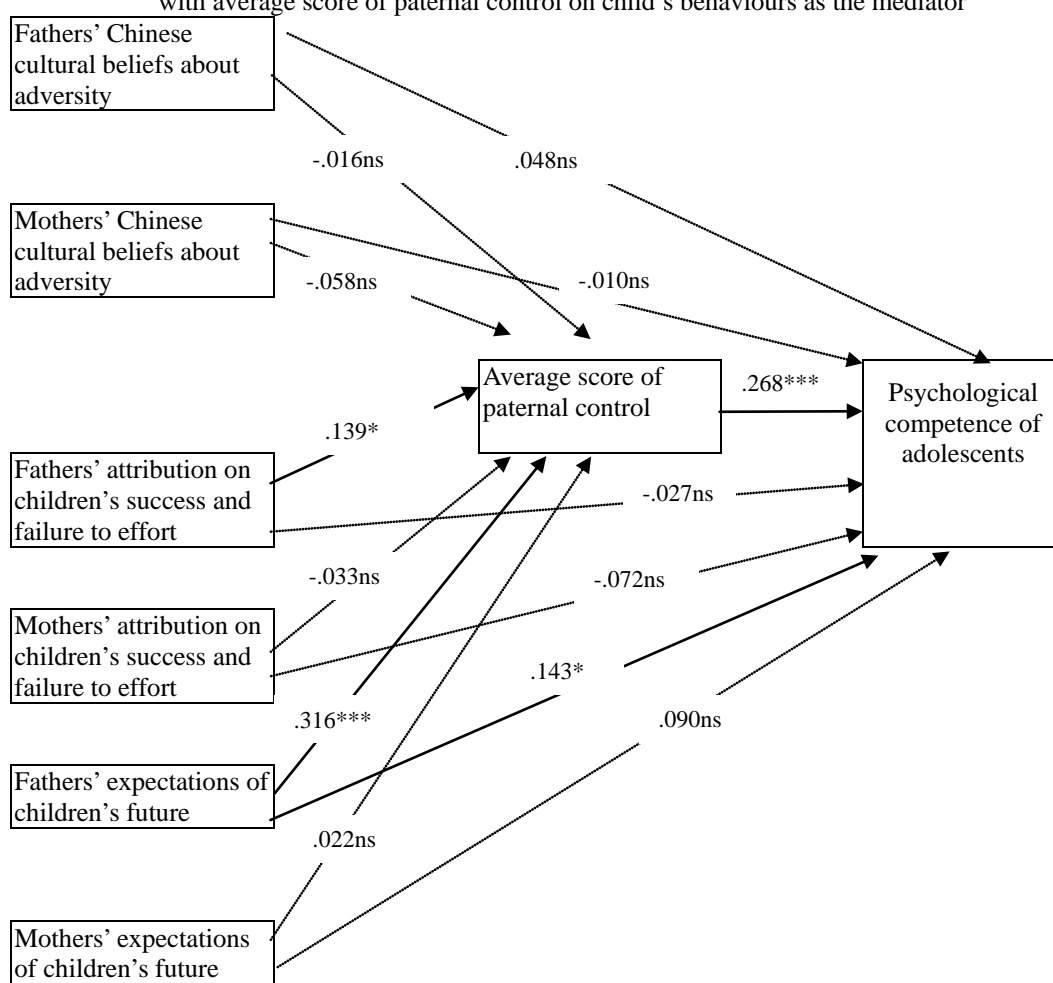
Figure 8.10. Path model of effects of parental beliefs on psychological competence of adolescents with maternal control perceived by adolescents as the mediator



* $p < .05$ for one-tailed test, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

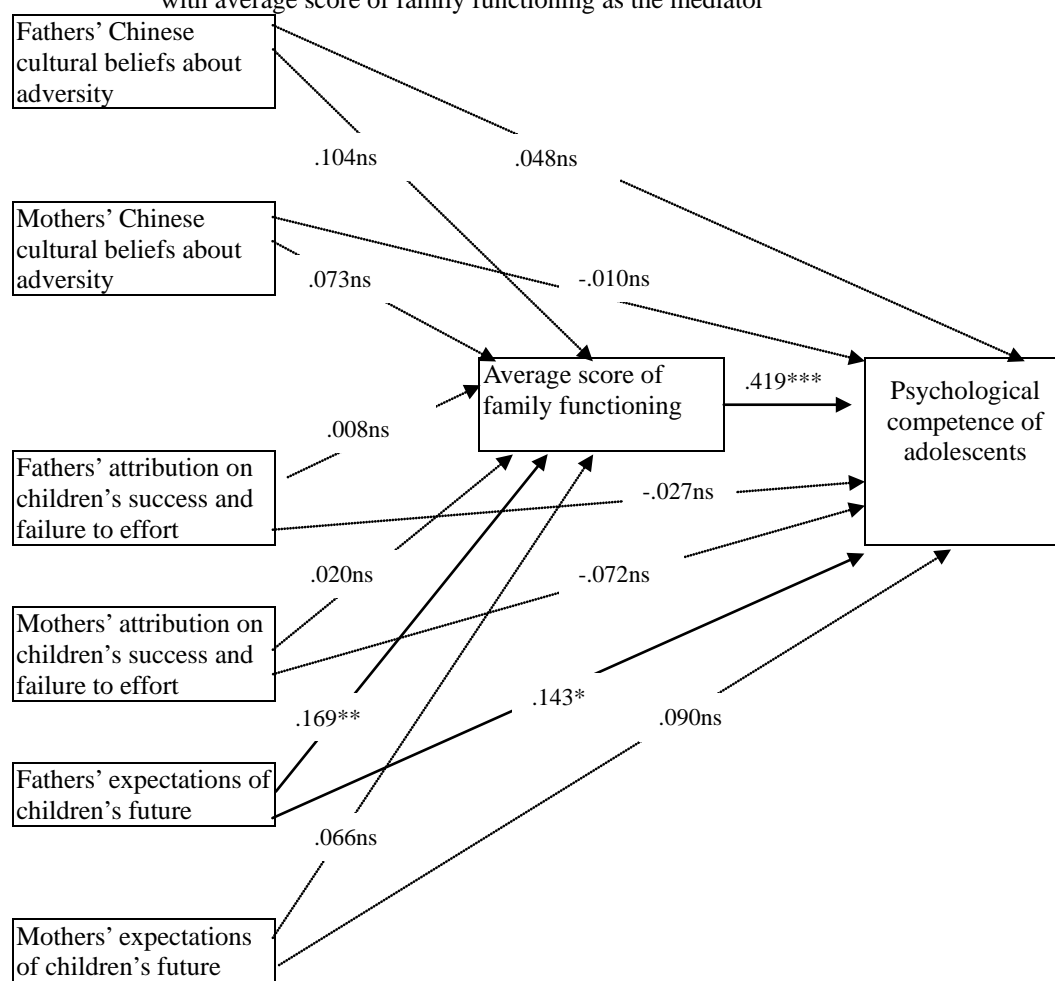
Figure 8.11. Path model of effects of parental beliefs on psychological competence of adolescents with average score of paternal control on child's behaviours as the mediator



* $p < .05$, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

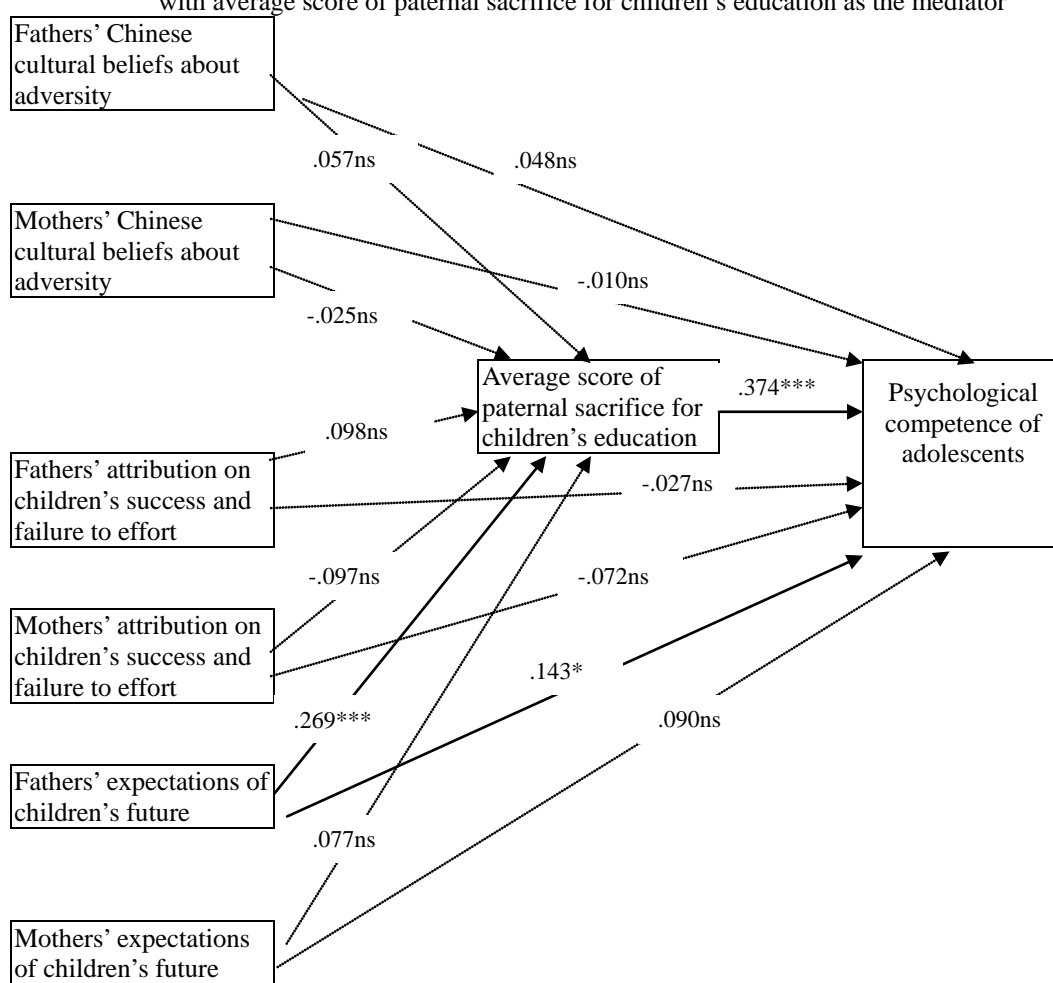
Figure 8.12. Path model of effects of parental beliefs on psychological competence of adolescents with average score of family functioning as the mediator



* $p < .05$ for one-tailed test, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

Figure 8.13. Path model of effects of parental beliefs on psychological competence of adolescents with average score of paternal sacrifice for children's education as the mediator



* $p < .05$ for one-tailed test, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

8.4.5 Mean difference of perceived family processes across dyads in the family

This section addresses two research questions:

Research question 5: Are there any differences in family processes between fathers and mothers?

Hypothesis 5.1: Mothers display more positive parenting attributes than do fathers.

Hypothesis 5.2: Mothers display more parental control than do fathers.

Hypothesis 5.3: Mothers show more sacrifice for children's education than do fathers.

Hypothesis 5.4: Fathers perceive higher level of family functioning than do mothers.

Research question 6: Are there any differences in the perceptions of family processes between parents and adolescents?

Hypothesis 6.1: Adolescents perceive weaker paternal endorsement of positive parenting styles than do fathers.

Hypothesis 6.2: Adolescents perceive weaker maternal endorsement of positive parenting styles than do mothers.

Hypothesis 6.3: Adolescents perceive less parental control than do fathers.

Hypothesis 6.4: Adolescents perceive less maternal control than do mothers.

Hypothesis 6.5: Adolescents perceive less paternal sacrifice for children's education than do fathers.

Hypothesis 6.6: Adolescents perceive less maternal sacrifice for children's education than do mothers.

Hypothesis 6.7: Adolescents perceive lower level of family functioning than do fathers.

Hypothesis 6.8: Adolescents perceive lower level of family functioning than do mothers.

Results

Among the family processes (parenting style, parental control, family functioning, parental sacrifice for children's education) being studied, it was found that parenting style, parental control, and parental sacrifice for children's

education concern the dyadic interactions, hence four dyadic differences were examined: (1) father-mother differences on parents' perceptions of family processes; (2) paternal and maternal differences on adolescents' perceptions of family processes; (3) father-adolescent differences on perceptions of paternal family processes; and (4) mother-adolescent differences on perceptions of maternal family processes. However, family functioning was regarded as a complex construct, generally referring to "the quality of family life at the systemic level, such as wellness, competence, strengths, and weaknesses of a family" (Shek, 2005b, p.518). As family functioning was defined and perceived at the systemic level, the differences on perceptions amongst fathers, mothers and adolescents were examined separately.

To examine the dyadic family processes of parenting style, parental control, and parental sacrifice for children's education, multivariate analyses of variance (MANOVA) and univariate analyses of variance (ANOVAs) were performed. In order to examine father-mother differences on family processes, both perspectives of parents and adolescents were analysed. On examining parent-child differences on family processes, both father-adolescent differences and mother-adolescent differences were analysed. For family functioning, univariate analyses of variance (ANOVAs) were performed to examine the father-mother, father-adolescent, and mother-adolescent differences.

From the data of dyadic family processes of parenting style, parental control, and parental sacrifice for children's education, using Wilks' criterion, the results indicated a significant overall main effect for the reporters (fathers' reports, mothers' reports, adolescents' reports of perceived paternal and maternal dyadic family processes), with $F(3,1096) = 51.78, p < .001$, partial eta squared = .64. To examine the differences in the individual dependent variable, univariate ANOVAs was performed. Bonferroni correction was adopted to reduce the chance of committing inflated Type I error. As there were 3 comparisons being tested, the alpha was determined with the formula of $\alpha = .05/3$, i.e. .017. Significant effects were further analysed by post-hoc comparisons of Tukey's HSD calculation. For calculation of Tukey's HSD,

$$\text{HSD} = \alpha_{.05} \sqrt{\frac{\text{MS}_w}{n}}$$

Table 8.103 lists the means and standard deviations for the measures of dyadic processes. Table 8.104 lists the results of the univariate ANOVAs, post-hoc comparisons and effect values in terms of partial eta squared of the dyadic processes.

Univariate analyses of variance showed significant effect on parenting styles for different reporters, with $F(3,1096) = 133.96$, $p < .001$, partial eta squared = .33. With post-hoc comparisons of Tukey's HSD value, it was found that there were significant differences between fathers' and mothers' reports, as well as between paternal and maternal endorsements of parenting styles from perceptions of adolescents. Both analyses showed that fathers had generally lower endorsement of positive parenting styles than did mothers. There was significant difference on paternal endorsement of positive parenting styles between fathers and adolescents, with adolescents perceiving lower endorsement of positive parenting styles than did fathers. Similar findings occurred in mother-adolescent differences, with adolescents perceiving significantly lower endorsement of positive parenting styles than did mothers.

For parental control, univariate ANVOA showed significant effect for different reporters, with $F(3,1096) = 15.68$, $p < .001$, partial eta squared = .05. For parental difference, post-hoc comparisons suggested significant difference between paternal and maternal control from the perceptions of adolescents, with fathers were perceived to have lower parental control than were mothers. However, there was no significant difference between fathers' and mothers' reports. For parent-adolescent differences, it was found that there was significant difference on paternal control between fathers and adolescents, with adolescents perceiving lower paternal control than did fathers. However, there was no significant difference on maternal control between mothers and adolescents.

For parental sacrifice for children's education, univariate analyses of variance showed that there was significant effect for different reporters, with $F(3,1096) = 140.52$, $p < .001$, partial eta squared = .34. With post-hoc comparisons, there were significant differences between fathers' and mothers' reports, as well as between paternal and maternal sacrifice from perceptions of adolescents. Both analyses showed that fathers had generally lower parental sacrifice for children's education than did mothers. For parent-adolescent

differences, there was significant difference on paternal sacrifice for children's education between perception of fathers and adolescents, with adolescents perceiving lower paternal sacrifice for children's education than did fathers. Similar findings occurred in mother-adolescent differences where adolescents perceived significantly lower maternal sacrifice for children's education than did mothers.

For family functioning, univariate analyses of variance (ANOVAs) were performed to examine the father-mother, father-adolescent, and mother-adolescent differences. There was significant effect for different reporters, with $F(2,822) = 32.77$, $p < .001$, partial eta squared = .20. For parental differences, there was no significant difference between fathers' and mothers' reports. For parent-adolescent differences, it was found that there was a significant difference on perception of family functioning between fathers and adolescents, with adolescents perceiving lower family functioning than did fathers. Similar findings occurred in mother-adolescent differences where adolescents perceived significantly lower perception of family functioning than did mothers. Table 8.105 showed the effects of reporters as well as post-hoc comparison on the measure of family functioning.

To assess the effect size of dyadic discrepancies in parenting styles, parental control, parental sacrifice for children's education, and family functioning, partial eta squared was calculated. It was found that father-adolescent discrepancies in parenting styles and parental sacrifice for children's education were great, with partial eta squared of .32 and .45 respectively. Besides, mother-adolescent discrepancies in parenting styles and parental sacrifice for children's education had smaller effect size than father-adolescent discrepancies. Regarding father-mother discrepancies, it was found that father-mother discrepancy in parenting styles was worth noting, particularly paternal-maternal discrepancy in parenting styles perceived by adolescents, with partial eta squared of .40. The paternal-maternal discrepancy in parental sacrifice perceived by adolescents was great too, with partial eta squared of .37. Generally speaking, paternal-maternal discrepancies in family processes perceived by adolescents had greater effect size than father-mother discrepancies in family processes. Table 8.106 lists the effect size in terms of partial eta squared of dyadic discrepancies in different family processes.

Summary

In addressing Research Question 5, it was found that there were significant discrepancies in perceptions of parenting styles and parental sacrifice for children's education between fathers and mothers from the parents' perspectives, but there was no significant difference on parental control and family functioning between fathers and mothers. Fathers had generally lower endorsement of positive parenting style and parental sacrifice for children's education than did mothers. There were also significant differences in adolescents' perceptions of paternal and maternal parenting style, paternal and maternal control, and paternal and maternal sacrifice for children's education. Fathers were perceived to have lower endorsement of positive parenting style, parental control and parental sacrifice for children's education than were mothers by adolescents. The mean differences of family processes between fathers and mothers as a response to Research Question 5 are listed below:

Parental differences of family processes responding to Research Question 5

Research question	Hypothesis	Status
Are there any differences in family processes between fathers and mothers?	<u>Hypothesis 5.1.a</u> Mothers perceive stronger endorsement of positive parenting styles than do fathers.	Supported
	<u>Hypothesis 5.1.b</u> Adolescents perceive stronger maternal endorsement of positive parenting styles than paternal endorsement.	Supported
	<u>Hypothesis 5.2.a</u> Fathers perceive more parental control than do mothers.	Supported.
	<u>Hypothesis 5.2.b</u> Adolescents perceive more paternal control than maternal control.	Supported.
	<u>Hypothesis 5.3a</u> Mothers perceive more sacrifice for children's education than do fathers.	Supported
	<u>Hypothesis 5.3b</u> Adolescents perceive more maternal sacrifice for children's education than paternal sacrifice.	Supported
	<u>Hypothesis 5.4</u> Fathers perceive higher level of family functioning than do mothers.	Not supported

With reference to Research Question 6, it was found that there were significant father-adolescent differences in perceptions of parenting styles, paternal control, paternal sacrifice for children's education and family functioning. Adolescents generally had lower scores on all measures than did fathers. Furthermore, there were significant mother-adolescent differences in perceptions of parenting styles, maternal sacrifice for children's education and family functioning, with adolescents generally having lower scores on the three measures than did mothers. However, there were no significant differences on maternal control between mothers and adolescents. The parent-child differences on perceptions of family processes are listed below:

Parent-child differences on family processes in response to Research Question 6

Research question	Hypothesis	Status
Are there any differences in perceptions of family processes between parents and adolescents?	<u>Hypothesis 6.1</u> Adolescents perceive weaker paternal endorsement of positive parenting styles than do fathers.	Supported
	<u>Hypothesis 6.2</u> Adolescents perceive weaker maternal endorsement of positive parenting style than do mothers.	Supported
	<u>Hypothesis 6.3</u> Adolescent perceive less paternal control than do fathers.	Supported
	<u>Hypothesis 6.4</u> Adolescents perceive less maternal control than do mothers.	Not supported
	<u>Hypothesis 6.5</u> Adolescents perceive less paternal sacrifice for children's education than do fathers.	Supported
	<u>Hypothesis 6.6</u> Adolescents perceive less maternal sacrifice for children's education than do mothers.	Supported
	<u>Hypothesis 6.7</u> Adolescents perceive lower level of family functioning than do fathers.	Supported
	<u>Hypothesis 6.8</u> Adolescents perceive lower level of family functioning than do mothers.	Supported

8.4.6 Relationships between parent-child discrepancies in perceptions of family processes and adolescent psychological outcomes

This section addresses Research question 7: Do parent-child discrepancies in perceptions of family processes influence adolescents' achievement motivation and psychological competence in economically disadvantaged families?

To address Research Question 7, two research questions were proposed. (1) Are there any relationships between parent-child discrepancies in perceptions of

family processes (endorsement of positive parenting styles and practices, family functioning, and parental sacrifice for children's education) and achievement motivation and psychological competence of economically disadvantaged adolescents (Question 7.1)? (2) Among different parent-child discrepancies in perceptions of family processes, what are the predictors of achievement motivation and psychological competence of economically disadvantaged adolescents (Question 7.2)?

8.4.6.1 Relationships between parent-child discrepancies in perceptions of family processes and adolescent achievement motivation and psychological competence

To address Question 7.1 (i.e., are there any relationships between family processes and achievement motivation and psychological competence of economically disadvantaged adolescents), six hypotheses were set. The model (Hypothetical Model 5) was listed in Chapter Five (Figure 5.5).

Hypothesis 7.1a: Greater discrepancies between parents and adolescents on positive parenting styles and parental control are related to lower achievement motivation of adolescents.

Hypothesis 7.1b: Greater discrepancies between parents and adolescents on positive parenting styles and parental control are related to poorer psychological competence of adolescents.

Hypothesis 7.1c: Greater discrepancies between parents and adolescents on family functioning are related to lower achievement motivation of adolescents.

Hypothesis 7.1d: Greater discrepancies between parents and adolescents on family functioning are related to poorer psychological competence of adolescents.

Hypothesis 7.1e: Greater discrepancies between parents and adolescents on parental sacrifice for children's education are related to lower achievement motivation of adolescents.

Hypothesis 7.1f: Greater discrepancies between parents and adolescents on parental sacrifice for children's education are related to poorer psychological competence of adolescents.

Results

Generally speaking, there are three most commonly used methods to measure informant discrepancies: (1) the difference between two informants' raw or unstandardized ratings; (2) the difference between two informants' standardized ratings, and (3) the residual difference between two informants' ratings (De Los Reyes & Kazdin, 2004).

In the study, the differences between the standardized ratings of fathers and adolescents, and between those of mothers and adolescents, were employed for four reasons. First, it is the only method which the standardized discrepancy scores correlated equally with the parents' and children's scores. This allows the parents' report and children's reports to contribute equally to discrepancy scores of the variables. As explained by De Los Reyes and Kazdin (2004), "no one informant can be considered a "gold standard" by which to interpret another informant's ratings" (p.334), so it is important that the calculated discrepancy scores correlate equally with the parents' and children's ratings so as to produce the most consistent estimates among informant discrepancies and informant characteristics (De Los Reyes & Kazdin, 2004). In contrast, the discrepancy scores computed from raw data are affected by the differential distributions of the individual scores (Gulon et al., 2009). Second, the standardized approach helps to adjust the systematic biases in variability of informant responses as it empirically equates the distributions of parents' and children's ratings (the *z* distribution) (Gulon et al., 2009). This is important, as children's ratings on family processes always had greater variability than mothers' ratings, resulting in higher correlations with the discrepancy scores when raw data were calculated. Third, the standardized approach enhances the interpretability of the score – the standardized score has a mean of 0 and a standard deviation of 1. Fourth, as many studies of calculated parent-child discrepancy scores employ the standardized approach (De Los Reyes & Kazdin, 2004; Ferdinand et al., 2004; Gulon et al., 2009), this maximizes comparability with related research on parent-child discrepancy and adolescent development.

In employing the standardized approach, the parents' and adolescents' reports on relative variables of family processes were converted into *z*-scores (the standardized scores). The discrepancy scores were calculated by subtracting

the adolescents' standardized scores from the parents' standardized scores on each variable of paternal parenting style, maternal parenting style, paternal control, maternal control, family functioning, paternal sacrifice for children's education, and maternal sacrifice for children's education. The positive discrepancy score shows that parents' report was more positive than the children's report.

Table 8.107, Table 8.108, Table 8.109 and Table 8.110 present the correlations for different family process measures of parenting style, parental control, family functioning, parental sacrifice and their related discrepancy scores. As z-scores of the measures were calculated, it was found that the calculated discrepancy scores correlated equally with the parents' and children's ratings of each family process.

To analyse the relationships between parent-child discrepancies in family processes and adolescent development, Pearson correlation analyses were performed. A two-tailed multistage Bonferroni procedure was carried out to guard against inflated Type I error (Larzelere & Mulaik, 1977). The pT was set at $<.006$ when pFW was $<.05$. It was found that there were no significant relationships between demographic data with parent-child discrepancies in perceptions of family processes and adolescent development.

Hypothesis 7.1a

It was found that father-child discrepancy in paternal parenting styles was associated negatively with achievement motivation of economically disadvantaged adolescents, with Pearson's r at $-.174$ ($p < .006$), with small to medium effect size. However, father-child discrepancy in paternal control was not associated with achievement motivation of adolescents ($r = -.092$, $p > .006$). Furthermore, it was found that mother-child discrepancy in maternal parenting styles was not correlated significantly with achievement motivation of economically disadvantaged adolescents, with Pearson's r at $-.064$ ($p > .006$). However, mother-child discrepancy in maternal control correlated negatively with achievement motivation of adolescents ($r = -.182$, $p < .006$). The effect size was considered small to medium. Table 8.111 shows the correlations between parent-child discrepancies in family parenting style and parental control with achievement motivation of economically disadvantaged adolescents.

Thus, Hypothesis 7.1a was partially supported, as greater father-child discrepancies in perceptions of paternal parenting styles and mother-child discrepancies in perceptions of maternal control were associated with lower achievement motivation of economically disadvantaged adolescents.

Hypothesis 7.1b

It was found that father-child discrepancy in paternal parenting styles was not associated with psychological competence of economically disadvantaged adolescents, with Pearson's r at $-.148$ ($p > .006$). However, father-child discrepancy in paternal control correlated negatively with psychological competence of adolescents ($r = -.184$, $p > .006$), with small to medium effect size. Furthermore, it was found that mother-child discrepancy in maternal parenting styles was not correlated significantly with psychological competence of economically disadvantaged adolescents, with Pearson's r at $-.138$ ($p > .006$), but mother-child discrepancy in maternal control was correlated negatively with psychological competence of adolescents ($r = -.171$, $p < .006$). The effect size was considered small to medium. Table 8.111 shows the correlations between parent-child discrepancies in family parenting styles and parental control with psychological competence of economically disadvantaged adolescents. Thus, Hypothesis 7.1b was partially supported, as greater father-child and mother-child discrepancies in perceptions of parental control were associated with poorer psychological competence of economically disadvantaged adolescents.

Hypothesis 7.1c

It was found that father-child discrepancy in family functioning was associated negatively with achievement motivation of economically disadvantaged adolescents, with Pearson's r at $-.175$ ($p < .006$), indicating small to medium effect size. However, it was found that mother-child discrepancy in family functioning was not correlated with achievement motivation of adolescents ($r = -.124$, $p > .006$). Table 8.111 shows the correlations between parent-child discrepancies in family functioning with achievement motivation of economically disadvantaged adolescents. Thus, Hypothesis 7.1c was partially supported, as greater father-child discrepancy in family functioning was associated with lower achievement motivation of economically disadvantaged

adolescents.

Hypothesis 7.1d

It was found that father-child discrepancy in family functioning correlated negatively with psychological competence of economically disadvantaged adolescents, with Pearson's r at $-.336$ ($p < .001$), indicating medium effect size. Moreover, it was found that mother-child discrepancy in family functioning was correlated negatively with psychological competence of adolescents ($r = -.296$, $p < .001$). Table 8.111 shows the correlations between parent-child discrepancies in family functioning with psychological competence of economically disadvantaged adolescents. Thus, Hypothesis 7.1d was supported, as greater father-child and mother-child discrepancies in perceptions of family functioning were associated with poorer psychological competence of economically disadvantaged adolescents.

Hypothesis 7.1e

It was found that father-child discrepancy in paternal sacrifice for children's education was not associated with achievement motivation of economically disadvantaged adolescents, with Pearson's r of $-.140$ ($p > .006$). However, it was found that mother-child discrepancy in maternal sacrifice for children's education was correlated negatively with achievement motivation of adolescents ($r = -.231$, $p < .001$), indicating small to medium effect size. Table 8.111 shows the correlations between parent-child discrepancies in parental sacrifice for children's education with achievement motivation of economically disadvantaged adolescents. Thus, Hypothesis 7.1e was partially supported, as greater mother-child discrepancy in maternal sacrifice for children's education was associated with lower achievement motivation of economically disadvantaged adolescents.

Hypothesis 7.1f

It was found that father-child discrepancy in paternal sacrifice for children's education and mother-child discrepancy in maternal sacrifice for children's education were not associated with psychological competence of economically disadvantaged adolescents, with Pearson's r of $-.136$ ($p > .006$) and $-.117$ (p

> .006) respectively. Table 8.111 shows the correlations between parent-child discrepancies in parental sacrifice for children's education with psychological competence of economically disadvantaged adolescents. Thus, Hypothesis 7.1f, on greater parent-child discrepancies in parental sacrifice for children's education in association with poorer psychological competence of economically disadvantaged adolescents, was not supported.

Summary

The findings addressing Research question 7.1 from adolescents' perspectives are summarized below:

Summary of findings in response to Research question 7.1 from adolescents' perspectives

Research question	Hypothesis	Status
Are there any relationships between parent-child discrepancies in perceptions of family processes (endorsement of positive parenting styles and practices, family functioning, and parental sacrifice for children's education) and achievement motivation and psychological competence of economically disadvantaged adolescents?	<u>Hypothesis 7.1a(i)</u> Greater discrepancy in positive paternal parenting styles between fathers and adolescents is related to lower achievement motivation of adolescents.	Supported
	<u>Hypothesis 7.1a(ii)</u> Greater discrepancy in positive maternal parenting styles between mothers and adolescents is related to lower achievement motivation of adolescents.	Not supported
	<u>Hypothesis 7.1a(iii)</u> Greater discrepancy in paternal control between fathers and adolescents is related to lower achievement motivation of adolescents.	Not supported
	<u>Hypothesis 7.1a(iv)</u> Greater discrepancy in maternal control between mothers and adolescents is related to lower achievement motivation of adolescents.	Supported
	<u>Hypothesis 7.1b(i)</u> Greater discrepancy in positive paternal parenting styles between fathers and adolescents is related to poorer psychological competence of adolescents.	Not supported
	<u>Hypothesis 7.1b(ii)</u> Greater discrepancy in positive maternal parenting styles between mothers and adolescents is related to poorer psychological competence of adolescents.	Not supported

<u>Hypothesis 7.1b(iii)</u>	Supported
Greater discrepancy in paternal control between fathers and adolescents is related to poorer psychological competence of adolescents.	
<u>Hypothesis 7.1b(iv)</u>	Supported
Greater discrepancy in maternal control between mothers and adolescents is related to poorer psychological competence of adolescents.	
<u>Hypothesis 7.1c(i)</u>	Supported
Greater discrepancy in family functioning between fathers and adolescents is related to lower achievement motivation of adolescents.	
<u>Hypothesis 7.1c(ii)</u>	Not supported
Greater discrepancy in family functioning between mothers and adolescents is related to lower achievement motivation of adolescents.	
<u>Hypothesis 7.1d(i)</u>	Supported
Greater discrepancy in family functioning between fathers and adolescents is related to poorer psychological competence of adolescents.	
<u>Hypothesis 7.1d(ii)</u>	Supported
Greater discrepancy in family functioning between mothers and adolescents is related to poorer psychological competence of adolescents.	
<u>Hypothesis 7.1e(i)</u>	Not supported
Greater discrepancy in paternal sacrifice for children's education between fathers and adolescents is related to lower achievement motivation of adolescents.	
<u>Hypothesis 7.1e(ii)</u>	Supported
Greater discrepancy in maternal sacrifice for children's education between mothers and adolescents is related to lower achievement motivation of adolescents.	
<u>Hypothesis 7.1f(i)</u>	Not supported
Greater discrepancy in paternal sacrifice for children's education between fathers and adolescents is related to poorer psychological competence of adolescents.	
<u>Hypothesis 7.1f(ii)</u>	Not supported
Greater discrepancy in maternal sacrifice for children's education between mothers and adolescents is related to poorer psychological competence of adolescents.	

8.4.6.2 Parent-child discrepancies in perceptions of family processes as predictors of achievement motivation and psychological competence of adolescents

To address Question 7.2 (Among parent-child discrepancies in perceptions of family processes, what are the predictors of achievement motivation and psychological competence of adolescents?), standardized multiple regression was employed. Different parent-child discrepancies in perceptions of family processes (endorsement of positive parenting style, parental control of children's behaviours, family functioning and parental sacrifice for children's education) were considered predictor variables, whereas achievement motivation and psychological competence of adolescents were set as outcome variables.

To understand the overall influence of parent-child discrepancies in perceptions of paternal and maternal parenting style and practices on achievement motivation of adolescents, standard multiple regression was performed. It was found that father-child discrepancy in paternal parental parenting styles and mother-child discrepancy in maternal parental parenting styles, together with father-child discrepancy in paternal control and mother-child discrepancy in maternal control, significantly predicted the achievement motivation of economically disadvantaged adolescents (Multiple $R = .234$, $p < .001$), explaining 5.5% of the variance of adolescent achievement motivation. Among all, it was noteworthy that father-child discrepancy in paternal parental parenting styles and mother-child discrepancy in maternal control significantly and negatively predicted adolescent achievement motivation, with $\beta = -.153$ ($p < .05$) and $\beta = -.162$ ($p < .05$).

Identical procedures were performed to examine the overall influence of parent-child discrepancies in paternal and maternal parenting style and practices on psychological competence of adolescents. Though father-child discrepancy in paternal parental parenting style, mother-child discrepancy in maternal parental parenting styles, father-child discrepancy in paternal control and mother-child discrepancy in maternal control had Multiple $R = .251$ ($p < .01$) and explained 6.3% of the variance of adolescent psychological competence, all parent-child dyad discrepancies in parenting styles and parental control did not predict adolescent psychological competence.

Table 8.112 lists the prediction of parent-child discrepancies in parenting styles and practices on achievement motivation and psychological competence of economically disadvantaged adolescents.

To understand the overall influences of parent-child discrepancies in family functioning on achievement motivation of adolescents, standard multiple regression was performed. It was found that parent-child discrepancies in family functioning, indexed by father-child discrepancy and mother-child discrepancy in family functioning, significantly predicted the achievement motivation of economically disadvantaged adolescents (Multiple $R = .177$, $p < .05$), explaining 3.1% of the variance of adolescent achievement motivation. It should be noted that father-child discrepancy in family functioning negatively predicted adolescent achievement motivation, with $\beta = -.154$ ($p < .05$).

Identical procedures were performed to examine the overall influence of parent-child discrepancies in family functioning on psychological competence of adolescents. It was found that parent-child discrepancies in family functioning significantly predicted the psychological competence of economically disadvantaged adolescents (Multiple $R = .358$, $p < .001$), explaining 12.8% of the variance of adolescent psychological competence. It should be noted that both father-child discrepancy and mother-child discrepancy in family functioning significantly and negatively predicted adolescent achievement motivation, with $\beta = -.247$ ($p < .01$) and $\beta = -.153$ ($p < .05$) respectively.

Table 8.113 lists the prediction of parent-child discrepancies in family functioning on achievement motivation and psychological competence of economically disadvantaged adolescents.

To understand the overall influence of parent-child discrepancies in paternal and maternal sacrifice for children's education on achievement motivation of adolescents, standard multiple regression was performed. It was found that parent-child discrepancies in parental sacrifice for children's education significantly predicted the achievement motivation of economically disadvantaged adolescents (Multiple $R = .239$, $p < .001$), explaining 5.7% of the variance of adolescent achievement motivation. It should be noted that

mother-child discrepancy in maternal sacrifice for children's education negatively predicted adolescent achievement motivation, with $\beta = -.208$ ($p < .01$).

Identical procedures were performed to examine the overall influence of parent-child discrepancies in paternal and maternal sacrifice for children's education on psychological competence of adolescents. Though parent-child discrepancies in paternal and maternal sacrifice for children's education had Multiple $R = .154$ ($p < .05$) and explained 2.4% of the variance of adolescent psychological competence, neither father-child discrepancy in paternal sacrifice for children's education nor mother-child discrepancy paternal sacrifice for children's education predicted adolescent psychological competence.

Table 8.114 lists the prediction of parent-child discrepancies in parental sacrifice for children's education on achievement motivation and psychological competence of economically disadvantaged adolescents.

It is important and interesting to understand how the father-child discrepancies and mother-child discrepancies in family processes separately influence adolescents' achievement motivation and psychological competence. Standard multiple regression with father-child discrepancies and mother-child discrepancies in perceptions of family processes (paternal and maternal parenting style, paternal and maternal control, and paternal and maternal sacrifice) as predictor variables and adolescent development (achievement motivation and psychological competence) as outcome variables were performed separately.

When looking into the influence of overall father-child discrepancies in perceptions of family processes on achievement motivation of adolescents, though Multiple R had the value of $.209$ ($p < .05$) and explained 4.4% of the variance of adolescent achievement motivation, none of the father-child discrepancies in perceptions of family processes predicted achievement motivation of adolescents. On the contrary, father-child discrepancies in perceptions of family processes significantly predicted psychological competence of adolescents (Multiple $R = .356$, $p < .001$), explaining 12.7% of the variance of adolescent psychological competence. Moreover, father-child discrepancies in paternal control of children's behaviours and family functioning

significantly and negatively predicted psychological competence of adolescents, with $\beta = -.126$ ($p < .05$) and $\beta = -.333$ ($p < .001$) respectively.

Regarding the influence of mother-child discrepancies in perceptions of family processes on achievement motivation of adolescents, it was found that mother-child discrepancies in perceptions of family processes significantly predicted achievement motivation of adolescents (Multiple $R = .255$, $p < .01$), explaining 6.5% of the variance of adolescent achievement motivation. It was found that mother-child discrepancy in maternal sacrifice for children's education negatively predicted achievement motivation of adolescents. Regarding psychological competence of adolescents, it was found that mother-child discrepancies in perceptions of family processes significantly predicted psychological competence of adolescents (Multiple $R = .321$, $p < .001$), explaining 9.0% of the variance of adolescent psychological competence. It is noteworthy that mother-child discrepancy in family functioning negatively predicted psychological competence of adolescents, with $\beta = -.333$ ($p < .001$).

Table 8.115 lists the prediction of father-child discrepancies and mother-child discrepancies in perceptions of the influences of different family processes on achievement motivation and psychological competence of economically disadvantaged adolescents.

To examine the overall contributions of different parent-child discrepancies in perceptions of family processes to achievement motivation and psychological competence of adolescents, multiple regression analyses were performed with measures of discrepancy scores of family processes (DIPPS, DIMPS, DIPCS, DIMCS, DIFAFAI, DIMAFAI, DIPSA, DIMSA) as the predictors and measures of achievement motivation (SOAM) and psychological competence (PYD) of adolescents as the outcome variables. Standard multiple regression was performed.

It was found that parent-child discrepancies in various family processes (parenting styles, parental control, family functioning, parental sacrifice for children's education) negatively predicted achievement motivation of adolescents, explaining 9.2% of the variance. Among the family processes, mother-child discrepancy score on maternal sacrifice for children's education significantly predicted adolescent achievement motivation ($\beta = -.189$, $p < .01$). Furthermore,

parent-child discrepancies in various family processes negatively predicted psychological competence of adolescents, explaining 15.4% of the variance. Among all, the father-child discrepancy score on perceptions of family functioning significantly predicted adolescent psychological competence ($\beta = -.267, p < .01$). Table 8.116 lists the prediction of the influences of various family processes on achievement motivation and psychological competence of economically disadvantaged adolescents. Figure 8.14 and Figure 8.15 demonstrate the influences of various parent-child discrepancies in perceptions of family processes on achievement motivation and psychological competence of economically disadvantaged adolescents.

Summary

The prediction of relative parent-child discrepancy scores of family processes of achievement motivation and psychological competence of economically disadvantaged adolescents are listed below:

Summary of prediction of relative parent-child discrepancy scores of family processes of achievement motivation and psychological competence of economically disadvantaged adolescents

Research Question	Parent-child discrepancy in perception of family processes	Predictors	Dependent variable	Findings	% of variance explained
<u>Research question 7.2</u> Among different parent-child discrepancies in family processes, what are the predictors of achievement motivation and psychological competence of economically disadvantaged adolescents?	Parent-child discrepancy in parenting styles and parental control	DIPPS, DIMPS, DIPCS, DIMCS	SOAM	DIPPS and DIMCS predicted SOAM	5.5%
			PYD	No predictors identified	6.3%
	Parent-child discrepancy in family functioning	DIFAFAI, DIMAFAI	SOAM	DIFAFAI predicted SOAM	3.1%
			PYD	DIFAFAI and DIMAFAI predicted PYD	12.8%
	Parent-child discrepancy in parental sacrifice for children's education	DIPSA, DIMSA	SOAM	DIMSA predicted SOAM	5.7%
			PYD	No predictors identified	2.4%
	Father-child discrepancy in paternal family processes	DIPPS, DIPCS, DIFAFAI, DIPSA	SOAM	No predictors identified	4.4%
			PYD	DIPCS and DIFAFAI predicted PYD	12.7%
	Mother-child discrepancy in maternal family processes	DIMPS, DIMCS, DIMAFAI, DIMSA	SOAM	DIMSA predicted SOAM	6.5%
			PYD	DIMAFAI predicted PYD	10.3%
	Parent-child discrepancy in overall family processes	DIPPS, DIMPS, DIPCS, DIMCS, DIFAFAI, DIMAFAI, DIPSA, DIMSA	SOAM	DIMSA predicted SOAM	9.2%
			PYD	DIFAFAI predicted PYD	15.4%

$p < .05$

DIPPS=Discrepancy score on paternal parenting style between fathers and adolescents.

DIMPS=Discrepancy score on maternal parenting style between mothers and adolescents.

DIPCS=Discrepancy score on paternal control between fathers and adolescents.

DIMCS=Discrepancy score on maternal control between mothers and adolescents.

DIFAFAI=Discrepancy score on family functioning between fathers and adolescents.

DIMAFAI=Discrepancy score on family functioning between mothers and adolescents.

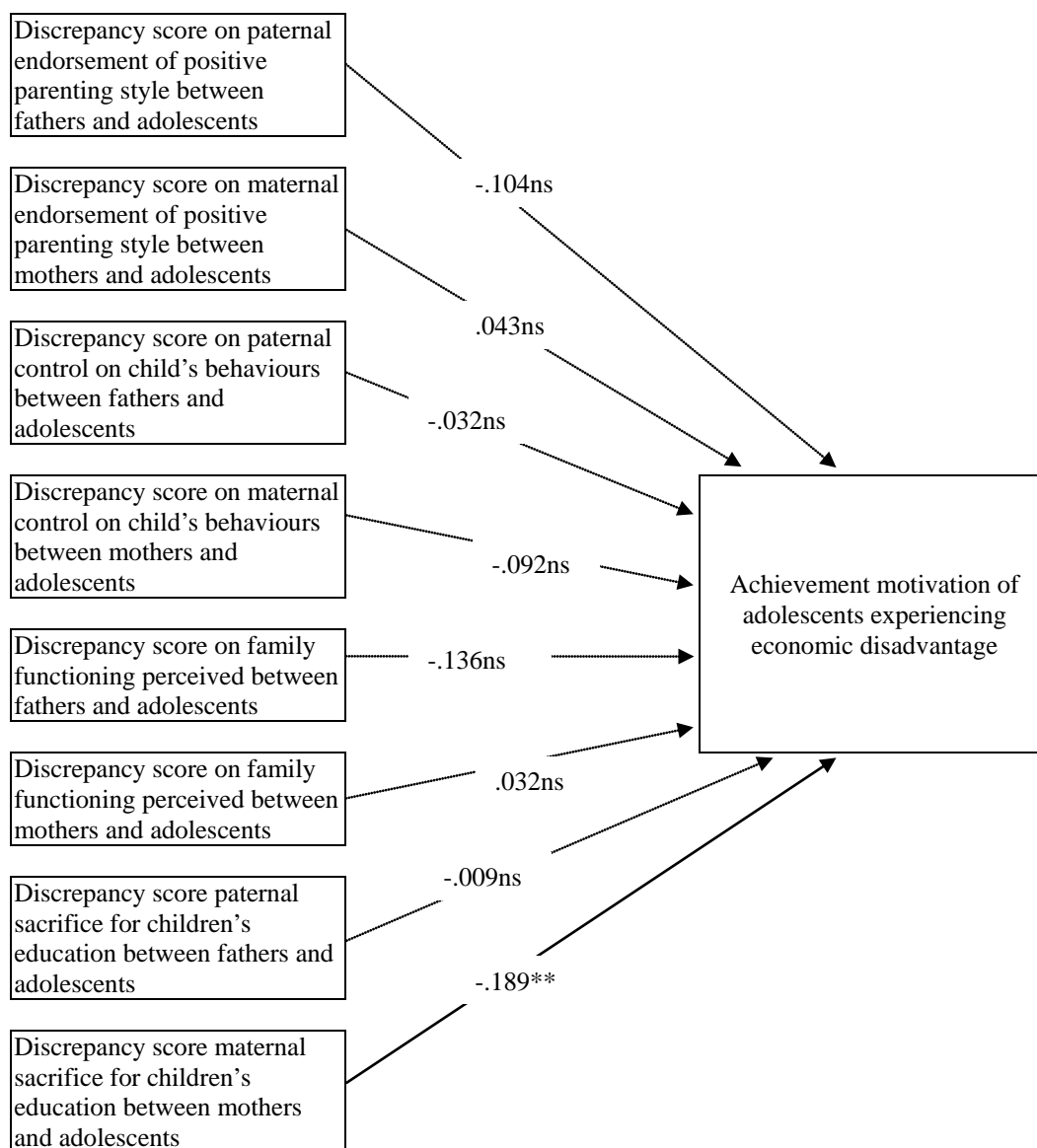
DIPSA=Discrepancy score on paternal sacrifice between fathers and adolescents.

DIMSA=Discrepancy score on maternal sacrifice between mothers and adolescents

SOAM=Social Oriented Achievement Motivation Scale.

PYD=Chinese Positive Youth Development Scale (7 sub-scales selected).

Figure 8.14. Predictions of different parent-child discrepancy scores of family processes on achievement motivation of adolescents experiencing economic disadvantage

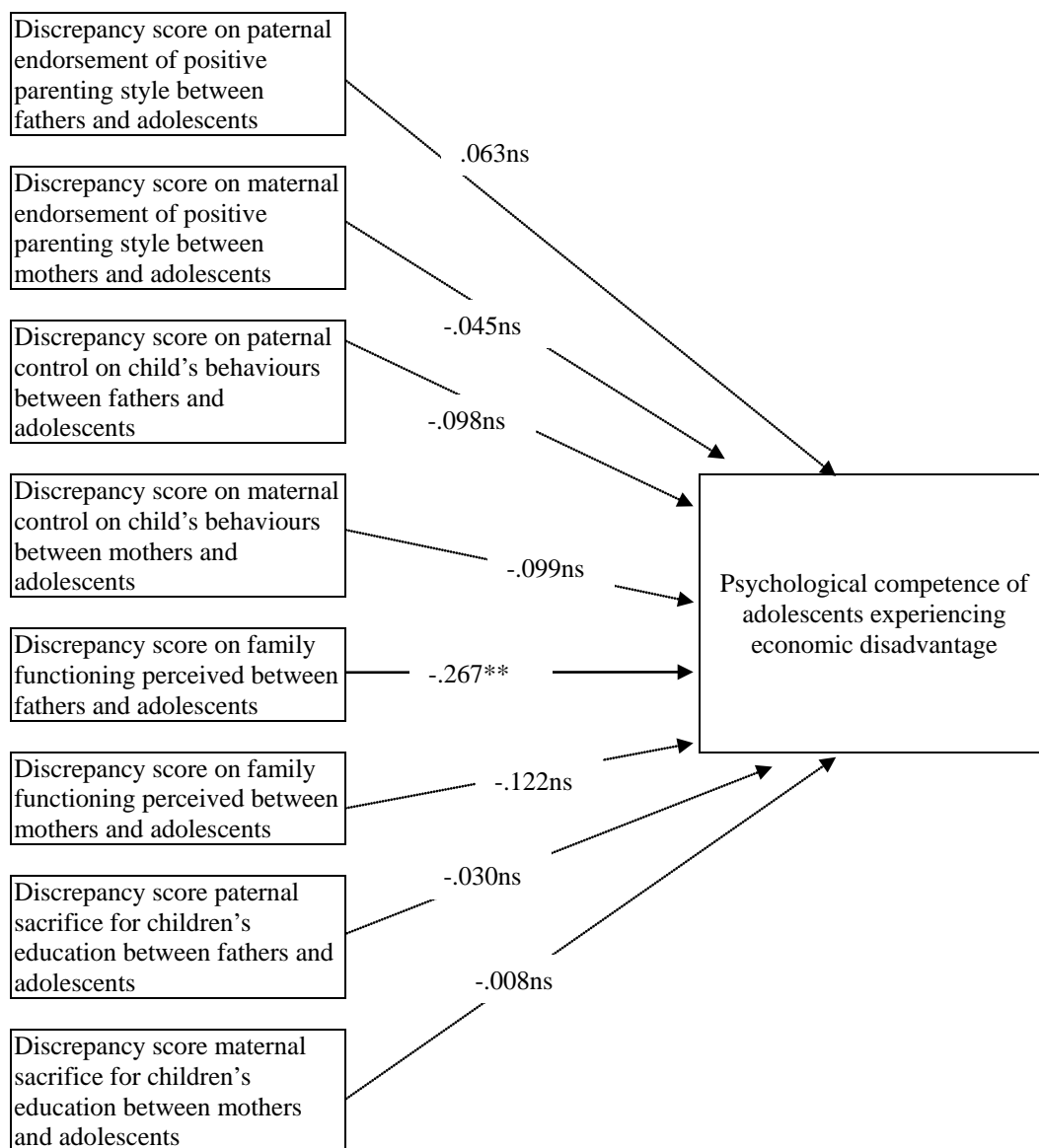


* $p < .05$, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

$R^2 = .092$

Figure 8.15. Predictions of different parent-child discrepancy scores of family processes on psychological competence of adolescents experiencing economic disadvantage



* $p < .05$, * $p < .01$, *** $p < .001$, ns=not significant

Note. Solid line = significant relationships; Dotted line = non-significant relationship

$R^2 = .154$

Table 8.1. Poverty threshold in reference with household size employed in the study

Household size	Median monthly domestic household income (Hong Kong dollars)	Poverty threshold (50% of Median monthly domestic household income (Hong Kong dollars))
2	14,000	7,000
3	17,500	8,750
4	21,500	10,750
5	26,705	13,352.5
6	29,500	14,750
7	33,590	16,795
8	36,600	18,300
9	47,000	23,500
10+	55,320	27,660

Source: Census and Statistics Department, 2007b, pp. 144-145

Table 8.2. Age distribution of fathers and mothers

Age	Fathers		Mothers	
	<i>n</i>	Percent	<i>n</i>	Percent
40 years and less	36	13.1	113	41.09
41-50 years	131	47.6	129	46.91
51-60 years	65	23.6	18	6.55
61-70 years	21	7.6	0	0.00
71 and above	11	4.0	0	0.00
Missing	11	4.0	15	5.45
Total	275	100.0	275	100.0

Table 8.3. Duration of stay in Hong Kong of fathers and mothers

Duration of Stay in Hong Kong	Fathers		Mothers	
	<i>n</i>	Percent	<i>n</i>	Percent
Born in Hong Kong	98	35.6	66	24.0
5 years or less	19	6.9	34	12.4
6-10 years	16	5.8	103	37.5
11-15 years	13	4.7	35	12.7
16-20 years	12	4.4	20	7.3
More than 20 years	115	41.8	17	6.2
Missing	2	0.7	0	0
Total	275	100.0	275	100.0

Table 8.4. Educational standard of fathers and mothers

Educational Levels	Fathers		Mothers	
	<i>N</i>	Percent	<i>N</i>	Percent
No formal education	4	1.4	6	2.2
Primary education	84	30.5	62	22.5
Junior Secondary (Form 1 to Form 3)	117	42.5	136	49.5
Senior Secondary (Form 4 to Form 7)	57	20.7	70	25.5
Post-secondary	8	2.9	1	0.4
University graduates and above	4	1.5	0	0
Missing	1	0.4	0	0
Total	275	100.0	275	100.0

Table 8.5. Occupations of fathers and mothers

Occupation	Fathers		Mothers	
	<i>n</i>	Percent	<i>n</i>	Percent
Unskilled worker	86	31.3	39	14.2
Skilled worker	98	35.6	7	2.5
Clerk	5	1.8	7	2.5
Manager or Professional	8	2.9	4	1.4
Unemployed	30	10.9	7	2.5
Retired	26	9.5	2	0.7
Homemaker	7	2.5	199	72.4
Others	14	5.1	7	2.5
Missing	1	0.4	3	1.1
Total	275	100.0	275	100.0

Table 8.6. Geographical distribution of poor children of age 0 to 14 (By-Census of 2006)

Districts	No. of poor children of age 0-14	Percentage of poor children aged 0 to 14 in proportion of whole children population	Ranking according to the no. of poor children	Ranking according to the percent of poor children in proportion of whole children population
Yuen Long	34255	35.6%	1	1
Kwun Tong	23929	30.6%	2	5
Kwai Tsing	23166	34.0%	3	2
Tuen Mun	21421	30.5%	4	6
Shatin	16885	21.2%	5	11
Wong Tai Sin	16012	30.4%	6	7
Shumshuipo	14974	33.5%	7	3
Sai Kung	12354	19.7%	8	12
The North District	11763	24.9%	9	8
The Eastern District	11222	15.3%	10	16
Tai Po	9550	24.9%	11	8
Kowloon City	8451	18.0%	12	14
Islands	8135	33.2%	13	4
Tsuen Wan	7974	19.2%	14	13
Yau Tsim Mong	7232	21.5%	15	10
Southern District	5839	16.2%	16	15
Central and Western District	3350	10.8%	17	17
Wanchai	1534	9.5%	18	18

Source: HKCSS, 2008

Table 8.7. Geographical location of the family sample

District	<i>n</i>	Percent
Kwai Tsing	43	15.6
Islands (including Tung Chung)	32	11.6
Tuen Mun	31	11.3
Yau Tsim Mong	29	10.5
Tai Po	28	10.2
Kwun Tong	27	9.8
Shumshuipo	24	8.7
Wong Tai Sin and Sai Kung	17	6.2
Yuen Long (including Tin Shui Wai)	12	4.4
Tsuen Wan	10	3.6
The North District	4	1.5
Shatin	4	1.5
Kowloon City	2	0.7
Total	275	100.0

Table 8.8. Types of housing of the family sample

Types of Housing	<i>n</i>	Percent
Public housing	207	75.3
Home-ownership scheme	13	4.7
Self-owned flat	22	8.0
Rented flat	15	5.5
Rented bedspace and apartment	15	5.5
Temporary housing/ squatters	2	0.7
Others	1	0.4
Total	275	100.0

Table 8.9. Marital status of the participating families

Marital Status	<i>n</i>	Percent
Married (first marriage)	243	88.4
Married (second marriage or more)	27	9.8
Divorced, no remarriage	3	1.1
Separated, no remarriage	2	0.7
Total	275	100.0

Table 8.10. Number of children in the families

No. of children	<i>n</i>	Percent
1	34	12.4
2	151	54.9
3	61	22.2
4	22	8.0
5	6	2.2
6 and above	1	0.4
Total	275	100.0

Table 8.11. Monthly household income of the families by CSSA recipients

Income	<i>n</i>	%	CSSA recipients	
			No	Yes
			<i>n</i>	<i>n</i>
HK\$5000 and below	25	9.09	7(28.0%)	18(72.0%)
HK\$5001 to \$10000	161	58.55	92(57.1%)	69(42.9%)
HK\$10001 to \$20000	81	29.45	74(91.4%)	7(8.6%)
HK\$20001 to \$30000	3	1.09	3(100.0%)	0(0.0%)
Missing	5	1.82	3(60%)	2(40%)
Total	275	100	179(64.9%)	97(35.1%)

Note. Number in parentheses is the percentage of children number in the family within the category of income

Table 8.12. Monthly household income of the families by number of children

Income	<i>n</i>	%	No. of children					
			1	2	3	4	5	≥6
	<i>N</i>	%	<i>n</i>	<i>N</i>	<i>n</i>	<i>N</i>	<i>n</i>	<i>n</i>
HK\$5000 and below	25	9.09	4(16.0%)	14(56.0%)	1(4.0%)	4(16.0%)	2(8.0%)	0(0.0%)
HK\$5001 to \$10000	161	58.55	23(14.3%)	81(50.3%)	42(26.1%)	13(8.1%)	2(1.2%)	0(0.0%)
HK\$10001 to \$20000	81	29.45	7(8.6%)	50(61.7%)	16(19.8%)	5(6.2%)	2(2.5%)	1(1.2%)
HK\$20001 to \$30000	3	1.09	0(0.0%)	2(66.7%)	1(33.3%)	0(0.0%)	0(0.0%)	0(0.0%)
Missing	5	1.82	0(0.0%)	4(80.0%)	1(20.0%)	0(0.0%)	0(0.0%)	0(0.0%)
Total	276	100	34(12.5%)	151(54.6%)	61(22.1%)	22(8.1%)	6(2.2%)	1(0.4%)

Note. Number in parentheses is the percentage of children number in the family within the category of income

Table 8.13. Recipients of CSSA

Recipients of CSSA	<i>n</i>	Percent
No	179	65.1
Yes	96	34.9
Total	275	100.0

Table 8.14. Family distribution on recipients of Textbook Allowance

Recipients of Textbook Allowance (TBA)	<i>n</i>	Percent
No	61	22.2
Yes, full subsidy	125	45.5
Yes, half subsidy	89	32.4
Total	275	100.0

Table 8.15: Age of adolescents by gender

Age of adolescents	<i>Male</i>		<i>Female</i>		<i>Total</i>	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
11 and below	14	10.4	3	2.1	17	6.2
12	34	25.4	36	25.4	70	25.5
13	26	19.4	29	20.6	55	20.0
14	23	17.2	25	17.7	48	17.5
15	22	16.4	28	19.9	51	18.2
16 and above	15	11.2	20	14.2	35	12.7
Total	134	100.0	141	100.0	275	100.0

Table 8.16. Education levels of adolescents by gender

Education levels of adolescents	<i>Male</i>		<i>Female</i>		<i>Total</i>	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Junior 5 and below	12	9.0	6	4.3	18	6.5
Junior 6	29	21.6	18	12.8	47	17.1
Form 1	29	21.6	34	24.1	63	22.9
Form 2	17	12.7	29	20.6	46	16.7
Form 3	22	16.4	20	14.2	43	15.3
Form 4	10	7.5	18	12.8	28	10.2
Form 5 and above	14	10.4	15	10.6	29	10.5
Others	1	0.7	1	0.7	2	0.7
Total	134	48.7	141	51.3	275	100.0

Table 8.17. Duration of stay of adolescents in Hong Kong by gender

Duration of Stay of Adolescents in Hong Kong	<i>Male</i>		<i>Female</i>		<i>Total</i>	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Born in Hong Kong	74	55.2	70	49.6	144	52.4
1-3 years	11	14.2	13	9.2	24	8.7
4-6 years	19	14.2	14	9.9	33	12.0
7-9 years	12	9.0	14	9.9	26	9.5
10 years and more	18	13.4	30	21.3	48	17.5
Total	134	100.0	141	100.0	275	100.0

Table 8.18. Item-total statistics of Parental Expectations of Children's Future Scale (PECF)

	FECF		MECF	
	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PECF1	.548	.876	.463	.874
PECF2	.531	.877	.608	.869
PECF3	.540	.876	.525	.871
PECF4	.492	.878	.505	.872
PECF5	.526	.877	.578	.870
PECF6	.406	.883	.274	.884
PECF7	.646	.873	.571	.870
PECF8	.482	.878	.572	.870
PECF9	.452	.881	.585	.869
PECF10	.623	.873	.565	.870
PECF11	.667	.872	.625	.868
PECF12	.706	.871	.659	.868
PECF13	.324	.886	.407	.878
PECF14	.582	.875	.507	.872
PECF15	.584	.875	.484	.873
PECF16	.432	.880	.434	.875
PECF17	.537	.876	.548	.871

Note. FECF=Parental Expectations of Children's Future Scale completed by fathers. MECF= Parental Expectations of Children's Future Scale completed by mothers.

Table 8.19. Inter-correlations among the measures derived from FECF

	EDU	SRE	OCCU	FAM	MOR	FECF
EDU	1.000					
SRE	.492***	1.000				
OCCU	.524***	.413***	1.000			
FAM	.501***	.408***	.681***	1.000		
MOR	.461***	.569***	.536***	.583***	1.000	
FECF	.726***	.635***	.803***	.759***	.725***	1.000

* $p < .003$; *** $p < .001$

Note. EDU=Education achievement; SRE=Self-reliance, OCCU=Occupation; FAM=Family; MOR=Moral conduct; FECF= Parental Expectations of Children's Future Scale completed by fathers.

Table 8.20. Inter-correlations among the measures derived from MECF

	EDU	SRE	OCCU	FAM	MOR	MECF
EDU	1.000					
SRE	.343***	1.000				
OCCU	.564***	.362***	1.000			
FAM	.488***	.384***	.581***	1.000		
MOR	.431***	.475***	.399***	.386***	1.000	
MECF	.785***	.611***	.857***	.754***	.668***	1.000

* $p < .003$; *** $p < .001$

Note. EDU=Education achievement; SRE=Self-reliance, OCCU=Occupation; FAM=Family; MOR=Moral conduct; MECF= Parental Expectations of Children's Future Scale completed by mothers.

Table 8.21. Coefficients of congruence on factor structure of FECF and MECF in the main study

			Present study	
			Father FECF	Mother MECF
Factor 1: Occupation and financial security (Item 7,8,9,10,11,13)				
Present Study	Father	FECF	(.777) ^a	
	Mother	MECF	.990	(.811) ^a
Factor 2: Personal conduct and family (Item 5,6,12,14,15,16,17)				
Present Study	Father	FECF	(.813) ^a	
	Mother	MECF	.974	(.785) ^a
Factor 3: Educational achievement (Item 1,2,3,4)				
Present Study	Father	FECF	(.747) ^a	
	Mother	MECF	.986	(.742) ^a

Note. FECF=Parental Expectations of Children's Future Scale completed by fathers. MECF= Parental Expectations of Children's Future Scale completed by mothers.

Note ^a number in parentheses was Cronbach's alpha of the factor in the measure.

Table 8.22. Inter-correlations among the measures derived from FSA

	FR	TS	RDR	SLA	SW	FSA
FR	1.000					
TS	.505***	1.000				
RDR	.501***	.699***	1.000			
SLA	.556***	.616***	.647***	1.000		
SW	.525***	.444***	.401***	.535***	1.000	
FSA	.857***	.816***	.760***	.816***	.675***	1.000

* $p < .003$; *** $p < .001$

Note. FR=Striving of financial resources. TS=Time spent on children's education. RDR=Restructuring of daily routine. SLA=Sacrifice of lifestyle and aspirations. SW=Shielding from worries. FSA= Parental Sacrifice for Children's Education Scale completed by fathers.

Table 8.23. Inter-correlations among the measures derived from MSA

	FR	TS	RDR	SLA	SW	MSA
FR	1.000					
TS	.530***	1.000				
RDR	.521***	.636***	1.000			
SLA	.581***	.575***	.667***	1.000		
SW	.481***	.304***	.316***	.431***	1.000	
MSA	.881***	.778***	.741***	.815***	.610***	1.000

* $p < .003$; *** $p < .001$

Note. FR=Striving of financial resources. TS=Time spent on children's education. RDR=Restructuring of daily routine. SLA=Sacrifice of lifestyle and aspirations. SW=Shielding from worries. MSA= Parental Sacrifice for Children's Education Scale completed by mothers.

Table 8.24. Inter-correlations among the measures derived from APSA

	FR	TS	RDR	SLA	SW	APSA
FR	1.000					
TS	.487***	1.000				
RDR	.470***	.752***	1.000			
SLA	.468***	.630***	.614***	1.000		
SW	.509***	.422***	.440***	.595***	1.000	
APSA	.827***	.835***	.773***	.794***	.678***	1.000

* $p < .003$; *** $p < .001$

Note. FR=Striving of financial resources. TS=Time spent on children's education. RDR=Restructuring of daily routine. SLA=Sacrifice of lifestyle and aspirations. SW=Shielding from worries. APSA= Paternal Sacrifice for Children's Education Scale completed by adolescents.

Table 8.25. Inter-correlations among the measures derived from AMSA

	FR	TS	RDR	SLA	SW	AMSA
FR	1.000					
TS	.594***	1.000				
RDR	.557***	.720***	1.000			
SLA	.498***	.585***	.636***	1.000		
SW	.525***	.469***	.498***	.643***	1.000	
AMSA	.867***	.838***	.789***	.812***	.698***	1.000

* $p < .003$; *** $p < .001$

Note. FR=Striving of financial resources. TS=Time spent on children's education. RDR=Restructuring of daily routine. SLA=Sacrifice of lifestyle and aspirations. SW=Shielding from worries. AMSA= Maternal Sacrifice for Children's Education Scale completed by adolescents.

Table 8.26. Three-factor model of factor structure of SA

Study	Present study				Validation Study		
Respondent	Father	Mother	Adolescent		Parent	Adolescent	
Measurement	FSA	MSA	APSA	AMSA	SA	APSA	AMSA
Sample size	275	275	275	275	125	373	373
Factor	Striving of financial resources (1-9) Time spent on children's education and restructuring of daily routine (10-17) Sacrifice of lifestyle and aspiration and shielding from worries (19-23)	Striving of financial resources (1-9) Time spent on children's education and restructuring of daily routine (10-18) Sacrifice of lifestyle and aspiration and shielding from worries (19-23)	Striving of financial resources (1-9) Time spent on children's education and restructuring of daily routine (10-18) Sacrifice of lifestyle and aspiration and shielding from worries (19-23)	Striving of financial resources (1-9) Time spent on children's education (10-16) Restructuring of routine, sacrifice of lifestyle and aspiration, and shielding from worries (17-23)	Striving of financial resources (1-9) Time spent on children's education (10-13,18) Restructuring of routine, sacrifice of lifestyle and aspiration, and shielding from worries (14-17, 19-23)	Striving of financial resources (1-9) Time spent on children's education (10-14,16) Restructuring of routine, sacrifice of lifestyle and aspiration, and shielding from worries (14,15,17-23)	Striving of financial resources (1-9) Time spent on children's education (10-13,16) Restructuring of routine, sacrifice of lifestyle and aspiration, and shielding from worries (15,17-23)
Variance explained	56.69	56.44	60.55	62.29	59.96	67.61	67.51
Eigenvalue smaller than unity	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Factor loading less than 0.4	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Note: FSA=Parental Sacrifice for Children's Education Scale completed by fathers. MSA=Parental Sacrifice for Children's Education Scale completed by mothers. APSA=Paternal Sacrifice for Children's Education Scale completed by adolescents. AMSA=Maternal Sacrifice for Children's Education Scale completed by adolescents.

Table 8.27. Four-factor model of factor structure of SA

Study	Present study				Validation Study		
Respondent	Father	Mother	Adolescent		Parent	Adolescent	
Measurement	FSA	MSA	APSA	AMSA	SA	APSA	AMSA
Sample size	275	275	275	275	125	373	373
Factor	Striving of financial resources (1-9)	Striving of financial resources (1-8)	Hardship in striving for financial expense (1,2,3,6)	Hardship in striving for financial expense (1,2,3,6)	Hardship in striving for financial expense (1,2,3,6)	Hardship in striving for financial expense (1,2,3)	Striving of financial resources (1-9)
	Time spent on children's education (10-16)	Time spent on children's education (10-14,16)	Precedence of children's education over family expenses (4,5,7,8,9)	Precedence of children's education over family expenses (4,5,7,8,9)	Precedence of children's education over family expenses (4,5,7,8,9)	Precedence of children's education over family expenses (4-9)	Time spent on children's education (10-13)
	Restructuring of routine, sacrifice of lifestyle and aspiration (17-23)	Restructuring of routine, sacrifice of lifestyle and aspiration (15,17-21)	Time spent on children's education and restructuring of routine (10-18)	Time spent on children's education (10-16)	Time spent on children's education (10-13,18)	Time spent on children's education (10-14,16)	Restructuring of routine (14-18)
	Shielding from worries (22,23)	Shielding from worries (9,22,23)	Sacrifice of lifestyle and aspiration and shielding from worries (19-23)	Restructuring of routine, sacrifice of lifestyle and aspiration, and shielding from worries (17-23)	Restructuring of routine, sacrifice of lifestyle and aspiration, and shielding from worries (14-17,19-23)	Restructuring of routine, sacrifice of lifestyle and aspiration, and shielding from worries (15,17-23)	Sacrifice of lifestyle and aspiration and shielding from worries (19-23)
Variance explained (%)	61.31	61.74	65.35	66.03	65.71	71.26	71.04
Eigenvalue smaller than unity	Nil	Nil	Nil	Nil	Nil	4 th factor (.84)	4 th factor (.81)
Factor loading less than 0.4	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Note: FSA=Parental Sacrifice for Children's Education Scale completed by fathers. MSA=Parental Sacrifice for Children's Education Scale completed by mothers. APSA=Paternal Sacrifice for Children's Education Scale completed by adolescents. AMSA=Maternal Sacrifice for Children's Education Scale completed by adolescents.

Table 8.28. Five-factor model of factor structure of SA

Study	Present study				Validation Study		
Respondent	Father	Mother	Adolescent		Parent	Adolescent	
Scale	FSA	MSA	APSA	AMSA	SA	APSA	AMSA
Sample size	275	275	275	275	125	373	373
Factor	Striving of financial resources (1-9)	Hardship in striving for financial expense (1,2,3,4,6)	Hardship in striving for financial expense (1,2,3,6)	Hardship in striving for financial expense (1,2,3,6)	Hardship in striving for financial expense (1,2,3,6)	Hardship in striving for financial expense (1,2,3)	Striving of financial resources (1-9)
	Time spent on children's education (10-13)	Precedence of children's education over family expenses (5,7,8,9)	Precedence of children's education over family expenses (4,5,7,8,9)	Precedence of children's education over family expenses (4,5,7,8,9)	Precedence of children's education over family expenses (4,5,7,8,9)	Precedence of children's education over family expenses (4-9)	Time spent on children's education (10-13)
	Restructuring of daily routine (14-17)	Time spent on children's education (10-13,16)	Time spent on children's education and restructuring of daily routine (10-17)	Time spent on children's education and restructuring of daily routine (10,13-18)	Time spent on children's education (11-13)	Time spent on children's education (10-13)	Restructuring of daily routine and sacrifice of lifestyle and aspiration (14-20)
	Sacrifice of lifestyle and aspiration (18-21)	Restructuring of daily routine and sacrifice of lifestyle and aspiration (14,15,17-21)	Sacrifice of lifestyle and aspiration (18-21)	Parental involvement in school (11,12)	Restructuring of daily routine and sacrifice of lifestyle and aspiration (10, 14-21)	Restructuring of daily routine and sacrifice of lifestyle and aspiration (14-21)	Sacrifice of social life (21)
	Shielding from worries (22,23)	Shielding from worries (22,23)	Shielding from worries (22,23)	Sacrifice of lifestyle and aspiration and shielding from worries (19-23)	Shielding from worries (22,23)	Shielding from worries (22,23)	Shielding from worries (22,23)
Variance explained	65.39	66.90	68.76	70.74	70.13	74.53	74.41
Eigenvalue smaller than unity	5 th factor (.94)	Nil	5 th factor (.88)	5 th factor (.82)	Nil	4 th factor (.84), 5 th factor (.75)	4 th factor (.81), 5 th factor (.78)
Factor loading less than 0.4	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Note: FSA=Parental Sacrifice for Children's Education Scale completed by fathers. MSA=Parental Sacrifice for Children's Education Scale completed by mothers. APSA=Paternal Sacrifice for Children's Education Scale completed by adolescents. AMSA=Maternal Sacrifice for Children's Education Scale completed by adolescents.

Table 8.29. Factor loadings of SA in present study and validation study

		Factor	Present study				Validation study		
			FSA	MSA	APSA	AMSA	SA	APSA	AMSA
SA1	To fulfill the educational needs of my child, I eat and wear less.	FR	.507	.482	.717	.705	.724	.696	.751
SA2	I save money for my child to study in university, despite how hard the work I face.	FR	.752	.541	.731	.638	.678	.779	.673
SA3	The expense of child's education is more important than my personal expenses.	FR	.713	.631	.653	.666	.787	.636	.758
SA4	If my child needs tutoring, I would fulfill his/her needs even if family expenses have to be tightened.	FR	.774	.644	.762	.772	.663	.755	.777
SA5	If my child needs to join extra-curricular activities, I would fulfill his/ her needs even if family expenses have to be tightened.	FR	.678	.773	.722	.743	.567	.759	.694
SA6	I save rigorously as to reserve funds for child's education.	FR	.605	.571	.703	.617	.774	.743	.708
SA7	Even if the family faces financial stress, I will not stop any educational expenses of children.	FR	.750	.713	.674	.749	.543	.767	.773
SA8	If my child needs to buy reference books, I would fulfill his/ her needs even if family expenses have to be tightened.	FR	.742	.741	.704	.768	.547	.825	.793
SA9	In case the family faces financial stress, I will borrow money to fulfill the educational needs of children.	FR	.611	.564	.573	.637	.639	.611	.648
SA10	During the examination period, I will try my best to stay at home and accompany with my child.	TS	.701	.695	.801	.772	.546	.752	.681
SA11	If the teacher calls me to discuss about my child, I will stop my work and see the teacher even I am busy at the time.	TS	.791	.706	.730	.667	.719	.759	.738
SA12	I always reserve the time for participating in the parent day of school.	TS	.689	.728	.759	.686	.834	.800	.781
SA13	Even I am tired, I try my best to understand the school life of my child.	TS	.734	.667	.768	.651	.775	.700	.747
SA14	When my child studies at mid-night, I will never sleep.	TS	.510	.437	.575	.576	.414	.600	.390
SA15	My life routine is adjusted according to the educational needs of my child.	ARL	.452	.460	.364	.410	.683	.590	.723
SA16	During the examination period, I am more conscious in taking care of my children.	TS	.564	.642	.742	.746	.430	.687	.625
SA17	I will change the family habits in order to fit the educational needs of my child.	ARL	.471	.461	.292	.541	.745	.619	.729
SA18	In order to have a silent environment for the study of my child, I give up family entertainment.	ARL	.556	.386	.511	.550	.349	.661	.684
SA19	I give up my hobbies for the education of my child.	ARL	.686	.608	.699	.790	.769	.770	.814
SA20	I sacrifice my aspiration for the education of my child.	ARL	.776	.772	.796	.815	.751	.805	.843
SA21	I give up my social life for the education of my child	ARL	.746	.700	.811	.851	.764	.821	.543
SA22	I will hide the family worries in front of my child in order not to disturb his/her studying.	ARL	.546	.646	.637	.685	.604	.708	.688
SA23	In order not to affect the study of my child, I will hide my sickness when it happens.	ARL	.540	.720	.706	.739	.696	.708	.649

Note. Factor: FR=Striving of financial resources, TS=Time spent on children's education, ARL=Accommodation of daily routine and lifestyle.

Note: FSA=Parental Sacrifice for Children's Education Scale completed by fathers. MSA=Parental Sacrifice for Children's Education Scale completed by mothers. APSA=Paternal Sacrifice for Children's Education Scale completed by adolescents. AMSA=Maternal Sacrifice for Children's Education Scale completed by adolescents. SA= Parental Sacrifice for Children's Education Scale completed by parents in validation study.

Table 8.30. Coefficients of congruence on 3-factor structure of SA of present study and in validation study

			Present study				Validation study		
			Father FSA	Mother MSA	Adolescent APSA	Adolescent AMSA	Parent SA	Adolescent APSA	Adolescent AMSA
Factor 1: FR									
Present study	Father	FSA	(.891) ^a						
	Mother	MSA	.992	(.874) ^a					
	Adolescent	APSA	.992	.988	(.890) ^a				
		AMSA	.993	.994	.997	(.910) ^a			
Validation study	Parent	SA	.977	.967	.988	.986	(.896) ^a		
	Adolescent	APSA	.994	.991	.998	.997	.981	(.918) ^a	
		AMSA	.993	.991	.997	.998	.988	.996	(.932) ^a
Factor 2: ST									
Present study	Father	FSA	(.831) ^a						
	Mother	MSA	.996	(.816) ^a					
	Adolescent	APSA	.994	.998	(.881) ^a				
		AMSA	.989	.994	.998	(.855) ^a			
Validation study	Parent	SA	.986	.982	.974	.961	(.819) ^a		
	Adolescent	APSA	.995	.997	.998	.996	.979	(.913) ^a	
		AMSA	.994	.998	.993	.986	.989	.993	(.896) ^a
Factor 3: ARL									
Present study	Father	FSA	(.876) ^a						
	Mother	MSA	.987	(.870) ^a					
	Adolescent	APSA	.988	.988	(.895) ^a				
		AMSA	.994	.993	.993	(.911) ^a			
Validation study	Parent	SA	.976	.982	.953	.976	(.890) ^a		
	Adolescent	APSA	.996	.989	.982	.994	.983	(.935) ^a	
		AMSA	.997	.969	.947	.968	.978	.986	(.892) ^a

Note. Factor: FR=Striving of financial resources, TS=Time spent on children's education, ARL=Accommodation of daily routine and lifestyle.

Note: FSA=Parental Sacrifice for Children's Education Scale completed by fathers. MSA=Parental Sacrifice for Children's Education Scale completed by mothers. APSA=Paternal Sacrifice for Children's Education Scale completed by adolescents. AMSA=Maternal Sacrifice for Children's Education Scale completed by adolescents. SA= Parental Sacrifice for Children's Education Scale completed by parents in validation study.

Note: ^a The number in parentheses was the Cronbach's alpha of the factor in the measure.

Table 8.31. Item-total statistics of CBA

	FCBA			MCBA	
	Corrected Correlation	Item-Total Cronbach's Alpha if Item Deleted		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CBA1	.452	.614		.443	.550
CBA2	.030	.731		.078	.668
CBA3	.573	.595		.542	.531
CBA4	.538	.606		.425	.559
CBA5	.221	.675		.200	.630
CBA6	.491	.604		.454	.555
CBA7	.263	.655		.131	.634
CBA8	.406	.625		.498	.549
CBA9	.557	.596		.488	.558

Note. FCBA=Chinese Cultural Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Cultural Beliefs about Adversity Scale completed by mothers.

Table 8.32. Factor loadings of FCBA and MCBA

	FCBA		MCBA	
	Component		Component	
	1	2	1	2
CBA1	.697	-.018	.736	-.063
CBA2	-.098	.812	-.063	.832
CBA3	.799	.074	.765	.075
CBA4	.762	.079	.694	-.055
CBA5	.123	.814	.125	.855
CBA6	.680	.027	.743	-.043
CBA7	.464	-.187	.341	-.298
CBA8	.629	.005	.767	-.059
CBA9	.766	.016	.712	.057
Variance explained	37.69	15.69	37.77	16.95

Note. FCBA=Chinese Cultural Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Cultural Beliefs about Adversity Scale completed by mothers.

Table 8.33. Inter-item correlation matrix of FCBA

	FCBA1	FCBA2	FCBA3	FCBA4	FCBA5	FCBA6	FCBA7	FCBA8	FCBA9
FCBA1	1.000	-.058	.541	.425	.047	.415	.225	.274	.463
FCBA2	<u>-.058</u>	1.000	<u>-.043</u>	<u>-.082</u>	<u>.341</u>	<u>.024</u>	<u>-.072</u>	<u>-.111</u>	<u>-.055</u>
FCBA3	.541	-.043	1.000	.669	.109	.460	.237	.344	.545
FCBA4	.425	-.082	.669	1.000	.151	.393	.238	.391	.501
FCBA5	<u>.047</u>	<u>.341</u>	<u>.109</u>	<u>.151</u>	1.000	<u>.038</u>	<u>.006</u>	<u>.123</u>	<u>.098</u>
FCBA6	.415	.024	.460	.393	.038	1.000	.288	.311	.506
FCBA7	.225	-.072	.237	.238	.006	.288	1.000	.269	.257
FCBA8	.274	-.111	.344	.391	.123	.311	.269	1.000	.472
FCBA9	.463	-.055	.545	.501	.098	.506	.257	.472	1.000

Note. FCBA=Chinese Cultural Beliefs about Adversity Scale completed by fathers.

Table 8.34. Inter-item correlation matrix of MCBA

	MCBA1	MCBA2	MCBA3	MCBA4	MCBA5	MCBA6	MCBA7	MCBA8	MCBA9
MCBA1	1.000	-.145	.550	.383	.062	.415	.207	.549	.397
MCBA2	<u>-.145</u>	1.000	<u>-.038</u>	<u>-.062</u>	<u>.482</u>	<u>-.044</u>	<u>-.092</u>	<u>-.110</u>	<u>.028</u>
MCBA3	.550	-.038	1.000	.480	.153	.480	.193	.481	.406
MCBA4	.383	-.062	.480	1.000	.001	.485	.177	.429	.425
MCBA5	<u>.062</u>	<u>.482</u>	<u>.153</u>	<u>.001</u>	1.000	<u>-.017</u>	<u>-.132</u>	<u>.066</u>	<u>.065</u>
MCBA6	.415	-.044	.480	.485	-.017	1.000	.189	.475	.471
MCBA7	.207	-.092	.193	.177	-.132	.189	1.000	.233	.185
MCBA8	.549	-.110	.481	.429	.066	.475	.233	1.000	.488
MCBA9	.397	.028	.406	.425	.065	.471	.185	.488	1.000

Note. MCBA=Chinese Cultural Beliefs about Adversity Scale completed by mothers.

Table 8.35. Inter-correlations among the measures derived from FAQ

	Strategy use	Ability	Effort	Luck	FAQ
Strategy use	1.000				
Ability	.458***	1.000			
Effort	.512***	.186*	1.000		
Luck	.193*	.535***	-.095ns	1.000	
FAQ	.755***	.803***	.539***	.648***	1.000

*Significant at the Bonferroni-corrected alpha level $p < .005$; *** $p < .001$, ns=not significant.
FAQ=Fathers' Attributions Questionnaire.

Table 8.36. Inter-correlations among the measures derived from MAQ

	Strategy use	Ability	Effort	Luck	MAQ
Strategy use	1.000				
Ability	.469***	1.000			
Effort	.491***	.274***	1.000		
Luck	.144 ^a	.405***	-.055ns	1.000	
MAQ	.734***	.797***	.596***	.597***	1.000

* Significant at the Bonferroni-corrected alpha level $p < .005$; *** $p < .001$, ^a=borderline significance, $p < .05$ per test, ns=not significant.

MAQ=Mothers' Attributions Questionnaire.

Table 8.37. Inter-correlations among the measures derived from FPS

	RES	DEM	FPS
RES	1.000		
DEM	.530***	1.000	
FPS	.871***	.878***	1.000

*** $p < .001$, *Significant at the Bonferroni-corrected alpha level $p < .02$.

Note. RES=Parental responsiveness; DEM=Parental demandingness; FPS=Paternal Parenting Style Scale completed by fathers

Table 8.38. Inter-correlations among the measures derived from MPS

	RES	DEM	MPS
RES	1.000		
DEM	.358***	1.000	
MPS	.821***	.811***	1.000

*** $p < .001$, *Significant at the Bonferroni-corrected alpha level $p < .02$.

Note. RES=Parental responsiveness; DEM=Parental demandingness; MPS=Maternal Parenting Style Scale completed by mothers

Table 8.39. Inter-correlations among the measures derived from APPS

	RES	DEM	APPS
RES	1.000		
DEM	.586***	1.000	
APPS	.903***	.877***	1.000

*** $p < .001$, *Significant at the Bonferroni-corrected alpha level $p < .02$.

Note. RES=Parental responsiveness; DEM=Parental demandingness; APPS=Paternal Parenting Style Scale completed by adolescents.

Table 8.40. Inter-correlations among the measures derived from AMPS

	RES	DEM	AMPS
RES	1.000		
DEM	.504***	1.000	
AMPS	.888***	.845***	1.000

*** $p < .001$, *Significant at the Bonferroni-corrected alpha level $p < .02$.

Note. RES=Parental responsiveness; DEM=Parental demandingness; AMPS=Maternal Parenting Style Scale completed by adolescents.

Table 8.41. Inter-correlations among the measures derived from FCS

	FCS1	FCS2	FCS3	FCS4	FCS5	FCS6	FCS7	FCS8	FCS9	FCS10	FCS11	FCS12	FCS
FCS1	1.000												
FCS2	.588***	1.000											
FCS3	.593***	.440***	1.000										
FCS4	.260***	.329***	.268***	1.000									
FCS5	.363***	.393***	.344***	.681***	1.000								
FCS6	.406***	.421***	.305***	.296***	.393***	1.000							
FCS7	.239***	.274***	.210***	.289***	.256***	.252***	1.000						
FCS8	.405***	.398***	.336***	.254***	.258***	.291***	.311***	1.000					
FCS9	.415***	.382***	.386***	.284***	.335***	.319***	.295***	.485***	1.000				
FCS10	.222***	.279***	.094ns	.247***	.233***	.274***	.506***	.287***	.334***	1.000			
FCS11	.234***	.346***	.229***	.175ns	.224***	.256***	.401***	.361***	.334***	.433***	1.000		
FCS12	.321***	.402***	.411***	.179ns	.218***	.408***	.263***	.435***	.367***	.207*	.370***	1.000	
FCS	.650***	.691***	.588***	.607***	.659***	.608***	.602***	.628***	.650***	.582***	.582***	.580***	1.000

Note. FCS=Paternal Control Scale completed by fathers.

A two-tailed, multistage Bonferroni procedure was used to analyze the data. pFW is based on the familywise Type I error rate, pT is the Type I error rate per test. * $pFW < .05$, $pT < .01$. *** $p < .001$, ns=not significant.

Table 8.42. Inter-correlations among the measures derived from MCS

	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9	MCS10	MCS11	MCS12	MCS
MCS1	1.000												
MCS2	.568***	1.000											
MCS3	.530***	.480***	1.000										
MCS4	.357***	.485***	.285***	1.000									
MCS5	.394***	.428***	.319***	.716***	1.000								
MCS6	.434***	.416***	.444***	.416***	.481***	1.000							
MCS7	.376***	.402***	.335***	.355***	.314***	.400***	1.000						
MCS8	.374***	.308***	.421***	.266***	.302***	.390***	.401***	1.000					
MCS9	.330***	.402***	.377***	.382***	.394***	.366***	.371***	.399***	1.000				
MCS10	.252***	.291***	.168ns	.397***	.279***	.381***	.373***	.187ns	.420***	1.000			
MCS11	.300***	.347***	.212***	.329***	.302***	.340***	.404***	.313***	.387***	.399	1.000		
MCS12	.378***	.357***	.458***	.234***	.320***	.370***	.320***	.443***	.366***	.234***	.328***	1.000	
MCS	.641***	.696***	.605***	.697***	.689***	.692***	.655***	.592***	.667***	.590***	.599***	.587***	1.000

Note. MCS=Maternal Control Scale completed by mothers.

A two-tailed, multistage Bonferroni procedure was used to analyze the data. pFW is based on the familywise Type I error rate, pT is the Type I error rate per test. * $pFW < .05$, $pT < .01$. *** $p < .001$, ns=not significant.

Table 8.43. Inter-correlations among the measures derived from APCS

	APCS1	APCS2	APCS3	APCS4	APCS5	APCS6	APCS7	APCS8	APCS9	APCS10	APCS11	APCS12	APCS
APCS1	1.000												
APCS2	.723***	1.000											
APCS3	.610***	.618***	1.000										
APCS4	.214***	.332***	.293***	1.000									
APCS5	.315***	.334***	.268***	.735***	1.000								
APCS6	.265***	.295***	.228***	.317***	.398***	1.000							
APCS7	.261***	.289***	.248***	.334***	.286***	.455***	1.000						
APCS8	.424***	.404***	.538***	.267***	.253***	.311***	.282***	1.000					
APCS9	.400***	.332***	.421***	.360***	.319***	.332***	.330***	.559***	1.000				
APCS10	.325***	.366***	.279***	.324***	.281***	.241***	.413***	.350***	.389***	1.000			
APCS11	.435***	.400***	.433***	.250***	.345***	.376***	.357***	.458***	.506***	.327***	1.000		
APCS12	.499***	.498***	.542***	.281***	.381***	.219***	.171ns	.391***	.387***	.207*	.420***	1.000	
APCS	.678***	.696***	.680***	.628***	.649***	.583***	.589***	.673***	.689***	.596***	.680***	.618***	1.000

Note. APCS= Perceived Paternal Control Scale completed by adolescents.

A two-tailed, multistage Bonferroni procedure was used to analyze the data. pFW is based on the familywise Type I error rate, pT is the Type I error rate per test. * $pFW < .05$, $pT < .01$. *** $p < .001$, ns=not significant.

Table 8.44. Inter-correlations among the measures derived from AMCS

	AMCS1	AMCS2	AMCS3	AMCS4	AMCS5	AMCS6	AMCS7	AMCS8	AMCS9	AMCS10	AMCS11	AMCS12	AMCS
AMCS1	1.000												
AMCS2	.830***	1.000											
AMCS3	.719***	.742***	1.000										
AMCS4	.354***	.340***	.265***	1.000									
AMCS5	.444***	.407***	.328***	.816***	1.000								
AMCS6	.347***	.349***	.284***	.289***	.383***	1.000							
AMCS7	.269***	.264***	.273***	.297***	.287***	.393***	1.000						
AMCS8	.363***	.369***	.448***	.315***	.317***	.273***	.349***	1.000					
AMCS9	.448***	.412***	.446***	.289***	.297***	.227***	.312***	.515***	1.000				
AMCS10	.381***	.360***	.311***	.392***	.379***	.253***	.464***	.304***	.419***	1.000			
AMCS11	.494***	.509***	.461***	.277***	.347***	.313***	.327***	.399***	.498***	.354***	1.000		
AMCS12	.532***	.556***	.622***	.265***	.261***	.221***	.259***	.513***	.455***	.270***	.471***	1.000	
AMCS	.737***	.726***	.695***	.656***	.692***	.549***	.595***	.648***	.667***	.637***	.665***	.649***	1.000

Note. AMCS= Perceived Maternal Control Scale completed by adolescents.

A two-tailed, multistage Bonferroni procedure was used to analyze the data. pFW is based on the familywise Type I error rate, pT is the Type I error rate per test. * $pFW < .05$, $pT < .01$. *** $p < .001$, ns=not significant.

Table 8.45. Inter-correlations among the measures derived from FFAI

	MU	COM	CH	PCONC	PCONT	FFAI
MU	1.000					
COM	.824***	1.000				
CH	.549***	.473***	1.000			
PCONC	.493***	.485***	.440***	1.000		
PCONT	.314***	.254***	.526***	.296***	1.000	
FFAI	.927***	.879***	.745***	.627***	.513***	1.000

* $p < .003$; *** $p < .001$

Note. Mu=Mutuality; COM=Communication, CH=Conflicts and Harmony; PCONC=Parental Concern; PCONT=Parental Control; FFAI=Family Assessment Inventory completed by fathers.

Table 8.46. Inter-correlations among the measures derived from MFAI

	MU	COM	CH	PCONC	PCONT	MFAI
MU	1.000					
COM	.810***	1.000				
CH	.502***	.448***	1.000			
PCONC	.494***	.517***	.558***	1.000		
PCONT	.284***	.175ns	.424***	.269***	1.000	
MFAI	.893***	.863***	.725***	.649***	.451***	1.000

* $p < .003$; *** $p < .001$

Note. Mu=Mutuality; COM=Communication, CH=Conflicts and Harmony; PCONC=Parental Concern; PCONT=Parental Control; MFAI=Family Assessment Inventory completed by mothers.

Table 8.47. Inter-correlations among the measures derived from AFAI

	MU	COM	CH	PCONC	PCONT	AFAI
MU	1.000					
COM	.819***	1.000				
CH	.591***	.560***	1.000			
PCONC	.485***	.466***	.529***	1.000		
PCONT	.366***	.354***	.586***	.372***	1.000	
AFAI	.922***	.896***	.784***	.631***	.575***	1.000

* $p < .003$; *** $p < .001$

Note. Mu=Mutuality; COM=Communication, CH=Conflicts and Harmony; PCONC=Parental Concern; PCONT=Parental Control; AFAI=Family Assessment Inventory completed by adolescents.

Table 8.48. Item-total statistics of SOAM

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	SOAM
1	1.000																														
2	.513*	1.000																													
3	.394*	.416*	1.000																												
4	.534*	.426*	.459*	1.000																											
5	.671*	.503*	.430*	.639*	1.000																										
6	.549*	.431*	.470*	.582*	.683*	1.000																									
7	.447*	.486*	.466*	.335*	.399*	.370*	1.000																								
8	.492*	.511*	.490*	.339*	.473*	.470*	.623*	1.000																							
9	.337*	.279*	.328*	.249*	.290*	.344*	.196n	.358*	1.000																						
10	.283*	.203*	.309*	.351*	.323*	.387*	.269*	.427*	.397*	1.000																					
11	.553*	.383*	.394*	.529*	.646*	.630*	.370*	.542*	.395*	.533*	1.000																				
12	.531*	.368*	.397*	.471*	.584*	.680*	.289*	.481*	.443*	.474*	.741*	1.000																			
13	.274*	.254*	.331*	.323*	.241*	.318*	.281*	.396*	.393*	.434*	.361*	.399*	1.000																		
14	.254*	.334*	.274*	.295*	.260*	.312*	.300*	.324*	.296*	.265*	.275*	.278*	.461*	1.000																	
15	.431*	.448*	.578*	.327*	.378*	.421*	.571*	.592*	.344*	.371*	.423*	.438*	.447*	.458*	1.000																
16	.447*	.506*	.537*	.420*	.525*	.523*	.516*	.534*	.373*	.309*	.510*	.465*	.388*	.513*	.657*	1.000															
17	.351*	.245*	.284*	.376*	.384*	.408*	.206*	.314*	.310*	.415*	.392*	.438*	.345*	.469*	.372*	.418*	1.000														
18	.467*	.427*	.500*	.381*	.488*	.450*	.427*	.489*	.262*	.289*	.484*	.441*	.376*	.305*	.489*	.546*	.291*	1.000													
19	.350*	.401*	.446*	.319*	.392*	.407*	.354*	.421*	.232*	.242*	.339*	.322*	.337*	.381*	.387*	.501*	.396*	.584*	1.000												
20	.352*	.239*	.395*	.333*	.286*	.400*	.228*	.345*	.267*	.399*	.301*	.320*	.421*	.304*	.345*	.311*	.379*	.455*	.598*	1.000											
21	.283*	.224*	.291*	.262*	.314*	.424*	.361*	.398*	.362*	.397*	.421*	.310*	.416*	.357*	.334*	.403*	.412*	.339*	.437*	.464*	1.000										
22	.301*	.402*	.387*	.232*	.328*	.387*	.366*	.438*	.274*	.207*	.337*	.334*	.351*	.384*	.462*	.460*	.305*	.460*	.430*	.418*	.441*	1.000									
23	.264*	.295*	.442*	.288*	.301*	.297*	.317*	.404*	.362*	.334*	.370*	.371*	.361*	.378*	.453*	.444*	.326*	.334*	.371*	.315*	.394*	.315*	1.000								
24	.292*	.277*	.362*	.309*	.346*	.332*	.276*	.353*	.377*	.436*	.420*	.443*	.443*	.326*	.398*	.383*	.288*	.474*	.389*	.355*	.514*	.349*	.385*	1.000							
25	.456*	.374*	.355*	.467*	.559*	.500*	.289*	.441*	.338*	.372*	.657*	.534*	.299*	.256*	.310*	.395*	.386*	.508*	.318*	.246*	.424*	.429*	.286*	.505*	1.000						
26	.350*	.291*	.330*	.288*	.357*	.356*	.246*	.338*	.457*	.336*	.386*	.378*	.398*	.320*	.350*	.377*	.344*	.371*	.319*	.313*	.341*	.362*	.368*	.430*	.413*	1.000					
27	.398*	.407*	.431*	.376*	.426*	.505*	.381*	.450*	.368*	.427*	.486*	.497*	.455*	.389*	.460*	.448*	.365*	.505*	.486*	.434*	.447*	.524*	.439*	.452*	.463*	.525*	1.000				
28	.191n	.175n	.361*	.213*	.213*	.268*	.178n	.329*	.277*	.418*	.303*	.337*	.449*	.414*	.329	.353*	.378*	.323*	.389*	.476*	.384*	.270*	.394*	.388*	.234*	.513*	.468*	1.000			
29	-.042n	-.004n	.167n	.065n	.045n	.062n	.129n	.220*	.225*	.392*	.201n	.186n*	.327*	.200n	.135n	.094n	.218*	.164n	.208n	.231*	.222*	.079n	.269*	.308*	.101n	.298*	.280*	.561*	1.000		
30	.210*	.302*	.272*	.213*	.198n	.232*	.311*	.358*	.238*	.315*	.287*	.199n	.288*	.362*	.363*	.375*	.220*	.330*	.306*	.260*	.436*	.419*	.321*	.435*	.363*	.355*	.402*	.356*	.247*	1.000	
SOAM	.624*	.578*	.650*	.600*	.666*	.693*	.570*	.703*	.562*	.615*	.727*	.699*	.622*	.572*	.686*	.721*	.589*	.672*	.628*	.586*	.627*	.604*	.591*	.641*	.638*	.606*	.723*	.594*	.359*	.527*	1.000

Note. SOAM= Social Oriented Achievement Motivation Scale completed by adolescents.

A two-tailed, multistage Bonferroni procedure was used to analyze the data. pFW is based on the familywise Type I error rate, pT is the Type I error rate per test. * $pFW < .05$, $pT < .01$. n=not significant.

Table 8.49. Inter-correlations among the measures derived from PYD

	SP	RE	CC	SD	CP1	BF	SE	PYD
SP	1.000							
RE	.554***	1.000						
CC	.420***	.662***	1.000					
SD	.411***	.639***	.668***	1.000				
CP1	.460***	.525***	.553***	.673***	1.000			
BF	.494***	.579***	.588***	.659***	.691***	1.000		
SE	.428***	.513***	.539***	.633***	.587***	.644***	1.000	
PYD	.703***	.804***	.792***	.836***	.812***	.842***	.757***	1.000

*** $p < .001$ A two-tailed, multistage Bonferroni procedure was used to analyze the data. pFW is based on the familywise Type I error rate, pT is the Type I error rate per test. * $pFW < .05$, $pT < .01$.

Note. SP=Spirituality; RE=Resilience; CC=Cognitive Competence; SD = Self-Determination; CPI=Clear and Positive Identity; BF=Beliefs in the Future; SE=Self- Efficacy, PYD=Chinese Positive Youth Development Scale (7 subscales selected)

Table 8.50. Correlations between parental beliefs measures across fathers and mothers

		Fathers	Mothers
		FCBA	MCBA
Fathers	FECF	.282***	-
	FAQ-E	.192**	-
Mother	MECF	-	.278***
	MAQ-E	-	.268***

** $p < .01$. *** $p < .001$.

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. FECF=Paternal Expectations of Children's Future Scale completed by fathers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale.

Table 8.51. Correlations of paternal beliefs and family processes reported by fathers

		Father		
		FCBA	FAQ-E	FECF
Father	FPS	.238* (.207*) ^a	.201* (.202*) ^a	.201* (.197*) ^a
	FCS	.081ns	.303*	.487*
	FFAI	.256*	.176*	.313*
	FSA	.197*	.301*	.537*

Note 1. * $p < .0042$ (Bonferroni correction was adopted to guard against familywise Type I error).

Note 2. ^a The number in parentheses was the correlation coefficient was calculated with age and educational level of adolescents, and number of children having controlled.

Note 3. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. FPS= Paternal Parenting Style Scale completed by fathers. FCS= Paternal Control Scale completed by fathers. FFAI=Family Assessment Inventory completed by fathers. FSA= Paternal Sacrifice for Children's Education Scale

Table 8.52. Correlations of maternal beliefs and family processes reported by mothers

		Mother		
		MCBA	MAQ-E	MECF
Mother	MPS	.147ns (.133ns) ^a	.039ns (.048ns) ^a	.164ns (.172*) ^a
	MCS	.141ns	.299*	.530*
	MFAI	.249*	.102ns	.223*
	MSA	.172*(.168 [#]) ^b	.301*(.283*) ^b	.593*(.586*) ^b

Note 1. * $p < .0042$ (Bonferroni correction was adopted to guard against familywise Type I error). [#] $p = .005$ marginal significant.

Note 2. ^a The number in parentheses was the correlation coefficient calculated with age and educational level of adolescents having controlled. ^b The number in parentheses was the correlation coefficient calculated with mothers' duration of stay in Hong Kong having controlled.

Note 3. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. MECF=Maternal Expectations of Children's Future Scale completed by mothers. MPS= Maternal Parenting Style Scale completed by mothers. MCS= Maternal Control Scale completed by mothers. MFAI=Family Assessment Inventory completed by mothers. MSA= Maternal Sacrifice for Children's Education Scale.

Table 8.53. Standard multiple regression of fathers' family processes by paternal beliefs

		Multiple R	Standardized Regression Coefficient (β)			R^2	Adjusted R^2
		Father					
			FCBA	FAQ-E	FECF		
Father	FPS	.303***	.181**	.132*	.109ns	.092	.082
	FCS	.519***	-.082ns	.178**	.455***	.269	.261
	FFAI	.364***	.175**	.067ns	.243***	.133	.123
	FSA	.556***	.033ns	.145**	.483***	.309	.302

* $p < .05$, ** $p < .01$, *** $p < .001$

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. FPS= Paternal Parenting Style Scale completed by fathers. FCS= Paternal Control Scale completed by fathers. FFAI=Family Assessment Inventory completed by fathers. FSA= Paternal Sacrifice for Children's Education Scale.

Table 8.54. Standard multiple regression of mothers' family processes by maternal beliefs

		Multiple R	Standardized Regression Coefficient (β)			R^2	Adjusted R^2
		Mother					
			MCBA	MAQ-E	MECF		
Mother	MPS	.200*	.119ns	-.049ns	.149*	.040	.029
	MCS	.542***	-.029ns	.123*	.492***	.293	.286
	MFAI	.296***	.205**	-.017ns	.173**	.088	.078
	MSA	.599***	-.009ns	.095ns	.559***	.359	.352

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. MECF=Maternal Expectations of Children's Future Scale completed by mothers. MPS= Maternal Parenting Style Scale completed by mothers. MCS= Maternal Control Scale completed by mothers. MFAI=Family Assessment Inventory completed by mothers. MSA= Maternal Sacrifice for Children's Education Scale.

Table 8.55. Correlation coefficients of paternal beliefs reported by fathers and family processes perceived by adolescents.

		Father		
		FCBA	FAQ-E	FECF
Adolescent	APPS	.037ns	.021ns	-.019ns
	APCS	.061ns	.074ns	.113ns
	AFAI	.078ns	-.004ns	.065ns
	APSA	.050ns	.016ns	.042ns

Note 1. * $p < .0042$ (Bonferroni correction was adopted to guard against familywise Type I error).

Note 2. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. FECF=Paternal Expectations of Children's Future Scale completed by fathers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. APPS= Perceived Paternal Parenting Style Scale completed by adolescents. APCS=Perceived Paternal Control Scale completed by adolescents. AFAI =Family Assessment Inventory completed by adolescents. APSA= Perceived Paternal Sacrifice for Children's Education Scale completed by adolescents.

Table 8.56. Correlation coefficients of maternal beliefs reported by mothers and family processes perceived by adolescents

		Mother		
		MCBA	MAQ-E	MECF
Adolescent	AMPS	.048ns	.025ns	.102ns
	AMCS	.029ns	.023ns	.099ns
	AFAI	.049ns	.077ns	.117ns
	AMSA	.098ns	-.040ns	.032ns

Note 1. * $p < .0042$ (Bonferroni correction was adopted to guard against familywise Type I error).

Note 2. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. MRES= Maternal Responsiveness Scale completed by mothers. MDEM= Maternal Demandingness Scale completed by mothers. MCS= Maternal Control Scale completed by mothers. MFAI=Family Assessment Inventory completed by mothers. MSA= Maternal Sacrifice for Children's Education Scale. AMRES= Perceived Maternal Responsiveness Scale completed by adolescents. AMDEM= Perceived Maternal Demandingness Scale completed by adolescents. AMCS=Perceived Maternal Control Scale completed by adolescents. AFAI =Family Assessment Inventory completed by adolescents. AMSA= Perceived Maternal Sacrifice for Children's Education Scale completed by adolescents.

Table 8.57. Correlations between relative family processes and adolescent development perceived by adolescents experiencing economic disadvantage

		Adolescents						
		Perceived parental parenting style		Perceived parental control		Perceived family functioning	Perceived parental sacrifice	
		APPS	AMPS	APCS	AMCS	AFAI	APSA	AMSA
Adolescents	SOAM	.253*** (.222***) ^a	.259*** (.225***) ^a	.308***	.393***	.220*** (.203**) ^b	.425***	.367***
	PYD	.332*** (.315***) ^a	.298*** (.278***) ^a	.327***	.345***	.569*** (.556***) ^b	.381***	.281***

Note 1. * $p < .004$, *** $p < .001$

Note 2. ^a The number in parentheses was the correlation coefficient was calculated with age and educational level of adolescents having controlled. ^b The number in parentheses was the correlation coefficient was calculated with status of CSSA recipients having controlled.

Note 3. APPS= Perceived Paternal Parenting Style Scale completed by adolescents. AMPS= Perceived Maternal Parenting Style Scale completed by adolescents. APCS= Perceived Paternal Control Scale completed by adolescents. AMCS= Perceived Maternal Control Scale completed by adolescents. APSA= Perceived Paternal Sacrifice for Children's Education Scale. AMSA= Perceived Maternal Sacrifice for Children's Education Scale. AFAI= Perceived Family Assessment Inventory. SOAM= Social Oriented Achievement Motivation Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.58. Prediction of perceived parenting style and practices on achievement motivation and psychological competence of adolescents experiencing economic disadvantage

psychological competence of adolescents experiencing economic disadvantage								
		Multiple R	Standardized Regression Coefficient (β)				R^2	Adjusted R^2
		Adolescents						
		Perceived parenting style		Perceived parental control				
			APPS	AMPS	APCS	AMCS		
Adolescents	SOAM	.433***	.089ns	.088ns	.074ns	.304***	.188	.176
	PYD	.440***	.177*	.088ns	.101ns	.219**	.193	.181

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant.

Note. APPS= Perceived Paternal Parenting Style Scale completed by adolescents. AMPS= Perceived Maternal Parenting Style Scale completed by adolescents. APCS= Perceived Paternal Control Scale completed by adolescents. AMCS= Perceived Maternal Control Scale completed by adolescents. APSA= Perceived Paternal Sacrifice for Children's Education Scale. AMSA= Perceived Maternal Sacrifice for Children's Education Scale. AFAI= Perceived Family Assessment Inventory. SOAM= Social Oriented Achievement Motivation Scale. PYD=Chinese Positive Youth Development Scale (7 subscales selected).

Table 8.59. Prediction of perceived parental sacrifice on achievement motivation and psychological competence of adolescents experiencing economic disadvantage

		Multiple R	Standardized Regression Coefficient (β)		R^2	$Adjusted\ R^2$
		Adolescents				
		Perceived parental sacrifice for children's education				
		APSA	AMSA			
Adolescents	SOAM	.469***	.239***	.292***	.220	.215
	PYD	.390***	.324***	.101ns	.152	.146

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. APSA=Perceived Paternal Sacrifice for Children's Education Scale completed by adolescents. AMSA=Perceived Maternal Sacrifice for Children's Education Scale completed by adolescents. SOAM= Social Oriented Achievement Motivation Scale. SOAM= Social Oriented Achievement Motivation Scale. PYD=Chinese Positive Youth Development Scale (7 subscales selected).

Table 8.60. Prediction of paternal and maternal family processes on adolescent development in economic disadvantaged families

		Multiple R	Standardized Regression Coefficient (β)			R^2	Adjusted R^2
		Adolescents					
		Paternal parenting style	Paternal control	Paternal sacrifice			
		APPS	APCS	APSA			
Adolescents	SOAM	.425***	-.021ns	.159*	.340***	.180	.171
	PYD	.427***	.120ns	.166*	.231**	.182	.173
		Maternal parenting style	Maternal control	Maternal sacrifice			
		AMPS	AMCS	AMSA			
Adolescents	SOAM	.487***	.067ns	.246***	.290***	.238	.229
	PYD	.409***	.184**	.246***	.099ns	.167	.158

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. APPS= Perceived Paternal Parenting Style Scale completed by adolescents. APCS= Perceived Paternal Control Scale completed by adolescents. APSA= Perceived Paternal Sacrifice for Children's Education Scale. AMPS= Perceived Maternal Parenting Style Scale completed by adolescents. AMCS= Perceived Maternal Control Scale completed by adolescents. AMSA= Perceived Maternal Sacrifice for Children's Education Scale. SOAM= Social Oriented Achievement Motivation Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.61. Prediction of overall family processes on adolescent development in economic disadvantaged families

		Disadvantaged families		Multiple R		Standardized Regression Coefficient (β)					R^2	$Adjusted R^2$
				Adolescents								
				Parenting style		Parental control		Family functioning	Parental sacrifice			
				APPS	AMPS	APCS	AMCS	AFAI	APSA	AMSA		
Adolescents	SOAM	.527***	-.044ns	.079ns	-.017ns	.269***	-.028ns	.282***	.143ns	.278	.259	
	PYD	.620***	-.103ns	-.011ns	.044ns	.192**	.501***	.164*	-.020ns	.385	.369	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. APPS= Perceived Paternal Parenting Style Scale completed by adolescents. AMPS= Perceived Maternal Parenting Style Scale completed by adolescents. APCS= Perceived Paternal Control Scale completed by adolescents. AMCS= Perceived Maternal Control Scale completed by adolescents. APSA= Perceived Paternal Sacrifice for Children's Education Scale. AMSA= Perceived Maternal Sacrifice for Children's Education Scale. AFAI= Perceived Family Assessment Inventory. SOAM= Social Oriented Achievement Motivation Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.62. Correlations between relative family processes perceived by fathers and mothers and adolescent development experiencing economic disadvantage

		Parents							
		Parental parenting style		Parental control		Family functioning		Parental sacrifice	
		PPS	MPS	PCS	MCS	FFAI	MFAI	PSA	MSA
Adolescents	SOAM	.062ns (.027ns) ^a	.190* (.154ns) ^b	.193*	.171*	.021ns	.083ns	.231***	.132ns (.123ns) ^c
	PYD	.170* (.131ns) ^a	.150ns (.124ns) ^b	.097ns	.135ns	.185*	.242***	.215***	.133ns (.127ns) ^c

Note 1. Bonferroni correction was used to evaluate the significance of the correlations and * indicates that the r value is significant when familywise Type I error. $pFW < .05$, $pT < .00625$. *** $p < .001$.

Note 2. ^a The number in parentheses was the correlation coefficient was calculated with age, educational level of adolescents and number of children having controlled. ^b The number in parentheses was the correlation coefficient was calculated with age and educational level of adolescents having controlled. ^c The number in parentheses was the correlation coefficient calculated with mothers' duration of stay in Hong Kong having controlled.

Note 3. APPS= Perceived Paternal Parenting Style Scale completed by adolescents. AMPS= Perceived Maternal Parenting Style Scale completed by adolescents. APCS= Perceived Paternal Control Scale completed by adolescents. AMCS= Perceived Maternal Control Scale completed by adolescents. APSA= Perceived Paternal Sacrifice for Children's Education Scale. AMSA= Perceived Maternal Sacrifice for Children's Education Scale. AFAI= Perceived Family Assessment Inventory. SOAM= Social Oriented Achievement Motivation Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.63. Prediction of paternal and maternal family processes on adolescent development in economic disadvantaged families

		Multiple R	Standardized Regression Coefficient (β)				R^2	Adjusted R^2
			Paternal parenting style FPS	Fathers' perspective Paternal control FCS	Family functioning FFAI	Paternal sacrifice FSA		
Adolescents	SOAM	.264**	.023ns	.123ns	-.106ns	.203**	.070	.056
	PYD	.250**	.061ns	-.029ns	.097ns	.172*	.063	.049
			Maternal parenting style MPS	Mothers' perspective Maternal control MCS	Family functioning MFAI	Maternal sacrifice MSA		
Adolescents	SOAM	.242**	.173**	.134ns	-.021ns	.035ns	.059	.045
	PYD	.265**	.059ns	.070ns	.196**	.032ns	.070	.056

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FPS= Paternal Parenting Style Scale completed by fathers. FCS= Paternal Control Scale completed by fathers. FFAI= Perceived Family Assessment Inventory completed by fathers. FSA= Paternal Sacrifice for Children's Education Scale completed by fathers. MPS= Maternal Parenting Style Scale completed by mothers. MCS= Maternal Control Scale completed by mothers. MFAI= Perceived Family Assessment Inventory completed by mothers. MSA= Maternal Sacrifice for Children's Education Scale completed by mothers. SOAM= Social Oriented Achievement Motivation Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.64. Prediction of overall family processes on adolescent development in economic disadvantaged families

		Multiple R	Standardized Regression Coefficient (β)								R^2	Adjusted R^2
			Parents									
			Parenting style		Parental control		Family functioning		Parental sacrifice			
			FPS	MPS	FCS	MCS	FFAI	MFAI	PSA	MSA		
Adolescents	SOAM	.330***	-.036ns	.174**	.100ns	.107ns	-.106ns	.007ns	.196**	-.021ns	.109	.082
	PYD	.316***	.035ns	.026ns	-.063ns	.100ns	.040ns	.161*	.175*	-.011ns	.100	.073

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FPS= Paternal Parenting Style Scale completed by fathers. FCS= Paternal Control Scale completed by fathers. FFAI= Perceived Family Assessment Inventory completed by fathers. FSA= Paternal Sacrifice for Children's Education Scale completed by fathers. MPS= Maternal Parenting Style Scale completed by mothers. MCS= Maternal Control Scale completed by mothers. MFAI= Perceived Family Assessment Inventory completed by mothers. MSA= Maternal Sacrifice for Children's Education Scale completed by mothers. SOAM= Social Oriented Achievement Motivation Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.65. Standard multiple regression of fathers' family processes by paternal beliefs

		Multiple R	Standardized Regression Coefficient (β)						R^2	Adjusted R^2
			Chinese cultural beliefs in adversity	Parental attribution on children's success and failure to effort		Parental expectations of children's future				
			FCBA	MCBA	FAQ-E	MAQ-E	FECF	MECF		
Adolescent	SOAM	.216*	-.006ns	-.060ns	.024ns	-.126ns	.140*	.066ns	.047	.025
	PYD	.220*	.048ns	-.010ns	-.027ns	.072ns	.143*	.090ns	.049	.027

* $p < .05$, ** $p < .01$, *** $p < .001$, ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers SOAM= Social Oriented Achievement Motivation Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.66. Direct, indirect and total effects of parental beliefs on achievement motivation (SOAM) of adolescents via paternal control perceived by fathers (FCS)

Path starting	Direct effect to SOAM	Direct effect to FCS	Indirect effect to SOAM via FCS	Total
FCBA	-.006ns	-.072ns	.005ns	-0.001
MCBA	-.060ns	-.094ns	-.046ns	-0.106
FAQ-E	.024ns	.180**	-.003ns	0.021
MAQ-E	-.126ns	.008ns	-.127ns	-0.253
FECF	.140*	.456***	.071ns	0.211
MECF	.066ns	.028ns	.119ns	0.185
Multiple R	.216*	.526***	.252*	
R^2	.047	.277	.063	
Adjusted R^2	.025	.261	.039	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. FCS= Paternal Control Scale completed by fathers. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.67. Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via paternal control perceived by fathers (FCS)

	Direct effect on SOAM		Direct effect on FCS		Sobel test statistics z-value
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	
FECF	.339	.159	.196	.025	2.057*

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. FCS= Maternal Control Scale completed by fathers. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.68. Direct, indirect and total effects of parental beliefs on psychological competence (PYD) of adolescents via paternal control perceived by fathers (FCS)

Path starting	Direct effect to PYD	Direct effect to FCS	Indirect effect to PYD via FCS	Total
FCBA	.048ns	-.072ns	.049ns	0.097
MCBA	-.010ns	-.094ns	-.009ns	-0.019
FAQ-E	-.027ns	.180**	-.030ns	-0.057
MAQ-E	.072ns	.008ns	.072ns	0.144
FECF	.143*	.456***	.136ns	0.279
MECF	.090ns	.028ns	.089ns	0.179
Multiple R	.220*	.526***	.220ns	
R ²	.049	.277	.049	
Adjusted R ²	.027	.261	.024	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. FCS= Paternal Control Scale completed by fathers. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.69. Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via paternal control perceived by fathers (FCS)

	Direct effect on PYD		Direct effect on FCS		Sobel test statistics z-value
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	
FECF	.210	.096	.196	.025	2.107*

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. FCS= Paternal Control Scale completed by fathers. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.70. Direct, indirect and total effects of parental beliefs on psychological competence (PYD) of adolescents via perceived family functioning by fathers (FFAI)

Path starting	Direct effect to PYD	Direct effect to FFAI	Indirect effect to PYD via FFAI	Total
FCBA	.048ns	.179**	.021ns	0.069
MCBA	-.010ns	-.022ns	-.007ns	-0.017
FAQ-E	-.027ns	.085ns	-.040ns	-0.067
MAQ-E	.072ns	.010ns	.071ns	0.143
FECF	.143*	.261***	.104ns	0.247
MECF	.090ns	-.101ns	.105ns	0.195
Multiple R	.220*	.378***	.261*	
R ²	.049	.143	.068	
Adjusted R ²	.027	.124	.044	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. FFAI=Family Assessment Inventory completed by fathers. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.71. Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via perceived family functioning by fathers (FFAI)

	Direct effect on PYD		Direct effect on FFAI		Sobel test statistics z-value
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	
FECF	.210	.096	.462	.110	1.940*

* $p < .05$ for one-tailed test, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. FFAI=Family Assessment Inventory completed by fathers. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.72. Direct, indirect and total effects of parental beliefs on psychological competence (PYD) of adolescents via perceived family functioning by mothers (MFAI)

Path starting	Direct effect to PYD	Direct effect to MFAI	Indirect effect to PYD via MFAI	Total
FCBA	.048ns	.004ns	.047ns	0.12
MCBA	-.010ns	.197**	-.052ns	-0.085
FAQ-E	-.027ns	.015ns	-.030ns	-0.1
MAQ-E	.072ns	-.020ns	.077ns	0.221
FECF	.143*	.102ns	.122ns	0.395
MECF	.090ns	.149*	.058ns	0.237
Multiple R	.220*	.314***	.299**	
R^2	.049	.099	.089	
Adjusted R^2	.027	.079	.066	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. MFAI=Family Assessment Inventory completed by mothers. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.73. Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via perceived family functioning by mothers (MFAI)

	Direct effect on PYD		Direct effect on MFAI		Sobel test statistics z-value
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	
FECF	.210	.096	.180	.113	1.288ns

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MFAI=Family Assessment Inventory completed by mothers. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.74. Direct, indirect and total effects of parental beliefs on achievement motivation (SOAM) of adolescents via paternal sacrifice for children's education perceived by fathers (FSA)

Path starting	Direct effect to SOAM	Direct effect to FSA	Indirect effect to SOAM via FSA	Total
FCBA	-.006ns	.036ns	-.013ns	-0.019
MCBA	-.060ns	.011ns	-.063ns	-0.123
FAQ-E	.024ns	.155**	-.008ns	0.016
MAQ-E	-.126ns	-.067ns	-.112ns	-0.238
FECF	.140*	.469***	.045ns	0.185
MECF	.066ns	.063	.111ns	0.177
Multiple R	.216*	.561***	.274**	
R^2	.047	.315	.075	
Adjusted R^2	.025	.299	.051	
Adjusted R^2	.027	.079	.066	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. FSA= Paternal Sacrifice for Children's Education Scale. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.75. Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via paternal sacrifice for children's education perceived by fathers (FSA)

	Direct effect on SOAM		Direct effect on FSA		Sobel test statistics z-value
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	
FECF	.339	.159	.706	.084	2.067*

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. FSA= Paternal Sacrifice for Children's Education Scale. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.76. Direct, indirect and total effects of parental beliefs on psychological competence (PYD) of adolescents via paternal sacrifice for children's education perceived by fathers (FSA)

Path starting	Direct effect to PYD	Direct effect to FSA	Indirect effect to PYD via FSA	Total
FCBA	.048ns	.036ns	.042ns	0.09
MCBA	-.010ns	.011ns	-.012ns	-0.022
FAQ-E	-.027ns	.155**	-.054ns	-0.081
MAQ-E	.072ns	-.067ns	.084ns	0.156
FECF	.143*	.469***	.063ns	0.206
MECF	.090ns	.063ns	.079ns	0.169
Multiple R	.220*	.561***	.262**	
R^2	.049	.315	.068	
Adjusted R^2	.027	.299	.044	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. FSA= Paternal Sacrifice for Children's Education Scale reported by fathers. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.77. Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via paternal sacrifice for children's education perceived by fathers (FSA)

	Direct effect on PYD		Direct effect on FSA		Sobel test statistics
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	z-value
FECF	.210	.096	.706	.084	2.117*

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. FSA= Paternal Sacrifice for Children's Education Scale reported by fathers. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.78. Direct, indirect and total effects of parental beliefs on adolescent achievement motivation (SOAM) via adolescents' perceived maternal control (AMCS)

Path starting	Direct effect to SOAM	Direct effect to AMCS	Indirect effect to SOAM via AMCS	Total
FCBA	-.006ns	-.036ns	.008ns	0.002
MCBA	-.060ns	-.004ns	-.059ns	-0.119
FAQ-E	.024ns	-.079ns	.053ns	0.077
MAQ-E	-.126ns	.010ns	-1.30*	-1.426
FECF	.140*	.223**	.056ns	0.196
MECF	.066ns	.068ns	.098ns	0.164
Multiple R	.216*	.227*	.426***	
R^2	.047	.052	.181	
Adjusted R^2	.025	.030	.160	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AMCS= Perceived Maternal Control Scale completed by adolescents. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.79. Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via adolescents' perceived maternal control (AMCS)

	Direct effect on SOAM		Direct effect on AMCS		Sobel test statistics
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	z-value
FECF	.339	.159	.124	.037	1.800*

* $p < .05$ for one-tailed test, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AMCS= Perceived Maternal Control Scale completed by adolescents. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.80. Direct, indirect and total effects of parental beliefs on adolescent psychological competence (PYD) via adolescents' perceived maternal control (AMCS)

Path starting	Direct effect to PYD	Direct effect to AMCS	Indirect effect to PYD via AMCS	Total
FCBA	.048ns	-.036ns	.059ns	0.107
MCBA	-.010ns	-.004ns	-.009ns	-0.019
FAQ-E	-.027ns	-.079ns	-.002ns	-0.029
MAQ-E	.072ns	.010ns	.069ns	0.141
FECF	.143*	.223**	.072ns	0.215
MECF	.090ns	.068ns	.068ns	0.158
Multiple R	.220*	.227*	.382***	
R^2	.049	.052	.146	
Adjusted R^2	.027	.030	.123	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AMCS= Perceived Maternal Control Scale completed by adolescents. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.81. Sobel test statistics on mediating effect of paternal expectations of children's future on adolescent achievement motivation via adolescents' perceived maternal control (AMCS)

	Direct effect on PYD		Direct effect on AMCS		Sobel test statistics z-value
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	
FECF	.210	.096	.124	.037	1.832*

* $p < .05$ for one-tailed test, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AMCS= Perceived Maternal Control Scale completed by adolescents. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.82. Correlations between parenting responses measures across participants

Family processes	Variables		Pearson's Coefficient
Parenting styles	FPS	APPS	.400***
	MPS	AMPS	.418***
	FPS	MPS	.352***
	APPS	AMPS	.642***
Parental control	FCS	APCS	.220***
	MCS	AMCS	.249***
	FCS	MCS	.294***
	APCS	AMCS	.551***
Family functioning	FFAI	AFAI	.345***
	MFAI	AFAI	.390***
	FFAI	MFAI	.459***
Parental sacrifice	FSA	APSA	.263***
	MSA	AMSA	.197*
	FSA	MSA	.282***
	APSA	AMSA	.557***

Note 1. * $p < .0033$ (Bonferroni correction was adopted to guard against familywise Type I error)

*** $p < .001$.

Note. FPS= Paternal Parenting Styles Scale completed by fathers. MPS= Maternal Parenting Styles Scale completed by mothers. APPS=Chinese Paternal Parenting Styles Scale completed by adolescents. AMPS=Chinese Maternal Parenting Styles Scale completed by adolescents. PCS= Paternal Control Scale completed by fathers. MCS= Maternal Control Scale completed by mothers. APCS=Perceived Paternal Control Scale completed by adolescents. AMCS=Perceived Maternal Control Scale completed by adolescents. FFAI=Family Assessment Inventory completed by fathers. MFAI=Family Assessment Inventory completed by mothers. AFAI =Family Assessment Inventory completed by adolescents. PSA= Paternal Sacrifice for Children's Education Scale completed by fathers. MSA= Maternal Sacrifice for Children's Education Scale completed by mothers. APSA= Perceived Paternal Sacrifice for Children's Education Scale completed by adolescents. AMSA= Perceived Maternal Sacrifice for Children's Education Scale completed by adolescents.

Table 8.83. Direct, indirect and total effects of parental beliefs on adolescent achievement motivation (SOAM) via averaged scores of measures from fathers, mothers and adolescents of paternal control (AVPCS)

Path starting	Direct effect to SOAM	Direct effect to AVPCS	Indirect effect to SOAM via AVPCS	Total
FCBA	-.006ns	-.016ns	.000ns	-0.006
MCBA	-.060ns	-.058ns	-.042ns	-0.102
FAQ-E	.024ns	.139*	-.019ns	0.005
MAQ-E	-.126ns	-.033	-.115ns	-0.241
FECF	.140*	.316***	.042ns	0.182
MECF	.066ns	.022ns	.117ns	0.183
Multiple R	.216*	.375***	.360***	
R^2	.047	.141	.130	
Adjusted R^2	.025	.122	.107	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AVPCS= Averaged scores of measures between fathers and adolescents of Paternal Control Scale. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.84. Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via averaged measure of paternal control (AVPCS)

	Direct effect on SOAM		Direct effect on AVPCS		Sobel test statistics
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	z-value
FECF	.339	.159	.123	.024	1.969*

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AVPCS= Averaged scores of measures between fathers and adolescents of Paternal Control Scale. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.85. Direct, indirect and total effects of parental beliefs on adolescent achievement motivation (SOAM) via averaged scores of measures from fathers, mothers and adolescents of maternal control (AVMCS)

Path starting	Direct effect to SOAM	Direct effect to AVMCS	Indirect effect to SOAM via AVMCS	Total
FCBA	-.006ns	-.045ns	.011ns	0.005
MCBA	-.060ns	-.021ns	-.052ns	-0.112
FAQ-E	.024ns	-.060ns	.046ns	0.07
MAQ-E	-.126ns	.076ns	-.154*	-0.28
FECF	.140*	.152*	.084ns	0.224
MECF	.066ns	.317***	.007ns	0.073
Multiple R	.216*	.385***	.403***	
R^2	.047	.148	.163	
Adjusted R^2	.025	.129	.141	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AVMCS= Averaged scores of measures between mothers and adolescents of Maternal Control Scale. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.86. Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via averaged measure of maternal control (AVMCS)

	Direct effect on SOAM		Direct effect on AVMCS		Sobel test statistics
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	z-value
FECF	.339	.159	.065	.027	1.596ns

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AVMCS= Averaged scores of measures between mothers and adolescents of Maternal Control Scale. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.87. Direct, indirect and total effects of parental beliefs on adolescent psychological competence (PYD) via averaged scores of measures from fathers, mothers and adolescents of paternal control (AVPCS)

Path starting	Direct effect to PYD	Direct effect to AVPCS	Indirect effect to PYD via AVPCS	Total
FCBA	.048ns	-.016ns	.052ns	0.1
MCBA	-.010ns	-.058ns	.005ns	-0.005
FAQ-E	-.027ns	.139*	-.064ns	-0.091
MAQ-E	.072ns	-.033	.081ns	0.153
FECF	.143*	.316***	.059ns	0.202
MECF	.090ns	.022ns	.084ns	0.174
Multiple R	.220*	.375***	.331***	
R^2	.049	.141	.110	
Adjusted R^2	.027	.122	.086	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AVPCS= Averaged scores of measures between fathers and adolescents of Paternal Control Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.88. Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of paternal control (AVPCS)

	Direct effect on PYD		Direct effect on AVPCS		Sobel test statistics
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	z-value
FECF	.210	.096	.123	.024	2.112*

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AVPCS= Averaged scores of measures between fathers and adolescents of Paternal Control Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.89. Direct, indirect and total effects of parental beliefs on adolescent psychological competence (PYD) via averaged scores of measures from fathers, mothers and adolescents of maternal control (AVMCS)

Path starting	Direct effect to PYD	Direct effect to AVMCS	Indirect effect to PYD via AVMCS	Total
FCBA	.048ns	-.045ns	.060ns	0.108
MCBA	-.010ns	-.021ns	-.005ns	-0.015
FAQ-E	-.027ns	-.060ns	.011ns	-0.016
MAQ-E	.072ns	.076ns	.052ns	0.124
FECF	.143*	.152*	.102ns	0.245
MECF	.090ns	.317***	.004ns	0.094
Multiple R	.220*	.385***	.332***	
R^2	.049	.148	.110	
Adjusted R^2	.027	.129	.087	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AVMCS= Averaged scores of measures between mothers and adolescents of Maternal Control Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.90. Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of maternal control (AVMCS)

	Direct effect on PYD		Direct effect on AVMCS		Sobel test statistics z-value
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	
FECF	.210	.096	.065	.027	1.619ns

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AVMCS= Averaged scores of measures between mothers and adolescents of Maternal Control Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.91. Direct, indirect and total effects of parental beliefs on adolescent's achievement motivation via averaged scores of measures from fathers, mothers and adolescents of family functioning (AVFAI)

Path starting	Direct effect to SOAM	Direct effect to AVFAI	Indirect effect to SOAM via AVFAI	Total
FCBA	-.006ns	.104ns	-.019ns	-0.025
MCBA	-.060ns	.073ns	-.069ns	-0.129
FAQ-E	.024ns	.008ns	.023ns	0.047
MAQ-E	-.126ns	.020ns	.128ns	0.002
FECF	.140*	.169**	.119ns	0.259
MECF	.066ns	.066ns	.115ns	0.181
Multiple R	.216*	.280**	.247*	
R^2	.047	.079	.061	
Adjusted R^2	.025	.058	.036	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Father's Attributions Questionnaire - Effort Subscale. MAQ-E= Mother's Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AVFAI= Averaged scores of measures among fathers, mothers and adolescents of Family Assessment Inventory. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.92. Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via averaged measure of family functioning (AVFAI)

	Direct effect on SOAM		Direct effect on AVFAI		Sobel test statistics z-value
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	
FECF	.339	.159	.243	.093	1.625ns

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AVFAI= Averaged scores of measures among fathers, mothers and adolescents of Family Assessment Inventory. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.93. Direct, indirect and total effects of parental beliefs on adolescent psychological competence via averaged scores of measures from fathers, mothers and adolescents of family functioning (AVFAI)

Path starting	Direct effect to PYD	Direct effect to AVFAI	Indirect effect to PYD via AVFAI	Total
FCBA	.048ns	.104ns	.004ns	0.052
MCBA	-.010ns	.073ns	-.041ns	-0.051
FAQ-E	-.027ns	.008ns	-.030ns	-0.057
MAQ-E	.072ns	.020ns	.064ns	0.136
FECF	.143*	.169**	.073ns	0.216
MECF	.090ns	.066ns	.062ns	0.152
Multiple R	.220*	.280**	.459***	
R^2	.049	.079	.210	
Adjusted R^2	.027	.058	.190	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AVFAI= Averaged scores of measures among fathers, mothers and adolescents of Family Assessment Inventory. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.94. Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of family functioning (AVFAI)

	Direct effect on PYD		Direct effect on AVFAI		Sobel test statistics
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	z-value
FECF	.210	.096	.243	.093	1.677*

* $p < .05$ for one-tailed test, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AVFAI= Averaged scores of measures among fathers, mothers and adolescents of Family Assessment Inventory. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.95. Direct, indirect and total effects of parental beliefs on adolescent achievement motivation via averaged scores of measures from fathers, mothers and adolescents of paternal sacrifice for children's education (AVPSA)

Path starting	Direct effect to SOAM	Direct effect to AVPSA	Indirect effect to SOAM via AVPSA	Total
FCBA	-.006ns	.057ns	-.028ns	-0.034
MCBA	-.060ns	-.025ns	-.050ns	-0.11
FAQ-E	.024ns	.098ns	-.015ns	0.009
MAQ-E	-.126ns	-.097ns	-.087ns	-0.213
FECF	.140*	.269***	.034ns	0.174
MECF	.066ns	.077	.093ns	0.159
Multiple R	.216*	.349***	.429***	
R^2	.047	.122	.184	
Adjusted R^2	.025	.102	.162	

* $p < .05$ for one-tailed test, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AVPSA= Averaged scores of measures between fathers and adolescents of Paternal Sacrifice for Children's Education Scale. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.96. Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of paternal sacrifice for children's education (AVPSA)

	Direct effect on SOAM		Direct effect on AVPSA		Sobel test statistics
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	z-value
FECF	.339	.159	.373	.088	1.905*

* $p < .05$ for one-tailed test, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AVPSA= Averaged scores of measures between fathers and adolescents of Paternal Sacrifice for Children's Education Scale. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.97. Direct, indirect and total effects of parental beliefs on adolescent achievement motivation via averaged scores of measures from fathers, mothers and adolescents of maternal sacrifice for children's education (AVMSA)

Path starting	Direct effect to SOAM	Direct effect to AVMSA	Indirect effect to SOAM via AVMSA	Total
FCBA	-.006ns	.104ns	-.047ns	-0.053
MCBA	-.060ns	.104ns	-.019ns	-0.079
FAQ-E	.024ns	.019ns	.017ns	0.041
MAQ-E	-.126ns	.008ns	-.129*	-0.255
FECF	.140*	.078ns	.109ns	0.249
MECF	.066ns	.335***	-.008ns	0.058
Multiple R	.216*	.381***	.423***	
R^2	.047	.145	.179	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AVMSA= Averaged scores of measures between mothers and adolescents of Maternal Sacrifice for Children's Education Scale. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.98. Sobel test statistics on mediating effect of paternal expectations of children's future on achievement motivation of adolescents via averaged measure of maternal sacrifice for children's education (AVMSA)

	Direct effect on SOAM		Direct effect on AVMSA		Sobel test statistics
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	z-value
FECF	.339	.159	.104	.083	1.080ns

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AVMSA= Averaged scores of measures between mothers and adolescents of Maternal Sacrifice for Children's Education Scale. SOAM= Social Oriented Achievement Motivation Scale.

Table 8.99. Direct, indirect and total effects of parental beliefs on adolescent psychological competence via averaged scores of measures from fathers, mothers and adolescents of paternal sacrifice for children's education (AVPSA)

Path starting	Direct effect to PYD	Direct effect to AVPSA	Indirect effect to PYD via AVPSA	Total
FCBA	.048ns	.057ns	.027ns	0.075
MCBA	-.010ns	-.025ns	.000ns	-0.01
FAQ-E	-.027ns	.098ns	-.064ns	-0.091
MAQ-E	.072ns	-.097ns	.109ns	0.181
FECF	.143*	.269***	.043ns	0.186
MECF	.090ns	.077	.061ns	0.151
Multiple R	.220*	.349***	.414***	
R^2	.049	.122	.171	
Adjusted R^2	.027	.102	.150	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AVPSA= Averaged scores of measures between fathers and adolescents of Paternal Sacrifice for Children's Education Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.100. Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of paternal sacrifice for children's education (AVPSA)

	Direct effect on PYD		Direct effect on AVPSA		Sobel test statistics
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	z-value
FECF	.210	.096	.373	.088	1.944*

* $p < .05$ for one-tailed test, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AVPSA= Averaged scores of measures between fathers and adolescents of Paternal Sacrifice for Children's Education Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.101. Direct, indirect and total effects of parental beliefs on adolescent psychological competence via averaged scores of measures from fathers, mothers and adolescents of maternal sacrifice for children's education (AVMSA)

Path starting	Direct effect to PYD	Direct effect to AVMSA	Indirect effect to PYD via AVMSA	Total
FCBA	.048ns	.104ns	.022ns	0.07
MCBA	-.010ns	.104ns	.016ns	0.006
FAQ-E	-.027ns	.019ns	-.032ns	-0.059
MAQ-E	.072ns	.008ns	.070ns	0.142
FECF	.143*	.078ns	.124ns	0.267
MECF	.090ns	.335***	.007ns	0.097
Multiple R	.220*	.381***	.318***	
R^2	.049	.145	.101	
Adjusted R^2	.027	.126	.007	

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. FCBA=Chinese Beliefs about Adversity Scale completed by fathers. MCBA=Chinese Beliefs about Adversity Scale completed by mothers. FAQ-E= Fathers' Attributions Questionnaire - Effort Subscale. MAQ-E= Mothers' Attributions Questionnaire - Effort Subscale. FECF=Paternal Expectations of Children's Future Scale completed by fathers. MECF=Maternal Expectations of Children's Future Scale completed by mothers. AVMSA= Averaged scores of measures between mothers and adolescents of Maternal Sacrifice for Children's Education Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.102. Sobel test statistics on mediating effect of paternal expectations of children's future on psychological competence of adolescents via averaged measure of maternal sacrifice for children's education (AVMSA)

	Direct effect on PYD		Direct effect on AVPSA		Sobel test statistics z-value
	Unstandardized regression coefficient	Standard error	Unstandardized regression coefficient	Standard error	
FECF	.210	.096	.104	.083	1.087ns

*p<0.05, **p<0.01, ***p<0.001 ns=not significant

Note. FECF=Paternal Expectations of Children's Future Scale completed by fathers. AVMSA= Averaged scores of measures between mothers and adolescents of Maternal Sacrifice for Children's Education Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected).

Table 8.103. Means and standard deviations for the measures of dyadic processes

Measure	Paternal family processes				Maternal family processes			
	Fathers' report		Adolescents' perception on paternal processes		Mothers' report		Adolescents' perception on maternal processes	
	M	SD	M	SD	M	SD	M	SD
Parenting style	27.18	5.81	22.04	7.60	30.11	4.41	26.93	6.54
Parental control	38.12	4.46	36.44	5.86	38.93	4.88	38.42	5.78
Parental sacrifice	104.66	15.62	84.42	20.46	109.92	14.79	99.28	20.48

Possible range of scores in the scale: FPS, APPS, MPS, AMPS (0 to 38 points); FCS, APCS, MCS, AMCS (12 to 48 points), FSA, APSA, MSA, AMSA (23 to 138).

Parenting style Paternal Parenting Style Scale reported by fathers (FPS) vs Paternal Parenting Style Scale reported by adolescents (APPS) vs Maternal Parenting Style Scale reported by mothers (MPS) vs Maternal Parenting Style Scale reported by adolescents (AMPS). *Parental control* Chinese Paternal Control Scale reported by fathers (FCS) vs Chinese Paternal Control Scale reported by adolescents (APCS) vs Chinese Maternal Control Scale reported by mothers (MCS) vs Chinese Maternal Control Scale reported by adolescents (AMCS). *Parental sacrifice* Paternal Sacrifice for Children's Education Scale reported by fathers (FSA) vs Paternal Sacrifice for Children's Education Scale reported by adolescents (APSA) vs Maternal Sacrifice for Children's Education Scale reported by mothers (MSA) vs Maternal Sacrifice for Children's Education Scale reported by adolescents (AMSA).

Table 8.104. Effects of parents and parent-child and post-hoc comparison on the different measures of dyadic processes

	Effect		Post-hoc comparison			
	<i>F</i> value	<i>Partial</i> η^2	A (fathers vs mothers)	B (paternal vs maternal processes by adolescents)	C (fathers vs paternal processes by adolescents)	D (mothers vs maternal processes by adolescents)
Parenting style	133.96***	.33	S (M>F)	S (<i>A_m</i> > <i>A_p</i>)	S (<i>F</i> > <i>A_p</i>)	S (M> <i>A_m</i>)
Parental control	15.68***	.05	NS	S (<i>A_m</i> > <i>A_p</i>)	S (<i>F</i> > <i>A_p</i>)	NS
Parental sacrifice	140.52***	.34	S (M>F)	S (<i>A_m</i> > <i>A_p</i>)	S (<i>F</i> > <i>A_p</i>)	S (M> <i>A_m</i>)

*p<0.05, **p<0.01, ***p<0.001 ns=not significant

Parenting style Paternal Parenting Style Scale reported by fathers (FPS) vs Paternal Parenting Style Scale reported by adolescents (APPS) vs Maternal Parenting Style Scale reported by mothers (MPS) vs Maternal Parenting Style Scale reported by adolescents (AMPS). *Parental control* Chinese Paternal Control Scale reported by fathers (FCS) vs Chinese Paternal Control Scale reported by adolescents (APCS) vs Chinese Maternal Control Scale reported by mothers (MCS) vs Chinese Maternal Control Scale reported by adolescents (AMCS). *Parental sacrifice* Paternal Sacrifice for Children's Education Scale reported by fathers (FSA) vs Paternal Sacrifice for Children's Education Scale reported by adolescents (APSA) vs Maternal Sacrifice for Children's Education Scale reported by mothers (MSA) vs Maternal Sacrifice for Children's Education Scale reported by adolescents (AMSA).

Post-hoc comparisons: A father-mother difference of the measure. B Paternal and Maternal difference of the measure by the adolescents. C father-adolescent difference of the measure. D mother-adolescent difference of the measure. S significant at .05% level. M>F Mothers' scores higher than fathers' scores. $A_m > A_p$ Adolescents' perceived maternal scores higher than perceived paternal scores. $F > A_p$ Fathers' scores higher than adolescents' perceived paternal scores. $M > A_m$ Mothers' scores higher than adolescents' perceived maternal scores.

Table 8.105. Effects and post-hoc comparison of reporters on the measure of family functioning

	Fathers		Reporter Mothers		Adolescents		Effect		Post-hoc comparison		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F</i> value	<i>Partial</i> η^2	A (fathers vs mothers)	B (fathers vs adolescents)	C (mothers vs adolescents)
Family functioning	132.34	18.37	132.31	18.36	122.52	20.96	32.77***	.20	NS	S (<i>F</i> > <i>A</i>)	S (<i>M</i> > <i>A</i>)

p*<0.05, *p*<0.01, ****p*<0.001 ns=not significant

Possible range of scores in the scale: AFAI, MFAI, AFAI (33 to 165 points).

Family functioning Family Assessment Inventory reported by fathers (FFAI) vs Family Assessment Inventory reported by adolescents (FAFI) vs Family Assessment Inventory reported by mothers (MFAI).

Post-hoc comparisons: *A* father-mother difference of the measure. *B* father-adolescent difference of the measure. *C* mother-adolescent difference of the measure. *S* significant at .05% level. *M*>*F* Mothers' scores higher than fathers' scores. *F*> *A* Fathers' scores higher than adolescents' scores. *M*>*A* Mothers' scores higher than adolescents' scores.

Table 8.106. Effect size (partial eta squared) of dyadic discrepancies on different family processes

	Effect size (<i>Partial</i> η^2)			
	Father-adolescent discrepancy	Mother-adolescent discrepancy	Father-mother discrepancy	Paternal-maternal discrepancy perceived by adolescents
Parenting style		.32	.21	.20
Parental control		.06	.01	.02
Parental sacrifice		.45	.18	.08
Family functioning		.16	.17	.00

Table 8.107. Correlations for parenting style scale and related discrepancy scales

	PPS	APPS	MPS	AMPS	DIPPS
<u>Standardized scale scores</u>					
1. Fathers' paternal parenting style (FPS)	1.000				
2. Adolescents' paternal parenting style (APPS)	.400***	1.000			
3. Mothers' maternal parenting style (MPS)	.348***	.352***	1.000		
4. Adolescents' maternal parenting style (AMPS)	.272***	.642***	.423***	1.000	
<u>Discrepancy scores^a</u>					
5. Paternal parenting style (DIFPS)	.548***	-.548***	-.004ns	-.338***	1.000
6. Maternal parenting style (DIMPS)	.071ns	-.269***	.537***	-.537***	.311***

a. Discrepancy scores are computed from standardized scale scores in parents' reports and adolescents' reports respectively.

p*<0.05, *p*<0.01, ****p*<0.001 ns=not significant

Table 8.108. Correlations for parental control scales and related discrepancy scales

	PCS	APCS	MCS	AMCS	DIPCS
<u>Standardized scale scores</u>					
1. Fathers' paternal control (PCS)	1.000				
2. Adolescents' paternal control (APCS)	.220***	1.000			
3. Mothers' maternal parental control (MCS)	.249***	.111ns	1.000		
4. Adolescents' maternal parental control (AMCS)	.176**	.551***	.249***	1.000	
<u>Discrepancy scores^a</u>					
5. Paternal parental control (DIPCS)	.624***	-.624***	.147*	-.300***	1.000
6. Maternal parenting control (DIMCS)	.096ns	-.349***	.613***	-.613***	.365***

a. Discrepancy scores are computed from standardized scale scores in parents' reports and adolescents' reports respectively.

p*<0.05, *p*<0.01, ****p*<0.001 ns=not significant

Table 8.109. Correlations for family functioning scales and related discrepancy scales

	FFAI	MFAI	AFAI	DIFAFAI
<u>Standardized scale scores</u>				
1. Fathers' family functioning (FFAI)	1.000			
2. Mothers' family functioning (MFAI)	.466***	1.000		
3. Adolescents' family functioning (AFAI)	.348***	.390***	1.000	
<u>Discrepancy scores^a</u>				
4. Family functioning perceived by fathers and adolescents (DIFAFAI)	.571***	.066ns	-.571***	1.000
5. Family functioning perceived by mothers and adolescents (DIMAFAI)	.107ns	.552***	-.552***	.577***

a. Discrepancy scores are computed from standardized scale scores in parents' reports and adolescents' reports respectively.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ ns=not significant

Table 8.110. Correlations for Parental Sacrifice for Children's Education Scales and related discrepancy scales

	PSA	APSA	MSA	AMSA	DIPSA
<u>Standardized scale scores</u>					
1. Fathers' paternal sacrifice for children's education (PSA)	1.000				
2. Adolescents' paternal sacrifice for children's education (APSA)	.263***	1.000			
3. Mothers' maternal sacrifice for children's education (MSA)	.282***	.115ns	1.000		
4. Adolescents' maternal sacrifice for children's education (AMSA)	.171**	.557***	.197**	1.000	
<u>Discrepancy scores^a</u>					
5. Paternal sacrifice for children's education (DIPSA)	.607***	-.607***	.137*	-.317***	1.000
6. Maternal sacrifice for children's education (DIMSA)	.087ns	-.348***	.634***	-.634***	.359***

a. Discrepancy scores are computed from standardized scale scores in parents' reports and adolescents' reports respectively.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ ns=not significant

Table 8.111. Correlations between parent-child discrepancies of family processes and adolescent development experiencing economic disadvantage

		Parent-child discrepancies on parental parenting style		Parent-child discrepancies on parental control		Parent-child discrepancies on family functioning		Parent-child discrepancies on parental sacrifice	
		DIPPS	DIMPS	DIPCS	DIMCS	DIFAFAI	DIMAFAI	DIPSA	DIMSA
Adolescents	SOAM	-.174*	-.064ns	-.092ns	-.182*	-.175*	-.124ns	-.140ns	-.231***
	PYD	-.148ns	-.138ns	-.184*	-.171*	-.336***	-.296***	-.136ns	-.117ns

Note 1. Bonferroni correction was used to evaluate the significance of the correlations and * indicates that the r value is significant when familywise Type I error. $pFW < .05$, $pT < .00625$. *** $p < .001$, ns=not significant.

Note 2. DIPPS=Discrepancy score on paternal parenting style between fathers and adolescents. DIMPS=Discrepancy score on maternal parenting style between mothers and adolescents. DIPCS=Discrepancy score on paternal control between fathers and adolescents. DIMCS=Discrepancy score on maternal control between mothers and adolescents. DIFSA=Discrepancy score on paternal sacrifice between fathers and adolescents. DIMSA=Discrepancy score on maternal sacrifice between mothers and adolescents. DIFAFAI=Discrepancy score on family functioning between fathers and adolescents. DIMAFAI=Discrepancy score on family functioning between mothers and adolescents. SOAM= Social Oriented Achievement Motivation Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected)

Table 8.112. Prediction of parent-child discrepancies on parenting style and practices on achievement motivation of adolescents experiencing economic disadvantage

		Multiple R	Standardized Regression Coefficient (β)				R^2	Adjusted R^2
			Parent-child discrepancy on parenting style		Parent-child discrepancy on parental control			
			DIPPS	DIMPS	DIPCS	DIMCS		
Adolescents	SOAM	.234***	-.153*	.004ns	.012ns	-.162*	.055	.041
	PYD	.251***	-.065ns	-.095ns	-.121ns	-.104ns	.063	.049

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note. DIPPS=Discrepancy score on paternal parenting style between fathers and adolescents. DIMPS=Discrepancy score on maternal parenting style between mothers and adolescents. DIPCS=Discrepancy score on paternal control between fathers and adolescents. DIMCS=Discrepancy score on maternal control between mothers and adolescents. SOAM=Social Oriented Achievement Motivation Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected)

Table 8.113. Prediction of parent-child discrepancies on family functioning on achievement motivation and psychological competence of adolescents experiencing economic disadvantage

		Multiple R	Standardized Regression Coefficient (β)		R^2	Adjusted R^2
			Parent-child discrepancy on family functioning			
			DIFAFAI	DIMAFAI		
Adolescents	SOAM	.177	-.154*	-.035ns	.031	.024
	PYD	.358	-.247***	-.153*	.128	.122

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note: DIFAFAI=Discrepancy score on family functioning between fathers and adolescents. DIMAFAI=Discrepancy score on family functioning between mothers and adolescents. SOAM=Social Oriented Achievement Motivation Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected)

Table 8.114. Prediction of parent-child discrepancies on parental sacrifice for children's education on achievement motivation and psychological competence of adolescents experiencing economic disadvantage

		Multiple R	Standardized Regression Coefficient (β)		R^2	Adjusted R^2
			Parent-child discrepancy on parental sacrifice for children's education			
			DIFSA	DIMSA		
Adolescents	SOAM	.239***	-.066ns	-.208**	.057	.050
	PYD	.154*	-.108ns	-.078ns	.024	.017

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant

Note: DIFSA=Discrepancy score on paternal sacrifice between fathers and adolescents. DIMSA=Discrepancy score on maternal sacrifice between mothers and adolescents SOAM=Social Oriented Achievement Motivation Scale. PYD= Chinese Positive Youth Development Scale (with 7 subscales selected)

Table 8.115. Prediction of paternal and maternal family processes on adolescent development in economic disadvantaged families.

		Multiple R	Standardized Regression Coefficient (β)				R^2	Adjusted R^2
Father-child discrepancies								
			Paternal parenting style DIPPS	Paternal control DIPCS	Family functioning DIFAFAI	Paternal sacrifice DIPSA		
Adolescents	SOAM	.209*	-.093ns	-.021ns	-.106ns	-.051ns	.044	.030
	PYD	.356***	.045ns	-.126*	-.333***	.013ns	.127	.114
Mother-child discrepancies								
			Maternal parenting style DIMPS	Maternal control DIMCS	Family functioning DIMAFAI	Maternal sacrifice DIMSA		
Adolescents	SOAM	.255**	.012ns	-.093ns	-.065ns	-.176**	.065	.051
	PYD	.321***	-.041ns	-.124ns	-.264***	.016ns	.103	.090

* $p < .05$, ** $p < .01$, *** $p < .001$. ns=not significant

Note: DIPPS=Discrepancy score on paternal parenting style between fathers and adolescents. DIMPS=Discrepancy score on maternal parenting style between mothers and adolescents. DIPCS=Discrepancy score on paternal control between fathers and adolescents. DIMCS=Discrepancy score on maternal control between mothers and adolescents. DIFSA=Discrepancy score on paternal sacrifice between fathers and adolescents. DIMSA=Discrepancy score on maternal sacrifice between mothers and adolescents. DIFAFAI=Discrepancy score on family functioning between fathers and adolescents. DIMAFAI=Discrepancy score on family functioning between mothers and adolescents. SOAM=Social Oriented Achievement Motivation Scale. PYD=Chinese Positive Youth Development Scale (7 sub-scales selected).

Table 8.116. Prediction of overall parent-child discrepancies of family processes on achievement motivation and psychological competence of adolescents experiencing economic disadvantage

		Standardized Regression Coefficient (β)							R^2	Adjusted R^2
		DIPPS	DIMPS	DIPCS	DIMCS	DIFAFAI	DIMAFAI	DIPSA	DIMSA	
SOAM		-.104ns	.043ns	-.022ns	-.092ns	-.136ns	.032ns	.009ns	-.189**	.092
PYD		.063ns	-.045ns	-.098ns	-.099ns	-.267**	-.122ns	.030ns	-.008ns	.154

* $p < .05$, ** $p < .01$, *** $p < .001$ ns=not significant.

Note: DIPPS=Discrepancy score on paternal parenting style between fathers and adolescents. DIMPS=Discrepancy score on maternal parenting style between mothers and adolescents. DIPCS=Discrepancy score on paternal control between fathers and adolescents. DIMCS=Discrepancy score on maternal control between mothers and adolescents. DIFSA=Discrepancy score on paternal sacrifice between fathers and adolescents. DIMSA=Discrepancy score on maternal sacrifice between mothers and adolescents. DIFAFAI=Discrepancy score on family functioning between fathers and adolescents. DIMAFAI=Discrepancy score on family functioning between mothers and adolescents. SOAM=Social Oriented Achievement Motivation Scale. PYD=Chinese Positive Youth Development Scale (7 sub-scales selected).

Chapter Nine: Discussion

There are six sections in this chapter. In the first section, discussion on the psychometric properties of the new and existing assessment tools used in this research is presented. In the second section, the key findings for each research question with reference to the literature are discussed. The theoretical implications of the research are presented in the third section, and practical implications regarding social work practice, policy formulation and social work education are outlined in the fourth section. In the fifth and sixth sections, methodological advancement of the research and limitations of this study are presented.

9.1 Psychometric properties of the measurement tools

There were two new measurement scales developed and validated in the study. They are the Chinese Parental Expectations of Children's Future Scale (PECF) and Chinese Parental Sacrifice for Children's Education Scale (SA). Seven previously validated measurement scales were also used in this research. Section 6.2 listed the summary of the psychometric properties of the measurement scales. The findings of the psychometric properties of the scales in the validation study and the main study are presented in this section.

9.1.1 Newly developed family measurement tools

9.1.1.1 Development and validation of Parental Expectations of Children's Future Scale

With the limited literature on the theoretical conceptualization of parental expectations of children's future, as well as the narrow scope of previous research that focused solely on completion of schooling, there was a need to develop a measurement tool to measure parental expectations of children's future. The validation study and the main study present pioneer findings on the conceptualization of the construct as well as evidence of the reliability and validity of the measure.

9.1.1.1.1 Construction of Parental Expectations of Children's Future Scale

From the survey of literature as well as the qualitative data of the focus

groups of parents and adolescents, the findings suggest that the domains and themes of parental expectations of children's future go beyond mere completion of schooling. Five themes emerged from the qualitative data: academic achievement, self-reliance, occupation, family and moral conduct. The domains tally with the findings of qualitative research relevant to parental expectations of children's development (Chao, 1995; Li, 2004; Shek & Chan, 1999), having family, academic and conduct related domains attributing the construct. It was found that the Parental Expectations of Children's Future Scale reflected both cultural and practical values. Cultural values refer to the high Confucian respect for education and scholarship, emphasis on effort, family obligation and filial piety, moral characters and personality. However, with rapid industrialization and globalization, economic achievement and material success have become an important source of life satisfaction. It is not surprising that parents generally believe that good educational attainment and occupation imply good future prospects and economic success in the highly competitive environment. The "insider" perspective enriches our understanding of Chinese family beliefs about their children.

However, the findings suggested that while parents focused more on the moralistic perspective – such as obedience to the law, fulfilment of responsibility in studying and good work attitudes – adolescents were more ready to express parental expectations from a more direct, concrete, instrumental and observable perspective, such as entering university, earning a good salary and a better status, and earning enough to support a family. The cultural emphasis on morals reflects an important parental role in the socialization of children in the Chinese community. As mentioned before, influenced by the Chinese ideal of collectivism, parents have the responsibility to nurture their children to reach the socialized goals of becoming people with good character and contributing to society. Thus, the societal and cultural inclinations of parents' socialization goals are salient.

Content validation by experts showed that the measure had good content validity in aspects of relevance, clarity and representativeness. This step was important as it ensured that the items developed were valid from an outside perspective of the judges. Modification of the items based on the views of the judges further improved the validity of the measure. Initially, 23-item Chinese Parental Expectations of Children's Future Scale was developed.

9.1.1.1.2 Validation of Parental Expectations of Children's Future Scale

Though the 23-item Parental Expectations of Children's Future Scale showed good internal consistency, test-retest reliability, and convergent validity with related measures, findings on the dimensionality of the scale were mixed. Internal consistency of the measure was improved further when six items with corrected item-total correlations less than .30 were deleted (Items 3, 8, 14, 15, 16 and 23).

The 17-item Parental Expectations of Children's Future Scale showed good internal consistency, test-retest reliability, convergent validity and factorial validity from the data of 125 parents, suggesting that the scale possessed good psychometric properties on reliability and validity. A five-factor structure of "occupation", "personal conduct", "family obligation", "educational attainment" and "educational expectation" was inferred from the data. The factor analytic findings basically conformed to the original conceptual model. However, it should be reminded that the sample size of the validation study was merely adequate for factor analysis (thus the factors may not stable) and further work should be conducted.

9.1.1.1.3 Reliability and validity of Parental Expectations of Children's Future Scale in main study

From the main study's data on 275 fathers and 275 mothers experiencing economic disadvantage, the 17-item Parental Expectations of Children's Future Scale (PECF) showed good internal consistency and construct validity in both the fathers and mothers samples. However, for factor analysis, three factors of "occupation and financial security", "personal conduct and family" and "educational achievement" were extracted from the fathers and mothers samples. Three observations are noteworthy. First, "occupation and financial security" was the most important dimension, explaining 38.21% and 36.22% of the total variances in the fathers and mothers samples. Second, the "family" dimension was not distinctive enough to be extracted as an independent factor in both fathers and mothers samples, though it was extracted as an independent factor in the validation study. Third, Item 13 (I expect my child to take care of me in the future) which was originally put in the "family" dimension in the conceptual

model, was categorized under the “occupation and financial security” dimension in both the fathers and mothers samples. These parents had clear expectations of their children – to have good jobs and a stable income in the future. They perceived that these were important means to escape from the shadow of poverty and sustain a quality life. They further interpreted the concept of “taking care” of parents (Item 13) as “rearing” or “providing financial support” to parents. Thus, “occupation and financial security” obtained dominant weight in parental expectations of their children’s future. Furthermore, parents may perceive expectations of “family” aspect as an “obligation”, a fulfilment that is necessary for the continuation of the clans. The factors extracted from the data of the main study showed some specific characteristics of the low socioeconomic stratum.

Regarding the factor congruence of the measure between fathers’ responses and mothers’ responses, coefficients of congruence indicated that there was factor congruence amongst the three factors (occupation and financial security, personal conduct and family, and educational achievement) between FECF and MECF, suggesting the three-factor model of Parental Expectations of Children’s Future Scale was acceptable in the parent populations in the context of poverty.

In summary, the development and validation of Parental Expectations of Children’s Future Scale (PECF) sharpens our ideas on the underlying facets of parental expectations of children’s future, which in turn extends our understanding of family beliefs about child development. Moreover, the Scale showed good internal consistency, test-retest reliability, content validity, convergent validity and construct validity that can be used to measure parental expectations of children’s future in the Chinese community. For factorial validity, as the factor structures extracted from validation study and the main study were different, further research on dimensionality of the measure is suggested. The findings of the validation study are published in an international refereed journal.

9.1.1.2 Development and validation of Parental Sacrifice for Children’s Education Scale

9.1.1.2.1 Construction of the Parental Sacrifice for Children’s Education Scale

The qualitative data of the focus group interviews with adolescents and

parents suggest that parental sacrifice for children's education goes beyond family distribution of financial resources and parental involvement in children's education, as suggested by literature on family capital theory (Coleman, 1988, 1990) and family investment model (Conger & Donnellan, 2007). It involves restructuring of daily routine, sacrifice of lifestyle and aspiration, as well as the shielding from worries from their children.

However, there were discrepancies in the perceptions of parents and adolescents on parental sacrifice for child education. Adolescents perceived sacrifice as pertaining to financial resources, whereas parents rarely mentioned this dimension. The findings suggest that adolescents may take a more direct, observable and instrumental view of parental sacrifice. In contrast, parents may consider striving for financial resources for the family as a normal parental role, not a sacrifice. Parents took a more sentimental and affective view on the conceptualization of parental sacrifice for children's education. They considered time involvement and accommodation of daily routine and lifestyle as the most salient attributes of parental sacrifice for their child's education, which involved effort and personal expense of lifestyle, hobbies, social life, and even aspirations. On the contrary, adolescents perceived time involvement of parents as a restriction of autonomy and a manifestation of mistrust. This discrepancy can be explained by the developmental approach on adolescence. Adolescence is the stage of searching for self-identity and autonomy. Adolescents may consider that parental involvement, especially supervision and monitoring, as unwanted restriction. Also, Chao and Sue (1996) suggested that parents' involvement in homework and school-related performance occurred at an earlier age for Chinese. When Chinese students reached adolescence, the roles of parents in helping their children in schoolwork diminished. Thus, adolescents were less ready to consider parental involvement in their schoolwork as sacrifice.

Content validation by experts showed that the measure had good content validity in aspects of relevance, clarity and representativeness. The modification of the items based on the views of the judges further improved the validity of the measure.

9.1.1.2.2 Validation of the Parental Sacrifice for Children's Education Scale

The validation studies of Parental Sacrifice for Children's Education Scale showed good results in internal consistency, test-retest reliability, convergent validity and factorial validity, generating empirical evidence of the scale's psychometric properties in aspects of reliability and validity.

Consistent with the literature on family resources and the conceptual framework based on the focus groups of parents and adolescents, factor analyses with adolescent and parent samples in the validation study suggested that striving for financial resources, time involvement in children's education and accommodation of daily routine and lifestyle were important dimensions of the construct. Furthermore, adolescents' perceptions of paternal and maternal sacrifice for children's education were very similar. Three factors of "striving of financial resources", "time spent on children's education" and "accommodation of daily routine and lifestyle" were extracted. However, a five-factor solution was obtained from the parent study which was different from the findings of adolescents' study. The discrepancies may be explained in two possible ways. First, there are discrepancies in perception of parents and adolescents on parental sacrifice for children's education. Parents take a more sentimental view of parental sacrifice for children's education which is more complex and multi-faceted. In contrast, adolescents perceive parental sacrifice for children's education from a more observable and instrumental view with emphases on financial resources and time. Second, as the sample of the parents study was just merely adequate for factor analysis, this may affect the result of factor structure of the measure. In addition, a mixture of fathers and mothers might also introduce additional noise for the data collected.

9.1.1.2.3 Reliability and validity of Parental Sacrifice for Children's Education Scale in main study

From the data of 275 intact economically disadvantaged families in the main study, fathers' responses (FSA), mothers' responses (MSA), and adolescents' responses of paternal and maternal sacrifice for children's education (APSA and AMSA) all showed excellent internal consistency, suggesting the measure showed sound reliability across parents and adolescents in the Chinese

community. Besides, the scale also showed good construct validity with significant correlations among the dimensions of “striving for financial resources”, “time spent on children’s education”, “restructuring of daily routines”, “sacrifice of lifestyle and aspirations” and “shielding from worries” and the whole measures of FSA, MSA, APSA and AMSA.

For factorial validity of the measure in the main study, it was found that a four-factor structure was extracted from FSA, APSA and AMSA, but a five-factor structure was extracted from MSA. Though the factor structures were different across measures of different respondents, the extracted factors were generally consistent with the dimensions of the conceptual model. Furthermore, the main study found similar observations to those in the validation study, i.e., parents took a more sentimental and affective view in perception of their sacrifice for children’s education, with factor of shielding from worries being extracted as an independent factor in both FSA and MSA. In contrast, adolescents’ perception of parental sacrifice was more instrumental and direct, with “striving of financial resources”, “time spent on children’s education” and “accommodation of routines and lifestyle” as the main extracted factors. The interesting findings of the factors extracted from parents’ and adolescents’ samples in validation study and main study deepen our understanding of the construct of parental sacrifice for children’s education amongst different family members.

When analysing the factor structures of the measures amongst different samples in validation study and main study, a conservative three-factor structure (striving of financial resources, time spent on children’s education and accommodation of routines and lifestyle) was employed. It was found that the coefficients of congruence amongst the factors in different measures were acceptable. Also, the internal consistencies of the three factors amongst all measures were good, suggesting that the measures have acceptable factorial validity across parents and adolescents in the Chinese community.

As there are only limited theoretical conceptualizations of the construct, the findings sharpen our ideas on the underlying facets of parental sacrifice. The studies are pioneering assessments of the reliability, validity and dimensionality of the measure. It clearly demonstrates that Parental Sacrifice for Children’s Education Scale (SA) possesses good psychometric properties that can be used

objectively in Chinese samples. Furthermore, the instrument was validated by parent and adolescent samples and managed to gauge the views of different family members. Thus, the Parental Sacrifice for Children's Education Scale (SA) can be used to measure parental sacrifice for children's education for parents and adolescents in the Chinese community. Papers arising from the validation study will also be published in an international refereed journal.

9.1.2 Psychometric properties of existing scales

There were seven existing measurement tools used in the study, namely Chinese Cultural Beliefs about Adversity Scale (CBA), Parent's Attribution on Children's Success and Failure to Effort Subscale (PAQ-E) from Parental Attribution Questionnaire (PAQ), Parenting Style Scale (PPS), Chinese Parental Control Scale (PCS), Chinese Family Assessment Inventory (FAI), Social Oriented Achievement Motivation Scale (SOAM) and a composite of seven subscales from Chinese Positive Youth Development Scale (PYD).

9.1.2.1 Chinese Cultural Beliefs about Adversity Scale (CBA)

The internal consistencies of Chinese Cultural Beliefs about Adversity Scale (CBA) based on fathers' report (FCBA) and mothers' report (MCBA) were considered acceptable, with Cronbach's alpha at .661 and .610. The internal consistencies were lower than those in Shek's longitudinal study (2005a) of 199 Chinese economically disadvantaged adolescents ($\alpha = .76$ and $.84$ at Time 1 and Time 2).

For validity, the CBA showed satisfactory factorial validity with two factors extracted, accounting for 52.87% and 54.72% of total variance of fathers' and mothers' responses. The two factors were positive Chinese beliefs about adversity (Items 1, 3, 4, 6, 7, 8, 9) and negative Chinese beliefs about adversity (Items 2 & 5).

However, Item 7 ('*Ren ding sheng tian*', man is the master of his own fate) of MCBA had factor loading of less than .40. There may be two possible reasons explaining its relatively lower factor loading. One is that poor mothers may be pessimistic about controlling their own fate. Another possibility is that they perceive nature as divine and powerful, and thus man could not overcome its power. This explanation is consistent with the beliefs of Confucianism, Taoism

and Buddhism that life trajectories go beyond one's control. In summary, the Chinese Cultural Beliefs about Adversity Scale (CBA) in the fathers and mothers samples showed acceptable reliability and validity in the main study.

9.1.2.2 Parental Attributions Questionnaire – Attribution to Effort Subscale (PAQ-E)

The internal consistencies of Fathers' Attributions Questionnaire (FAQ) and Mothers' Attributions Questionnaire (MAQ) were .835 and .848, showing good reliability of the measures. Both FAQ and MAQ also showed acceptable construct validity, as the "Attribution to Strategy Use" subscale, "Attribution to Ability" subscale, and "Attribution to Effort" subscale were significantly correlated with each other. Furthermore, all the subscales were significantly correlated with the measures. However, it was found that "Attribution to Luck" subscale was not significantly related to "Attribution to Effort" subscale in FAQ and MAQ. It is not surprising that parental attribution of children's success and failure to "luck" was correlated with "effort", as "luck" contains "external locus" and "uncontrollable" dimensions, whereas "effort" contains the "internal locus" and "controllable" dimensions (Weiner, 1985, 1992). In general, FAQ and MAQ showed acceptable construct validity.

As the research was concerned about parental attribution of children's success and failure to effort, only "attribution of children's success and failure to effort" subscale (PAQ-E) was considered. It was found that fathers' responses to FAQ-E and mothers' responses to MAQ-E showed acceptable internal consistencies. Regarding validity, factor analyses were performed and two stable factors of "attribution of children's success to effort" and "attribution of children's failure to effort" were extracted from FAQ-E and MAQ-E, suggesting that both FAQ-E and MAQ-E showed good factorial validity. The coefficients of congruence of the two factors were high and the internal consistencies of the two factors were also acceptable, suggesting that the two-factor model was congruent between father and mother samples.

In summary, both Fathers' Attribution of Children's Success and Failure to Effort Subscale and Mothers' Attribution of Children's Success and Failure to Effort Subscale showed acceptable reliability and validity in the study.

9.1.2.3 Parenting style Scale (PPS)

The internal consistencies of Parenting Style Scale across fathers' (FPS), mothers' (MPS) and adolescents' responses (APPS for paternal parenting style and AMPS for maternal parenting style) were satisfactory ($\alpha = .807$ in FPS, $.701$ in MPS, $.856$ in APPS and $.834$ in AMPS), showing that Parenting Style Scale (PPS) had good reliability across different respondents. When comparing with Shek's longitudinal study (2005d) of 199 economically disadvantaged adolescents ($\alpha = .76$ and $.78$ for paternal parenting style in Time 1 and Time 2; and $\alpha = .73$ and $.74$ for maternal parenting style in Time 1 and Time 2), the present study showed comparatively better internal consistencies of PPS in measuring perceived paternal and maternal parenting styles of economically disadvantaged adolescents.

PPS also showed good construct validity across different measures. The correlations among Parental Responsiveness Subscale, Parental Demandingness Subscale and the whole measure of Parenting Style Scale (PPS) showed good correlation coefficients across FPS, MPS, APPS and AMPS, implying that the measure fit with theoretical expectations. In summary, Parenting Style Scale showed good psychometric properties across different respondents in the main study.

9.1.2.4 Chinese Parental Control Scale (PCS)

The internal consistencies of Parental Control Scale across fathers' (FCS), mothers' (MCS) and adolescents' responses (APCS for paternal control and AMCS for maternal control) were good (Cronbach's $\alpha = .850$ in FCS; $.872$ in MCS; $.870$ in APCS and $.876$ in AMCS), showing that Chinese Parental Control Scale (PCS) had sound reliability across different respondents. The values of internal consistency were also similar to Shek's study (2007d) with a sample of 3,017 Chinese secondary school students (Mean age = 12.65) (Cronbach's $\alpha = .86$ and $.85$ for paternal and maternal control). PCS also showed good construct validity across different measures. The correlations among different items and the measure of PCS generally showed significant correlation coefficients across FCS, MCS, APCS and AMCS, suggesting that the measure fit with theoretical expectations. In summary, the Parental Control Scale showed good psychometric properties across different measures in the main study.

9.1.2.5 Chinese Family Assessment Inventory (FAI)

The internal consistencies of Chinese Family Assessment Inventory (FAI) based on fathers' responses (FFAI), mothers' responses (MFAI) and adolescents' responses (AFAI) were excellent ($\alpha = .943$ in FFAI, $.940$ in MFAI, $.949$ in AFAI), showing that Chinese Family Assessment Inventory (FAI) had sound reliability across different respondents. Furthermore, the values of internal consistency were also similar to Shek's study (2002a) with a sample of 3,649 Chinese adolescents (Mean age = 14) ($\alpha = .96$), and another longitudinal study of Shek (2005b) with a sample of 199 Chinese economically disadvantaged adolescents ($\alpha = .94$ and $.96$ at Time 1 and Time 2). Thus, the FAI was proved reliable across parents' and adolescents' samples, different sample size, and across poor and non-poor samples.

Regarding validity, FAI also showed good construct validity across different measures. The correlations among the factors of mutuality, communication, conflicts and harmony, parental concern, parental control and the measure of FAI generally showed significant correlation coefficients across fathers', mothers' and adolescents' samples, suggesting that the measure fit with theoretical expectations. In summary, the Chinese Family Assessment Inventory showed good psychometric properties across different samples in the main study.

9.1.2.6 Social Oriented Achievement Motivation Scale (SOAM)

The Cronbach's alpha of Social Oriented Achievement Motivation Scale (SOAM) was $.944$, which showed excellent reliability. The main study showed better internal consistency when compared with the study of Yu and Yang (1989) using 784 senior-secondary students in Taiwan as the sample ($\alpha = .91$), or with the study of Chang et al. (2000) using 217 Singaporean Chinese students (mean age = 16) as the sample ($\alpha = .85$). The findings suggested that SOAM was reliable across Chinese adolescent samples in different countries.

Regarding validity of the measure, SOAM generally showed good construct validity. Except Item 29 (Without others' encouragement, I would think of giving up a difficult task), the interrelationships among individual items and the measure of SOAM were significant. Item 29 may suffer from the problem of "double-barrel" as two conditions were highlighted for respondents to give up

the task: when the task was difficult and when there was no encouragement of others, making the item questionable in reliability and validity. Nevertheless, as the corrected item-total of Item 29 was satisfactory (.297) and the reliability and validity of SOAM as a whole was generally sound enough, the item was suggested to be retained. In summary, the Social Oriented Achievement Motivation Scale showed good psychometric properties in the main study.

9.1.2.7 Psychological competence in Chinese Positive Youth Development Scale (PYD)

The internal consistency of the composite of seven subscales (PYD) from Chinese Positive Youth Development Scale (CPYDS) was .941, which showed excellent reliability. PYD also showed sound construct validity as there were significant inter-relationships between the subscales of spirituality, resilience, cognitive competence, self-determination, clear and positive identity, beliefs in the future, self-efficacy and the whole measure of PYD. In summary, the composite of seven subscales from Chinese Positive Youth Development Scale showed good psychometric properties in the main study.

9.2 Empirical findings for the Research Questions

This section discusses key empirical findings of this study with reference to the research questions stated in Chapter Five.

9.2.1 Relationships between parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs

This section addresses the findings of Research Question 1. Echoing the expectancy-value theory of motivation suggested by Eccles et al. (1998, 2006) that the cultural milieu influence socializers' (parents') beliefs which in turn influence the parents' perception and expectations of their children, the findings showed empirical support that fathers' and mothers' Chinese cultural beliefs about adversity had positive relationship with their child-specific beliefs, as indexed by parental expectations of children's future and parental attribution of children's success and failure to effort. Parents' positive Chinese cultural beliefs about adversity are shaped by Confucian thought that emphasize people's inner

strengths and virtues such as perseverance and effort (Shek, 2004b). These Chinese cultural beliefs influence parents' expectations that their children will become moral, responsible and competent individuals in their future. Furthermore, positive Chinese cultural beliefs about adversity also reinforce parents' attribution of success or failure to children's effort. The findings contradict the suggestion of O'Sullivan and Howe (1996) that low-income families might believe that they had little control over their environment and therefore are more likely to attribute success and failure to external factors such as luck rather than effort. However, in Chinese culture, though poor families may face difficulty managing their daily lives, they never lose hope and believe that "effort" will change the life trajectories of their children. Hence, the findings support the ecological perspective that cultural contexts influence the beliefs systems of individuals (Bronfenbrenner, 1979, 1986), and provide empirical evidence that poor parents may not necessarily believe that their children's life trajectories cannot be altered. This provides important implications for policymakers and practitioners to formulate policies and intervention strategies in dealing with the risk of intergenerational poverty.

9.2.2 Influences of parental beliefs on family processes in economically disadvantaged families

This section addresses the findings of Research Question 2. Consistent with expectancy-value theory suggested by Eccles et al. (1998, 2006) and literature (Davis-Kean, 2005, Georgiou, 1999; Gill & Reynolds, 1999; Halle et al., 1997; Schoon et al., 2004), the findings suggest that parental beliefs influence parenting style and practices, family functioning, and parental sacrifice for children's education in economically disadvantaged families.

9.2.2.1 Relationships of paternal beliefs and family processes perceived by fathers

Regarding paternal beliefs and family processes perceived by fathers, it was found that except for the relationship of fathers' Chinese cultural beliefs about adversity and paternal control, which was not significant, all other relationships of parental beliefs (fathers' Chinese cultural beliefs about adversity, paternal expectations of children's future, and paternal attribution of children's success

and failure to effort) with various family processes (paternal parenting style, paternal control, paternal sacrifice, and family functioning) reported by fathers were significant. It was noteworthy that fathers' child-specific beliefs, with fathers' expectations of children's future in particular, greatly influenced fathers' perceptions of family processes. Regarding the relative influence of paternal beliefs on different family processes, it was found that fathers' Chinese cultural beliefs about adversity significantly predicted paternal parenting style and family functioning, whereas fathers' attribution of children's success and failure to effort significantly influenced paternal parenting style, paternal control and paternal sacrifice for children's education. Lastly, fathers' expectations of children's future had great influence on paternal control, perceived family functioning and paternal sacrifice for children's education in economically disadvantaged families.

In the Chinese culture, traditional families are patriarchal and hierarchical, with power vested in the head of the household to maintain family harmony and proper functions. Males, as the head of the household, are socialized to have a strong sense of responsibility in protecting family members and mobilizing family resources. Influenced by Confucian beliefs, fathers have strong expectations of their children's future, and believe that their children could succeed in paying effort in education. With the expectation that their children can have a better future via education (Chao, 1996; Chao & Tseng, 2002; Fuligni, 1997), fathers are committed to the role of mobilizing family resources for the upbringing and development of their children, regardless of the struggles they may face due to low socio-economic background. Furthermore, it was suggested that parents' investment preference rather than income that affected education of economically disadvantaged children (Becker & Tome, 1985). Fathers who placed high value on the future of their children would devote more resources to the development of the children, though investment in children's education required parental self-sacrifice in low-income families (Schlee, 2009). Hence, it is anticipated that paternal sacrifice for children's education was salient. Besides, it was suggested by the literature that Chinese parenting was characterized by behavioural control, expressed by the terms '*jiao xun*' (to train) and '*guan*' (to govern), a socialization practice reflecting Confucian principles (Chao, 1994). Fathers were socialized to take up the role of training and monitoring the

behaviours of children, echoing the popular Chinese maxim “*yang bu jiao, fu zhi guo*” (it is the fathers’ fault for only nurturing but not teaching his children). Chinese fathers are more restrictive and authoritarian in their child-rearing practice when comparing with fathers in Western countries (Chao, 1994; Chao & Tseng, 2002). To guide their children according to their beliefs, paternal control is prevalent in paternal parenting practices. Apart from paternal control and paternal sacrifice for children’s education, paternal parenting style and family functioning were also influenced by paternal beliefs (fathers’ Chinese cultural beliefs about adversity, fathers’ expectations of children’s future, and fathers’ attribution of children’s success and failure to effort), but the effect size was small to medium.

9.2.2.2 Relationships between maternal beliefs and family processes perceived by mothers

For relationships between maternal beliefs and family processes reported by mothers, it was found that mothers’ child-specific beliefs, with mothers’ expectations of children’s future in particular, greatly influenced mothers’ perceptions of family processes. It was found that the influence of mothers’ expectations of children’s future greatly influenced maternal control and maternal sacrifice for children’s education. Similar to the explanation of paternal beliefs on family processes, mothers who had higher expectations of children’s future and higher attribution of children’s success and failure to effort would offer more family resources for the education of their children, believing that education and effort could change their children’s life trajectories. Besides, mothers also took up the role of guiding their children via maternal control. Moreover, mothers’ Chinese cultural beliefs about adversity and expectations of children’s future influenced the level of family functioning, suggesting that mothers attempted to provide a harmonious and stable environment for their children to develop and strive for achievement.

Unlike paternal beliefs, which showed significant relationships with paternal parenting style, except for mothers’ expectations of children’s future showing a small influence on parenting style, other maternal beliefs were found insignificant in relation with maternal parenting style. To account for the findings, it should be noted that parenting styles are related to the different concerns of

fathers and mothers for their children. Collins and Russell (1991) suggested that father-child interaction mainly involves goals and achievements, whereas mother-child interaction mainly involves care-taking and routine family concerns. Fathers' beliefs about adversity as well as child-specific beliefs, being internalized by Confucian thought, affect their goal-oriented and achievement-focused interactions with their children. In contrast, as mothers are mainly responsible for caring and nurturing of the children, their parenting styles are more determined by their parenting roles and demands and less directed by their cultural beliefs. Irrespective of cultural beliefs, mothers are tied to their roles and responsibilities as mothers. Nevertheless, mothers' expectations of children's future reflected mothers' socialization goals to prepare their children to become responsible, competent, law-abiding and self-reliant individuals; thus mothers' expectations of children's future do affect their parenting styles.

When we looked into the relationships between parental beliefs and family processes perceived by adolescents, a different picture was presented. There were not any relationships found between parental beliefs and adolescents' perceived family processes. The findings may be due to parent-child discrepancies in perceptions of family processes. Or perhaps parents socialize their children irrespective of their beliefs. We will discuss the parent-child discrepancies in perceptions of family processes in detail in Section 9.2.7.

9.2.3 Influences of family processes on achievement motivation and psychological competence of adolescents

The findings on Research Question 3 are discussed in this section. The findings provide empirical evidence showing that family processes (parenting style, parental control, family functioning, parental sacrifice) influence achievement motivation and psychological competence of economically disadvantaged adolescents.

9.2.3.1 Relationships between family processes and adolescents' achievement motivation

Regarding achievement motivation of adolescents, the findings support the socialization models of achievement (Eccles, 1993) that family processes predict motivation of adolescents. As proposed by Eccles et al. (1998), developmentally

appropriate achievement demands and pressure, as well as a supportive affective family climate, are important components in parenting. Thus, positive endorsement of parenting style with parental responsiveness and demandingness, parental control of children's behaviours, and better family functioning was essential in predicting adolescents' motivation. Furthermore, the findings support the social capital theory of family (Coleman, 1988, 1990) which suggests that parental investment and involvement influence the motivation of adolescents. Paternal and maternal parenting style, paternal and maternal control, family functioning, and paternal and maternal sacrifice for children's education showed positive relationships with achievement motivation of economically disadvantaged adolescents. It was found that overall family processes perceived by adolescents accounted for 28.5% of variance of adolescents' achievement motivation, which was substantial in building achievement motivation of economically disadvantaged adolescents.

Among different family processes perceived by adolescents, it was found that paternal and maternal sacrifice for children's education and maternal control showed the greatest association with achievement motivation of adolescents, with the effect sizes between medium to high. From the findings of standard multiple regression of overall family processes on prediction of achievement motivation, it was found that paternal sacrifice for children's education and maternal control predicted adolescents' achievement motivation.

9.2.3.1.1 Influence of paternal sacrifice on achievement motivation of adolescents

The qualitative studies on parental sacrifice give us some insight on the explanation on how parental sacrifice enhances achievement motivation of economically disadvantaged adolescents. Gofen (2009), in her qualitative study on how higher education students broke through the intergenerational cycle of education level inheritance, found that children felt indebted to their parents' sacrifice for their education and thus regarded it a duty to fulfil the parents' expectations. Fuligni and Yoshikawa (2003) also found that a sense of filial obligation motivated children and adolescents to achieve academically and avoid problem behaviours in response to the sacrifice of parents who had migrated to the United States for a better future. The studies indicated that children who were

deeply indebted to parents' sacrifice would be motivated to achieve out of gratitude to their parents' unconditional love. This view echoes the "reciprocity" concept of fulfilling different roles within the Chinese family system, as indicated by mutual care and obligation (Chao & Tseng, 2002). Parents hold the authority and responsibility for taking care of their children, and children in turn are obliged to respect their parents and fulfil their responsibility to the families. It should be noted that paternal sacrifice for children's education had greater effect size on association with adolescents' achievement motivation than did maternal sacrifice. As adolescents perceived that their fathers made a lot of sacrifices to engage in unpleasant jobs and long hours of work with their low educational and socio-economic background in order to earn a living, they were more motivated for achievement, on one hand to strive for a better future so that they could eventually support the family, and on the other hand to honour their fathers for their sacrifice and investment. Thus, adolescents may be more indebted to fathers' devotion and sacrifice and thus motivated towards achievement in return. In view of the fact that related studies are almost non-existent, it was essential to conduct research on this area.

9.2.3.1.2 Influence of maternal control on achievement motivation of adolescents

Another significant predictor of adolescents' achievement motivation was maternal control of children's behaviours. To account for the influence of maternal control in influencing achievement motivation of adolescents, the concepts of filial piety and shame strategy may give us some insight. As mentioned, parental control is distinctive in Chinese parenting practices for setting parental expectation and standards in monitoring children's behaviours (Chao, 1994; Chao & Tseng, 2002), and adolescents are expected to follow the standards and expectations of parents in the pursuit of filial piety. Furthermore, Bempechat et al. (1999) attempted to integrate the concept of interdependence into the parental socialization strategies for fostering achievement in poor children. It was found that a strong perception of shame about poor performance was exhibited in Indo-Chinese students (Bempechat et al., 1999). Yang (1981, 1986) also suggested that shame strategy was an indigenous Chinese socialization practice. When parents execute clear expectations and standards for

adolescents, those who fail may experience shame and guilt. Thus, adolescents may put effort into achievement in order to gain pride and reduce shame to their families. Obviously, this is also a manifestation of filial piety (Yu, 1996). It is interesting that maternal control showed greater association with achievement motivation than paternal control. As mothers spent more time and effort nurturing their children than fathers, adolescents were more sensitive to the expectations and standards of mothers. In manifesting filial piety as well as avoiding shame that would ruin the name of the families and create disappointment for their mothers, adolescents were motivated to achieve for the sake of the families. Furthermore, it was found that the emphasis of interdependence in the Chinese family system was more salient in mother-child relationships, as Chinese mothers emphasized the relational goals of fostering enduring mother-child relationships and sharing of love and affection (Chao & Tseng, 2002). Thus, adolescents were more sensitive to their relationships with their mothers and experienced more shame and guilt for not fulfilling their mothers' instructions and standards. With the fear of hurting their mothers and breaking the mother-child relationship, adolescents were motivated to strive for achievement.

9.2.3.2 Relationships between family processes and adolescent psychological competence

Regarding psychological competence of economically disadvantaged adolescents, the present findings supported the family process model that positive parental qualities such as positive parenting style, parental management and supervision, parental support and involvement, warm and stable family environment were associated with better psychological well-being of adolescents living in poverty (Conger et al, 2002; Bradley & Crowyn, 2002; Shek 2002e). The findings also echoed the resilience literature that family processes serve as protective factors against the adverse effects of poverty (Garmezy, 1993; Masten et al., 1990; Rutter, 1987, 1990; Smith & Carlson, 1997; Wyman et al., 1992; Yeung et al, 2002). It was found that all measured family processes (parenting style, parental control, family functioning, parental sacrifice) perceived by adolescents were significantly related to psychological competence of adolescents. Among the relationships of various family processes and adolescent

psychological competence, it was found that the effect of family functioning was the greatest. The other family processes also had the strength of effect ranging from medium to high level. The overall family processes accounted for 38.5% of the variance of psychological competence of economically disadvantaged adolescents, which was considered influential in the effect. Parents could “make a difference” in building psychological competence and resilience of economically disadvantaged adolescents.

From the findings of prediction of overall family processes on psychological competence of adolescents, it was found that family functioning remarkably influenced adolescent psychological competence. Maternal control and paternal sacrifice for children’s education also significantly predicted adolescent psychological competence.

9.2.3.2.1 Influence of family functioning on psychological competence of adolescents

The literature on resilience suggested that a warm and stable family environment with affectional familial relationships served as an important familial buffer for poor adolescents in facing adversity (Garmezy, 1993; Smith & Carlson, 1997; Wyman et al., 1992; Yeung et al, 2002). In addition, resilient poor families demonstrated high levels of warmth, affection, emotional support for one another and sustained family rules, routines and shared core values (McCubbin, 1996; Seccombe, 2002). Furthermore, empirical evidence also supported that positive family functioning was related to better adolescent adjustment in low socio-economic context (Bosma & Gerrits, 1985; Shek, 1995b, 2002b, Street et al., 2009). Thus, it is unquestionable that family functioning is an important predictor of enhanced adolescent psychological competence. However, we should bear in mind that the relationships between family functioning and adolescent psychological well-being were found to be bi-directional in nature in longitudinal studies (Shek, 1998a). As this research is cross-sectional in research design, this is a limitation to be addressed in future studies.

9.2.3.2.2 Influence of maternal control on psychological competence of adolescents

From the findings, maternal control was a significant predictor of adolescent psychological competence. Though guilt and shame would arise if adolescents could not meet mothers' expectations and standards, adolescents developed clear and positive identity, cognitive competence, and resilience when they received clear expectations from and shared similar standards with their mothers. Furthermore, clear expectations and standards would help family members to develop a sense of coherence that crisis could be manageable and meaningful (Walsh, 2003), which were essential for economically disadvantaged adolescents to develop resilience in facing adversity. As mothers spent more time in monitoring their children and were more involved in the parenting roles, maternal control was found to be more salient in influencing the psychological competence of adolescents.

9.2.3.2.3 Influence of paternal sacrifice on psychological competence of adolescents

Last but not least, paternal sacrifice for children's education influenced psychological competence of adolescents. Paternal sacrifice for children's education implied the love, expectation and support of the fathers for the adolescents, which was important for enhancing adolescent psychological competence, and essentially helped adolescents develop clear future orientation and positive self-identity.

9.2.3.3 Relationships between family processes perceived by parents and adolescents' achievement motivation and psychological competence

When viewing family processes from parents' perspectives, it was found that not all family processes were related to achievement motivation and psychological competence of economically disadvantaged adolescents. Paternal and maternal control and paternal sacrifice for children's education were related to adolescents' achievement motivation. Paternal parenting style, fathers' and mothers' perceptions of family functioning, and paternal sacrifice for children's education were related to adolescent psychological competence. There may be due to the parent-child discrepancies in perceptions of family processes. We will

discuss the parent-child discrepancies in perceptions of family processes in detail in Section 9.2.7.

When examining parents' perceived family processes as predictors of achievement motivation and psychological competence of adolescents, the findings were quite similar to adolescents' perceptions. For achievement motivation, it was found that maternal endorsement of positive parenting style and paternal sacrifice for children's education were significant predictors. It was somewhat different from adolescents' perspective, where maternal control and paternal sacrifice was stressed. According to socialization models of achievement (Eccles, 1993), parental demandingness and responsiveness were important qualities for building up achievement motivation of adolescents. Furthermore, empirical findings supported that parental control with parental warmth predicted academic achievement of Chinese students (Chao & Sue, 1996). As mothers were assumed to take up the child-rearing responsibility in Chinese culture (Shek, 2005e), and the majority of mothers in the sample stayed at home, they were more ready to support and respond to the needs of their children so as to enhance the achievement motivation of adolescents. Thus, maternal endorsement of positive parenting style was a predictor of achievement motivation of adolescents.

Moreover, fathers' report of paternal sacrifice for children's education and mothers' perceived family functioning were significant predictors for psychological competence, which was similar to adolescents' perception. However, mothers' perception of maternal control was not a significant predictor of adolescent psychological competence, though it was a predictor of psychological competence from adolescents' perception. As mentioned above, mothers exercised maternal control to monitor the behaviour of their children, adolescents would experience shame and guilt if they failed to observe the rules and standards of mothers. Thus, mothers' perception of maternal control did not necessarily predict adolescent psychological competence, if adolescents failed to follow mothers' rules and shared mothers' standards.

Overall speaking, from the results of relationships on family processes and adolescents' development, it was noteworthy that there were different roles of fathers and mothers that enhanced the achievement motivation and psychological

competence of economically disadvantaged adolescents. Fathers, as breadwinners, are responsible for protecting family members and striving for family resources for maintenance of family daily necessities and adolescent development. Thus, paternal sacrifice for children's education was considered a prevalent family process perceived by both fathers and adolescents that enhanced achievement motivation and psychological competence of adolescents. This is particularly important for poor families, as fathers put extraordinary effort in striving for financial resources for family expenses and their children's development. The process may involve extra paternal sacrifice, as resources for poor families were scarce. Mothers, on the other hand, were mainly responsible for child-rearing roles such as caring, nurturing and monitoring children's behaviours in the families. As the child-rearing role was central to mothers' responsibilities, maternal parenting style in the forms of maternal demandingness and responsiveness, and maternal control were considered significant predictors of achievement motivation of adolescents. The findings echo with the cultural inclination of "*nan zhu wai, nu zhu nei*" (men manage things outside the family, whereas women manage things inside the families) in Chinese community. The different contributions of fathers and mothers to building adolescents' achievement motivation and psychological competence via paternal sacrifice and maternal control are illuminating for us to understand the complex family processes of poor families. Besides differential contributions of family processes between fathers and mothers, there were other parental differences on family processes. Section 9.2.5 will discuss parental difference on family processes in detail.

9.2.4 Family processes as mediators for the influence of parental beliefs on achievement motivation and psychological competence of adolescents

This section addresses the findings of Research Question 4. Three sets of data (the parents' data, the adolescents' data, and the averaged data of fathers, mothers and adolescents) provided three perspectives (the parents' perspective, the adolescents' perspectives, and the "integrated" perspective of fathers, mothers and adolescents) in understanding the influences of parental beliefs on achievement motivation and psychological competence of adolescents.

Before analysing the mediating effects on influences of parental beliefs on

achievement motivation and psychological competence of economically disadvantaged adolescents, it is essential to understand the direct effect of parental beliefs on adolescents' achievement motivation and psychological competence. It was found that fathers' expectations of children's future significantly predicted the achievement motivation and psychological competence of economically disadvantaged adolescents. The findings echoed the literature on the relationships between parental expectation and adolescents' cognitive and psychological competence (Davis-Kean, 2005, Fan & Chen, 2001, Gill & Reynolds, 1999; Schoon et al., 2004). This is especially relevant for Chinese people, as evidence showed that Chinese parents have high expectations of education of their children in Chinese community (Blair & Qian, 1998; Fuligni, 1997; Goyette & Xie, 1999; Lee, 1987; Slaughter-Defoe et al., 1990; Stevenson & Lee, 1990; Yao, 1985). Parents have expectations of their children to pursue a better future, on one hand expecting the children to be competent and contributive to the society, and on the other hand expecting their children to bring honour to the family. This is of particular importance to poor families, as the future prospects of their children imply an escape of the children and the families from the trajectory of poverty. Adolescents, driven by filial piety, would try to fulfil parents' expectations (Chao & Tseng, 2002). Thus, achievement motivation and psychological competence of adolescents are enhanced. Interestingly, the findings suggested that it was the fathers' expectations of children's future that predicted adolescents' achievement motivation and psychological competence. Chao and Tseng (2002) suggested that filial piety traditionally entails "a rigid system of age veneration and patriarchy" (p.65); i.e., fathers, as "*yi jia zhi zhu*" (the head of the family) in Chinese culture, wielded greater decision-making power and were treated with respect and obedience by their children. Thus, fathers' expectations of children's future had more influence on adolescents' achievement motivation and psychological competence. The importance of patriarchal status is still salient in poor Chinese families.

9.2.4.1 Mediating effects of the influence of parental beliefs on adolescents' achievement motivation

On analysing the mediating effects of influences of parental beliefs on achievement motivation of economically disadvantaged adolescents, it was found

that four mediating factors were identified: paternal control perceived by fathers; paternal sacrifice for children's education perceived by fathers; paternal control from averaged data of fathers and adolescents; and paternal sacrifice for children's education from averaged data of fathers and adolescents. It was not surprising to find that that paternal control and paternal sacrifice for children's education are mediators for the influences of parental beliefs on achievement motivation of adolescents, as paternal beliefs were greatly associated with parental control and paternal sacrifice from the fathers' data, and at the same time, paternal control and paternal sacrifice perceived by fathers were also significantly related to achievement motivation of adolescents. However, these factors failed to emerge as mediators based on adolescent perceptions.

9.2.4.2 Mediating effects of the influence of parental beliefs on adolescent psychological competence

Regarding the mediating effects of influences of parental beliefs on psychological competence of economically disadvantaged adolescents, it was found that six mediating factors were identified: fathers' perception of family functioning; paternal sacrifice for children's education perceived by fathers; maternal control from adolescents' perspective; paternal control from averaged data of fathers and adolescents; family functioning from averaged data of fathers, mothers and adolescents; and paternal sacrifice for children's education from averaged data of fathers and adolescents. Obviously, fathers' perception of family functioning and paternal sacrifice for children's education were mediators for the influences of parental beliefs on psychological competence of adolescents, as parental beliefs were significantly associated with fathers' perception of family functioning and paternal sacrifice for children's education, and at the same time fathers' perception of family functioning and paternal sacrifice were correlated with psychological competence of adolescents. Furthermore, it was also indisputable that the integrated perceptions of fathers and adolescents on paternal control, family functioning and paternal sacrifice were identified as mediators for the influences of parental beliefs on adolescent psychological competence, as paternal beliefs had great influence on paternal control, family functioning and paternal sacrifice reported by fathers, and at the same adolescents' perception of paternal control, family functioning and paternal sacrifice significantly

influenced their psychological competence.

In summary, the findings of mediation effect of paternal control, family functioning and paternal sacrifice between parental beliefs and adolescent development were in line with previous findings.

9.2.4.3 Maternal control as mediating factors of influences of parental beliefs on adolescent psychological competence

It should be noted that maternal control perceived by adolescents mediated the influences of parental beliefs on adolescent psychological competence. It is interesting to find that fathers' expectations of children's future predicted maternal control perceived by adolescents. The results suggested that the patterns of parental influences on adolescents' development might be triadic rather than dyadic. Fathers, as the figure-heads of the families, have great decision-making authority in the family that may influence the behaviours of other family members. Mothers, who spend most of their time nurturing and monitoring their children, are obliged to fulfil fathers' expectations. With the practical difficulties of fathers in exercising paternal control due to long, non-standard hours of work, maternal control is important for setting standards and rules according to fathers' expectations. Indeed, the mechanisms of how fathers' expectations of children's future influence mothers' perceptions of family processes should be further researched.

Essentially, the findings provide empirical evidence supporting the socialization models of achievement (Eccles, 1993) and social capital theory on families (Coleman, 1988, 1990). Parents, influenced by their cultures, develop worldviews, cultural beliefs and child-specific beliefs about their children. The parents' general beliefs together with child-specific beliefs directly link to their parenting strategies for the expected outcomes of their children. In addition, the value parents place on their children's development determines their investment preference on their children. Parents who have high expectations of their children would make more investment in their children's education, though this involves parental sacrifice in low-income families (Becker & Tome, 1985; Schlee, 2009). Last but not least, the social learning perspective (Bandura, 1985) may also give us insight on the phenomenon. Parents with strong positive cultural beliefs about

adversity and high expectations of their children would be more positive and motivated to deal with the daily challenges brought forth by poverty. The parents' active coping and perseverance may act as models that shape the attitudes their children in facing the challenge in their development. This may also help to build up achievement motivation and resilience of economically disadvantaged adolescents.

9.2.5 Parental Differences in Family Processes

This section addresses Research Question 5. From the parents' perspectives, it was found that there were significant differences in parenting style and parental sacrifice for children's education between fathers and mothers, with mothers showing higher levels of positive parenting style as well as sacrifice for children's education than fathers. From adolescents' perspective, it was also found that adolescents perceived significant differences between paternal and maternal parenting style, paternal and maternal control, and paternal and maternal sacrifice for children's education. Similar results were obtained with mothers being perceived to exhibit higher levels of positive parenting style, control and sacrifice for children's education than fathers. The results were consistent with some research concerning father-mother differences on family processes (Forehand & Nousiainen, 1993; Noller & Callan, 1990; Paulson & Sputa, 1996). However, the difference in family functioning between fathers and mothers was not significant in this study.

9.2.5.1 Father-mother discrepancies in parenting style

The findings supported Hypothesis 5.1 suggesting that mothers showed more demandingness and responsiveness on parenting their children than did fathers. It should be noted that the effect size of father-mother discrepancies in parenting styles was noteworthy, particularly from adolescents' perception of paternal-maternal discrepancies in parenting styles. Echoing the theories mentioned in the literature review (psychoanalytic theory, sex-role theory, gender ideology approach and resources perspective), fathers were found more detached from socialization of their children than mothers. It was particularly salient in Chinese families. The role theory of cultural perspective suggested that parenting roles and practices were determined by culture. In Chinese culture, mothers were

defined as caregivers, responsible for maintaining the daily management and nurturing the children. Fathers, in contrast, were traditionally defined as providers and disciplinarians, mainly for mobilizing resources and protecting the family (Shek, 2005e). Furthermore, in economically disadvantaged families, the physically demanding jobs and long and non-standard hours of work add additional burdens for fathers to be involved in parenting.

9.2.5.2 Parental control perceived by fathers and mothers

It is interesting to examine parental control between fathers and mothers, as the findings of this study and recent research show contradictory views from the traditional theories. There is a strong traditional discourse of “strict fathers, kind mothers” (Wilson, 1974) embedded in Chinese culture. Fathers are generally regarded as “harsh disciplinarians” whereas mothers are kind and affectionate (Ho, 1986; Shek, 2002c). The sex role theory also posits that females, who exhibit higher levels of expressiveness, may adopt a warmer style of parenting, whereas males, who exhibit higher levels of instrumentality, may adopt a more goal-oriented style of parenting (McKinney & Renk, 2008). Furthermore, the cultural perspective also supports the “strict fathers, kind mothers” thesis. Surprisingly, fathers did not show greater control of adolescents’ behaviours than did mothers. Adolescents even perceived significantly greater maternal control than paternal control. The traditional “strict father, kind mother” thesis was challenged. Recent studies of perceptions of paternal and maternal control by Chinese adolescents had similar findings (Shek, 2007a, 2008b). Shek (2008b) argued that “strict fathers, kind mothers” thesis had become a “cultural stereotype” in the contemporary Chinese era. Recent studies provided support for the “strict mothers, kind fathers” thesis, or even “stricter mothers and kinder mothers” with fathers remaining detached (Shek, 2007a, 2008b). Furstenberg (1988) referred to these phenomena as “two faces of fatherhood” (p. 193). On one hand, fathers moved towards more involvement in caring and rearing their children. On the other hand, increase in fathers’ absence of child support was also evident. One possible explanation is the changing gender roles of fathers and mothers in contemporary Chinese culture. With a more egalitarian expectation of gender roles in the contemporary world, fathers and mothers are anticipated to have congruent parenting practices for their children. Thus, fathers tend to be less

strict and mothers need to exercise more control in parenting. Furthermore, as mothers spend most of their time at home caring for their children, they were sensitive to the development and behaviour of adolescents. Family rules and standards were essential for mothers to monitor the behaviours of their children. In contrast, fathers may be less involved in monitoring their children due to the practical limitations of demanding jobs and long hours of work. Fathers might expect themselves to take up some monitoring role in parenting their children, but the reality was that the practical limitations restricted their actual involvement. Thus, adolescents perceived paternal control as significantly lower than maternal control.

9.2.5.3 Father-mother discrepancies in parental sacrifice for children's education

When looking into parental sacrifice for children's education, it was found mothers perceived significantly higher level of sacrifice for children's education than did fathers. Adolescents also perceived higher level of maternal sacrifice for their education than paternal sacrifice. The results from parents' and adolescents' perspectives showed similar conclusions. There were two possibilities to account for the higher level of maternal sacrifice for children's education than paternal sacrifice. First, mothers were designated to care about all aspects of adolescents' lives. Thus, they are more ready to allocate their time and money for education of adolescents, as well as to accommodate their daily routines and sacrifice their personal needs for the sake of their children's development. Different dimensions of family resources including money, time, and effort were mobilized and allocated by mothers for the education of children. In contrast, fathers were the breadwinners of the families and were mainly responsible for mobilizing financial resources. Thus, the scope of sacrifice between fathers and mothers was somewhat different, with maternal sacrifice covering more facets of sacrifice than paternal sacrifice. Furthermore, it was found that maternal sacrifice for children's education perceived by mothers was negatively associated with mothers' duration of stay in Hong Kong, suggesting that the shorter the duration of stay of mothers in Hong Kong, the more maternal sacrifice perceived by mothers. Mothers might perceive leaving the mainland to settle in Hong Kong was an important sacrifice, as they had to leave their own parents, relatives,

friends and hometowns, move to a strange place and live at subsistence levels. With the expectation of better education for their children, mothers' decision to settle in a strange environment was definitely a sacrifice. Thus, maternal sacrifice was considered greater than paternal sacrifice from both parents' and adolescents' perspectives.

9.2.5.4 Influences of fathers' roles on achievement motivation and psychological competence of adolescents

It is both interesting and worthy to understand that although fathers were less involved in the socialization of children, and demonstrated less sacrifice for children's education than mothers, they showed significant influence on building achievement motivation and psychological competence of economically disadvantaged adolescents. Lamb and Lewis (2010) commented that the influences of parents on adolescents' development were "somewhat surprising" (p. 125), when they found that maternal influences were not consistently correlated with adolescent development when their children entered secondary school, whereas paternal influences were correlated with adolescent development. The results also echo Shek's (1999c) study on paternal and maternal influences on psychological well-being of Chinese adolescents. There are several possible explanations for the phenomenon. First, the patriarchal and hierarchical family system in Chinese culture gives us some hints. In Chinese culture, where clear hierarchical relationships as well as well-defined roles are identified within the family, fathers are regarded as the head of the household with vested power and financial resources for family decision-making. Thus, adolescents may interpret fathers' involvement in family processes to be more influential and convincing on children's behaviours (Shek, 1999c). Second, there is another argument that though fathers are less involved in parenting, positive paternal attributes and related changes in fathers have more salient effects on children's behaviours and competence. Barrera and Garrison-Jones (1992), in their study of paternal support for adolescent psychological well-being, found that for those adolescents lacking support in father-adolescent relationship, the effect of paternal support accentuated when it was available. Forehand and Nousiainen (1993) also put forth a similar suggestion explaining why paternal but not maternal acceptance predicted adolescents' social competence and conduct problems at school. They

suggested that adolescents were more conscious in obtaining recognition from their fathers than from their mothers, as fathers' acceptance was less available.

In summary, the above explanations suggest that it is not the quantity of paternal involvement that affected the psychological well-being of adolescents, but instead the availability and meanings of paternal involvement perceived by adolescents that mattered. The findings give us important cues that fathers' contributions to family processes enhancing adolescent competence should be firmly recognized.

9.2.6 Parent-child discrepancies in perception of family processes

This section addresses the findings in response to Research Question 6. It was found that there were significant father-adolescent differences in perception of parenting style, paternal control, paternal sacrifice for children's education and family functioning. Adolescents generally had lower scores on all measures than did fathers. Furthermore, there were significant mother-adolescent differences in perception of parenting style, maternal sacrifice for children's education and family functioning, with adolescents generally having lower scores on the three measures than mothers. However, there were no significant differences on maternal control between mothers and adolescents.

The research findings support the previous findings that there were parent-adolescent differences in perceptions of different family processes, such as parenting styles (Gaylord et al., 2003; McBride-Chang, 1998; Padmawidjaja & Chao, 2010; Paulson & Sputa, 1996), parenting practices (Cottrell et al, 2003; Gulon et al., 2009), family functioning (Ohannessian et al., 1995, 2000; Shek, 1999d). Three explanations were identified to account for the parent-adolescent differences. These include indication of individuation of adolescents as a normative developmental process (Grotevant & Cooper, 1986), the "generational stake" hypothesis that parents tend to maximize parent-child similarities, whereas adolescents have a stake to minimize the similarities (Bengtson & Kuypers, 1971); and the conflictual interactions and communications between parents and adolescents that may reflect family disorganization, maladaptive family interaction patterns, and a lack of cohesion (Olson et al., 1983; Minuchin, 1985).

From the findings, it should be noted that the effect size of parent-child discrepancies in parenting style and parental sacrifice for children's education

was great, especially on father-adolescent discrepancies in parenting styles and parental sacrifice for children's education. Furthermore, the effect size of father-child discrepancies in family functioning was also worth noting. The father-adolescent discrepancies in family processes suggested that there might be conflict in communication between fathers and adolescents in poor families.

It is noteworthy that there were great discrepancies in perceptions of parental sacrifice between parents and economically disadvantaged adolescents. Besides the explanations mentioned above, the phenomenon may be further explained by the struggle with material and resource deprivation of the families living in poverty. Economically disadvantaged parents spend most of their resources on daily necessities such as rent, food and transportation. Though they put extraordinary effort in providing a supportive environment for their children despite the challenges of economic strains and stresses, the resources that they could offer to their children were still inadequate, or at least less than what their peers and schoolmates obtained from their middle-class families. Adolescents may be overwhelmed by material deprivation, undermining the effort and devotion that parents made. The resource deprivation and peer comparison would result in lower perception of parental sacrifice in adolescents.

9.2.7 Influence of parent-child discrepancies in family processes on adolescent psychological outcomes

This section addresses the findings in response to Research Question 7. As mentioned above, the relationships of parental beliefs in influencing adolescent psychological development via family processes were not as straightforward as expected. There were discrepancies between parents and adolescents in perceptions of family processes. It is important to understand how the parent-child discrepancies in perceptions of family processes influence adolescent psychological development, as the result may help us to modify the hypothetical model. Furthermore, there are divergent explanations on parent-child discrepancies in perceptions of family processes, including individuation process, generation stake hypotheses, and maladjustment of family members in the theoretical framework. The relationships between parent-child discrepancies and adolescent psychological development give us some hints on the explanation models.

Echoing the literature that parent-child discrepancies in perception of family processes are related to low levels of adolescent self-competence, self-esteem, emotional adjustment and social competence (Carlson et al., 1991; Guion et al., 2009; Ohannessian et al., 2000), the findings showed empirical evidence that parent-child discrepancies in family processes generally reduced the achievement motivation and psychological competence of economically disadvantaged adolescents. The findings sound an alarm that parent-child discrepancies in family processes may go beyond the normal developmental assumptions of the individuation process and the generational stake thesis, which are regarded as healthy. There may be conflicting interaction between parents and adolescents in poor families that brings stress and maladjustment, which in turn results in poor psychological adjustment of adolescents.

9.2.7.1 Influences of parent-adolescent discrepancies in perceptions of family processes on achievement motivation of adolescents

The results showed that father-child discrepancies in paternal parenting styles and family functioning, as well as mother-child discrepancies in maternal control and maternal sacrifice for children's education were negatively related with achievement motivation of economically disadvantaged adolescents. Moreover, when examining the overall parent-child discrepancies in perception of family processes in prediction of adolescent achievement motivation, it was found that parent-child discrepancies explained 9.2% of the variance of adolescent achievement motivation. Among all, it was found that mother-child discrepancies in maternal sacrifice for children's education predicted adversely adolescent achievement motivation.

9.2.7.1.1 Parent-adolescent discrepancies in parental sacrifice predicting adolescent achievement motivation

As mentioned above, parental sacrifice for children's education was an important predictor in enhancing achievement motivation and psychological competence of adolescents. Parental sacrifice for children's education not only provides necessary resources for adolescents on their educational needs, it also reflects parents' love, care, expectation and contributions on the development of adolescents. On the contrary, parent-child discrepancies in parental sacrifice for

children's education may imply tension between parents and adolescents on the use of family resources. The discrepancies would result in inadequate resources for adolescents to fulfil their educational needs, the conflicts on misallocation of resources perceived by parents and adolescents, and in worse case the mistrust and feelings of neglect perceived by adolescents. The discrepancies in parental sacrifice for children's education between parents and adolescents could be detrimental for building adolescents' achievement motivation.

However, it is interesting to find that it was mother-child discrepancies in maternal sacrifice instead of father-child discrepancies in paternal sacrifice that inversely influenced the achievement motivation of adolescents. There are two possible explanations for the findings. One possibility is that mothers are mainly responsible for the distribution of family resources in the family, and so adolescents may easily have conflict with mothers on the allocation of scarce resources. Another possibility is that as fathers are breadwinners as well as authority figures of the family, they are more understandable to reserve some resources for their personal needs. Also, adolescents were more accepting of fathers' decreased involvement in their daily lives, according to the different roles of parenting in Chinese culture, as well as the long hours of work. However, mothers may be perceived as dependent on their families as they need not go out to work. Thus, adolescents may be less tolerant if mothers spend financial and other resources apart from daily necessities and their educational needs. As there are not any studies on how parent-child discrepancies in parental sacrifice influence adolescent development, further research on this area is urged.

9.2.7.2 Influences of parent-adolescent discrepancies in perceptions of family processes on psychological competence of adolescents

Regarding adolescent psychological competence, the results showed that father-child discrepancies in paternal control and family functioning, as well as mother-child discrepancies in maternal control and family functioning, were negatively related to psychological competence of economically disadvantaged adolescents. Moreover, when examining overall parent-child discrepancies in perception of family processes in prediction of adolescent psychological competence, it was found that parent-child discrepancies explained 15.4% of the variance of adolescent psychological competence. Among all, it was found that

father-child discrepancies in family functioning predicted adversely adolescent psychological competence.

9.2.7.2.1 Parent-adolescent discrepancies in family functioning predicting adolescent psychological competence

There was empirical evidence that parent-child discrepancies in perception of family functioning inversely predicted self-competence of adolescents (Ohannessian et al., 1995, 2000). Family theorists and clinicians suggested that discrepancies between family members in perceptions of family functioning were related to both maladjustment in individual and to the family (Olson et al., 1983; Reiss, 1981). Parent-child discrepancies in family functioning may be seen as poor communication between parents and adolescents, which may result in a lack of harmony and cohesion in the family (Minuchin, 1985).

In Chinese culture, parent-child discrepancies in family functioning may bring additional hurdles to adolescent psychological development. With the collectivist orientation of the family as well as interdependent relations among family members, adolescents develop the concept of self in the linkage of attachment and relationships with others, especially significant others. Miscommunication or the threat of detrimental family relationships would have adverse effects on adolescents' emotional adjustment and development of self. This helps explain the negative influence of parent-child discrepancies in family functioning on psychological development of adolescents, though further research on this area is needed.

9.3 Theoretical implications of the research

As there has been a lack of scientific research on parental beliefs and family processes in building the positive adaptation of adolescents in the context of socioeconomic disadvantage, this study attempts to fill the gaps. Against this background, there are several unique characteristics of the study with reference to the conceptual and methodological limitations of the studies in the literature. These include: (1) employment of an ecological perspective with an integration of social cognitive theory and sociological theory in the formulation of theoretical framework; (2) employment of indigenous Chinese concepts such as

Chinese cultural beliefs about adversity, parental control, parental sacrifice in the theorization of Chinese family models; (3) conceptualization of parental expectations of children's future and development of Parental Expectations of Children's Future Scale; (4) conceptualization of parental sacrifice for children's education and development of Parental Sacrifice for Children's Education Scale; (5) employment of the "positive youth development" paradigm on studying the achievement motivation and positive development of economically disadvantaged adolescents; (6) exploring parental beliefs including parents' Chinese cultural beliefs about adversity and parents' child-specific beliefs as protective factors on adolescent development in economically disadvantaged families; (7) studying a diversified set of dyadic (parenting style, parental control, parental sacrifice for children's education) and systemic (family functioning) family processes in the low socioeconomic context; (8) identifying the mediating pathways of parental beliefs, family processes and adolescent development in the context of poverty; (9) studying the parental differences and parent-child differences in perceptions of family processes in economically disadvantaged families; (10) exploring fathers' involvement in and contributions on adolescent achievement motivation and psychological competence in poor families; (11) studying the impacts of parent-adolescent discrepancies in perceptions of family processes on adolescent achievement motivation and psychological competence; and (12) employing the concept of relative poverty in defining and measuring poverty threshold, allowing a major proportion of low-income working families to be recruited in the study.

The uniqueness of the study underscores the theoretical implications of the study. The research highlights the importance of developing indigenous Chinese concepts in building Chinese family models. Development and testing of the hypothetical model based on Chinese concepts that portrayed the pathways of parental beliefs, family processes and adolescent development in the economically disadvantaged families is a vital step in construction of Chinese theoretical models. Furthermore, the research identifies the protective factors of parental beliefs and family processes that enhance achievement motivation and resilience of economically disadvantaged adolescents, which provide important cues for alleviating the problem of intergenerational poverty. In view of the paucity of research on positive development in the context of poverty (Luthar,

1997; McLoyd et al. 2009; Shek 2002e), the research is an active response to the theoretical gap. In addition, the study portrayed how dyadic and systemic family processes are related to adolescent development in Chinese economically disadvantaged families. Diversified family processes from different perspectives of family members were studied. Moreover, the influences of parent-adolescent discrepancies in family processes on adolescent development in poor families were analysed. This provides important ingredients for us to understand how different family processes influence adolescent development in the context of poverty. The subsections below outline the theoretical implications in detail.

9.3.1 Employment of ecological perspective with an integration of social capital theory and expectancy-value theory on motivation

Ecological perspective has been widely used in research on understanding the functioning of individuals and economically disadvantaged families. The “person-process-context” model (Bronfenbrenner, 1986, p.725) allows us to understand the relationship between the behavioural outcomes of individuals and the influence of the environment. When comparing with other perspectives, it is found that the ecological perspective provides a systematic framework in studying the impacts of poverty on individual and family functioning with its merits of clear and coherent theoretical structure, good empirical support, multilevel and multi-system considerations, good heuristic value and sensitivity, satisfactory explanatory and predictive power, and practical utility.

The ecological perspective places the importance on family influence on individual development as it views family as “an energy transformation system that is interdependent with its natural physical-biological, human built, and social-cultural milieu” (Bubolz & Sontag, 1993, p. 419). It focuses on the framework of family ecosystem that links individual members with the environment, having family’s decision and actions concentrate on adaptation to the environment as well as foster human development (Bubolz & Sontag, 1993). Hence, the perspective is widely employed in family research.

In this study, the ecological perspective provides a systematic framework in studying the influences of parental beliefs and family processes on adolescent development under specific cultural and socioeconomic context. The Chinese

philosophies lay the values and institutional patterns that form a specific Chinese cultural ecology, whereas the low socioeconomic context shapes the behaviours and actions of individuals and families in responses to economic strains and stresses. The ecological perspective outlines the skeleton of how Chinese families act and respond to the socio-economically disadvantaged environment so as to foster the development of their children. The person-process-context perspective fits the objectives of the study.

Though the ecological perspective provides us with a comprehensive framework and attempts to examine multiple familial influences on adolescent development, its scope could be too broad and as everything inclusive, making the perspective less distinctive and easily lead to blurriness in the focus of study. Thus, the ecological perspective had been criticized as a “way of looking at things” without providing adequate substantiation for theory building and practice (Wakefield, 1996a; 1996b). Besides, some concepts of the ecological perspective are abstract (e.g. interdependence, adaptation etc.) and may cause difficulties in operationalization of the variables.

To resolve the limitations of the ecological perspective, Brower (1988) suggested the concept of “niche” as a possible focus in analysing the person-environment interactions. Domain-specific theories were added in order to enrich the perspective and understand the social phenomena more specifically. The development of social cognitive theories helps us to conceptualize the person-environment interactions, and to understand how social schemas shape family interactions and individual development.

The expectancy-value theory of motivation identifies the socio-cognitive mechanism of parental beliefs in influencing children’s motivation and achievement, whereas the social capital theory of the family emphasizes the quantity and quality of family networks that link family demographic characteristics with adolescent development. The theories help operationalize the concepts of parental beliefs and family processes that may serve to predict adolescents’ motivation and competence. Besides, they sketch the pathways of how parental beliefs and family characteristics influence the motivation and development of adolescents. The theories contribute to the formation of this study’s hypothetical models.

However, both theories have their limitations. The expectancy-value theory

on motivation mainly emphasizes children's achievement goals, motivation and cognitive performance. The other dimensions of children's development such as psychosocial outcomes have not been studied. Also the theory views parental influences as external stimuli and focuses on the cognitive process of adolescents in responding to the stimuli, thus the family processes as mediating factors are ignored. The social capital theory of the family has a major limitation – the pathways of social capital in linking the financial, human and cultural capital of the family with adolescent development remain unclear. Besides, the theory overemphasizes family demographic characteristics as determinant factors in influencing the development of adolescents, and ignores family beliefs that could be important predictors of adolescent development.

The integrative model employs the strengths of ecological perspective, the expectancy-value theory of motivation, and social capital theory of the family, and tries to remedy the limitations of the theories. The model not only reflects the characteristics of ecological perspective that emphasizes adolescent developmental outcome as a function of human interacting with the environment, it also enriches the theoretical framework by addressing the contributions of parental beliefs and family processes to the development of adolescents.

9.3.2 Integrating indigenous Chinese family concepts into the theoretical model

Following the suggestion of Yang (1999), that “knowledge is not created in an intellectual vacuum; instead, it is a function of social, cultural, intellectual and historical context in which the creators of knowledge find themselves” (p. 181), there is a need for development and advancement of indigenous research in social and behavioural sciences. This is particularly relevant for Chinese societies, with their unique systems of values, culture and philosophies developed over five thousand years. Yang (1999) argued that unquestioning borrowing of Western concepts and tools results in inhibition of native values, views and ways of thinking. Shek (2006a) also puzzled about the compatibility of Western theories and research findings when applying to Chinese people, especially Western family concepts and theories built on individualistic values that may be contradictory to the collectivistic ideology of Chinese families. In addition, Chao (1994) criticized Western descriptions of Chinese parenting for being “rather

ethnocentric and misleading” (p.1111). There is a lack of development of indigenous Chinese family concepts that could enhance understanding of Chinese families and construction of relevant family models.

In this research, though the employed theories were developed in the Western societies, Chinese philosophies and culture were carefully considered in the theorization and conceptualization of the models of the study. The characteristics of Chinese beliefs and culture, such as perception of life chances and attitudes in coping, the emphasis of education and effort in pursuit of life goals, family hierarchy and well-defined family roles, collectivist orientation on socialization, interdependence in parent-child relationships, parental control and restrictiveness in child-rearing, ‘relational’ self-concept developed in Chinese adolescents, and the importance of filial piety, are taken into account in the theorization of the hypothetical models and explanation of the phenomena. Chao and Tseng (2002) identified three central themes for Asian parenting: centrality of the family and family interdependence, parental control and strictness, and fostering of educational achievement of children. The research addressed these foci of Chinese parenting in specific socioeconomic context. For instance, parents’ attribution of children’s success and failure to effort, greatly influenced by the Confucian emphasis on education and virtue, was selected as a predictor variable. Regarding family processes, besides parenting style and family functioning, which were considered important family processes in influencing adolescent development, parental control and parental sacrifice for children’s education were also selected as mediating variables in the study. Both parental control and parental sacrifice were regarded as central features of parenting in Asian culture (Chao & Kaeochinda, 2010; Chao & Tseng, 2002) and have important implications for development of indigenous family concepts.

Furthermore, on conceptualization of the factors and outcomes in the study, indigenous Chinese concepts were employed. Chinese cultural beliefs about adversity, family functioning, parental control, social oriented achievement motivation were conceptualized with reference to Chinese philosophies and culture, or emerged from the qualitative data of Chinese people. Moreover, in order to conceptualize parental expectations of children’s future and parental sacrifice for children’s education, focus-group interviews of Chinese parents and adolescents were conducted to grasp their opinions and experiences. The

dimensions of constructs of parental expectations of children's future as well as parental sacrifice for children's education reflected the characteristics of Confucian thought and Chinese culture, which enrich our understandings of parental expectations and parental sacrifice in Chinese parenting. Unlike Western theories that parental expectations of children's future focus mainly on children's individuality and independence (Chao, 1995), the Chinese concept of parental expectations of the future carries strong cultural inclinations of family obligations and moral conduct. Similarly, parental sacrifice also indicated sentimental elements (restructuring of daily routine, sacrifice of parents' lifestyle and aspirations, shielding from worries) that reflect the "interdependence" concept which is distinctive in Chinese parenting (Chao & Tseng, 2002).

Last but not least, all measurement tools employed were indigenously validated with samples in Chinese community and showed good psychometric properties. The development and validation of indigenous measurement tools can facilitate further exploration of indigenous Chinese concepts as well as construction of family models applicable to Chinese context.

9.3.3 Conceptualization of Chinese parental expectations of children's future and development of indigenous measurement tools

Parental expectations have been regarded as one of the most important family factors that influence the academic achievement and development of adolescents (Seiginer, 1983; Li, 2004). In the Chinese community, parental expectations of children's future are highly valued in the socialization of their children. There is a popular Chinese maxim of "*wang zi cheng long*" (expecting the son to become a dragon) that truly reflects the essence of parental expectations of children's future, with the dragon symbolizing "supremacy" in Chinese culture. Though the concept of parental expectations of children's future is distinctive and important in understanding family beliefs and processes in the Chinese context, relevant research in this area is minimal.

Based on a survey of the literature on parental expectations of children's development (Chao, 1995; Li, 2004; Padmawidjaja & Chao, 2010; Shek & Chan, 1999), ideas of Confucian thought, and qualitative data of two focus groups of parents and adolescents to understand their perceptions and experiences on parental expectations of children's future, five dimensions of parental

expectations of children's future emerged from the qualitative data, including "educational achievement", "self-reliance", "occupation", "family obligation" and "conduct". The dimensions reflect the central features of Confucian thought as well as the practical inclinations of parents. Furthermore, a measurement tool of Parental Expectations of Children's Future Scale (PECF) was developed and validated in the research with Chinese parents as the sample. The measure showed good internal consistency, test-retest reliability, content validity, convergent validity, construct validity, and acceptable factorial validity that can be used to measure parental expectations of children's future in the Chinese community.

There are two implications on the conceptualization of Chinese parental expectations of children's future and development of indigenous measurement tools. First, the study sharpens our ideas about the underlying facets of parental expectations of children's future which deepens our understanding of family beliefs about child development. As "mental steps leading to intended actions" (Sigel, 1985, p.346), family beliefs have great impacts on parenting practices that further affect adolescent developmental outcomes. The domains and themes of parental expectation derived from the focus groups and experts will help to fill the conceptual gap in understanding parental expectations on children's future. Second, the development and validation of this indigenous measurement tool enhances the further exploration of indigenous Chinese concepts as well as construction of family models applicable to Chinese context. Adopting an ecological perspective that ideological values, norms, and institutional patterns of a particular culture serve as 'blueprints' for the ecology of human development (Boss et al., 1993, p.423), parental expectations in Chinese families are inevitably influenced by Chinese philosophies and culture, and are distinctive from those in Western culture, where individuality, independence and autonomy are stressed. Chao (1994, 1995) indicated thematic differences in childrearing beliefs and socialization goals of Chinese and Western cultures, implying that an indigenous Chinese conception of parental expectations of children's future is needed. It is important to explore how parental expectations on children's future, under the influence of Confucian philosophy, affect parenting practices and parent-child interactions, as the theoretical model may be distinctive from the Western models on parenting. Thus, development of indigenous measurement

tool will “open up new paths to a deeper understanding of the Chinese cultural, social, and psychological processes and patterns” (Yang, 1999, p. 182).

As the concept of parental expectations of children’s future is grossly neglected in the literature, the research pioneers the concept of parental expectations of children’s future and is an important addition to the literature.

9.3.4 Conceptualization of Chinese parental sacrifice for children’s education and development of indigenous measurement tools

Education has been regarded as a milestone for individuals in achieving upward social and economic mobility (Bryant, 1995; Chao & Sue, 1996). Apart from serving the instrumental purpose of climbing up the social ladder, education has special meaning in Chinese values. According to Chinese philosophy, education is intrinsic for the fulfilment of two fundamental values: human malleability and self-improvement (Chen & Uttal, 1988). Among different aspects of parents’ contribution to children’s education, parental sacrifice is an important feature in the Chinese conception of familism (Chao, 1994). Unfortunately, the concept of parental sacrifice for children’s education is grossly neglected in the literature.

Based on a survey of the literature on family resources for children’s education, including family capital theory (Coleman, 1988, 1990), family investment model (Conger & Donnellan, 2007), and parental involvement in children’s schooling and activities (Grolnick et al., 1997), together with the qualitative data of two focus groups of parents and adolescents in understanding their perceptions and experiences on parental sacrifice for children’s education, five dimensions of parental sacrifice for children’s education emerged in the qualitative data, they were “striving of financial resources”, “time spent on children’s education”, “restructuring of daily routine”, “sacrifice of lifestyle and aspiration” and “shielding from worries”. The dimensions reflect the conceptual model of family resources for children’s education by recognizing the importance of financial resources and time allocation for children’s education. Moreover, the affective dimensions of “restructuring of daily routine”, “sacrifice of lifestyle and aspiration” and “shielding from worries” were also identified that enriched the conceptual model of parental sacrifice for children’s education.

Furthermore, the Parental Sacrifice for Children’s Education Scale (SA) was

developed and validated with Chinese samples of adolescents and parents. The measurement tool showed good results in internal consistency, test-retest reliability, content validity, convergent validity and factorial validity, suggesting that the measurement possessed good psychometric properties on reliability and validity.

There are five implications for the conceptualization of Chinese parental sacrifice for children's education and development of the measure. First, it deepens our understanding of the dimensionality of the construct of parental sacrifice for children's education. Second, the present findings provide evidence for an indigenous measurement tool that may be useful for further exploration of indigenous Chinese concepts as well as construction of Chinese family models. Third, though the concept of parental sacrifice was quite distinctive according to the "interdependence" concept in Chinese parenting, it was grossly neglected in the Western literature. Thus, the exploration of the concept of parental sacrifice for children's education is an important addition to the literature. Fourth, the measurement tool can be used to assess the perceptions of both parents and adolescents. Day et al. (2001) argued that responses from one person in family research provide "a very limited basis for extrapolating a sequence of events that may lead to a certain decision or interactional style" (p. 110). They called for research strategies that included "the collective perceptions of multiple family members" (p. 110). The instrument, validated by parent and adolescent samples, can gauge the views of different family members and allow triangulation of different data sources.

Last but not least, conceptualization of Chinese parental sacrifice for children's education and development of the measure may have special value for further research on family contribution to children's development of families with socioeconomic disadvantage. As suggested by the family investment model, poor families may have restricted resources for the investment of cognitive development of their children (Conger & Donnellan, 2007). However, there are counter-arguments that families in socioeconomic disadvantage do invest in the development of their children (Schlee et al., 2009; Weiling, 2003). Becker and Tomes (1985) also suggested that it was investment preference rather than income that affected education of children in economic disadvantage. Regardless of income, parents who highly value their children devote more resources to

their development, though investment in children's education required parental self-sacrifice in low-income families (Schlee et al., 2009). The conceptualization of parental sacrifice for children's education and development of measurement tool would definitely be useful in understanding the complex family processes in low socioeconomic context.

In summary, as the concept and the theories related to parental sacrifice are under-developed, the study helps in the conceptualisation of parental sacrifice for children's education in Chinese culture. Furthermore, the validated Parental Sacrifice for Children's Education Scale is useful for researchers to understand the family's contribution for the development of children in socio-economic disadvantage.

9.3.5 “Positive youth development” paradigm on focusing on motivation and competence of economically disadvantaged adolescents

In reviewing the literature of poverty research, it was found that empirical evidence on negative impacts on family functioning and adolescent development of low socioeconomic families preoccupied the academic agenda. Research studying the impacts of poverty on adolescent development mainly focuses on internalizing behaviours such as depression, anxiety, withdrawal etc., and externalizing behaviours such as aggressive behaviour, drug use, premarital sex, teenage pregnancy etc. Resilience and psychosocial competencies of adolescents were always ignored. Coincidentally, the popular Chinese maxims of ‘*Ren qong zhi duan*’ (poverty stifles ambition), and ‘*Pin jian fu qi bai shi ai*’ (poor couples are miserable in hundreds of circumstances) all contributed to the negative discourse of poor families. “Being poor” seemed to be the vital fate of poor families under the “deficiency” model.

This study incorporates the “positive youth development” perspective that focusing on strengths and competencies of economically disadvantaged adolescents. Instead of emphasizing the pathologies of economically disadvantaged adolescents from a “deficiency” model, the research employed the “positive youth development” perspective (Benson, 1997; Damon 2004; Shek et al. 2007) that focuses on “assets, abilities, and potentials of adolescents” (Shek et al. 2007, p.380). The resilience of adolescents in facing poverty was stressed. Furthermore, achievement motivation and psychological competence of

adolescents, important attributes of resilience (Masten & Coatsworth, 1998), were used as the outcome variables of the study. The former has rarely been employed in poverty research. Indeed, achievement motivation was critical for adolescents to climb up the social ladder and escape from poverty, so the construct has important theoretical implications for poverty research.

9.3.6 Theoretical model contributing to adolescent positive psychological development in the context of poverty

In understanding the impact of poverty on adolescent development, the family stress model was widely employed and tested with the mediating pathways of parental distress and poor parenting. However, the findings give us an alternate perspective that parents in poverty may try hard to provide responsive parenting, family functioning and sacrifice for the well-being and development of the adolescents, motivated by cultural positive beliefs about adversity, expectations of their children's future, as well as their attribution of children's success and failure to effort.

Researchers and policymakers have tried to identify the factors that influence positive psychological development of economically disadvantaged adolescents, as these factors help change the life trajectories of adolescents, and as a result shed light on the problem of intergenerational poverty. From the findings, three important ingredients were identified in building the achievement motivation and psychological competence of economically disadvantaged adolescents. They were (1) positive parental beliefs about adversity and children's development; (2) family processes that foster a supportive familial environment and good family quality for adolescents; and (3) effective communication between parents and adolescents to reduce parent-child discrepancies. The three factors provide important academic implications for understanding the influences of families in building resilience of economically disadvantaged adolescents.

The findings suggested that parental beliefs including cultural beliefs about adversity, expectations of children's future, and attribution of children's success and failure to effort influenced family processes of parenting styles, parental control, family functioning and parental sacrifice. Furthermore, family processes also influenced achievement motivation and psychological competence of

economically disadvantaged adolescents. The pathways of parental beliefs, family processes and adolescent developmental competence were hypothesized and tested. The theoretical model reaffirmed Davis-Kean's (2005) suggestion that "if parents are successful in providing an emotionally stable and stimulating environment, the negative effects of financial restrictions can be minimized" (p. 302). Moreover, the discrepancies in perceptions of family processes adversely influenced achievement motivation and psychological competence of adolescents. The results suggested that researchers should pay special attention to the conflicts and misunderstandings between parents and adolescents. Effective communication should be fostered to build up mutual understanding between parents and adolescents. As a conclusion, parents do "make a difference" in building the achievement motivation and psychological competence of economically disadvantaged adolescents.

On the level of knowledge accumulation, the study introduced and tested a hypothetical model demonstrating the relationships of parental beliefs, family processes and resilience of economically disadvantaged adolescents in the Chinese context. As there was no similar research on the pathways through which parental beliefs influenced the positive development of Chinese adolescents in the context of poverty, the study could be regarded as a pioneering and constructive response to McLoyd's (2009) comment about "a dearth of research about contributors to positive adaptation in the context of socioeconomic disadvantage" (p. 446).

9.3.7 Parental beliefs as protective factors for positive development of economically disadvantaged adolescents

As mentioned in the literature review, there has been a negligence of parental beliefs as protective factors of economically disadvantaged adolescents, and this study was an attempt to fill the gap. The study paid attention to three parental beliefs in two domains: parents' cultural beliefs about adversity as well as parents' child-specific beliefs, indexed by attribution of children's success and failure to effort, and expectations of children's future. In fact, parents' child-specific beliefs have seldom been addressed in the context of poverty. Indeed, parental beliefs could be important drivers for parents to socialize their children as well as to mobilize their limited resources for their children's

education and development, which in turn may alter the life chances of adolescents. The study was a pioneer in understanding the direct and indirect influences of parental beliefs on Chinese adolescents' motivation and competence via family processes in the context of poverty.

Regarding parental beliefs, this research makes four academic contributions unexplored in previous literature. First, The Parental Expectations of Children's Future Scale was developed and validated. The items of the measurement reflected the moral sentiments of high respect for education, family obligation, and moral character rooted in Confucian thought, as well as the practical requirements for economic success and survival in a highly competitive metropolitan environment. Second, parents' cultural beliefs about adversity of poor families were found to be significantly and positively associated with parents' child-specific beliefs, indexed by attribution of the success and failure of children to effort, and expectations of children's future. This helps outline the interrelationships of different beliefs in the family belief system (Sigel & McGillicuddy-De Lisi, 2002). The study addresses Leung's (1996) comment that "there is a dearth of theorizing and data on the beliefs systems of Chinese" (p. 262). Third, the findings raise doubts about the suggestion of O'Sullivan and Howe (1996) that low-income families perceive they have little control over their environment and thus are more likely to attribute success and failure to external factors such as luck. Instead, the findings suggested that poor Chinese families have great expectations of their children and believe that "effort" will change the life trajectories of their children. The findings argue against the fate-determinism of poor Chinese families and support the ecological perspective that cultural contexts influence the beliefs systems of individuals and families (Bronfenbrenner, 1979, 1986). This further reinforces the importance of developing indigenous Chinese theories that may be different from Western theorization. Fourth, parental beliefs of Chinese economically disadvantaged families, particularly parents' child-specific beliefs, were found to have significant influence on parenting styles and practices, family functioning, and parental sacrifice for children's education in economically disadvantaged families. As parental child-specific beliefs had been unexplored in family research, the study is an important addition to the literature.

Indeed, as Sigel and McGillicuddy-De Lisi (2002) pointed out, "a clear

conception of beliefs [for parents] and theoretical explanations of how and why beliefs are effective are lacking” and literature on beliefs “is superficial, poorly defined, and while often in face validity, it is sorely lacking in providing information about construct and content validity” (p. 497). Therefore, this study is a positive response to that comment.

9.3.8 Identification of different family processes in the relationships between parental beliefs and development of economically disadvantaged adolescents

The literature review found a variety of familial factors (e.g. parenting styles and practices, warm and stable family environment, family involvement, and family investment) that buffered the impacts of poverty of economically disadvantaged adolescents (Shek 1995b; Smith & Carlson, 1997; Wyman et al., 1992). However, there were difficulties in analysing the impact of poverty on adolescent development as it involved more than one pathway (Bradley & Corwyn, 2002, Hoff et al., 2002). To solve the difficulties, Shek (1999c) suggested that “different aspects of parenting can reveal the complex nature of the linkage between parenting and adolescent psychological well-being” (p. 273). Thus, it is essential to analyse different family processes for their impacts on adolescent development in the low socioeconomic context.

To conceptualize the complexity of family processes and family relationships, dyadic relationships (father-mother, father-adolescent, mother-adolescent) have usually been explored (Gulon et al., 2009; Reynolds et al., 2011; Shek, 2008b). The study of dyadic family processes provides us important information on the contributions and different roles of fathers and mothers in parenting their children.

On the other hand, systemic theories view family as a social system and focus on interdependence among family relationships, that is, the quality of one relationship affects the others (Belsky, 1981; Minuchin, 1974). Hence, a parent-child dyad is embedded in a mother-father-child triad (Gjerde, 1986), and a parent-child dyad in a family system is a composition of marital and parent-child relations (Belsky, 1981). It is suggested that the interrelationships within the family should also be addressed.

However, only few studies in the literature included both dyadic and

systemic family processes in a single study (Gjerde, 1986; Smetana et al., 2000). In this research, a diversified set of family processes as the mediating effects of the impacts of parental beliefs on adolescent development in Chinese economically disadvantaged families were assessed. The dyadic relationships between fathers and mothers, fathers and adolescents, and mothers and adolescents on parenting styles, parental control and parental sacrifice were explored. At the same time, family functioning, a systemic family process, was also assessed. This research was the first scientific study that explored both dyadic and systemic processes of economically disadvantaged families in the Chinese community.

Through understanding these different aspects of family processes of parenting styles, parental control, family functioning, and parental sacrifice, a clearer picture on how parental beliefs influence achievement motivation and psychological competence of economically disadvantaged adolescents was sketched.

The study also makes three theoretical contributions. First, parental control, which was regarded as a distinctive domain of parenting practice in Chinese societies (Chao, 1994; Shek 2007a; Yang, 1981), was analysed for its relationships with parental beliefs and adolescent development in poor Chinese families. It was found that parental control exhibited strong relationships with parental expectations of children's future, as well as with adolescents' achievement motivation and psychological competence. It was also a significant predictor of achievement motivation and psychological competence of economically disadvantaged adolescents. In view of the paucity of research in the context of poverty, the findings were a strong addition to the literature.

Second, though parental sacrifice is regarded as important feature of Asian culture (Chao & Kaeochinda, 2010), it has been grossly unexplored in the literature. The study attempted to conceptualize parental sacrifice for children's education and analysed its relationships with parental beliefs and adolescent development in poor Chinese families. It was found that parental sacrifice for children's education had strong relationships with parental expectations of children's future, and adolescents' achievement motivation and psychological competence. It was also significant predictor of achievement motivation and psychological competence of economically disadvantaged adolescents. The

exploration of the relationships enlightens our understanding of the influence of parental sacrifice on adolescent development in Chinese culture and in the low socioeconomic context.

Third, the study analysed different family processes mediating the effects of parental beliefs on adolescent development in Chinese economically disadvantaged families. To analyse parenting styles, parental control, family functioning, and parental sacrifice, a comprehensive sketch of family processes including parenting attitudes and practices, family psychological climate, allocation of family resources, were explored as the pathways of parental beliefs' influence on adolescent development. It was found that paternal control and paternal sacrifice for children's education (in fathers' perception and in the "integrated" perception of father and adolescents) mediated the influence of parental beliefs on achievement motivation of adolescents, whereas family functioning and paternal sacrifice for children's education (perceived by fathers), maternal control (perceived by adolescents), paternal control, family functioning and paternal sacrifice for children's education (in the "integrated" perspective) mediated the influence of parental beliefs on psychological competence of adolescents. The study of different family processes as the pathways for parental beliefs' influences on adolescents' development in poor families provide important academic cues for us to understand how those adolescents can be succeed in escaping from the shadow of poverty.

9.3.9 Roles of fathers in building achievement motivation and psychological competence of adolescents in the context of poverty

In many existing studies examining parenting characteristics, the role of primary caregivers, mostly the mothers, was the main concern (Benner & Mistry, 2007; Chao, 1995, 1996, 2000; Padmawidjaja & Chao, 2010). The fathers were easily ignored. The paucity of research on paternal roles in adolescent development may be due to difficulties in engaging fathers in research as well as the public perception that fathers as "bread-winners" of the family seldom get involved in parenting their children. The negligence of fathers' roles is even more salient in poverty research. The physically demanding jobs as well as long and non-standard working hours create additional hurdles for economically disadvantaged fathers to be involved in research. However, consistent with some

research in which paternal parenting showed greater influence on adolescent development when comparing with maternal parenting in economically disadvantaged families (Shek, 2008a), in this study, paternal sacrifice for children's education significantly influenced the achievement motivation and psychological competence of adolescents.

Furthermore, fathers' expectations of children's future predicted psychological competence of adolescents via fathers' perception of family functioning and paternal sacrifice, as well as via adolescents' perception of maternal control. The findings suggest that fathers' beliefs and expectations may also influence the triadic relationships amongst the family members, and the family psychological environment as a whole. Fathers' beliefs may determine the core values of the family and influence the family interaction patterns and processes, which in turn influence adolescent development in the context of poverty. In the face of suggestions that low-income fathers are "not essential" as long as children are placed in supportive environments and have necessary resources allocated to their development (Silverstein & Auerbach, 1999), this research provides a counter-argument and demonstrates with empirical evidence for the importance of fathers' values and roles in influencing adolescent development in poor families.

9.3.10 Replication of findings on parental differences and parent-child differences on perceptions of family processes

There have been studies of parental differences and parent-child differences in perceptions of family processes in Chinese community. These included father-mother differences on parenting style (Shek, 1998c) and parental control (Shek, 2008b), and parent-child difference on family functioning (Shek, 1999d). The research replicated the previous studies and extended the analyses of parental differences and parent-child differences in three aspects: (1) a diversified set of family processes, including parenting style, parental control, family functioning and paternal sacrifice for children's education, were examined; (2) Chinese economically disadvantaged families were explored; and (3) father-mother differences from both parents' and adolescents' perspectives were assessed. These widen the scope, context and perspective in which parental differences and parent-child differences of perceptions of family processes were

examined. The findings supported previous studies and suggested that there were significant father-mother differences in parenting style perceived by parents and adolescents, and paternal-maternal differences in parental control perceived by adolescents, with fathers being less involved in parenting in economically disadvantaged families. The findings reaffirmed the thesis of “stricter mothers and kinder mothers” with fathers remaining detached (Shek, 2007a, 2008b), in contrary to the cultural thesis about “strict fathers, kind mothers” (Wilson, 1974). This implies that the roles of fathers and mothers are changing in the contemporary era, with mothers doing more monitoring and control in addition to the conventional expectations of caring and nurturing. The long hours of work and nonstandard work shifts of fathers further pushed them to be more detached.

Regarding parent-adolescent differences, the findings echoed previous findings that there are significant differences in perceptions of family functioning between parents and adolescents, with adolescents perceiving lower level of family functioning than parents. The research also extended to the analyses of parent-child differences in perception of parenting style, parental control and parental sacrifice for children’s education in economically disadvantaged families. It should be noted that there were great father-adolescents discrepancies in perception of parenting style and paternal sacrifice for children’s education. The findings are important additions to the literature.

These findings have three theoretical implications. First, as studies on parental difference and parent-child discrepancies in family processes of Chinese economically disadvantaged families were non-existent, the findings of the study are important additions to the literature. Second, parental differences in family processes in economically disadvantaged families supported the thesis of “stricter mothers and kinder mothers” with fathers remaining detached (Shek, 2007a, 2008b), in contrary to the cultural thesis of “strict fathers, kind mothers” (Wilson, 1974). The change in parental roles may have important implications on marital relationships, parent-child relational qualities, mothers’ psychological and parenting stress, and family functioning of Chinese families. Further studies in these areas are urged. Third, the great parent-child discrepancies in family processes suggested conflictual interaction between parents and adolescents in economically disadvantaged families, in contrast to the view of parent-child discrepancies as normal developmental processes that facilitate healthy

development of adolescents (Ohannessian et al., 1995; Welsh et al., 1998). This prompts researchers and family educators to have special concern for the influences of parent-child discrepancies in family processes on parent-child relational qualities and adolescent development in the context of poverty.

9.3.11 Understanding the impacts of parent-child discrepancies in perceptions of family processes on adolescents' development in low socio-economic families

The understanding of the impact of poverty on adolescent development had been dominated by the family stress model with the mediation pathways of parental distress and poor parenting. These findings give us an alternate perspective – that parent-child discrepancies in family processes are significant and negatively predicted adolescent developmental outcomes. This has important theoretical implications for studying the impacts of poverty on family processes and adolescent development, as research on parent-child discrepancies in family processes in the context of poverty had been almost non-existent.

Informant discrepancies had long been regarded as “‘methodological nuisances’ that needed to be ‘rectified’ in some way” (De Los Reyes, 2011, p. 2). The historical approach of researchers in handling these “research artifacts” was simply treating them as measurement errors (McGuire, 1969) instead of addressing them actively as a legitimate construct valuable for empirical study. However, “informant discrepancies” are absolutely “more than measurement error” (Achenbach, 2011, p. 80) and have important meanings and implications for the clinical assessment of children and adolescents (Achenbach, 2011; Achenbach et al, 1987; De Los Reyes, 2011).

There is empirical evidence showing that parent-child discrepancies in family processes predicted the poor adjustment of children and adolescent psychological outcomes. (De Los Reyes et al., 2010; Feinberg et al. 2000, Guion et al., 2009, Ohannessian et al. 2000; Reynolds et al., 2011; Welsh et al. 1998). However, literature on relationships of parent-child discrepancies in perceptions of family processes and adolescent development was limited to Western societies. There are very few studies in the Chinese community on parent-child discrepancies in perceptions of family processes. Among them, Shek (1999d) conducted a longitudinal study on the perceptions of family functioning among

Chinese parents and their adolescents. But his research did not focus on predicting the impact of parent-child discrepancies in perceptions of family functioning on adolescent development. Padmawidjaja and Chao (2010) analysed parents' and adolescents' reports of parenting practice of Chinese Americans in comparison with European Americans. Similarly, they did not draw any predictions on the impact of parent-child discrepancies in perception of parental control and parental warmth on adolescent development. Moreover, research on relationships of parent-child discrepancies in perceptions of family processes with adolescent development in the low socio-economic context had been non-existent. This research is a pioneering attempt to investigate the impacts of parent-child discrepancies in perceptions of family processes on adolescents' development in Chinese families of low socioeconomic status.

Research findings suggested that mother-adolescent discrepancies in perceptions of maternal sacrifice for children's education inversely predicted achievement motivation of adolescents, whereas father-adolescent discrepancies in perceptions of family functioning inversely predicted psychological competence of economically disadvantaged adolescents.

The research provides three academic contributions unexplored in the previous literature. First, the research explored how the strength and direction of parent-child discrepancies in perception of different family processes (parenting style, parental control, family functioning and parental sacrifice) influenced adolescent development in low socio-economic context, which had been totally ignored in the literature. This enlightens our understanding of family processes and adolescent development in the socio-economically disadvantaged context. As the research in this area is non-existent, this study is an important addition to the literature. Second, the discrepancies between parents and adolescents in perceptions of parental sacrifice, and their predictions of achievement motivation and psychological competence of adolescents, were identified. In Western countries, "family processes" mainly focused on parenting styles, socialization practices, and family functioning, and therefore only in these processes were parent-child discrepancies explored. Parental sacrifice, a central feature of parenting in Asian culture (Chao & Kaeochinda, 2010), has been more or less ignored in the Western academic arena. Analyses of parent-child discrepancies in perceptions of parental sacrifice were certainly non-existent. The research

addresses this conceptual gap of understanding how parent-adolescent discrepancies in perception of parental sacrifice influence adolescent development in the Chinese community. Last but not least, echoing the suggestion of De Los Reyes (2011) to use “informant discrepancies to increase understanding if the causes and consequences of, as well as treatment for, child and adolescent psychopathology” (p.1), the study shows empirical support that parent-child discrepancies in family processes should be treated as a legitimate construct that deserves academic and empirical attention.

9.3.12 Understanding parental beliefs, family processes, and adolescent development of low-income working families

The study employed a relative definition of poverty, using 50% of the median monthly domestic household income as determined in the 2006 Population By-census as the poverty threshold. The definition is grounded and calculated under national economic context and takes into account the socio-economic context of Hong Kong. The research included low-income families, especially those not applying for any cash assistance, in the research. In fact, 65.1% of the responding low-income families had not applied for CSSA. This has important implications for studying low-income working families, as there has been a severe lack of research on the working poor in the Chinese community. Due to the self-reliance ethos and work ethic embraced in Chinese culture and strongly promoted by the Government, low-income working families are a majority of economically disadvantaged families. There are approximately 210,500 children below age 15 living in low-income working families (Subcommittee to Study the Subject of Combating Poverty, Legislative Council of HKSAR, 2006), compared with 116,777 children below age 15 receiving CSSA (Census and Statistics Department, 2009b) in 2005. However, due to the difficulties in identifying low-income working families as well as engaging them in research, most poverty research has sampled CSSA recipients instead (Shek, 2003a, 2004a, 2005b, 2005d). The present study used a relative poverty threshold and recruited participants from children and youth service units in different localities, allowing more low-income working families to be included.

The theoretical implications of the study are listed in Table 9.1.

Table 9.1: Theoretical advances of the study

Theoretical gap	Advances in the study	Theoretical implications of the study
Limitations of theoretical perspective and models in consideration of both individual and context in the study of poverty	<ul style="list-style-type: none"> ◆ Employment of ecological perspective providing person-process-context perspective for the study of family factors in influencing adolescent development in the context of poverty ◆ Employment of social capital theory and expectancy-value theory on motivation in studying the influences of parental beliefs and family processes on adolescent development 	<ul style="list-style-type: none"> ◆ Enrich the ecological perspective with integration of social capital theory and expectancy-value theory on motivation in studying the familial factors that influence adolescent development in low socioeconomic context
Neglect of indigenous family concepts and cultural considerations on understanding the impacts of poverty	<ul style="list-style-type: none"> ◆ Integration of indigenous Chinese family concepts such as Chinese cultural beliefs about adversity, parental control, parental sacrifice for children's education, social-oriented achievement motivation into the theoretical hypothetical model ◆ Conceptualization of parental expectations of children's future in the Chinese context as well as development and validation of the Parental Expectations of Children's Future Scale ◆ Conceptualization of 	<ul style="list-style-type: none"> ◆ Enhances understanding of Chinese families and construction of relevant family models, which may be different from Western theoretical models where individualistic values are stressed. ◆ Understanding the underlying facets of parental expectations of children's future that contain both Confucian philosophy and practical ideas about competing for better quality of life. ◆ Allows further exploration of parental expectations of family processes and adolescent development. ◆ Understanding the underlying facets of parental sacrifice for children's education that involve

	<p>parental sacrifice for children's education in the Chinese cultural context as well as development and validation of the Parental Sacrifice for Children's Education Scale</p> <ul style="list-style-type: none"> ♦ Employment of measurement tools that were indigenously validated with samples in Chinese community and showed good psychometric properties. 	<p>striving for financial resources, time spent on children's education, restructuring of daily routines, sacrifice of lifestyle, aspiration and social life, and shielding from worries.</p> <ul style="list-style-type: none"> ♦ Development and validation of the Parental Expectations of Children's Future Scale and Parental Sacrifice for Children's Education Scale allow further exploration of parental expectations and parental sacrifice for adolescent development.
Lack of concern for theoretical conceptualization of adolescent resilience and positive development in the context of poverty	<ul style="list-style-type: none"> ♦ A "positive youth development" paradigm instead of a "deficiency" perspective was employed to understand the attitudes and behaviours of poor families. ♦ Achievement motivation and psychological competence, which were positive youth development attributes of adolescents, were chosen as outcome variables. ♦ Protective factors on parental beliefs and family processes as predictors of achievement motivation and psychological competence of adolescents 	<ul style="list-style-type: none"> ♦ Parental beliefs and family processes predicted achievement motivation and psychological competence of adolescents experiencing economic advantage, contributing to the theoretical conceptualization of adolescent resilience and positive development in the context of poverty. ♦ Parent-child discrepancies in perceptions of family processes adversely influenced achievement motivation and psychological competence of adolescents, suggesting that effective parent-child communication should be fostered.

	<p>experiencing economic advantage were examined, contributing to the theoretical conceptualization of adolescent resilience and positive development in the context of poverty.</p>	
<p>Neglect of studies on parental beliefs as protective factors of adolescents in facing poverty</p>	<ul style="list-style-type: none"> ◆ Three parental beliefs: Chinese cultural beliefs about adversity, attribution of the success and failure of children to effort, and expectations of children's future were analysed as protective factors of adolescents in facing poverty, with the latter two parental beliefs not studied in the context of poverty in Chinese community before. ◆ The relationships between Chinese cultural beliefs about adversity and child-specific beliefs (parents' attribution of the success and failure of children to effort, and parents' expectations of children's future) were examined. ◆ A new measure, the Parental Expectations of Children's Future Scale, was developed and validated in the study. 	<ul style="list-style-type: none"> ◆ The study was pioneering in identifying the three parental beliefs, particularly parent's attribution on the children's success and failure to effort and parent's expectations of children's future, predicted family processes in Chinese economically disadvantaged families. ◆ The study was pioneering in identifying paternal expectations of children's future as the main predictors of achievement motivation and psychological competence of economically disadvantaged adolescents. ◆ The interrelationships of Chinese cultural beliefs about adversity and parents' child-specific beliefs were discovered. ◆ Makes a counter-argument to O'Sullivan and Howe's suggestion (1996) that low-income families are more likely to attribute success and failure to external factors such as luck rather than effort. Chinese cultural beliefs about adversity had positive relationships with parental attribution of children's success and failure to effort in the beliefs systems of economically disadvantaged

		<p>parents.</p> <ul style="list-style-type: none"> ◆ Development and validation of the Parental Expectations of Children's Future Scale allows further exploration of parental family processes and adolescent development.
Diversity of processes and factors in studying the relationships among family processes and adolescent development	<ul style="list-style-type: none"> ◆ A set of family processes: parenting styles, parental control, family functioning, and parental sacrifice for children's education were studied as mediating variables so as to give a clearer picture on how parental beliefs influence achievement motivation and psychological competence of economically disadvantaged adolescents. ◆ Both dyadic family processes (parenting style, parental control and parental sacrifice) and systemic family processes (family functioning) were examined. ◆ The study attempts to conceptualize the construct of parental sacrifice for children's education and test its effect on achievement motivation and psychological competence of economically disadvantaged 	<ul style="list-style-type: none"> ◆ Maternal control, as a distinctive feature in Chinese parenting, predicted achievement motivation of economically disadvantaged adolescents, which is important addition to the literature. ◆ Paternal sacrifice for children's education, as an important family process in Chinese culture, predicted achievement motivation and psychological competence of economically disadvantaged adolescents. The results are an academic contribution to an area that was basically non-existent. ◆ The pathways for the influence of parental beliefs on achievement motivation and psychological competence of economically disadvantaged adolescents via family processes were identified, which facilitates the building of resilience model of Chinese adolescents and families in low socioeconomic context. ◆ Both dyadic and systemic family processes were included in a single study, which is regarded as the first scientific study that explored both dyadic and systemic processes of economically disadvantaged families in the Chinese community.

	adolescents.	
Fathers' roles in and contribution to adolescent development in low socioeconomic families were ignored.	<ul style="list-style-type: none"> ◆ Fathers, mothers and adolescents were selected as respondents of the study. ◆ Paternal beliefs and paternal family processes were examined in predicting adolescents' achievement motivation and psychological competence. ◆ Paternal and maternal involvement of family processes from parents' perspective and adolescents' perspective were compared and examined. 	<ul style="list-style-type: none"> ◆ Fathers' values and involvement in family processes was critical in enhancing achievement motivation and psychological competence of economically disadvantaged adolescents, which argued against Silverstein and Auerbach's (1999) suggestion that fathers in low-income families were "not essential". ◆ There were different contributions of paternal and maternal influences on achievement motivation and psychological competence of economically disadvantaged adolescents, an important contribution to the literature. ◆ Fathers though involved and sacrificing less for children's education, exhibited greater influences on psychological competence of adolescents, an important contribution to the literature.
Parental discrepancies and parent-adolescent discrepancies in family processes were not examined in economically disadvantaged families.	<ul style="list-style-type: none"> ◆ Replication of study on <i>parental differences</i> in perceptions of parenting style and parental control in economically disadvantaged families. ◆ Replication of study on <i>parent-child differences</i> in perceptions of family functioning in economically disadvantaged families. ◆ Extension of studies 	<ul style="list-style-type: none"> ◆ The findings echo previous findings about parental differences on perceptions of parenting style and parental control, reaffirming the "stricter mothers, kinder fathers" thesis (Shek, 2008b). ◆ The significant father-mother differences and paternal-maternal differences of parental sacrifice for children's education perceived by adolescents are important additions to the literature. ◆ Parent-child discrepancies in

	<p>of <i>parental differences</i> to perceptions of family functioning and parental sacrifice for children's education in economically disadvantaged Chinese families.</p> <ul style="list-style-type: none"> ♦ Extension of studies of <i>parent-child differences</i> to perceptions of parenting styles, parental control and parental sacrifice for children's education on economically disadvantaged Chinese families. ♦ The significance of parent-child discrepancies in perceptions of family processes in economically disadvantaged families was examined. 	<p>perceptions of parenting styles, parental control and parental sacrifice were significant and had notable effect size. The findings add important contribution to the literature as related studies were non-existent.</p> <ul style="list-style-type: none"> ♦ Great parent-child discrepancies suggested conflictual interaction between parents and adolescents, a concern for researchers and family educators.
Informant discrepancies in family processes were considered measurement errors instead of a legitimate construct that deserves academic and empirical attention.	<ul style="list-style-type: none"> ♦ The influence of parent-child discrepancies in perceptions of family processes on enhancing achievement motivation and psychological competence of economically disadvantaged adolescents were examined. 	<ul style="list-style-type: none"> ♦ Father-adolescent discrepancies in perceptions of family functioning adversely predicted achievement motivation of adolescents, whereas mother-adolescent discrepancies in perceptions of maternal sacrifice for children's education adversely predicted psychological competence of economically disadvantaged adolescents. The findings bring important academic implication as related findings were non-existent in the literature. ♦ Parent-child discrepancies in

		perceptions of family processes serve as predictors on reducing achievement motivation and psychological competence of adolescents, not measurement errors.
Low-income working families were always excluded from related research	<ul style="list-style-type: none"> ♦ 50% of median monthly domestic household income as determined in the 2006 Population By-census was the poverty threshold in the study. The definition is grounded in the socioeconomic context of Hong Kong. ♦ Recruitment from children and youth services units, school social work services, community services to identify and outreach low-income working families 	<ul style="list-style-type: none"> ♦ About 65% of the sample came from low-income working families. The inclusion of low-income working families provides a more comprehensive and less biased picture of the influence of parental beliefs and family processes on adolescent development in poor families.

9.4 Practical Implications

The findings of the research provide important information for social workers and policymakers to formulate intervention strategies and policies for helping economically disadvantaged families. By building up achievement motivation and psychological competence of adolescents, the negative impacts of poverty on their life trajectories could be ameliorated. Furthermore, the findings of the study provide important implications on social work education. In this section, four areas are discussed. First, we stress the importance of assessment instruments to measure parental expectations and parental sacrifice in the Chinese context. Second, we discuss the implications of the findings for social work intervention strategies and practices. Then, we focus on implications for policymakers in formulating social policies that help economically disadvantaged

families. Finally, the implications of the findings for social work education are highlighted.

9.4.1 Availability of assessment instruments

There has been a severe lack of objective family and psychosocial assessment tools (Shek, 2002d, 2010) that may hinder the development of family intervention strategies and models for Chinese communities (Phillips et al., 1998; Shek, 2007d). The construction and validation of indigenous Chinese family measurement tools is an urgent task. This study involves the development and validation of two measurement instruments: the Parental Expectations of Children's Future Scale and the Parental Sacrifice for Children's Education Scale, which had not been developed in the Chinese context before. The measurement tools were developed with consideration of indigenous concepts and qualitative data of focus group of parents and adolescents. Furthermore, the measurement tools showed sound psychometric properties on internal consistency, test-retest reliability, content validity, convergent validity and factorial validity. The measurement tools aid operationalization of the constructs in the Chinese community and facilitate our understanding of concepts of parental expectations and parental sacrifice. Furthermore, the measurement tools can be employed in assessing parental expectations and parental sacrifice, which may further help in the theorization of family models. In view of the dearth of indigenous family assessment tools in the Chinese context, the construction and validation of the two measures was a useful response.

9.4.2 Social work practice on building motivation and competence of economically disadvantaged adolescents

In conventional social work practice, cash assistance, material resources and tangible services are emphasized in helping economically disadvantaged families. The findings suggest other important familial aspects in building motivation and competence of economically disadvantaged adolescents to which social workers should pay more attention.

9.4.2.1 Fostering positive parental beliefs among economically disadvantaged

parents

It was found that parental beliefs, especially child-specific beliefs, were important predictors for parents to foster the development of their children. Family beliefs have great impacts on parenting practices that further affect child developmental outcomes. Cultivation of positive orientations of parents on adversity, aspirations and expectations of parents on their children's future, parents' attribution of children's success and failure to effort, could be important points of social work intervention on parents and their families. Shiang et al. (1998) supported the idea by claiming that "incorporation of specific cultural beliefs and behaviours into standard clinical treatments is sorely needed to improve our ability to provide services to people from diverse settings" (p.182). Furthermore, parental beliefs and meanings are important in determining family capacities that may eventually contribute to family resilience (Patterson, 2002). Unfortunately, fostering positive parental beliefs of poor families is always ignored in social work intervention. It is important that social workers should take cultural beliefs into account when understanding and interpreting behaviours of family members (Shek et al., 2003). Social workers could make use of parental beliefs as points of intervention that foster effective parenting practices.

9.4.2.2 Enhancing parenting qualities for economically disadvantaged adolescents

There has been a severe lack of "systematic and comprehensive strategies to promote parenting and parent-child relational processes in poor families with adolescent children" (Shek, 2008a, p.183) in Hong Kong, and the research findings reaffirmed the need for comprehensive intervention strategies that enhance parenting qualities as well as building warm and stable family environments for economically disadvantaged adolescents. Consistent with the literature on building resilience of economically disadvantaged adolescents (Garmezy, 1993; Wyman, 2003), the findings of the study showed evidence that parenting styles, parental control, parental sacrifice and family functioning predicted achievement motivation and psychological competence of adolescents. Apart from cash assistance and material resources that becomes the dominant strategies in helping the poor families, family educational programs that enhance parenting qualities are also important in promoting warm and positive nurturing

environments for the development of economically disadvantaged adolescents.

9.4.2.3 Reducing parent-child discrepancies in perceptions of family processes by enhancing parent-child communication

Discrepancies were found in perceptions of family processes between parents and adolescents. Small discrepancies may be normal due to individuation process of adolescents in search of identity and independence (Grotevant & Cooper, 1986), and the “generational stake” thesis (Bengtson & Kuypers, 1971). However, parent-child discrepancies may be interpreted as problems in communication that result in parent-child conflicts (Olson et al., 1983; Welsh et al. 1998). The research findings indicated that in economically disadvantaged families, there were significant parent-child discrepancies in perceptions of family processes, which negatively influenced achievement motivation and psychological competence of adolescents. These have important implications for social workers in helping adolescents and their economically disadvantaged families. As suggested by De Los Reyes (2011), informant discrepancies can be important in both understanding the causes and consequences of child and adolescent psychopathology, and allowing treatments to be more focused and appropriate, social workers should be sensitive to the differences in the interpretations of family processes between parents and adolescents, and the meanings of the discrepancies. Social workers could also work on facilitation of parent-child communication and mutual understanding among family members, especially for economically disadvantaged families.

9.4.2.4 The need for family-based intervention to help economically disadvantaged families

It was found that parents did “make a difference” in the positive development of economically disadvantaged adolescents. To assist economically disadvantaged families, family-based intervention practices are essential. In the United States, antipoverty programs are rooted in three major premises: (1) early experience is an important determinant of the course of development of children; (2) parents and home environment influence the development of children; and (3) family life has great impacts on parental behaviour, which in turn influences children’s development (McLoyd, 1998a). According to these three pillars, many

antipoverty programs employ parent-based and family-based intervention strategies that focus on parents' competency training and parenting. The programs aim at improving parent-child interactions, increasing educational and literacy enhancement activities in the home, improving the mental health of parents, and engaging parents with other community resources (Magnuson & Duncan, 2002; McLoyd, 1998a). Intervention strategies include home visitation programs (Olds & Kitzman, 1990, 1993), emotional and instrumental support for parents, educational sessions for children and parents, parenting enhancement programs, and welfare-to-work programs (Brooks-Gunn, 1995; Huston et al., 2005; Morris et al., 2001).

On the contrary, there is a deficiency of such family-based intervention in Hong Kong. Apart from cash assistance (e.g. CSSA) and material support (e.g. food bank), the intervention strategies in Hong Kong are the welfare-to-work programs Intensive Employment Assistance Scheme (IEAS) and "New Dawn" Project. However, the programs aimed at getting welfare recipients into the work force instead of focusing on poverty alleviation. It was not until 2005 that an asset-based model, the Child Development Fund, was launched. However, the program employs child-based intervention strategies that focus on mentorship and individual savings plans. Parent-based and family-based interventions have little priority. There is a quest for family-based intervention programs and practices that enhance the roles and functions of parents as well as improve parent-child interactions, which in turn may influence adolescent development in economically disadvantaged families.

9.4.2.5 Strengthening paternal involvement in parenting

As mentioned, paternal parenting style, paternal control, and paternal sacrifice significantly influenced the achievement motivation and psychological competence of adolescents. The findings suggest that the roles and involvement of fathers should be strengthened. However, long hours of work, low educational standard and cultural inclinations hinder fathers' involvement in parenting. For helping the adolescents and families living in poverty, the participation of fathers in parenting is essential. Social workers have to reach out to engage fathers in family educational programs. Men service should be expanded to cover parenting and roles of families.

Moreover, it was identified that father-adolescent discrepancies in perceptions of family processes were greater than mother-adolescent discrepancies, and father-adolescent discrepancies negatively predicted achievement motivation and psychological competence of adolescents. The findings alert social workers and clinical practitioners to the fact that father-child conflicts could be detrimental to adolescent well-being. As men are less likely to seek help, social workers and clinical practitioners should be sensitive to father-child conflicts and make more room for father-child communication and mutual understanding.

9.4.2.6 The quest for gender-sensitive practices towards fathers and mothers' roles in family intervention

The research showed interesting findings that maternal control and paternal sacrifice for children's education influenced achievement motivation and psychological competence of economically disadvantaged adolescents. This suggested that there were different roles of fathers and mothers in enhancing the development of adolescents, with fathers mobilizing family resources for the education of adolescents and mothers monitoring their children's behaviours. The different roles of fathers and mothers imply a call for gender-sensitive practice in family intervention of economically disadvantaged families.

The different roles of fathers and mothers entail different needs of fathers and mothers. Fathers, responsible for mobilizing family resources for the families, may experience great pressure as their wages are minimal. They may perceive themselves and be perceived by others as incompetent and inadequate in their family roles. The situations are especially stressful when they face unemployment or inadequate self-employed work. On the other side, mothers take up more parental roles on monitoring and control, in addition to the conventional expectations of caring and nurturing. Mothers may shoulder the burden of monitoring and nurturing their children, and fathers are less involved in parenting even though their roles are influential in adolescent development. Mother may also experience dual burdens of heavier parental control and being blamed for children's behaviours (Caplan & Hall-McCorquodale, 1985; Shek, 2008b). Shek (2008b) suggested that "higher behavioural control would be physically and psychologically taxing for mothers" (p.679). The strains and

stresses of performing family roles may affect the psychological well-being of fathers and mothers, and may cause marital conflict. Social workers should be sensitive to the different roles of fathers and mothers and address their psychological and parenting needs.

9.4.3 Policy formulation on reducing intergenerational cycle of poverty

9.4.3.1 Direction of dealing with intergenerational poverty: Fulfilment of developmental needs instead of basic needs

The threat of intergenerational poverty is a main concern in combating the problems of poverty. Schiller (1989) alerted us that economic and social disadvantages in one generation lead to poverty in the next generation with the lack of children's opportunities. Castañeda and Aldaz-Carroll (1999) also argued for the existence of intergenerational transmission of poverty.

On the policy level, it is found that the existing policies on poverty alleviation rely mainly on cash assistance to provide a safety net for individuals and families to maintain a subsistence level of living. The policies for combating poverty in Hong Kong pursue the residual model of social welfare. Under the model, social welfare is carried out only when the normal channels fail to perform functionally. Thus, it is a supplementary response to the failures of individuals and major systems (Gilbert & Terrell, 2005). The services provided under the model are minimal, basic and temporary. The social security system in Hong Kong works on this model. As mentioned in the Report on the Review of CSSA scheme (1998), the objective of the scheme is "to provide cash assistance for financially vulnerable individuals and families to bring their income up to a level to meet their basic and special needs" (Social Welfare Department, 1998, p. 2). The amount is calculated under the basic need approach and is minimal to provide a subsistence level of living for recipients.

The residual model of cash assistance can help families with some of their burdens, but it may not change their lives or their orientation of being "poor". Intergenerational poverty will not be eliminated solely with cash assistance that is only adequate for "the maintenance of merely physical efficiency" (Rowntree, 1901, p.86). A change on the paradigm of policymaking for a more positive, constructive and proactive orientation is urged. Developmental needs of economically disadvantaged adolescents should be catered for.

Fulfilling the developmental needs of economically disadvantaged adolescents need not be expensive in monetary terms, but it will be socially intensive in policy and program design. The three important ingredients in building the achievement motivation and psychological competence of economically disadvantaged adolescents identified in the research – positive parental beliefs about adversity and their children, family processes that foster a supportive familial environment for the adolescents, and effective communication between parents and adolescents to reduce parent-child discrepancies – all confirm that parents do ‘make a difference’ in preparing their children for adversity and challenges. Thus, the formulation of policy should take an ecological perspective into account and support families to foster and nurture their children into competent, resilient, and responsible adults.

9.4.3.2 Investment and asset building of economically disadvantaged adolescents

The asset model of social welfare has been developed as a new model of social policy and social work practice. Sherraden (1991) defined assets as “rights or claims related to property... Assets comprise capital for investment, which in turn, generates future flows of income” (p. 101). Assets can be classified into tangible assets such as money savings, real property, machines and equipment, and intangible assets including access to credit, human capital, cultural capital, informal social capital, organizational capital and political capital (Sherraden, 1991).

Sherraden (1991) proposed the welfare model for the poor with accumulated assets and discovered the “welfare effects of assets” (p. 148) generated in both the short and long run. The “welfare effects of assets” included improvement of household stability; creation of future orientation; development of other assets; increased personal efficacy; increased political participation; and enhancement of children’s welfare (Sherraden, 1991).

The establishment of the Child Development Fund in 2007 was a breakthrough for the Hong Kong Government as the Fund focused on the asset building and developmental needs of economically disadvantaged adolescents. The Fund aimed to enhance children's abilities to manage resources and plan for their own future through developing an asset-building habit and accumulating financial assets and non-financial assets such as a proper mind-set, personal

resilience and social networks. (Child Development Fund, 2010, Introduction).

Investment or asset building by children is an innovation in fostering the development of economically disadvantaged adolescents. The current findings suggest that perceived parental sacrifice for children's education predicted adolescent achievement motivation as well as psychological competence. The money, time and effort parents invested in their children became important components for adolescents to strive for achievement. However, apart from parental sacrifice and investment, which are important family processes, parenting style, parental control and family functioning are also critical in providing warm and stable environments for adolescents to develop healthily. Furthermore, the social capital theory (Coleman, 1990) reminded us that the ultimate goal of investment or asset building should not be solely an increase in wealth (physical capital) – the social and human capital of the families is also indispensable. Thus, asset building should be considered at the familial level and should include families' social and human capital.

9.4.3.3 Reduce social stigmatization of families in poverty

Under the social psychological model on motivation of poor people (Kane, 1987; Pareek, 2002), and theory on culture of poverty (Lewis, 1968), individuals and families living in poverty are considered as inadequate and incapable to sustain positive and healthy well-being. The discourse contains heavy “blame the victim” connotation, with the poor being “pathologized” (Mehryar, 1984). The strong sense of social stigmatization of poor people is not only caused by conventional views towards poor people, but also the discourse constructed by the Government and widely expanded by the media. Recipients of Comprehensive Social Security Assistance (CSSA), in particular, experience a strong sense of social stigma. The social stigma included not only being poor, but also being incapable for self-reliance and thus becoming a social burden to society. There are arguments that welfare benefits provided by social assistance system breed welfare dependency (Cocca, 2002; Kittay, 1998; Schneider & Jacoby, 2003). The public image of CSSA recipients as the “undeserving poor” has likewise emerged in Hong Kong (Wong & Lou, 2010).

The research showed that families, though poor, did not give up their socialization roles in nurturing their children positively and providing stable

environments. Poor parents do have strong endorsement of positive cultural beliefs about adversity, high expectations of children's future, and strong attribution of children's success and failure to effort, and they perform actively in their socialization roles to nurture their children into motivated and competent people. Thus, social stigma and labels may not fairly describe the realities of poor families. It is necessary to reduce social stigmatization to poor people in policy implementation and service delivery, especially for those families receiving public assistance.

9.4.3.4 Formulating family policy for the promotion of positive family values and building of supportive familial environment for economically disadvantaged families

Family policy is essential in guiding the Government in the provision of social services for families, including medical care, education, labour and social welfare. From the literature review of family policy in the four East Asian societies of Japan, South Korea, Taiwan and China, it was found that a pro-traditional approach of family policy orientation was adopted with the emphasis on the Confucian cultural legacy (The Chinese University in Hong Kong, 2009). Preservation of Confucian family values is still prevalent in the family policy of these four East Asian societies.

Hong Kong has not formulated any policy to guide family services. Though the characteristics of Chinese families have been changing from traditional familism to "utilitarian familism" (Lau, 1982), family still remains the basic elementary unit of social life in Chinese communities, including Hong Kong. Furthermore, it was found that Confucian thought was still salient in shaping the beliefs of parents in economically disadvantaged families. Thus, in formulating family policy in Hong Kong, a pro-traditional approach of family policy that promotes Confucian family values is preferred.

The findings indicate familial predictors for positive development of economically disadvantaged adolescents, which give us insight into the formulation of family policy that upholds positive family values and fosters effective family processes, particular for families living in poverty. Positive outlook on adversity, high expectations of children's future, and the emphasis on attribution of children's success and failure to effort are important parental values

driving parents to provide a supportive environment for their children to develop healthily and positively. Thus, it is important for policymakers to promote positive family values and beliefs, as well as to develop family-friendly policies that enhance parents to foster a harmonious, supportive and responsive family environment for their children.

Moreover, it was found that non-standard and long hours of work hinder parents' involvement in parenting their children, especially in economically disadvantaged families. Policies that encourage family-work balance and parents' participation in children's welfare and development should be advocated.

Last but not least, it was found that the Family Council did not specifically target the needs of poor families. However, as more than one million people are living in poverty and the needs of poor families are escalating, it is essential for the Family Council to pay attention to the needs of economically disadvantaged families and formulate relevant policies and programs for them.

9.4.3.5 Exploring and encouraging home industry

In the seventies, when light industry was booming in Hong Kong, home industry was very common – parents bringing semi-products back home for refinement. Parents could earn a living and at the same time rear their children. Through observing the work process of parents, and sometimes even being involved in the home industry, children received positive parental Chinese beliefs such as forbearance, self-reliance and emphasis on effort, and children empathized with parental sacrifices. In Chinese culture, parenting is emphasized through two strategies: “*yan jiao*” (teaching by words, that is, precept) and “*shen jiao*” (teaching by deeds, that is, example). There is a Chinese idiom saying: “*shen jiao zhong yu yan jiao*” (example is better than precept), suggesting that modelling of parents is essential for children to learn the attitudes and behaviours of parents. If parents behave positively and actively in coping with the adverse environment, children will be socialized to face adversity positively and persistently. The model effect, i.e., “*shen jiao*”, is another indication of how resiliency could be parented through work ethic. Thus, home industry not only provides additional income for poor families through work, it is obviously a real life demonstration of parents' effort and struggle. Hence, economic and labour policies for exploring and promoting home industry should be encouraged.

9.4.4 Implications for social work education

9.4.4.1 Evidence-based practice in social work training

The study demonstrates the importance of evidence-based practice in social work training. Evidence-based practice involves “integrating individual practice from systematic research as well as considering the values and expectations of clients” (Gambrill, 1999, p. 346). Evidence-based practice is important for social workers to utilize their knowledge, values, skills, and professional rigor in maximizing the likelihood of helping clients to achieve the outcomes they value. However, it has been commented that evidence-based social work practice is limited in Hong Kong (Shek, Lam & Tsoi, 2004). The study provides an empirical evidence for the values and expectations of economically disadvantaged families, as well as for familial pathways that build resilience of adolescents, which is a piece of important information for social workers in helping the economically disadvantaged families. Social work training should pay more attention to the integration of empirical research, professional practice, and client values, which are essential building blocks of evidence-based practice (Sackett et al., 1997).

9.4.4.2 Focus on strengths in helping economically disadvantaged families

Poverty has been seen as social problem that is detrimental to family functioning and adolescent development. However, poor families are easily victimized from the “pathological” perspective. In this perspective, poor individuals are viewed as inadequate, incompetent, unmotivated and highly dependent (Kane, 1987; Pareek, 2002), which may deepen the helplessness and powerlessness of the families. Believing in the core social work value of “helping people to help themselves”, it is important to look into the strengths of the families in economic disadvantage. Saleebey (1992) developed the “strengths” perspective of social work practice, which introduced a new paradigm to social work. The “strengths” perspective operates on the strengths and potentiality of the clients as well as the available resources of the environment. Social workers, as “collaborators” with clients, aim at identifying and fostering the strengths of the clients. By cultivating their strengths, clients are motivated and empowered to solve their problems (Saleebey, 1992). The

“strengths” perspective works to avoid the victim mind-set (Saleebey, 1992, p. 7) and allows clients to grow and develop. Thus, the perspective is a less stigmatized perspective and views individuals and families from a more holistic manner.

From the findings, the “strengths” of the families that enhanced the positive development of economically disadvantaged adolescents were identified. The research demonstrates the importance of studying economically disadvantaged families from a “strengths” perspective so as to identify the protective factors in helping the families. Undoubtedly, the “strengths” perspective in understanding our clients as well as the environment that they are facing should be fostered in social work education.

9.4.4.3 Teaching family based intervention models and strategies

The lack of formal mechanisms for welfare planning in Hong Kong has truncated the development of social welfare services. The historical categorization of social welfare services into different target groups results in the clear “categorization” of social workers into “youth workers”, “family workers”, “community workers” etc., according to the clientele they serve. Youth social workers often employ an adolescent-oriented perspective in understanding the needs and development of economically disadvantaged adolescents, and their families are viewed as “separate” entities. The family perspective was easily ignored in the helping process. The fragmentation of service development hinders social workers’ holistic assessment of the needs of the individuals and families and provides comprehensive intervention for them. However, the findings clearly show that parental beliefs and family processes significantly influenced achievement motivation and psychological competence of economically disadvantaged adolescents. The importance of families in helping adolescents’ development should not be denied. The development of systems theory in the twentieth century provides a “scientific paradigm” for understanding interwoven relationships among family members (Minuchin, 1985). This brings forth the blossoming of family therapy in clinical practice. To develop a holistic approach in helping economically disadvantaged adolescents, family based intervention models and strategies are indispensable. The Report on Long-term Social Welfare Planning in Hong Kong (July, 2011) recently issued by

Social Welfare Advisory Committee (SWAC), firmly stated that “in mapping out the social welfare policy, the Government should be more mindful of the family dimension and devise policies to preserve and strengthen the role of the family in our society” (p.47). Thus, the scope of social work training should expand from teaching students on individual based intervention models and strategies to understanding and application of family based intervention models and strategies.

9.4.4.4 Family assessment in helping economically disadvantaged families

When suggesting that family based intervention models and strategies are important curricula in social work education, family assessment is the initial step in understanding the needs of economically disadvantaged families. Family assessment is essential to “identify, describe, and quantify relational processes that may be functional and dysfunctional for the development of the individual or the system of relationships [within the family]” (Cierpka et al., 2005a, p.4). Cierpka et al. (2005b) further suggested a three-level model in family assessment: the individual, the dyads, and the family system. Social workers not only need to assess the needs and behaviours of adolescents at individual level, they also have to assess the family interactions at dyadic level, as well as family beliefs, family resources, family processes and family dynamics at the family system level. Again, a family oriented perspective on family assessment is advocated. To examine the family through different lenses, social workers should be equipped with knowledge on psychosocial theories and family perspectives. The use of reliable and valid assessment instruments, techniques of observations and interviews are also important assessment strategies and skills that should be focused on social work training.

9.5 Methodological advances of the study

The study employed the post-positivist orientation to understand the influences of parental beliefs and family processes in enhancing the achievement motivation and psychological competence of economically disadvantaged adolescents. In the literature review, we discussed the methodological gaps of the research into the impacts of poverty on individuals and families. This section will

discuss the methodological advances of this study.

9.5.1 Collecting data from different data sources

Unit of analysis is always an issue when studying the impact of poverty on adolescent development, especially with family processes as the pathways. It was found that many researchers gathered information and responses only from adolescents (Chao & Kaeochinda, 2010; Shek, 2007a, 2008a, 2008b), with parents' perspectives in poverty research neglected. As each set of respondents only represents one perspective, employment of a single perspective to understand the association would confine the findings to one particular response set. On the contrary, a multiple perspective to study family processes can give us a broader scope. Day et al. (2001) argued that responses from one person in family research provide a very limited basis for understanding family decisions and interactions, and thus they called for research strategies that include the collective perceptions of multiple family members. Furthermore, as discrepancies in the perceptions of family processes often arise among multiple informants (De Los Reyes, 2011; Guion, 2009; Noller & Collan, 1986; Ohannessian et al., 1995), researchers should be cautious that "what parents think they may be doing in the home may not be what the adolescent perceives" (Paulson & Sputa, 1996, p. 371). Collecting data from a single data source would increase individual response bias and make analysis of parent-child discrepancies impossible. Unfortunately, even in research attempting to include parents in the study, mothers as caregivers were mainly engaged (Benner & Mistry, 2007; Chao, 1995, 1996, 2000; Padmawidjaja & Chao, 2010), and the responses of fathers were ignored. But there is empirical evidence that the influence of fathers and mothers on parenting practices is different (Forehand & Nousiainen, 1993; Noller & Callan, 1990; Paulson & Sputa, 1996), and so under-representation of fathers' perspective may restrict the scope and comprehensiveness of our understanding of family processes. This study fills the typical methodological gap of collecting data from a single data source. This study collected data from multiple data sources – father, mother, and adolescents. This allows triangulation of different data sources to minimize individual response bias.

Furthermore, data from different informants allow us to expand our scope of analysis in understanding family processes within families. As some measuring

constructs such as beliefs, attitudes and psychological well-being may be subjective, other informants could not represent their views. By gathering data from fathers, mothers and adolescents, the scope of analysis can expand to touch upon different subjective responses. Furthermore, the analysis of parent-child discrepancies in family processes can hardly be carried out with a single data source. Data from different informants, as demonstrated in this study, enhances the scope of predictive factors that influence adolescents' developmental outcomes.

9.5.2 Systematic use of qualitative and quantitative methods on scale construction and validation

With the paucity of literature on conceptualization of parental expectations of children's future and parental sacrifice for children's education, together with the cultural specificity of the constructs that are greatly influenced by Confucian thought, there was a need to indigenously conceptualize the constructs and develop the measurement tools. In this study, both qualitative and quantitative methods were systematically employed in scale construction and validation.

Apart from a survey of literature related to the constructs, the researcher conducted focus group interviews to allow direct participation of parents and adolescents in raising their ideas and sharing their experiences. The qualitative method is essential in the conceptualization process so that the researcher can be immersed in the rich indigenous content of the phenomenon. Yang (1999) explicitly claimed that "it is always a good policy to make an unstructured preliminary study for face-to-face observation and collection of penetrating qualitative data...Only in this way is the researcher able to grasp firmly the native meanings and characteristics of the phenomenon, indigenously conceptualize it" (p. 190-191). He further suggested that "even if researchers are doing a quantitative study (e.g. constructing a new scale for the measurement of a construct...), they [researcher] should still begin with a qualitative pilot study to allow thorough acquaintance with the details of the phenomenon to be studied" (p.191). Thus, qualitative study as the start of scale construction is important.

Items were developed with the rich qualitative data of focus groups and the survey of literature. The scales were assessed on content validity by a panel of

experts. The levels of relevance, clarity and representativeness of the items were rated by experts. Comments were requested from these experts for modification of the items. The quantitative and qualitative information provided by experts was used to validate the items and make modifications when necessary.

The third stage involved validation of the scales. Quantitative surveys were used to assess the reliability and validity of the scales. Internal consistency, test-retest reliability, convergent validity and factor analysis of data from adolescents and parents were evaluated in the validation process.

Last but not least, cross-validation of the scales was performed using the sample in the main study. Internal consistency, construct validity and factor analysis were evaluated to see whether the measurement tools showed reliability and validity in samples of low socioeconomic background.

The present study provides a good example of the systematic use of qualitative and quantitative methods in scale construction, validation and cross-validation, which demonstrates procedures on how psychosocial assessment tools should be properly validated.

9.5.3 Employment of indigenous measurement tools

We should be conscious that Western theories and concepts may not be totally compatible with the Chinese community, as Western concepts and theories are built on individualistic values that may be contradictory to the collectivistic ideology of Chinese culture. This study found that Chinese philosophies greatly influence the conception of family processes and adolescent development. Thus, indigenous measurement tools that accurately capture Chinese conceptions of beliefs, attitudes, family processes and adolescent development are indispensable. Unfortunately, there is a severe lack of psychosocial assessment tools in Chinese culture (Shek, 2002d, 2010; Shek, Lam & Tsoi, 2004), and this may undermine the development of indigenous Chinese concepts and models. In this study, several indigenous measurement tools were employed. These include Chinese Cultural Belief about Adversity Scale (CBA), Chinese Parental Control Scale (PCS), Chinese Family Assessment Inventory (FAI), Social-Oriented Achievement Motivation Scale (SOAM), and the two measurement tools developed in the research, that is, Parental Expectations of Children's Future Scale (PECF), and Parental Sacrifice for Children's Education Scale (SA). The

two new scales were developed with Chinese concepts and validated with Chinese samples. They showed good psychometric properties in the validation and main studies. Other measurement tools, though conceptualized with Western theories, had been validated with Chinese samples and showed good psychometric properties. These included Parental Attribution Questionnaire (PAQ), Parental Parenting Style scale (PPS), and Chinese Positive Youth Development Scale (CPYDS). The indigenous measurement tools facilitate further exploration of indigenous Chinese concepts as well as construction of family models applicable to Chinese contexts.

9.5.4 Constructing and validation of measurement tools in the context of poverty

The lack of reliable measurement tools may hinder the development of poverty research. However, in constructing measurement tools, the experiences and views of families in the low socioeconomic context are often ignored. The measurement tools may not truly reflect the situations of poor people. It is essential to construct and validate the measurement tools in the context of poverty. In constructing the Parental Expectations of Children's Future Scale and the Parental Sacrifice for Children's Education Scale, two focus groups of parents and adolescents were arranged. Half of the participants were recruited from economically disadvantaged families. They gave a perspective on parental expectation and parental sacrifice in the context of poverty. For instance, economically disadvantaged adolescents highlighted the preference of parents for children's education over their personal needs, which was not mentioned by non-poor adolescents. Similarly, economically disadvantaged adolescents revealed that their parents hoped they would not need to engage in physically demanding jobs, whereas non-poor adolescents did not mention this point. The experiences and situations of poverty altered their interpretation of parental expectation and parental sacrifice. This study thus allowed the views and ideas of poor people to be considered in the construction of measurement tools.

As most measurement tools have not been developed in the context of poverty, it was essential to assess the reliability and validity of the instruments when applying them in the main study to samples experiencing economic disadvantage. All instruments showed acceptable reliability and construct

validity in the main study, indicating that the measurement tools showed satisfactory psychometric properties in samples experiencing economic disadvantage. Furthermore, coefficients of congruence were calculated to assess the degree of factorial similarity of some measurements across different studies of poor and non-poor samples. It was found that there were high degrees of factorial similarity in all dimensions of Parental Sacrifice for Children's Education Scale (SA) in studies using different (poor and non-poor) samples. However, for Parental Expectations on Children's Future Scale (PECF), similar factor structures and high degrees of factorial similarity were found across samples of fathers and mothers experiencing economic disadvantage, but the measurement exhibited different factor structures in validation study when using samples of general socioeconomic status. There may be possibility that the dimensions of parental expectations of children's future are specific across different socioeconomic contexts. Further research on dimensionality of Parental Expectations on Children's Future Scale is necessary. Nevertheless, the consideration of different socioeconomic contexts on construction and validation of measurement tools contributes to the methodological advances of the study.

9.5.5 Recruitment of intact Chinese economically disadvantaged families

Income or SES is a sensitive variable, and together with the fact that poverty brings social stigmatization (Wong & Lou, 2010), there were difficulties in recruiting respondents. Such recruitment is particularly difficult in the Chinese community. In Chinese culture, individual achievement is an aspect of family achievement (Wilson & Pusey, 1982), and poverty has been perceived as "losing face" and disgracing the family name. This would be a shame for family members which discourages them from participation in poverty-related studies. Due to the difficulties in recruiting poor families, most research either employed single data source strategies (Lam, 2011; Shek, 2002b, 2004b, 2008a), or used a smaller sample size (Shek, 2004a, 2005b; Shek et al., 2003). The difficulties in recruitment have hindered the development of Chinese family research in the context of poverty.

This study successfully recruited 275 intact Chinese economically disadvantaged families, the largest sample size among existing poverty-related research concerning multiple respondents within the family in the Chinese

community. The participating families were recruited from 10 non-Government organizations and a total of 24 children and youth service units, school social work services and community service units were involved. The extensive recruitment network covered almost all the geographical districts of Hong Kong. Furthermore, the already-built relationships between service units and participating families facilitated the identification of families that met the criteria of poverty threshold (50% of median monthly household income as determined in the 2006 Population By-Census) and family composition (intact families with at least one adolescents aged 11-16). Also, the service units helped explain the research to the families and encouraged them to participate. This greatly helped in the recruitment of economically disadvantaged families.

In addition, the study adopted the “positive youth development” paradigm that focused on the positive outcomes of adolescents, which helped to reduce the social stigmatization of economically disadvantaged families by not concentrating on the problems and “deficiencies” of the families. This also facilitated the recruitment of Chinese families.

In summary, Table 9.2 summarizes the methodological advances of the study.

Table 9.2: Methodological advances of the study

Methodological gaps	Advances of the study
Single source of data (mostly adolescents)	<ul style="list-style-type: none"> ◆ In understanding the family processes, the data from father, mother, and adolescents were collected for analysis. Multiple informants would help to minimize individual response bias that may arise from single data source. ◆ The multiple data sources of fathers, mothers, and adolescents allowed analyses of father-mother differences on parenting practices as well as parent-child discrepancies (father-adolescent discrepancies and mother-adolescent discrepancies) on family processes.
Problems in construction and validation of indigenous psychosocial measurement tools	<ul style="list-style-type: none"> ◆ Both qualitative and quantitative methods were employed in development and validation of Parental Expectations of Children’s Future Scale and Parental Sacrifice for Children’s Education Scale. Qualitative methods were used to understand the native meanings and characteristics of the phenomena, whereas quantitative methods were used to assess

	<p>the psychometric properties of the measures.</p> <ul style="list-style-type: none"> ◆ The measurement tools were validated on their internal consistency, test-retest reliability, content validity, convergent validity, construct validity and factor analysis. Furthermore, both parent and adolescent samples were recruited for the validation of Parental Sacrifice for Children's Education Scale.
Problems of measurement tools	<ul style="list-style-type: none"> ◆ Many measurement tools employed were indigenously developed and conceptualized with consideration of Chinese philosophies. They were validated with samples in Chinese community and showed good psychometric properties. ◆ Those measurement tools developed with Western theories were validated in Chinese communities using Chinese samples. All showed good psychometric properties in their validation processes as well as in the main study. ◆ Two new measurement tools, Parental Expectations of Children's Future Scale and Parental Sacrifice for Children's Education Scale were developed through survey of literature and data of focus groups of Chinese parents and adolescents. The measures showed cultural inclinations that were rooted in Confucian philosophy. Furthermore, the measures were validated using Chinese samples.
Lack of concern on construction and validation of measurement tools in low socioeconomic context	<ul style="list-style-type: none"> ◆ Parents and economically disadvantaged adolescents were invited to participate in focus groups during the construction of Parental Expectation for Children's Future Scale and Parental Sacrifice for Children's Education Scale. ◆ All measurement tools were assessed on their reliability and validity in main study, using samples from economically disadvantaged families.
Difficulties in recruiting participants results in severe lack of Chinese family studies in the context of poverty	<ul style="list-style-type: none"> ◆ A sample of 275 intact Chinese families experiencing economically disadvantage was recruited in the study, the largest sample size among similar studies in Chinese community in the context of poverty. ◆ The participating families were recruited from 10 non-Government organizations and a total of 24 children and youth service units, school social work services and community service units were involved. The extensive recruitment network covered almost all districts in Hong Kong. Furthermore, the already-built relationships between service units and participating families facilitated the identification of

	<p>the families.</p> <ul style="list-style-type: none"> ♦ The study reduced social stigmatization of economically disadvantaged families by focusing on positive outcomes of adolescents instead of concentrating on problems and “deficiencies”.
--	--

9.6 Limitations of the research

9.6.1 Cross sectional design

To understand the relationship between two variables, there are five possibilities that may exist: (1) the first variable (x) influences the second variable (y), that is, $x \rightarrow y$; (2) the second variable influences the first variable, that is, $y \rightarrow x$; (3) the two variables mutually influence each other, that is, $x \rightleftharpoons y$; (4) the two variables do not influence each other, that is, $x \nrightarrow y$; and (5) the relationship between these variables is influenced by the third variable (z), thus the relationship is spurious $\begin{matrix} x \rightarrow y \\ \nwarrow z \nearrow \end{matrix}$. The first two possibilities indicate causal relationship between the variables whereas the third possibility indicates a correlation. As mentioned, causal relationship between X and Y is established under controlled experimental conditions. However, as real-life situations preclude experimental design, correlation and regression analyses are used as alternative tools to specify the relationships.

There are four methods that can be used to strengthen the causal relationship (Tabachnick & Fidell, 2007): (1) a sound theoretical argument; (2) logical time sequence; (3) a dose-response relationship (the larger the causal relationship, the larger the outcome); and (4) consistency of results across similar studies.

Only methods (1), (3) and (4) were established in this study. For (1), the ecological perspective together with social capital theory and expectancy-value theory on motivation provided a sound theoretical framework for the formulation of hypothetical model of study. For (3), it was found that the higher the levels of positive parental beliefs, the better the family processes perceived by parents. Furthermore, the better the adolescents' perceptions of family processes, the higher were their levels of achievement motivation and psychological competence. For (4), the study showed similar results that resembled studies on parental beliefs and family processes (Davis-Kean, 2005, Georgiou, 1999; Gill & Raynolds, 1999; Halle et al., 1997; Schoon et al., 2004) and on adolescents'

resilience (Garmezy, 1993; Masten et al., 1990; Rutter, 1987, 1990; Smith & Carlson, 1997; Wyman et al., 1992; Yeung et al., 2002). However, the cross-sectional design in this study has the inherent problem in inferring cause-and-effect relationships, due to the lack of time order. The problem of directionality emerges in cross-sectional correlational design with its failure to perform real-time sequential analysis. Furthermore, as suggested by Mistry et al. (2002), poverty exhibits a cyclical pattern and families transition in and out of poverty over time, so a cross-sectional design would have difficulty in capturing the process and cumulative impact of poverty. It is suggested that a longitudinal design, such as a panel study or cohort study, is more powerful in assessing the causal relationship of variables (e.g. Shek, 1998b). Though cross-sectional studies are commonly employed in poverty research (Conger et al., 1992, 1993; Conger et al. 2002; Mistry et al., 2002; Parke et al. 2004; Shek 2004b), longitudinal research on the protective factors and familial pathways influencing adolescent development in the context of poverty is indispensable.

9.6.2 Employment of non-random sampling strategy

As the concept of drawing inferences is based on probability theory, sampling strategy is an important determinant of whether inferences can be drawn, as random sampling can eliminate bias and permit the measurement of random sampling errors. However, there were practical difficulties in recruiting members of Chinese economically disadvantaged families. First, it is impossible to obtain a complete list of economically disadvantaged families in Hong Kong. Second, the strong stigmatization attached to poverty and to those receiving cash assistance in Chinese community discourages economically disadvantaged families from participating in the research. Third, Chinese people may perceive their lives in poverty as inglorious and dishonouring to the family. Thus, they were unwilling to reveal their identities and participate. Fourth, the research required multiple family members (father, mother and adolescent) to participate, which was another obstacle to recruitment. Thus, purposeful sampling was considered the most practical and comprehensible alternative for recruiting the respondents with the above-mentioned restrictions. In reality, the non-random sampling strategy is commonly employed in poverty research in the Chinese community (Shek, 2002e; 2004b; 2005a) due to the difficulties in recruiting

economically disadvantaged Chinese adolescents and families in the research. With the employment of non-random sampling strategy, the generalization of research findings is questionable.

9.6.3 Sample size

A larger sample size reduces random fluctuations in the selection of observations from the sample that may result in deviation between sample statistics and population parameters (Newton & Rudestam, 1999). Besides, as the research employed factor analysis in validation of the measurement and multiple regression analysis in the main study, the statistic analytical techniques required a large sample size to sustain the robustness of the tests. However, in the validation study, the parent sample was 125, merely adequate for factor analysis. The small sample size did not permit researcher to examine the stability of the factor analytic findings. In the main study, as there was a large set of predictor variables under investigation, the sample size of 275 was just adequate for performing multiple regression analysis. Two problems arise with small sample sizes: the problem of generalizability and the problem of power (Kraemer & Thieman, 1987). As discussed before, the non-random sampling strategy and relatively small sample size restricted the generalizability of the study. On the problem of power, the significant findings with considerable effect size in regression analyses lead us to have confidence in the results, despite the relatively small sample size.

Though the sample size was considered relatively small for performing statistical analytic techniques such as factor analysis and multiple regression, the sample size of the present study was respectable in light of the problems with recruitment. In fact, the present study had the largest sample size among existing poverty-related research concerning multiple respondents within the family in the Chinese community. Recruitment of economically disadvantaged families for research participation will always be a challenge for researchers. Nevertheless, it is advised to replicate the study using a larger sample so as to improve the stability of the results.

9.6.4 Use of self-report

The main study solely relied on the self-report measure, making the findings

only have the perceptions of the “insiders”. Though there is evidence showing that self-report measures were similar to other means of measuring family processes (e.g. Hampson et al., 1989; Stevenson-Hinde & Akister, 1995), there were also findings that found discrepancies between methods of assessing family processes (e.g. Green et al., 1995, Smetana et al., 2000). Furthermore, studies relying on self-report face the issue of shared method variance, which may inflate some of the associations among the variables. This was common in family research when self-reported measures were employed as the only method of study (Guion et al., 2009; Wadsworth et al., 2005). Smetana et al. (2000) called for research that involved trained observers of family interactions. The inclusion of observational data of “outsiders” in real-life settings may give us a clearer picture of the linkages between family processes and development of Chinese adolescents with economic disadvantage. Furthermore, observation of family interactions from “outsiders” allows the study of triadic relationships within the family. This echoed Tutty’s (1995) recommendation that “gathering data from several perspectives is recommended to obtain the most comprehensive picture of a family” (p.81). However, researchers should be alert to the ethical hazards generated from real-life settings observed by “outsiders”, as the data collection process is intrusive to a family’s private life (LaRossa et al., 1981).

There are other limitations in using self-reported measures. One limitation is its susceptibility to reactivity, which introduces systematic measurement errors. The tendency of respondents to give socially desirable answers to questions, to misunderstand questions, to be unable to recall past events accurately, or to misinterpret questions on attitudes and perceptions are all measurement errors (Singleton et al., 1993). Also, self-reported measures on structured questionnaire are all predetermined items, which restricts the respondents’ indication of the most meaningful and salient ideas and preferences. Wampler and Halverson (1993) criticized the use of quantitative measurement in “capturing the complexity of family life” (p. 189). Furthermore, the formats and items of questionnaires are fixed once the process of data collection starts. Thus, the approach is less adaptable and flexible to capture the complexity of family processes.

Use of self-report measures was an additional difficulty for economically disadvantaged parents, as many of the respondents were of low educational

standard or even illiterate. Some of the respondents in the study were quite old and may have had difficulties in interpreting and handling the items.

9.6.5 Reliability and validity of the measures

It was found that the reliability of Chinese Cultural Beliefs about Adversity Scale and Parental Attribution of Children's Success and Failure to Effort Subscale reported by fathers and mothers were not high. Neither was the reliability of Parenting Style Scale reported by mothers. Regarding validity of the measures, it was found that the factor structures of Parental Expectations of Children's Future Scale and Parental Sacrifice for Children's Education Scale were not stable due to the limitation of sample size. Further studies to refine the measures are necessary.

9.6.6 Limitations in performing structural equation modelling analyses

There is a limitation of correlation analyses to imply a causal relationship among independent variables and dependent variables. In the past two decades, the development of structural equation modelling (SEM) or path analysis facilitates the causal interpretation of correlational results in cross-sectional studies. Structural equation modelling (SEM) is a confirmatory technique to investigate theory-derived structural/causal hypotheses. It concerns testing complex models for structure of functional relationships among observed variables on latent variables. By assessing the magnitude of the direct and indirect effects that independent variables exert on dependent variables, the functional relationships among the variables are determined (Marcoulides & Schumacker, 1996). There are several advantages of using structural equation modelling in data analyses. First, it improves the statistical estimation of relationships among factors of variables. By estimation and removal of measurement error, reliability of measurement can be accounted for. Besides, structural equation modelling estimates a series of separate, but interdependent, multiple regression equations simultaneously by specifying the structural model, thus complex relationships can be examined. This would facilitate model confirmation (by evaluation of goodness-of-fit criteria) and theory testing. Furthermore, it provides the comparison of group differences in their covariance matrices, regression coefficients and means (cf. Hair et al., 2010, pp. 624-629, &

also Tabachnick & Fidell, 2007, pp.680-682).

Even though SEM is a powerful statistical analytic technique in giving a more confident causal interpretation of correlational results, it does not necessarily mean that the relationships between independent variables and dependent variables are causal. Mistry et al. (2002) gave a sound comment: “When applied to cross-sectional data, the results obtained from analyses involving SEM, at best, support the proposition that the pattern of associations are an adequate representation of the data, they do not provide confirmation of a causal relation between two constructs...Moreover, as is the case for most statistical procedures, SEM cannot rule out the problem of omitted variables” (p. 948). Causality is governed by theories and logical conclusion rather than statistical manoeuvre. Nevertheless, SEM is a more powerful statistical analytical technique for analyses of correlational results in cross-sectional studies.

However, when performing SEM, sample size is a practical concern. As SEM is based on covariances, it is less stable when estimated from small samples. Hair et al. (2010) suggested five considerations that affect the required sample size for SEM: (1) multivariate normality of the data; (2) estimation technique; (3) model complexity; (4) amount of missing data; and (5) average error variance among reflective indicators. As the data deviate more from the assumption of multivariate normality, there is a need to increase the ratio of respondents to parameters. A ratio of 15 respondents for each parameter is generally accepted to minimize the problems with deviations from normality. Besides, the estimation technique of maximum likelihood estimation is sensitive to sample size. Regarding model complexity, it is suggested that the more complex the model, the larger the sample size. The model is regarded as complex when (1) there are more constructs in the model; (2) constructs have fewer than three measured variables; and (3) multi-group analyses are performed. Furthermore, larger sample size is required if communalities of the latent constructs are low. Hair et al. (2010) offered the minimum sample sizes based on model complexity and basic measurement model characteristics. They suggested that for a model of seven or fewer constructs, lower communalities (below .45), multiple under-identified constructs would need a minimum sample size of 300. For a model with large numbers of constructs, some with lower communalities, having fewer than three measured items, would require a minimum sample size of 500

(p. 644).

In this study, the model is regarded as a complex one with large set of constructs and the performance of multi-group analyses. Thus, a minimum sample size of over 500 in each sample group (fathers, mothers and adolescents) is required for SEM. However, as the sample size of the present study was 275 families, it was relatively small for generating a stable result in using SEM.

On the contrary, analytic techniques based on ordinary least squares (OLS) multiple regression analyses are powerful for exploration of relationships between independent variables and dependent variables and estimating prediction. OLS multiple regression analyses were commonly used in exploratory analyses in poverty research (Jimerson et al., 1999; Orthner et al., 2004; Schlee et al., 2009; Shek, 2005a, 2005b; Wadsworth et al., 2005). The present research used ordinary least squares multiple regression as analytic strategies generated important findings on understanding and predicting the influences of parental beliefs and family processes on adolescent development in low socioeconomic families. Nonetheless, it would be advisable to perform SEM to understand the path models of parental beliefs, family processes, and adolescent development in larger samples in future research.

Chapter Ten: Conclusions and Suggestions for Future Research

This section provides a summary of the findings and recommendations for future research.

10.1 Summary of findings

The relationships of parental beliefs, family processes, achievement motivation and psychological competence of economically disadvantaged adolescents in Hong Kong were examined in this research. Quantitative study on self-reported measures was employed as the research design. Two stages were involved. The validation stage developed and validated two psychometric measures: Parental Expectations of Children's Future Scale (PECF) and Parental Sacrifice for Children's Education Scale (SA). The main study explored the relationships of parental beliefs, family processes, and achievement motivation and psychological competence of economically disadvantaged adolescents. Intact families with monthly household income less than 50% of the median of monthly household income indicated in the 2006 Population By-census were invited to participate in the study. Fathers, mothers and adolescents ages 11-16 were invited to complete questionnaires containing the validated psychometric scales. In all, 276 families participated in the study. As one set of questionnaires was found problematic (an adolescent filled in the parent questionnaire), only 275 sets of questionnaires were analysed.

10.1.1 Validation of two measurement tools

Two psychometric measures: the Parental Expectations of Children's Future Scale and the Parental Sacrifice for Children's Education Scale were developed and validated. The measures have good internal consistency, test-retest reliability, content validity, convergent validity, construct validity, and factor analysis, showing that the measures were reliable and valid to be used to measure parental expectations of children's future and parental sacrifice for children's education in the Chinese community.

10.1.2 Summary of findings addressing the research questions of the study

Research Question 1: Among economically disadvantaged parents, are there any relationships between Chinese cultural beliefs about adversity and child-specific beliefs, including attribution of children's success and failure to effort, and expectations of children's future?

It was found that paternal Chinese cultural beliefs about adversity were associated with paternal expectations of children's future and paternal attribution of children's success and failure to effort. Maternal Chinese cultural beliefs about adversity were also associated with maternal expectations of children's future and maternal attribution of children's success and failure to effort.

Research Question 2: Do parental beliefs (Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, and expectations of children's future) influence parenting styles and practices, family functioning, and parental sacrifice for children's education in economically disadvantaged families?

Except for the relationship between fathers' Chinese cultural beliefs about adversity and paternal control, all other relationships between paternal beliefs (Chinese cultural beliefs about adversity, attribution of children's success and failure to effort, and expectations of children's future) and various family processes (paternal parenting style, paternal control, paternal sacrifice, and family functioning) reported by fathers were significant. It was noteworthy that fathers' child-specific beliefs, particularly fathers' expectations of children's future, greatly influenced fathers' perceptions of family processes. Furthermore, it was found that fathers' Chinese cultural beliefs about adversity significantly predicted paternal parenting style and family functioning. In addition, fathers' attribution of children's success and failure to effort significantly influenced paternal parenting style, paternal control and paternal sacrifice for children's education. Lastly, father's expectations of children's future greatly influenced paternal control, perceived family functioning and paternal sacrifice for children's education in economically disadvantaged families.

For relationships between maternal beliefs and family processes reported by mothers, it was found that mothers' child-specific beliefs, particularly mothers' expectations of children's future, greatly influenced mothers' perceptions of family processes. Also, mothers' expectations of children's future greatly influenced maternal control and maternal sacrifice for children's education. Moreover, mothers' Chinese cultural beliefs about adversity and mothers' expectations of children's future influenced family functioning, as they attempted to provide a harmonious and stable environment for their children to develop and achieve.

Research Question 3: Do parenting styles and practices, family functioning, and parental sacrifice for children's education influence achievement motivation and psychological competence of economically disadvantaged adolescents?

The findings provide empirical evidence that family processes (parenting style, parental control, family functioning and parental sacrifice for children's education) influence achievement motivation and psychological competence of economically disadvantaged adolescents.

For achievement motivation, overall family processes perceived by adolescents were influential. Among different family processes, it was found that paternal and maternal sacrifice for children's education and maternal control showed the greatest association with achievement motivation of adolescents, with effect sizes ranging from medium to great. Standard multiple regression showed that paternal sacrifice for children's education and maternal control predicted adolescent achievement motivation.

For psychological competence, overall family processes had a prominent influence. Family functioning remarkably influenced adolescent psychological competence. Maternal control and paternal sacrifice for children's education also significantly predicted adolescent psychological competence.

Research question 4: Do family processes (parenting styles and practices, family functioning, and parental sacrifice for children's education) mediate the influences of parents' Chinese cultural beliefs

about adversity and parents' child-specific beliefs (attribution of children's success and failure to effort, and expectations of children's future) on the achievement motivation and psychological competence of economically disadvantaged adolescents?

This study found four mediating factors that mediated the relationships between parental beliefs and achievement motivation of economically disadvantaged adolescents. They were (1) paternal control perceived by fathers; (2) paternal sacrifice for children's education perceived by fathers; (3) paternal control from averaged data of fathers and adolescents; and (4) paternal sacrifice for children's education from averaged data of fathers and adolescents.

Regarding the mediating effects of influences of parental beliefs on psychological competence of economically disadvantaged adolescents, six mediating factors were identified: (1) father's perception of family functioning; (2) paternal sacrifice for children's education perceived by fathers; (3) maternal control from adolescents' perspective; (4) paternal control from averaged data of fathers and adolescents; (5) family functioning from averaged data of fathers, mothers and adolescents; and (6) paternal sacrifice for children's education from averaged data of fathers and adolescents.

Research Question 5: Are there any differences in the perceptions of family processes between fathers and mothers?

From the parents' perspectives, there were significant differences in parenting style and parental sacrifice for children's education between fathers and mothers, with mothers showing higher levels of positive parenting style as well as more sacrifice for children's education. From the adolescents' perspective, there were significant differences between paternal and maternal parenting style, paternal and maternal control, and paternal and maternal sacrifice for children's education. Adolescents also perceived mothers as exhibiting higher levels of positive parenting style, parental control and parental sacrifice for children's education. However, the difference in fathers' and mothers' perceptions of family functioning was not significant.

Research Question 6: Are there any differences in the perceptions of family processes between parents and adolescents?

Significant father-adolescent differences were found in perceptions of parenting style, paternal control, paternal sacrifice for children's education and family functioning. Adolescents generally had lower scores on all measures than fathers. Furthermore, there were significant mother-adolescent differences in perceptions of parenting style, maternal sacrifice for children's education and family functioning, with adolescents generally having lower scores on the three measures than mothers. However, there were no significant differences in perceptions of maternal control between mothers and adolescents.

Research Question 7: Do parent-child discrepancies in perceptions of family processes influence adolescent achievement motivation and psychological competence in economically disadvantaged families?

Father-child discrepancies in paternal parenting style and family functioning, as well as mother-child discrepancies in maternal control and maternal sacrifice for children's education, were negatively related to achievement motivation of economically disadvantaged adolescents. Parent-child discrepancies in perceptions of family processes reduced adolescent achievement motivation. In particular, it was found that mother-child discrepancies in maternal sacrifice for children's education adversely predicted adolescent achievement motivation.

Regarding psychological competence, father-child discrepancies in paternal control and family functioning, as well as mother-child discrepancies in maternal control and family functioning were negatively related to psychological competence of economically disadvantaged adolescents. Parent-child discrepancies also decreased adolescent psychological competence. In particular, father-child discrepancies in perceptions of family functioning predicted adversely adolescent psychological competence.

10.2 Recommendations for future research

The research gives us important information for understanding the relationships of parental beliefs, family processes, and achievement motivation

and psychological competence of economically disadvantaged adolescents. However, there is still more room for further research:

1. In the study, it is suggested that parents' Chinese cultural beliefs about adversity as well as parental child-specific beliefs (expectations of children's future and attribution of children's success and failure to effort) significantly influenced paternal and maternal parenting practices in Chinese families living in poverty. These parental beliefs are rooted in Confucian thought. It is essential to explore whether these parental beliefs influence parenting practices and behaviours of Chinese families in general. Further studies in this area enhance the theorization of indigenous Chinese family models. The availability of the Parental Expectations of Children's Future Scale will facilitate further exploration in this area.
2. Parental sacrifice for children's education is an indigenous Chinese concept explored in the study. Parental sacrifice for children's education was significantly associated with parents' cultural beliefs about adversity as well as with parents' child-specific beliefs. The construct also greatly influenced the achievement motivation and psychological competence of economically disadvantaged adolescents. Parental sacrifice for children's education is an important family process in Chinese culture, yet the effort to conceptualize the construct is just starting. It is essential to explore how this indigenous Chinese concept influences individual and family functioning of Chinese families in general. The availability of the validated Parental Sacrifice for Children's Education Scale can facilitate further exploration in this area.
3. This study focuses on dyadic relationships of families in the analyses of family processes. However, analyses of triadic relationships within the family system are an important theoretical angle in family research. Further research should study the triadic interactions of economically disadvantaged families.
4. This study selected intact economically disadvantaged families as the sample, while single-parent economically disadvantaged families were unexplored. In fact, low-income single-parent families with children ages 6-14 were 50.8% of all Hong Kong single-parent families with children ages 6-14 in 2006 (HKCSS, 2008, p.8). Also, 12.5% of CSSA recipients are in

single-parent families (Census and Statistics Department, 2010, FC4). The statistics tell us that the situation of single-parent economically disadvantaged families is worth exploring. Furthermore, as single parents have to take up a dual role in parenting, their cultural beliefs about adversity and expectations of their children's development obviously influence adolescent development in unique ways. Thus, the influences of parental beliefs and family processes on adolescent development in poor single-parent families should be explored in future studies.

5. While the study focused on understanding the effect of family processes in mediating the influences of parental beliefs on adolescents' positive development, it would be illuminating to explore the underlying factors and mechanisms through which adolescent positive development is affected by family processes. In Chinese culture, familism is characterized by the concept of interdependence (Bempechat et al., 1999). There is "reciprocity" on fulfilling different roles within the Chinese family system, as indicated by mutual care and obligation (Chao & Tseng, 2002). Parents hold the responsibility for taking care of their children, and children in turn are obliged to respect their parents and fulfil their responsibility to the families. Thus, the roles and mechanisms of filial piety and filial obligation exhibited by adolescents on the influence of family processes on adolescent positive development are worthwhile to study in both Chinese and low socio-economic contexts.
6. The study found that parent-child discrepancies in perceptions of family processes negatively influenced motivation and competence of economically disadvantaged adolescents. It is important to explore the antecedent factors of parent-child discrepancies, the mediating factors that link parent-child discrepancies and adolescent development, and the moderating factors that alter the relationships. The factors will help us reduce the negative effect of parent-child discrepancies on adolescent development in poor families.
7. Longitudinal study of the influences of parental beliefs and family processes on achievement motivation and psychological competence of economically disadvantaged adolescents can minimize the problem of directionality and

address the dynamic nature of poverty over time. A cohort or panel study tracing the influences of family beliefs and processes on adolescent development over time could be employed.

8. Multi-level analyses on impacts of poverty are important for theoretical formulation. The impacts of poverty on individuals and families as well as the ecological influences at the family, community and societal levels should be explored. For instance, the exo-system of parents' jobs in relation to family functioning and adolescent development is a new niche for research.
9. Qualitative methods can be employed to understand the impact of economic disadvantage on family processes and adolescent development. The naturalistic and contextually sensitive characteristics of qualitative methods are very useful in exploratory research on the changes of family lives and roles of family members living in poverty, the subjective experiences of adolescents and their family members, and the aspirations of adolescents and their family members. Interviews, observations and field studies are common methods to allow the subjects to "voice" and "tell" their stories in face of economic hardship. Besides, qualitative research gives us a rich, in-depth and detailed account of family processes and adolescent development perceived by different family members in poverty. Discoveries and new insights will be gained from the subjects' voices and stories. New patterns and concepts can thus emerge. Furthermore, qualitative methods are useful in understanding phenomena of family systems such as family dynamics, patterns of interactions and communications, patterns of congruence and incongruence among members, ways to resolve conflicts and family boundaries (Rosenblatt & Fischer, 1993), which provide important hints for us to understand family dynamics and interactions in poor families. Another alternative is the employment of mixed methods that may expand both the scope and breadth of the study. These allow qualitative and quantitative data to be "fruitfully combined to elucidate complementary aspects of the same phenomena" (Patton, 2002, p.558). Mixed methods also allow methodological triangulation to enhance reliability.
10. Duration, timing and depth of poverty are important factors that should be

considered to capture the dynamic situation of poverty influencing adolescent development and family functioning.

11. In this study, two measurement scales – (1) Parental Expectations of Children's Future Scale, and (2) Parental Sacrifice for Children's Education Scale – were developed and validated. Further confirmatory factor analyses are suggested to confirm the factor structures of the two instruments.
12. It is essential to further explore the influences of parental beliefs and family processes on adolescent development of families living in poverty across gender of adolescents. There is evidence showing that the links between parenting characteristics and adolescent psychological well-being were stronger in girls than in boys (Shek, 1998c, 1999c, 2002c, 2007b), and the links between family functioning and adolescent development in economically disadvantaged adolescents were also stronger in girls than in boys (Shek, 2005b). Thus, it is worth exploring the influences across gender of adolescents in the low socioeconomic context.
13. With the powerful advanced statistical analytical technique of structural equation modelling (SEM) for analysing relationships between latent variables, future research should use SEM to understand the path models of parental beliefs, family processes and adolescent development in larger samples experiencing economic disadvantage.

10.3 Conclusion

The study inquires into the relationships amongst parental beliefs, family processes, achievement motivation and psychological competence of Chinese economically disadvantaged adolescents. In contrast to the mainstream family stress model employed in much poverty research, this study explored a different angle for understanding the influences of parental beliefs and family processes on adolescent development in poor families. It was found that parental beliefs about adversity and child-specific beliefs influenced family processes perceived by parents. Family processes perceived by adolescents also influenced adolescent achievement motivation and psychological competence. The mediating pathways of family processes through which parental beliefs influenced adolescent development were also identified. However, it was found that there were

significant parent-child discrepancies in perceptions of family processes, and that these discrepancies negatively influenced adolescent achievement motivation and psychological competence. The findings provide important theoretical and practical implications for researchers, social workers, policymakers and social work educators, especially in relation to combating intergenerational poverty. As stated in the Policy Discussion Paper of Commission on Poverty (2005), “tackling intergenerational poverty would involve the provision of support and opportunities essential to a person’s sound, balanced and sustainable development” (p.1), thus, the promotion of parents’ positive beliefs and strengthening of family functions in enhancing achievement motivation and psychological competence of adolescents is essential.

Appendices

Appendix 1: Interview guide of focus group

Interview guide

Focus Group Interview for parents

Participants:

Parents with children at the age 11 to 15 (General / with economic disadvantage)

Number of parents: 7 (4 parents were experiencing economic disadvantage)

Purposes:

1. To understand parent's conception on expectations of children's future.
2. To understand parent's conception on parental sacrifice for children's education.
3. To understand the experiences of sacrifice of parents in children's education.

Interview guide:

1. Introduce the purpose of research to the participants.
2. Introduce the aim, rundown, requirements, as well as their rights to the participants. Ask them if they have any questions. Ensure anonymity and confidentiality of the research. Informed consent should be sought from the parents.
3. Gather background information of the respondents (complete the information sheet).
4. Invite participants to introduce themselves as a warm-up among the group.

Parent's conception on expectations of children's future

What are your expectations on the future of your children?

你對孩子的將來有什麼期望？

Did you tell your children your expectations on their future? If yes, how did you tell them? If no, what are the reasons of not telling the children?

你有否把你對孩子將來的期望告訴他？若有，怎樣告知？若沒有，什麼原因令你不告訴他？

What do you think your children should do in order to fulfill your expectations of their future?

你認為孩子怎樣可以達到你對他們的期望？

What did/ do you do in order to fulfill your expectations on child's future?

你會做什麼讓孩子可以達到你對他的期望？

Parental conception on parental sacrifice for children's education

What are the educational needs of children that you perceive?

你認為孩子在學習上有什麼需要？

How do you fulfill the needs of education of children? Are there any educational needs that you find you have not fulfilled?

作為父母，你如何滿足孩子在學習上的需要？哪些學習需要你未能滿足？

When facing financial difficulty, how do you fulfill the needs of education of children?

若面對經濟壓力，你怎樣處理孩子在學習上的需要及要求？

In your daily lives, do you need to sacrifice your personal needs in order to fulfill the educational needs of children? If yes, what are the sacrifices?

在日常生活裡，你有否感覺到你為孩子的學習而作出個人犧牲？若有，哪些犧牲是什麼？

Interview guide

Focus Group Interview for adolescents

Participants:

Adolescents at age 11 to 15 (General / with economic disadvantage)

Number of participants: 8 (4 participants were experiencing economic disadvantage)

Purposes:

1. To understand adolescents' conception on parent's expectation of their future.
2. To understand adolescents' conception on parental sacrifice for their education.
3. To understand the experiences of parental sacrifice for children's education as perceived by adolescents.

Interview guide:

1. Introduce the purpose of research to the participants.
2. Introduce the aim, rundown, requirements of the interview as well as their rights to the participants. Ask them if they have any questions. Ensure anonymity and confidentiality of the research. Informed consent was sought from the parents.
3. Gather background information of the respondents (complete the information sheet).
4. Invite participants to introduce themselves as a warm up among the group.

Adolescents' conception on parent's expectations of their future

What are your parents' expectations of your future?

你認為父母對你將來有什麼期望？

Did your parents tell you about their expectations on your future? If yes, how did they tell you? If not, how do you know your parents' expectations?

父母有沒有告訴你他們對你將來的期望？若有，怎樣告知？若沒有，那你怎

樣知道他們對你將來的期望？

How would you fulfill their expectations on your future?

你認為你怎樣做才可以達到他們對你的期望？

What have your parents done in order to fulfill their expectations on your future?

你認為父母怎樣做可以让你達到他們對你的期望？

Adolescents' conception on parental sacrifice for their education

What are your educational needs?

你在學習上有什麼需要？

Do your parents fulfill your educational needs? If yes, how do they fulfill your educational needs? If not, what are the educational needs that have not been fulfilled?

父母能否滿足你在學習上的需要？若可以，他們怎樣滿足你在學習上的需要？若不可以，哪些地方他們未能滿足你在學習上的需要？

When facing financial difficulty, how do your parents fulfill your needs on education?

若面對經濟壓力，父母怎樣處理你在學習上的需要及要求？

In your daily lives, do you feel that your parents sacrifice their personal needs in order to fulfill your educational needs? If yes, what are the sacrifices? If not, how do your parents fulfill your educational needs?

在日常生活裡，你有否感覺到父母為你的學習而作出個人犧牲？若有，哪些犧牲是什麼？若沒有，你的父母怎樣滿足你的學習需要？

Appendix 2: Content Validation Questionnaire for Experts (Chinese version)

「父母對孩子將來的期望」量表 (Parental Expectations of Children's Future Scale)

量表主要就「父母對孩子將來的期望」這個概念作出量度，文獻主要把「父母對孩子將來的期望」設定為「父母對孩子完成學業的期望」為唯一指標 (Davis-Kean, 2005; Hao & Bonstead-Bruns, 1998; Kim et al., 1998; Peng & Wright, 1994; Spera et al. 2009)。而就父母理想中的孩子這個課題，質性研究顯示學業、家庭及品格為父母理想中的孩子之主要範疇 (Shek & Chan, 1999)。然而，由於「父母對孩子將來的期望」這個概念涉及「將來」之考慮，其主題更豐富。就「父母對孩子將來的期望」這個概念之理解，本人於 2010 年 3 月曾進行 2 個分別家長及青少年之聚焦小組訪談(focus group interview)，分別有 7 位家長及 8 位青少年參加。根據文獻資料及聚焦小組資料之分析，「父母對孩子將來的期望」這個概念可分為 5 個主題：

主題 (Domain)	內容 (Themes)
1.1 教育成就 (Education achievement)	1.1.1 完成大學課程 completion of courses in universities
	1.1.2 認真學習 Fulfilling responsibility in studying
	1.1.3 多方面學習 Diverse development
1.2 自力更生 (Self-reliance)	1.2.1 養活自己 Earn adequately to support oneself
1.3 工作 (Occupation)	1.3.1 有好及穩定的收入 Have good and stable income
	1.3.2 正當職業 Decent job
	1.3.3 不粗勞 No hardship
	1.3.4 可提昇社會階層 Climbing up the social ladder
	1.3.5 配合個人興趣 Fit one's interest
	1.3.6 良好工作態度 Good attitudes towards work
	1.3.7 有好我前途 Have good prospect
1.4. 家庭承擔 (Family contributions)	1.4.1 養活一家 Earn adequately for the family
	1.4.2 照顧父母 Take care of parents
	1.4.3 娶個好妻子/嫁個好丈夫 Marry good husband/ wife
1.5.品格 (Conduct)	1.5.1 不會行差踏錯 Avoid breaking law and misconduct
	1.5.2 做一個好人 Be a good person

「父母對孩子將來的期望」量表 (Parental Expectations of Children's Future Scale)

主題		題目	題目內容與概念之符合(relevance)					題目的清晰度(clarity)					題目之代表性(representativeness)					
			I. 你認為題目內容與概念是否相符？						II. 你認為題目是否清晰表達？			III. 你認為題目是否足夠表達其主題？						
			題目內容與概念不符合	若不修改題目內容，則無法與概念符合	題目內容與概念符合，但須作輕微修訂	題目內容與概念符合	題目內容與概念不符合之理據(選擇 1 及 2)	建議修訂(選擇 2 及 3)	十分不清晰	不清晰	清晰	十分清晰	建議修訂(選擇 1 及 2)	十分不足夠	不足夠	足夠	十分足夠	建議增加之題目(選擇 1 及 2)
教育成就	1.	我期望我的子女完成大學課程。	1	2	3	4			1	2	3	4		1	2	3	4	
	2.	我期望子女在學業上有好的表現。	1	2	3	4			1	2	3	4						
	3.	我由子女決定想”讀幾多就讀幾多”，。	1	2	3	4			1	2	3	4						
	4.	我對子女的學業成就有明確的要求。	1	2	3	4			1	2	3	4						
自力更生	5.	我經常提醒子女在將來要自力更生。	1	2	3	4			1	2	3	4		1	2	3	4	
	6.	我期望子女將來不需要領取政府的經濟援助。	1	2	3	4			1	2	3	4						
工作	7.	我希望子女將來能夠出人頭地。	1	2	3	4			1	2	3	4		1	2	3	4	
	8.	子女將來的出路就是找到一份好工。	1	2	3	4			1	2	3	4						
	9.	我希望子女找到一份工作，使他/她脫離我們家庭現處的階層。	1	2	3	4			1	2	3	4						

工作	10.	我期望子女將來的工作有豐厚收入。	1	2	3	4			1	2	3	4					
	11.	我希望子女將來的工作能夠使他/她衣食無憂。	1	2	3	4			1	2	3	4					
	12.	我期望子女將來能創一番事業。	1	2	3	4			1	2	3	4					
	13.	子女想做什麼都可以，我對他/她將來的工作並沒有什麼期望。	1	2	3	4			1	2	3	4					
	14.	我希望子女將來的工作切合他/她的興趣。	1	2	3	4			1	2	3	4					
家庭承擔	15.	我期望子女將來能供養我。	1	2	3	4			1	2	3	4		1	2	3	4
	16.	我期望子女將來能養活一家。	1	2	3	4			1	2	3	4					
	17.	我希望子女將來照顧我。	1	2	3	4			1	2	3	4					
品格	18.	我經常提醒子女將來切勿行差踏錯。	1	2	3	4			1	2	3	4		1	2	3	4
	19.	子女將來腳踏實地比賺錢更為重要。	1	2	3	4			1	2	3	4					
整體	20.	子女在將來想怎樣我也控制不了，我對他/她沒有什麼期望。	1	2	3	4			1	2	3	4		1	2	3	4

整體而言，你認為 5 項主題(教育成就、自力更生、工作、家庭承擔、品格)是否足夠表達「父母對孩子將來之期望」？

☐十分不足夠 ☐不足夠 ☐足夠 ☐十分足夠

若十分不足夠/不足夠，你建議增加什麼？

「父母對孩子教育之犧牲」量表 (Parental Sacrifice for Children's Education Scale)

量表主要就「父母對孩子教育之犧牲」這個概念作出量度，有關「父母對孩子教育之犧牲」的文獻很少，在少量有關文獻(Schlee et al., 2009; Gofen, 2009; Fuligni and Yoshikawa, 2003; Weiling, 2003)當中，「父母對孩子教育之犧牲」概念涉及 3 個重要意思：(1) 父母就孩子的教育需要運用家庭資源(金錢、時間、精神)；(2) 父母面對家庭資源分配遇到的掙扎；(3) 父母把孩子的教育需要高於個人需要。由於「父母對孩子教育之犧牲」這個概念涉及家庭資源的運用，家庭投資模式(Family Investment Model) (Conger and Donnellan, 2007)、家庭資本理論(family capital theory) (Coleman, 1988, 1990) 及家長參與孩子學習 (parental involvement in child's education) (Epstein, 1987, 1992; Grolnick et al., 1997; Kellaghan et al., 1993) 這些概念也有助建構「父母對孩子教育之犧牲」概念。此外，就「父母對孩子教育之犧牲」這個概念之理解，本人於 2010 年 3 月曾進行 2 個分別家長及青少年之聚焦小組訪談(focus group interview)，分別有 7 位家長及 8 位青少年參加。根據聚焦小組之資料之分析及總括文獻之描述，「父母對孩子教育之犧牲」這個概念可分為 5 個主題：

主題 (Domain)	內容 (Themes)
2.1 金錢上的付出 (Strive for financial resources)	2.1.1 勤力賺錢 Work hard for a living
	2.1.2 孩子的教育所需高於個人需要 Priority of provision for education over personal needs
	2.1.3 儲錢作孩子入大學及教育儲備 Strive for savings for children to study in university and other educational expenses
	2.1.4 借錢付孩子教育開支 Borrow money to fulfill educational needs of children
2.2 時間上的付出(Spending of time on educational needs of children)	2.2.1 參與孩子的學校活動 Involvement in school activities
	2.2.2 督導孩子學習 Supervision of children's school work
2.3 家庭生活上的遷就 (Restructuring of family routines)	2.3.1 就孩子的上學及日常生活而改變生活習慣及規律 Change of family habits and routines to adjust for children's schooling and daily needs
	2.3.2 犧牲家庭娛樂 sacrifice of family entertainment
2.4 個人犧牲 (Personal sacrifice)	2.4.1 犧牲職業/夢想 Sacrifice of occupational aspiration
	2.4.2 犧牲個人嗜好 Sacrifice of hobbies
	2.4.3 減少社交活動 Reduced social life
2.5 隱瞞困憂 (Shielding of worries)	2.5.1 隱瞞病患 Shielding of illness
	2.5.2 隱瞞家庭困擾 Shielding of family worries

「父母對孩子教育之犧牲」量表 (Parental Sacrifice for Child's Education Scale)

主題		題目	題目內容與概念之符合(relevance)					題目的清晰度(clarity)					題目之代表性(representativeness)					
			I. 你認為題目內容與概念是否相符？						II. 你認為題目是否清晰表達？					III. 你認為題是否足夠表達其主題？				
			題目內容與概念不符合	若不修改題目內容,則無法與概念符合	題目內容與概念符合,但須作輕微修訂	題目內容與概念符合	題目內容與概念不符合之理據 (選擇 1 及 2)	建議修訂 (選擇 2 及 3)	十分不清晰	不清晰	清晰	十分清晰	建議修訂 (選擇 1 及 2)	十分不足夠	不足夠	足夠	十分足夠	建議增加之題目 (選擇 1 及 2)
金錢上的付出	1.	為了子女的教育，我節衣縮食。	1	2	3	4			1	2	3	4		1	2	3	4	
	2.	即使工作多辛苦，我也要儲錢供子女讀大學。	1	2	3	4			1	2	3	4						
	3.	子女的教育開支比我自己的生活開支重要。	1	2	3	4			1	2	3	4						
	4.	若子女需要補習，即使要緊縮家庭開支我也會盡力去滿足他。	1	2	3	4			1	2	3	4						
	5.	若子女需要參加課外活動，我會盡力去滿足他，即使家庭要更慳儉也在所不計。	1	2	3	4			1	2	3	4						
	6.	我努力儲蓄，為子女的教育作儲備。	1	2	3	4			1	2	3	4						
	7.	若家庭遇到經濟困擾，我也不會停止子女的學習開支。	1	2	3	4			1	2	3	4						

金錢上的付出	8. 若子女需要購買參考書，我會盡力去滿足他/她，即使家庭要更慳儉也在所不計。	1	2	3	4			1	2	3	4					
	9. 若家庭遇到經濟困擾，我也會借錢去滿足子女的學習需要。	1	2	3	4			1	2	3	4					
時間上的付出	10. 在子女考試期間，我會儘量抽時間在家陪伴子女溫習。	1	2	3	4			1	2	3	4		1	2	3	4
	11. 若老師有事找到學校傾談，我就算多忙，也會放下手上的工作到學校見老師。	1	2	3	4			1	2	3	4					
	12. 我必定預留時間參與學校的家長日。	1	2	3	4			1	2	3	4					
	13. 即使很疲倦，我也會儘量了解子女在學校的生活。	1	2	3	4			1	2	3	4					
家庭生活上的遷就	14. 若子女讀書至深夜，我也不會入睡。	1	2	3	4			1	2	3	4		1	2	3	4
	15. 我的起居作息都會根據子女的學習需要而安排。	1	2	3	4			1	2	3	4					
	16. 即使我生病了也會堅持照顧子女的責任。	1	2	3	4			1	2	3	4					
	17. 若遇到子女考試，我會倍加緊張地照顧他/她。	1	2	3	4			1	2	3	4					
	18. 我會就子女的學習需要而改變家庭生活習慣。	1	2	3	4			1	2	3	4					
	19. 為了讓子女有安靜的環境溫習，我放棄家中的娛樂。	1	2	3	4			1	2	3	4					

個人犧牲	20. 為了子女的學業，我放棄我的嗜好。	1	2	3	4			1	2	3	4		1	2	3	4	
	21. 為了子女的學業，我犧牲我的夢想。	1	2	3	4			1	2	3	4						
隱瞞困擾	22. 我會避免子女知道家庭面對的困難，以免他/她在學習上分心。	1	2	3	4			1	2	3	4		1	2	3	4	
	23. 即使我患病我也會隱瞞，免得子女因擔心我而影響學業。	1	2	3	4			1	2	3	4						

整體而言，你認為 5 項主題(金錢上的付出、時間上的付出、家庭生活之遷就、個人犧牲、隱瞞困擾)是否足夠表達「父母對孩子教育之犧牲」？

☐十分不足夠 ☐不足夠 ☐足夠 ☐十分足夠

若十分不足夠/不足夠，你建議增加什麼？

你的職業是：☐社工 ☐輔導人員 ☐心理學家 ☐學者 ☐其他，請列明：_____

你的工作範疇是(可選擇多項)：☐青少年工作 ☐家庭輔導 ☐親子教育 ☐青少年研究 ☐家庭研究 ☐其他，請列明：_____

你從事你的職業年資為：☐少於 5 年 ☐5-10 年 ☐11-15 年 ☐16-20 年 ☐20 年以上

你的教育程度為：☐副學士/文憑/高級文憑 ☐學位 ☐碩士 ☐博士 ☐其他，請列明：_____

姓名：_____ 日期：_____

多謝你抽時間作答以上問題。

Appendix 2: Content Validation Questionnaire for Experts (English version)

Parental Expectations of Children's Future Scale

The Parental Expectations of Children's Future Scale (PECF) is a measurement tool to measure the construct of parental expectations of children's future. However, the literature on parental expectations of children's future used the "completion of schooling of children" as the sole indicator (Davis-Kean, 2005; Hao & Bonstead-Bruns, 1998; Kim et al., 1998; Peng & Wright, 1994; Spera et al. 2009). Besides, the qualitative research conducted by Shek and Chan (1999) suggested that there were academic, family and conduct related attributes as parents' attributes of ideal child. As the concept of "parental expectations of children's future" has a connotation of "future" aspect, the construct could be richer. To understand the concept of "parental expectations of children's future" from the stakeholders, I conducted two focus group interviews of parents and adolescents in March, 2010, with 7 parents and 8 adolescents participated in the focus groups respectively. According to the qualitative data of focus groups and the literature, 5 domains were identified:

Domain	Themes
1.1 Education achievement	1.1.1 Completion of courses in universities
	1.1.2 Fulfilling responsibility in studying
	1.1.3 Diverse development
1.2 Self-reliance	1.2.1 Earn adequately to support oneself
1.3 Occupation	1.3.1 Have good and stable income
	1.3.2 Decent job
	1.3.3 No hardship
	1.3.4 Climbing up the social ladder
	1.3.5 Fit one's interest
	1.3.6 Good attitudes towards work
	1.3.7 Have good prospect
1.4. Family contributions	1.4.1 Earn adequately for the family
	1.4.2 Take care of parents
	1.4.3 Marry good husband/ wife
1.5. Conduct	1.5.1 Avoid breaking law and misconduct
	1.5.2 Be a good person

Parental Expectations of Children's Future Scale

Domain		Item	Relevance of the items with the concept					Clarity of the items					Representativeness of the items				
			I. Do you think that the item is relevant to the construct?						II. Do you think that the item is clear?					III. Do you think that the items are adequate to describe the domain?			
			Irrelevant	Item in need of revision or otherwise it would no longer be relevant	Relevant but needs minor alternations	Relevant	Justifications of items being irrelevant to the construct (Option 1 and 2)	Suggested modifications (Option 2 and 3)	Very unclear	Unclear	Clear	Very clear	Suggested modifications (Option 1 and 2)	Very unrepresentative	unrepresentative	Very representative	Suggested questions to be added (Option 1 and 2)
Educational achievement	1.	I expect my child to complete university.	1	2	3	4			1	2	3	4		1	2	3	4
	2.	I expect my child to have good academic performance.	1	2	3	4			1	2	3	4					
	3.	I let my child decide how long he/she wants to study.	1	2	3	4			1	2	3	4					
	4.	I have clear expectations of my child's academic achievement.	1	2	3	4			1	2	3	4					
Self reliance	5.	I always remind my child to be self-reliant in the future.	1	2	3	4			1	2	3	4		1	2	3	4
	6.	I expect my child to not need financial assistance from the Government.	1	2	3	4			1	2	3	4					
Occupation	7.	I hope that my child can stand out from the crowd in the future.	1	2	3	4			1	2	3	4		1	2	3	4
	8.	The way out for my child's future is to find a good job.	1	2	3	4			1	2	3	4					

Occupation	9.	I hope that my child can find a job so that he/she can rise out of our current situation.	1	2	3	4			1	2	3	4						
	10.	I expect my child to have a good salary in the future.	1	2	3	4			1	2	3	4						
	11.	I hope that my child's future job can keep him/her free from anxiety about daily necessities.	1	2	3	4			1	2	3	4						
	12.	I expect my child to have a good career.	1	2	3	4			1	2	3	4						
	13.	My child can do whatever he/she wants; I have no expectations for his/her career.	1	2	3	4			1	2	3	4						
	14.	I hope that my child's future job will fit his/her interest.	1	2	3	4			1	2	3	4						
Family obligations	15.	I expect my child to rear me in the future.	1	2	3	4			1	2	3	4		1	2	3	4	
	16.	I expect my child to rear his/her whole family.	1	2	3	4			1	2	3	4						
	17.	I expect my child to take care of me in the future.	1	2	3	4			1	2	3	4						
Conduct	18.	I always remind my child not to act indecently in the future.	1	2	3	4			1	2	3	4		1	2	3	4	
	19.	For my child, being down to earth in the future is more important than earning money.	1	2	3	4			1	2	3	4						
Overall comment	20.	As I cannot control the future development of my child, I do not have any expectations of my child's future.	1	2	3	4			1	2	3	4		1	2	3	4	

Overall speaking, do you think that the 5 domains (educational achievement, self-reliance, occupation, family obligation and conduct) adequately describe the construct of “Parental Expectations of Children’s Future”?

☐ Very inadequate ☐ Inadequate ☐ Adequate ☐ Very adequate

If they are very inadequate/ inadequate, what do you suggest to be added?

Parental Sacrifice for Children's Education Scale

The Parental Sacrifice for Children's Education Scale is used to measure parental sacrifice for children's education. However, the literature on parental sacrifice on children's education was rare. From the limited literature (Schlee et al., 2009; Gofen, 2009; Fuligni and Yoshikawa, 2003; Weiling, 2003), the concept of "parental sacrifice for children's education" has three meanings: (1) Education of children requires parents to mobilize different family resources, such as money, time and effort. (2) Due to limited resources with the family, parents face the struggle in resource mobilization and distribution. (3) Parents prioritize the educational needs of children over their own personal needs, and thus there is mobilization of resources for children's education over parental fulfilment of their own needs. As the concept of "parental sacrifice for child's education" is related to the allocation of family resources, the Family Investment Model (Conger & Donnellan, 2007), family capital theory (Coleman, 1988, 1990), and parental involvement in children's education (Epstein, 1987, 1992; Grolnick et al., 1997; Kellaghan et al., 1993) will help us to construct the concept of "parental sacrifice for children's education". Besides, to understand the concept of "parental sacrifice for children's education" from the stakeholders, I conducted two focus group interviews of parents and adolescents in March, 2010, with 7 parents and 8 adolescents participated in the focus groups respectively. According to the qualitative data of focus groups and the literature, 5 domains were identified:

Domain	Themes
2.1 Strive for financial resources	2.1.1 Work hard for a living
	2.1.2 Priority of provision for education over personal needs
	2.1.3 Strive for savings for children to study in university and other educational expenses
	2.1.4 Borrow money to fulfill educational needs of children
2.2. Spending of time on education of children	2.2.1 Involvement in school activities
	2.2.2 Supervision of children's school work
2.3 Restructuring of family routines	2.3.1 Change of family habits and routines to adjust for children's schooling and daily needs
	2.3.2 sacrifice of family entertainment
2.4 Sacrifice of lifestyle and aspiration	2.4.1 Sacrifice of occupational aspiration
	2.4.2 Sacrifice of hobbies
	2.4.3 Reduced social life
2.5 Shielding from worries	2.5.1 Shielding from illness
	2.5.2 Shielding from family worries

Parental Sacrifice for Children's Education Scale

Domain		Item	Relevance of the items with the concept					Clarity of the items				Representativeness of the items						
			I. Do you think that the item is relevant to the construct?						II. Do you think that the item is clear?					III. Do you think that the items are adequate to describe the domain?				
			Irrelevant	Item in need of revision or otherwise it would no longer be relevant	relevant but needs minor alternations	Relevant	Justifications of items being irrelevant to the construct (Option 1 and 2)	Suggested modifications (Option 2 and 3)	Very unclear	Unclear	Clear	Very clear	Suggested modifications (Option 1 and 2)	Very unrepresentative	unrepresentative	representative	Very representative	Suggested questions to be added (Option 1 and 2)
Strive for financial resources	1.	To fulfil the educational needs of my child, I eat and wear less.	1	2	3	4			1	2	3	4		1	2	3	4	
	2.	I save money for my child to study in university, despite the difficulty of the work.	1	2	3	4			1	2	3	4						
	3.	The expenses of my child’s education are more important than my personal expenses.	1	2	3	4			1	2	3	4						
	4.	If my child needs tutoring, I will fulfil his/her needs even if family expenses have to be tightened.	1	2	3	4			1	2	3	4						
	5.	If my child needs to join extra-curricular activities, I will fulfil his/her needs even if family expenses have to be tightened.	1	2	3	4			1	2	3	4						

Strive for financial resources	6.	I save rigorously to reserve funds for my child's education.	1	2	3	4			1	2	3	4						
	7.	Even if the family faces financial stress, I will not cut any educational expenses of my children.	1	2	3	4			1	2	3	4						
	8.	If my child needs to buy reference books, I will fulfil his/her needs even if family expenses have to be tightened.	1	2	3	4			1	2	3	4						
	9.	If the family faces financial stress, I will borrow money to fulfil the educational needs of children.	1	2	3	4			1	2	3	4						
Spending of time on education of children	10.	During the examination period, I will try my best to stay at home with my child.	1	2	3	4			1	2	3	4		1	2	3	4	
	11.	If the teacher calls me to discuss my child's schooling, I will stop work and see the teacher even I am busy.	1	2	3	4			1	2	3	4						
	12.	I always reserve time for participating in the school's parent day.	1	2	3	4			1	2	3	4						
	13.	Even I am tired, I try my best to understand my child's school life.	1	2	3	4			1	2	3	4						
Restructuring of family routines	14.	When my child studies at midnight, I will never sleep.	1	2	3	4			1	2	3	4		1	2	3	4	
	15.	My life routine is structured according to the educational needs of my child.	1	2	3	4			1	2	3	4						
	16.	I keep taking care of my child even when I am sick.	1	2	3	4			1	2	3	4						

Restructuring of daily routines	17.	During the examination period, I am more conscious of taking care of my children.	1	2	3	4			1	2	3	4					
	18.	I will change family habits in order to fit the educational needs of my child.	1	2	3	4			1	2	3	4					
	19.	In order to have a silent environment for my child to study, I give up family entertainment.	1	2	3	4			1	2	3	4					
Sacrifice of lifestyle and aspiration	20.	I give up my hobbies for the education of my child.	1	2	3	4			1	2	3	4		1	2	3	4
	21.	I sacrifice my aspirations for the education of my child.	1	2	3	4			1	2	3	4					
Shielding from worries	22.	I hide family worries in front of my child in order not to disturb his/her studies.	1	2	3	4			1	2	3	4		1	2	3	4
	23.	In order not to affect my child's studies, I hide being sick when it happens.	1	2	3	4			1	2	3	4					

Overall speaking, do you think that the 5 domains (striving of financial resources, time spent on child's education, restructuring of daily routine, personal sacrifice, shielding of worries) adequately describe the construct of "parental sacrifice for child's education"?

☐Very inadequate ☐Inadequate ☐Adequate ☐Very adequate

If they are very inadequate/ inadequate, what do you suggest to be added?

Personal information:

Your occupation is: ☐social worker ☐counselor ☐psychologist ☐academic ☐others, please specify:_____

Your work focus is (can choose more than one option):☐children and youth work ☐family counseling ☐parent education

☐research on children and adolescence ☐family research ☐Others, please specify:_____

Year of work experience: ☐less than 5 years ☐5-10 years ☐11-15years ☐16-20years ☐20years and more

Educational standard: ☐associate degree/ diploma/ higher diploma ☐Bachelor degree ☐Master degree ☐Doctoral degree

☐Others, please specify _____

Name: _____ Date:_____

Thank you very much!

Appendix 3: Parent Questionnaire (Chinese version)

香港理工大學
應用社會科學系

「家長信念與青少年成長」研究

親愛的家長：

本人現正進行一項有關家長信念與青少年成長之研究，這研究希望了解家長信念與青少年成長的關係，有助掌握青少年成長的家庭因素。

是項研究包括家長信念之問卷調查，希望你按著你的看法及感覺，表達你對家長信念及家庭關係的意見，問卷內各題目並沒有對或錯的答案，最重要是能夠得到你的寶貴意見。參加這項研究是完全自願的。問卷收集的資料只供本人研究之用，資料會絕對保密。

這份問卷共分八部份，請細閱每一部份的指示及說明，然後回答每一條題目。在回答過程中，請不要與別人討論有關問題。如有任何疑問，請與負責職員查詢。

如閣下對問卷有任何疑問，請聯絡本人 (5165)。

多謝你參與這項研究。

祝生活愉快！

梁倩儀女士
香港理工大學
應用社會科學系
哲學博士研究生

二零一零年八月三日

香港理工大學
應用社會科學系

「家長信念與青少年成長」研究

參加研究者同意書

我明白這項研究的有關資料。

我明白我及我的子女可隨時退出這項研究，如我及我的子女退出，我及我的子女所提供資料會被銷毀。

我明白我及我的子女所提供的資料會絕對保密。

我明白我的子女有權不作答他/她認為不想回應的問題。

我明白我的子女參與這項研究並不會為我及我的子女帶來負面影響。

我願意參與香港理工大學應用社會科學系「家長信念與青少年成長」研究，並讓我的子女
_____ (姓名) 參與這項研究。

家長簽名: _____

家長姓名: _____

日期: _____

由工作人員填寫	
填寫日期：	
所屬中心：	
編號：	
負責職員	

請你以回答青少年問卷之 12-15 歲子女為目標對象，回答以下題目。

☐父

☐母

第一部份

以下共有 9 句你可能同意或不同意的句子。請小心閱讀每一句，並按你的感覺，在每一句句子後面圈出你認為最能夠代表你的感受的答案。

如果你十分不同意該句子，請圈 1

如果你頗為不同意該句子，請圈 2

如果你少許不同意該句子，請圈 3

如果你少許同意該句子，請圈 4

如果你頗為同意該句子，請圈 5

如果你十分同意該句子，請圈 6

請不要花太多時間在任何一句句子上。請回答所有問題。

題目例子	十分不同意	頗為不同意	少許不同意	少許同意	頗為同意	十分同意
吃得苦中苦，方為人上人。	1	2	3	4	5	6
人窮志短。	1	2	3	4	5	6

第二部份

請小心閱讀下列句子，按着你對子女將來的期望，從以下六個不同程度的等級，圈出一個你認為最能夠代表你的看法和感覺的數字答案。請回答每一條問題。

例子：我要求子女努力學習。

如果你覺得這句子十分不準確地描述你的看法，請圈 1(即十分不同意)

如果你覺得這句子大致上不準確地描述你的看法，請圈 2(即不同意)

如果你覺得這句子有點不準確地描述你的看法，請圈 3(即有點不同意)

如果你覺得這句子有點準確地描述你的看法，請圈 4(即有點同意)

如果你覺得這句子大致上準確地描述你的看法，請圈 5(即同意)

如果你覺得這句子十分準確地描述你的看法，請圈 6(即十分同意)

	題目	選項					
		十分不同意	不同意	有點不同意	有點同意	同意	十分同意
1.	我期望我的子女完成大學課程。	1	2	3	4	5	6
2.	我期望子女在學業上有好的學業成績。	1	2	3	4	5	6
3.	我對子女學業上的表現有明確的要求。	1	2	3	4	5	6
4.	我期望子女學得一技之長。	1	2	3	4	5	6
5.	我經常提醒子女在將來要自力更生。	1	2	3	4	5	6
6.	我期望子女將來不需要領取政府的經濟援助。	1	2	3	4	5	6
7.	我希望子女將來在事業上能夠出人頭地。	1	2	3	4	5	6
8.	子女將來的出路就是找到一份好工。	1	2	3	4	5	6
9.	我希望子女找到一份工作，使他/她脫離我們家庭現處的階層。	1	2	3	4	5	6
10.	我期望子女將來的工作有豐厚的收入。	1	2	3	4	5	6
11.	我希望子女將來的工作能夠使他/她衣食無憂。	1	2	3	4	5	6
12.	我期望子女將來能養活自己的家庭。	1	2	3	4	5	6
13.	我希望子女將來照顧我。	1	2	3	4	5	6
14.	我希望子女將來會成家立室。	1	2	3	4	5	6
15.	我經常提醒子女將來切勿行差踏錯。	1	2	3	4	5	6
16.	我期望子女將來腳踏實地，不要好高騖遠(即有不切實際的期望)。	1	2	3	4	5	6
17.	我經常提醒子女將來要貢獻社會。	1	2	3	4	5	6

第三部份

以下二十四項中描寫你認為子女在校學習成績及相關活動表現的原因。請圈出一個你認為最能夠代表你的看法和感覺的數字答案。

例子：當我的孩子在習作中取得高分數時，這是因為他/她十分努力。

如果你覺得這句子十分不準確地描述你的看法，請圈 1(即十分不同意)
 如果你覺得這句子大致上不準確地描述你的看法，請圈 2(即不同意)
 如果你覺得這句子大致上準確地描述你的看法，請圈 3(即同意)
 如果你覺得這句子十分準確地描述你的看法，請圈 4(即十分同意)

題目例子	十分不同意	不同意	同意	十分同意
假如我的孩子沒有取得學校獎項，這大概因為他/她沒有有用的策略。	1	2	3	4
假如我的孩子取得學校獎項，這大概因為他/她很努力。	1	2	3	4

第四部份

請小心閱讀下列句子，按着你對子女教育的付出，從以下六個不同程度的等級，圈出一個你認為最能夠代表你的看法和感覺的數字答案。請回答每一條問題。

例子：我為子女的學業放棄工作。

如果你覺得這句子十分不準確地描述你對子女教育的付出，請圈 1(即十分不同意)
 如果你覺得這句子大致上不準確地描述你對子女教育的付出，請圈 2(即不同意)
 如果你覺得這句子有點不準確地描述你對子女教育的付出，請圈 3(即有點不同意)
 如果你覺得這句子有點準確地描述你對子女教育的付出，請圈 4(即有點同意)
 如果你覺得這句子大致上準確地描述你對子女教育的付出，請圈 5(即同意)
 如果你覺得這句子十分準確地描述你對子女教育的付出，請圈 6(即十分同意)

	題目	選項					
		十分不同意	不同意	有點不同意	有點同意	同意	十分同意
1.	為了子女的教育，我節衣縮食。	1	2	3	4	5	6
2.	即使工作多辛苦，我也要儲錢供子女讀大學。	1	2	3	4	5	6
3.	子女的教育開支比我自己的生活開支重要。	1	2	3	4	5	6
4.	若子女需要補習，即使要緊縮家庭開支我也會盡力去滿足他。	1	2	3	4	5	6
5.	若子女需要參加課外活動，我會盡力去滿足他，即使家庭要更慳儉也在所不計。	1	2	3	4	5	6
6.	我努力儲蓄，為子女的教育作儲備。	1	2	3	4	5	6

		選項					
		十分不同意	不同意	有點不同意	有點同意	同意	十分同意
7.	若家庭遇到經濟困擾，我也不會停止子女的學習開支。	1	2	3	4	5	6
8.	若子女需要購買參考書，我會盡力去滿足他/她，即使家庭要更慳儉也在所不計。	1	2	3	4	5	6
9.	若家庭遇到經濟困擾，我也會借錢去滿足子女的學習需要。	1	2	3	4	5	6
10.	在子女考試期間，我會儘量抽時間在家陪伴子女溫習。	1	2	3	4	5	6
11.	若老師有事找到學校傾談，我就算多忙，也會放下手上的工作到學校見老師。	1	2	3	4	5	6
12.	我必定預留時間參與學校的家長日。	1	2	3	4	5	6
13.	即使很疲倦，我也會儘量了解子女在學校的生活。	1	2	3	4	5	6
14.	若子女讀書至深夜，我也不會入睡。	1	2	3	4	5	6
15.	我會跟據子女的學習需要，調節我的起居作息。	1	2	3	4	5	6
16.	若遇到子女考試，我會倍加緊張地看顧他/她。	1	2	3	4	5	6
17.	我會就子女的學習需要而改變家庭生活習慣。	1	2	3	4	5	6
18.	為了讓子女有安靜的環境溫習，我放棄家中的娛樂。	1	2	3	4	5	6
19.	為了子女的學業，我放棄我的嗜好。	1	2	3	4	5	6
20.	為了子女的學業，我犧牲我的夢想。	1	2	3	4	5	6
21.	為了子女的學業，我放棄我的社交生活。	1	2	3	4	5	6
22.	我會避免子女知道家庭面對的困難，以免他/她在學習上分心。	1	2	3	4	5	6
23.	即使我患病我也會隱瞞，免得子女因擔心我而影響學業。	1	2	3	4	5	6

第五部份

在以下的題目中，我們希望知道你對於管教子女的看法。請你細心閱讀每條題目，想想自己的情況，然後選擇一個你認為適合的答案，並在方格「□」內打上「✓」號。

你認為以下的句子是否適合用來形容你呢？

題目例子

適合

不適合

如果子女遇到困難，他/她可以依賴我幫他/她解決問題。

☐
☐

無論子女做什麼，我都鼓勵他/她要做到最好。

☐
☐

第六部份

在以下的題目中，請按着現時你管教你的子女的情況，從以下四個不同程度的等級(從一個極端“1”到另一個極端“4”)，圈出一個你認為最能夠代表你的感覺的數字答案。請回答每一條問題。

例子：我要求子女吃飯前要洗手。

如果你覺得這句子十分不準確地描述你對子女的管教情況，請圈①(即十分不同意)

如果你覺得這句子大致上不準確地描述你對子女的管教情況，請圈②(即不同意)

如果你覺得這句子大致上準確地描述你對子女的管教情況，請圈③(即同意)

如果你覺得這句子十分準確地描述你對子女的管教情況，請圈 ④(即十分同意)

題目例子	十分不同意	不同意	同意	十分同意
我要求子女要「生性」。	1	2	3	4
我要求子女要有好行為，以免別人批評我「無家教」。	1	2	3	4

第七部份

在以下的題目中，請按著你對你現時家庭的看法，選出一個你認為最能夠代表你的感覺的答案。

例子：我的家人是自私自利的。

如果你覺得這句子是與你的家庭情況十分不相似，請圈 1

如果你覺得這句子是與你的家庭情況有點不相似，請圈 2

如果你覺得這句子是與你的家庭情況介乎有點相似與有點不相似之間，請圈 3

如果你覺得這句子是與你的家庭情況有點相似，請圈 4

如果你覺得這句子是與你的家庭情況十分相似，請圈 5

題目例子	十分不相似	有點不相似	介乎有點相似與有點不相似之間	有點相似	十分相似
家庭成員互相支持。	1	2	3	4	5
家庭成員彼此照顧。	1	2	3	4	5

第八部份

請細閱每題，選出在一個適當答案，並在該答案前的空格加上✓號。

1. 性別：☐男 ☐女
年齡：_____
2. 你的教育程度是：☐沒有受過教育 ☐小學 ☐初中（中一至三）
☐高中（中四五）、預科☐文憑、大專 ☐大學或以上
3. 你的工作是：☐非技術工人 ☐技術工人 ☐文員 ☐管理階級、專業 ☐待業
☐退休 ☐處理家務 ☐全職進修 ☐其他：_____
4. 你在香港居住多久？
☐香港出世 ☐5 年以下 ☐6-10 年 ☐11-15 年 ☐16-20 年 ☐20 年以上
5. 居住單位的類型是：
☐公共屋邨 ☐居者有其屋 ☐自置私人物業 ☐租住私人樓宇(整個單位)
☐租住私人樓宇(房間或分租) ☐臨時房屋或木屋 ☐其他：_____
6. 你現時的婚姻狀況是怎樣？
☐已婚(第一段婚姻關係) ☐已婚(再婚，即第二段或以上婚姻關係)
☐已離婚，但沒有再婚 ☐已分居，但沒有再婚 ☐配偶已去世
☐其他：_____
7. 你家庭每月家庭總收入為：
☐\$5,000 或以下 ☐\$5,001-\$10,000 ☐\$10,001-\$20,000 ☐\$20,001-\$30,000
☐\$30,001 以上
8. 你的家庭現時是否有領取政府之綜合社會保障援助金(即綜援)？
☐沒有 ☐有
9. 你的子女現時是否有領取學校書簿津貼津貼？
☐沒有 ☐有，並獲全額津貼 ☐有，並獲半額津貼
10. 你共有多少名子女：☐1 名 ☐2 名 ☐3 名 ☐4 名 ☐5 名 ☐5 名以上
11. 作為你目標對象的子女資料：
性別：☐男 ☐女
年齡：_____

就讀年級：☐小五或以下 ☐小六 ☐中一 ☐中二 ☐中三
☐中四 ☐中五或以上 ☐其他：_____

居港年期：☐香港出世 ☐1-3 年 ☐4-6 年 ☐7-9 年 ☐10 年以上

全卷完，多謝合作！

Appendix 3: Parent Questionnaire (English version)

**The Hong Kong Polytechnic University
Department of Applied Social Sciences**

Research on parental beliefs and adolescent development

Dear parent,

I am doing a research on parental beliefs and adolescent development. The research aimed at exploring the relationships between parental beliefs and adolescent development, so as to understand the protective familial factors on enhancing positive development of adolescents.

The research design is based on questionnaire. It is hoped that you can express your views on parental beliefs and family processes according to your feelings and thoughts. There is no right or wrong answer, it is of the most importance that you can share your valuable views. It is absolutely voluntary to participate in the study. The data of the questionnaire would only be used in research purpose. All information is strictly confidential.

The questionnaire covers eight parts. Please read the guideline of each part, and then answer each question. It is expected that you would not discuss with others when answering the questions. If you have any queries, please feel free to contact the responsible staff.

Should you have any enquiries, please feel free to contact me at 5165 .

Thank you very much for participating in the research.

Yours faithfully,

(Leung Tsin Yee Janet)
PhD Candidate
Department of Applied Social Sciences
Hong Kong Polytechnic University

**The Hong Kong Polytechnic University
Department of Applied Social Sciences**

Research on parental beliefs and adolescent development

Agreement of research participant

I understand the information related to the research.

I understand that I and my child could withdraw from the research when we wish. If I and my child withdraw from the research, all information that we provide would be destroyed.

I understand that all information of me and my child is strictly confidential.

I understand that I and my child have the right not to answer any questions if we do not wish to answer.

I understand that the research would not bring any adverse effects to me and my child.

I agree to participate in the research on parental beliefs and adolescent development of Department of Applied Social Sciences, The Hong Kong Polytechnic University. I also agree my child _____(Name) to participate in the research.

Signature of parent: _____

Name of parent: _____

Date: _____

Official use	
Date:	
Unit:	
No.:	
Staff name:	

Please answer the questions with reference of one of your children aged between 12 and 15.

☐ Father

☐ Mother

Part 1: (Chinese Cultural Beliefs about Adversity Scale (CBA))

There are nine statements that you may agree and disagree. Please read the following statements carefully and choose one option that is the most representative of your feelings and thoughts. Please circle the number that is the most representative of your answer.

If you strongly disagree with the statement, please circle 1.

If you disagree with the statement, please circle 2.

If you slightly disagree with the statement, please circle 3.

If you slightly agree with the statement, please circle 4.

If you agree with the statement, please circle 5.

If you strongly agree with the statement, please circle 6.

Please do not spend too much time in each statement. Please answer all questions.

Example items	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly Agree
'Chi de ku zhong ku, fang wei ren shang ren' (hardship increases stature)	1	2	3	4	5	6
'Ren qiong zhi duan' (poverty stifles ambition)	1	2	3	4	5	6

Part 2: (Revised Parental Expectations of Children's Future Scale (Revised PECF))

The following statements list the parent's expectation on child's future. Please read the following statements carefully and choose one option that is the most representative of your feelings and views. Please circle the number that represents your answer. Please answer all questions.

Example: I expect my child to study diligently.

If you find that the statement strongly inaccurately describe your thought, please circle 1 (i.e. strongly disagree).

If you find that the statement inaccurately describe your thought, please circle 2 (i.e. disagree).

If you find that the statement slightly inaccurately describe your thought, please circle 3 (i.e. slightly disagree).

If you find that the statement slightly accurately describe your thought, please circle 4 (i.e. slightly agree).

If you find that the statement accurately describe your thought, please circle 5 (i.e. agree).

If you find that the statement strongly accurately describe your thought, please circle 6 (i.e. strongly agree).

		Option					
		Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly Agree
1.	I expect my child to complete university.	1	2	3	4	5	6
2.	I expect my child to have good academic results.	1	2	3	4	5	6
3.	I have clear expectations of my child's academic performance.	1	2	3	4	5	6
4.	I expect my child to learn a specific skill.	1	2	3	4	5	6
5.	I always remind my child to be self-reliant in the future.	1	2	3	4	5	6
6.	I expect my child to not need financial assistance from the Government.	1	2	3	4	5	6
7.	I hope that my child can stand out from the crowd in his/her career.	1	2	3	4	5	6
8.	The way out for my child's future is to find a good job.	1	2	3	4	5	6
9.	I hope that my child can find a job so that he/she rise out of our current situation.	1	2	3	4	5	6
10.	I expect my child to have a good salary in the future.	1	2	3	4	5	6
11.	I hope that my child's future job can keep him/her free from anxiety about daily necessities.	1	2	3	4	5	6
12.	I expect my child to rear his/her future family.	1	2	3	4	5	6
13.	I expect my child to take care of me in the future.	1	2	3	4	5	6
14.	I hope that my child can create a new family.	1	2	3	4	5	6
15.	I always remind my child not to act indecently in the future.	1	2	3	4	5	6
16.	I hope that my child will be down to earth, without unrealistic expectations.	1	2	3	4	5	6
17.	I always remind my child to contribute to the society in the future.	1	2	3	4	5	6

Part 3: Parental Attributions Questionnaire (PAQ)

The following 24 statements describe the parental attributions on children's academic achievement and performance of related activities. Please circle the option that represents your thought and feelings.

Example: When my child gets high marks from his/ her homework, I think it is because he/ she is diligent.

If you find that the statement strongly inaccurately describe your thought, please circle 1 (i.e. strongly disagree).

If you find that the statement inaccurately describe your thought, please circle 2 (i.e. disagree).

If you find that the statement accurately describe your thought, please circle 3 (i.e. agree).

If you find that the statement strongly accurately describe your view, please circle 4 (i.e. strongly agree).

Example items	Strongly disagree	Disagree	Agree	Strongly Agree
If my child does not get a school award, it is likely because he/she has no useful methods.	1	2	3	4
If my child gets a school award, it is likely because of his/her hard work.	1	2	3	4

Part 4: Parental Sacrifice for Children's Education (SA)

The following statements list the parent's contribution for the education of your child. Please read the following statements carefully and choose one option that is the most representative of your feelings and views. Please circle the number that represents your answer. Please answer all questions.

Example: I give up my job for the sake of my children's education.

If you find that the statement strongly inaccurately describe your thought, please circle 1 (i.e. strongly disagree).

If you find that the statement inaccurately describe your thought, please circle 2 (i.e. disagree).

If you find that the statement slightly inaccurately describe your thought, please circle 3 (i.e. slightly disagree).

If you find that the statement slightly accurately describe your thought, please circle 4 (i.e. slightly agree).

If you find that the statement accurately describe your thought, please circle 5 (i.e. agree).

If you find that the statement strongly accurately describe your thought, please circle 6 (i.e. strongly agree).

		Options					
		Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly Agree
1	To fulfill the educational needs of my child, I eat and wear less.	1	2	3	4	5	6
2	I save money for my child to study in university, despite how hard the work I face.	1	2	3	4	5	6
3	The expense of child's education is more important than my personal expenses.	1	2	3	4	5	6
4	If my child needs tutoring, I would fulfill his/her needs even if family expenses have to be tightened.	1	2	3	4	5	6
5	If my child needs to join extra-curricular activities, I would fulfill his/ her needs even if family expenses have to be tightened.	1	2	3	4	5	6

Part 4: Parental Sacrifice for Children's Education (SA) (Cont.)

		Options					
		Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly Agree
6	I save rigorously as to reserve funds for child's education.	1	2	3	4	5	6
7	Even if the family faces financial stress, I will not stop any educational expenses of children.	1	2	3	4	5	6
8	If my child needs to buy reference books, I would fulfill his/ her needs even if family expenses have to be tightened.	1	2	3	4	5	6
9	In case the family faces financial stress, I will borrow money to fulfill the educational needs of children.	1	2	3	4	5	6
10	During the examination period, I will try my best to stay at home and accompany with my child.	1	2	3	4	5	6
11	If the teacher calls me to discuss about my child, I will stop my work and see the teacher even I am busy at the time.	1	2	3	4	5	6
12	I always reserve the time for participating in the parent day of school.	1	2	3	4	5	6
13	Even I am tired, I try my best to understand the school life of my child.	1	2	3	4	5	6
14	When my child studies at mid-night, I will never sleep.	1	2	3	4	5	6
15	My life routine is adjusted according to the educational needs of my child.	1	2	3	4	5	6
16	During the examination period, I am more conscious in taking care of my children.	1	2	3	4	5	6
17	I will change the family habits in order to fit the educational needs of my child.	1	2	3	4	5	6
18	In order to have a silent environment for the study of my child, I give up family entertainment.	1	2	3	4	5	6
19	I give up my hobbies for the education of my child.	1	2	3	4	5	6
20	I sacrifice my aspiration for the education of my child.	1	2	3	4	5	6
21	I give up my social life for the education of my child	1	2	3	4	5	6
22	I will hide the family worries in front of my child in order not to disturb his/her studying.	1	2	3	4	5	6
23	In order not to affect the study of my child, I will hide my sickness when it happens.	1	2	3	4	5	6

Part 5: Parenting Style Scale (PPS)

In the following questions, we would like to know your views on parenting. Please read each question carefully and think of your situation, then choose the option that represents your answer. Please put a "✓" on the appropriate box.

Do you think the following statements are appropriate to describe you?

Example Items	Usually true	Usually false
My child can count on me to help him/her out, if he/she has some kind of problem.	<input type="checkbox"/>	<input type="checkbox"/>
I keep pushing my child to do his/her best in whatever he/she does.	<input type="checkbox"/>	<input type="checkbox"/>

Part 6: Chinese Parental Control Scale (PCS)

In the following statements, please circle the option that represents your thought and feelings according to how you parent your child in the present situation. Please answer every question.

Example: I expect my child wash his /her hands before eating.

If you find that the statement strongly inaccurately describe your thought, please circle 1 (i.e. strongly disagree).

If you find that the statement inaccurately describe your thought, please circle 2 (i.e. disagree).

If you find that the statement accurately describe your thought, please circle 3 (i.e. agree).

If you find that the statement strongly accurately describe your view, please circle 4 (i.e. strongly agree).

	Strongly disagree	Disagree	Agree	Strongly Agree
I expect my child to be mature (<i>sheng xing</i>).	1	2	3	4
I expect my child to have good behaviour so that he/ she will not be criticized by others as having no family teaching (<i>wu jiao jiao</i>).	1	2	3	4

Part 7: The Chinese Family Assessment Inventory (C-FAI)

In the following statements, please circle the option that represents your thought and feelings on your family in the present situation.

Example: My family member is selfish.

If you find that the statement is not very similar to your family situation, please circle 1 (i.e. not very similar).

If you find that the statement is not similar to your family situation, please circle 2 (i.e. not similar).

If you find that the statement is in between similar and not similar to your family situation, please circle 3 (i.e. between similar and not similar).

If you find that the statement is similar to your family situation, please circle 4 (i.e. similar).

If you find that the statement is very similar to your family situation, please circle 5 (i.e. very similar).

	Not very similar	Not similar	Between similar and not similar	Similar	Very similar
Family members support each other	1	2	3	4	5
Family members care each other	1	2	3	4	5

Part 8: Demographic information

Please read every question. Choose one option that is the most representative of your information, and put a "✓" on the appropriate box.

1. Sex: ☐ Male ☐ Female
Age: _____
2. Educational standard:
☐ no formal education ☐ primary school ☐ junior secondary (Form 1 to Form 3)
☐ senior secondary (Form 4 to Form 7) ☐ Post secondary (certificate, diploma)
☐ University graduate and above
3. What is your occupation?
☐ non-skilled worker ☐ skilled worker ☐ clerk ☐ manager or professional
☐ unemployed ☐ retired ☐ homemaker ☐ student ☐ others: _____
4. How long have you stayed in Hong Kong?
☐ Born in Hong Kong ☐ 5 years and less ☐ 6 to 10 years ☐ 11 to 15 years
☐ 16 to 20 years ☐ 20 years and above
5. The type of your accommodation is:
☐ public houses ☐ Home Ownership Scheme ☐ self-owned houses
☐ rented private houses (entire flat) ☐ rented private houses (room and apartment)
☐ Temporary houses or squatters ☐ others: _____
6. What is your marital status?
☐ Married (the first marriage) ☐ Married (the second or more marriage)
☐ divorced, but not remarried ☐ separated, but not remarried
☐ widowed ☐ others: _____
7. Your monthly household income is:
☐ \$5,000 or less ☐ \$5,001-\$10,000 ☐ \$10,001-\$20,000 ☐ \$20,001-\$30,000
☐ \$30,001 or more
8. Does your family receive Comprehensive Social Security Assistance (CSSA) at present?
☐ No ☐ Yes
9. Do your children receive Textbook Allowance (TBA)?
☐ No ☐ Yes, Full Textbook Allowance ☐ Yes, Half Textbook Allowance
10. No. of children: ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 5 or above
11. Demographic information of your targeted child:
 Sex: ☐ Male ☐ Female
 Age: _____
 Educational level:
☐ Junior 5 or below ☐ Junior 6 ☐ Form 1 ☐ Form 2 ☐ Form 3
☐ Form 4 and above ☐ Others: _____
 Duration of stay in Hong Kong:
☐ Born in Hong Kong ☐ 1-3 years ☐ 4-6 years ☐ 7-9 years ☐ 10 years and above

-End of questionnaire-

Thank you very much

Appendix 4: Adolescent Questionnaire (Chinese version)

香港理工大學
應用社會科學系

「家長信念與青少年成長」研究

親愛的青少年：

本人現正進行一項有關家長信念與青少年成長之研究，這研究希望了解家長信念與青少年成長的關係，有助掌握青少年成長的家庭因素。

是項研究包括家長信念及青少年發展之問卷調查，希望你按著你的看法及感覺，表達你對家長信念、家庭關係及青少年發展的意見，問卷內各題目並沒有對或錯的答案，最重要是能夠得到你的寶貴意見。參加這項研究是完全自願的。問卷收集的資料只供本人研究之用，資料會絕對保密。

這份問卷共分十一部份，請細閱每一部份的指示及說明，然後回答每一條題目。在回答過程中，請不要與別人討論有關問題。如有任何疑問，請與負責職員查詢。

多謝你參與這項研究。

祝生活愉快！

梁倩儀女士
香港理工大學
應用社會科學系
哲學博士研究生

二零一零年八月三日

香港理工大學
應用社會科學系

「家長信念與青少年成長」研究

參加研究者同意書

我明白這項研究的有關資料。

我明白我可隨時退出這項研究，如我退出，我所提供資料會被銷毀。

我明白所提供的資料會絕對保密。

我明白我有權不作答自己認為不想回應的問題。

我明白我參與這項研究並不會為我帶來負面影響。

我願參加香港理工大學應用社會科學系「家長信念與青少年成長」研究。

簽名: _____

姓名: _____

日期: _____

由工作人員填寫	
填寫日期：	
所屬單位：	
編號：	
負責職員：	

第一部份

請小心閱讀下列句子，按着爸爸(或繼父或男性監護人)對你教育的付出，從以下六個不同程度的等級，圈出一個你認為最能夠代表你的看法和感覺的數字答案。請回答每一條問題。

例子：爸爸為子女的學業放棄工作。

如果你覺得這句子十分不準確地描述爸爸對你教育的付出，請圈 1(即十分不同意)

如果你覺得這句子大致上不準確地描述爸爸對你教育的付出，請圈 2(即不同意)

如果你覺得這句子有點不準確地描述爸爸對你教育的付出，請圈 3(即有點不同意)

如果你覺得這句子有點準確地描述爸爸對你教育的付出，請圈 4(即有點同意)

如果你覺得這句子大致上準確地描述爸爸對你教育的付出，請圈 5(即同意)

如果你覺得這句子十分準確地描述爸爸對你教育的付出，請圈 6(即十分同意)

	題目	選項					
		十分不同意	不同意	有點不同意	有點同意	同意	十分同意
1.	為了子女的教育，爸爸節衣縮食。	1	2	3	4	5	6
2.	即使工作多辛苦，爸爸也要儲錢供我讀大學。	1	2	3	4	5	6
3.	我的教育開支比爸爸自己的生活開支重要。	1	2	3	4	5	6
4.	若我需要補習，即使要緊縮家庭開支爸爸也會盡力去滿足我。	1	2	3	4	5	6
5.	若我需要參加課外活動，爸爸會盡力去滿足我，即使家庭要更慳儉也在所不計。	1	2	3	4	5	6
6.	爸爸努力儲蓄，為我的教育作儲備。	1	2	3	4	5	6
7.	若家庭遇到經濟困擾，爸爸也不會停止我的學習開支。	1	2	3	4	5	6
8.	若我需要購買參考書，爸爸會盡力去滿足我，即使家庭要更慳儉也在所不計。	1	2	3	4	5	6
9.	若家庭遇到經濟困擾，爸爸也會借錢去滿足我的學習需要。	1	2	3	4	5	6
10.	在子女考試期間，爸爸會盡量抽時間在家陪伴我溫習。	1	2	3	4	5	6
11.	若老師有事找爸爸到學校傾談，爸爸就算多忙，也會放下手上的工作到學校見老師。	1	2	3	4	5	6
12.	爸爸必定預留時間參與學校的家長日。	1	2	3	4	5	6
13.	即使很疲倦，爸爸也會盡量了解我在學校的生活。	1	2	3	4	5	6
14.	若我讀書至深夜，爸爸也不會入睡。	1	2	3	4	5	6
15.	爸爸會跟據我的學習需要，調節他的起居作息。	1	2	3	4	5	6

第一部份(續)

		選項					
		十分不同意	不同意	有點不同意	有點同意	同意	十分同意
16.	若遇到考試，爸爸會倍加緊張地看顧我。	1	2	3	4	5	6
17.	爸爸會就我的學習需要而改變家庭生活習慣。	1	2	3	4	5	6
18.	為了讓我有安靜的環境溫習，爸爸放棄家中的娛樂。	1	2	3	4	5	6
19.	為了我的學業，爸爸放棄他的嗜好。	1	2	3	4	5	6
20.	為了我的學業，爸爸犧牲他的夢想。	1	2	3	4	5	6
21.	為了我的學業，爸爸放棄他的社交生活。	1	2	3	4	5	6
22.	爸爸會避免我知道家庭面對的困難，以免我在學習上分心。	1	2	3	4	5	6
23.	即使爸爸患病他也會隱瞞，免得我因擔心他而影響學業。	1	2	3	4	5	6

第二部份

在以下的題目中，我們希望知道你對於你的爸爸(或繼父或男性監護人)的看法。請你細心閱讀每條題目，想想自己的情況，然後選擇一個你認為適合的答案，並在方格「□」內打上「✓」號。

你認為以下的句子是否適合用來形容你的爸爸呢？

題目例子	適合	不適合
如果我遇到困難，我可以依賴他幫我解決問題。	<input type="checkbox"/>	<input type="checkbox"/>
無論我做什麼，他都鼓勵我要做到最好。	<input type="checkbox"/>	<input type="checkbox"/>

第三部份

在以下的題目中，請按着你對爸爸(或繼父或男性監護人)和自己的看法，從以下四個不同程度的等級(從一個極端“1”到另一個極端“4”)，圈出一個你認為最能夠代表你的感覺的數字答案。請回答每一條問題。

例子：爸爸與我的關係很好。

如果你覺得這句子十分不準確地描述你與爸爸的關係，請圈①(即十分不同意)

如果你覺得這句子大致上不準確地描述你與爸爸的關係，請圈②(即不同意)

如果你覺得這句子大致上準確地描述你與爸爸的關係，請圈③(即同意)

如果你覺得這句子十分準確地描述你與爸爸的關係，請圈④(即十分同意)

題目例子	十分不同意	不同意	同意	十分同意
爸爸要求我要「生性」。	1	2	3	4
爸爸要求我要有好行為，以免別人批評他「無家教」。	1	2	3	4

第四部份

請小心閱讀下列句子，按着媽媽(或繼母或女性監護人)對你教育的付出，從以下六個不同程度的等級，圈出一個你認為最能夠代表你的看法和感覺的數字答案。請回答每一條問題。

例子：媽媽為子女的學業放棄工作。

如果你覺得這句子十分不準確地描述媽媽對你教育的付出，請圈 1 (即十分不同意)

如果你覺得這句子大致上不準確地描述媽媽對你教育的付出，請圈 2 (即不同意)

如果你覺得這句子有點不準確地描述媽媽對你教育的付出，請圈 3 (即有點不同意)

如果你覺得這句子有點準確地描述媽媽對你教育的付出，請圈 4 (即有點同意)

如果你覺得這句子大致上準確地描述媽媽對你教育的付出，請圈 5 (即同意)

如果你覺得這句子十分準確地描述媽媽對你教育的付出，請圈 6 (即十分同意)

		選項					
		十分不同意	不同意	有點不同意	有點同意	同意	十分同意
1.	為了子女的教育，媽媽節衣縮食。	1	2	3	4	5	6
2.	即使工作多辛苦，媽媽也要儲錢供我讀大學。	1	2	3	4	5	6
3.	我的教育開支比媽媽自己的生活開支重要。	1	2	3	4	5	6
4.	若我需要補習，即使要緊縮家庭開支媽媽也會盡力去滿足我。	1	2	3	4	5	6
5.	若我需要參加課外活動，媽媽會盡力去滿足我，即使家庭要更慳儉也在所不計。	1	2	3	4	5	6
6.	媽媽努力儲蓄，為我的教育作儲備。	1	2	3	4	5	6

第四部份(續)

		選項					
		十分 不同 同意	不同 意	有點 不同 意	有點 同意	同意	十分 同意
7.	若家庭遇到經濟困擾，媽媽也不會停止我的學習開支。	1	2	3	4	5	6
8.	若我需要購買參考書，媽媽會盡力去滿足我，即使家庭要更慳儉也在所不計。	1	2	3	4	5	6
9.	若家庭遇到經濟困擾，媽媽也會借錢去滿足我的學習需要。	1	2	3	4	5	6
10.	在子女考試期間，媽媽會儘量抽時間在家陪伴我溫習。	1	2	3	4	5	6
11.	若老師有事找媽媽到學校傾談，媽媽就算多忙，也會放下手上的工作到學校見老師。	1	2	3	4	5	6
12.	媽媽必定預留時間參與學校的家長日。	1	2	3	4	5	6
13.	即使很疲倦，媽媽也會儘量了解我在學校的生活。	1	2	3	4	5	6
14.	若我讀書至深夜，媽媽也不會入睡。	1	2	3	4	5	6
15.	媽媽會跟據我的學習需要，調節他的起居作息。	1	2	3	4	5	6
16.	若遇到考試，媽媽會倍加緊張地看顧我。	1	2	3	4	5	6
17.	媽媽會就我的學習需要而改變家庭生活習慣。	1	2	3	4	5	6
18.	為了讓我有安靜的環境溫習，媽媽放棄家中的娛樂。	1	2	3	4	5	6
19.	為了我的學業，媽媽放棄他的嗜好。	1	2	3	4	5	6
20.	為了我的學業，媽媽犧牲他的夢想。	1	2	3	4	5	6
21.	為了我的學業，媽媽放棄他的社交生活。	1	2	3	4	5	6
22.	媽媽會避免我知道家庭面對的困難，以免我在學習上分心。	1	2	3	4	5	6
23.	即使媽媽患病他也會隱瞞，免得我因擔心他而影響學業。	1	2	3	4	5	6

第五部份

在以下的題目中，我們希望知道你對於你的媽媽(或繼母或女性監護人)的看法。請你細心閱讀每條題目，想想自己的情況，然後選擇一個你認為適合的答案，並在方格「□」內打上「✓」號。

你認為以下的句子是否適合用來形容你的媽媽呢？

題目例子

適合

不適合

1. 如果我遇到困難，我可以依賴他幫我解決問題。

□

□

2. 無論我做什麼，他都鼓勵我要做到最好。

□

□

第六部份

在以下的題目中，請按着你對媽媽(或繼母或女性監護人)和自己的看法，從以下四個不同程度的等級(從一個極端“1”到另一個極端“4”)，圈出一個你認為最能夠代表你的感覺的數字答案。請回答每一條問題。

例子：媽媽與我的關係很好。

如果你覺得這句子十分不準確地描述你與媽媽的關係，請圈①(即十分不同意)

如果你覺得這句子大致上不準確地描述你與媽媽的關係，請圈②(即不同意)

如果你覺得這句子大致上準確地描述你與媽媽的關係，請圈③(即同意)

如果你覺得這句子十分準確地描述你與媽媽的關係，請圈④(即十分同意)

題目例子	十分不同意	不同意	同意	十分同意
媽媽要求我要「生性」。	1	2	3	4
媽媽要求我要有好行為，以免別人批評她「無家教」。	1	2	3	4

第七部份

在以下的題目中，請按著你對你現時家庭的看法，選出一個你認為最能夠代表你的感覺的答案。

例子：我的家人是自私自利的。

如果你覺得這句子是與你的家庭情況十分不相似，請圈 1

如果你覺得這句子是與你的家庭情況有點不相似，請圈 2

如果你覺得這句子是與你的家庭情況介乎有點相似與有點不相似之間，請圈 3

如果你覺得這句子是與你的家庭情況有點相似，請圈 4

如果你覺得這句子是與你的家庭情況十分相似，請圈 5

題目例子	十分不相似	有點不相似	介乎有點相似與有點不相似之間	有點相似	十分相似
家庭成員互相支持。	1	2	3	4	5
家庭成員彼此照顧。	1	2	3	4	5

第八部份

在以下的題目中，都與你的生活有關。請按著你對你現時你的看法或做法，選出一個你認為最能夠代表你的感覺的答案。

例子：我認為勝敗無關緊要。

如果你覺得這句子是與你的看法或做法**十分不符合**，請圈 1(十分不符合)。

如果你覺得這句子是與你的看法或做法**大致上不符合**，請圈 2 (不符合)。

如果你覺得這句子是與你的看法或做法**有點不符合**，請圈 3 (有點不符合)。

如果你覺得這句子是與你的看法或做法**有點符合**，請圈 4 (有點符合)。

如果你覺得這句子是與你的看法或做法**大致上符合**，請圈 5 (符合)。

如果你覺得這句子是與你的看法或做法**十分符合**，請圈 6 (十分符合)。

	選項					
	十分不符合	不符合	有點不符合	有點符合	符合	十分符合
為了不讓父母失望，我總是照著父母的期望努力去做。	1	2	3	4	5	6
我之所以努力唸書，是因為只有把書唸好，才會有好的前途。	1	2	3	4	5	6

第九部份

請小心閱讀下列句子，選出你認為最能代表你感受和想法的答案，並圈出適當的數字。請留意這些數字是從一個極端(例如“1”)到另一個相反的極端(例如“7”)，而它們是代表著不同程度的感受。“4”是代表沒有意見(或不能作出任何判斷)，請盡量避免選擇這個答案。

我通常是						
1	2	3	4	5	6	7
十分煩厭生活			(無意見)			熱愛生活 活力充沛

10. 你家庭每月家庭總收入為：
☐\$5,000 或以下 ☐\$5,001-\$10,000 ☐\$10,001-\$20,000 ☐10,001-\$30,000 ☐\$30,001 以上
11. 你的家庭現時是否有領取政府之綜合社會保障援助金(即綜援)? ☐沒有 ☐有
12. 你現時是否有領取學校書簿津貼津貼?
☐沒有 ☐有，並獲全額津貼 ☐有，並獲半額津貼
13. 你覺得你的讀書成績：☐很差 ☐差 ☐普通 ☐良好 ☐優異
14. 你覺得你在學校的操行：☐很差 ☐差 ☐普通 ☐良好 ☐優異

全卷完，多謝合作！

Appendix 4: Adolescent Questionnaire (English version)

**The Hong Kong Polytechnic University
Department of Applied Social Sciences**

Research on parental beliefs and adolescent development

Dear adolescent,

I am doing a research on parental beliefs and adolescent development. The research aimed at exploring the relationships between parental beliefs and adolescent development, so as to understand the protective familial factors on enhancing positive development of adolescents.

The research design is based on questionnaire. It is hoped that you can express your views on parental beliefs, family processes and adolescent development according to your feelings and thoughts. There is no right or wrong answer, it is of the most importance that you can share your valuable views. It is absolutely voluntary to participate in the study. The data of the questionnaire would only be used in research purpose. All information is strictly confidential.

The questionnaire covers eleven parts. Please read the guideline of each part, and then answer each question. It is expected that you would not discuss with others when answering the questions. If you have any queries, please feel free to contact the responsible staff.

Should you have any enquiries, please feel free to contact me at 5165 .

Thank you very much for participating in the research.

Yours faithfully,

(Leung Tsin Yee Janet)
PhD Candidate
Department of Applied Social Sciences
Hong Kong Polytechnic University

**The Hong Kong Polytechnic University
Department of Applied Social Sciences**

Research on parental beliefs and adolescent development

Agreement of research participant

I understand the information related to the research.

I understand that I could withdraw from the research when I wish. If I withdraw from the research, all information that I provide would be destroyed.

I understand that all my information is strictly confidential.

I understand that I have the right not to answer any questions if I do not wish to answer.

I understand that the research would not bring any adverse effects to me.

I agree to participate in the research on parental beliefs and adolescent development of Department of Applied Social Sciences, The Hong Kong Polytechnic University.

Signature of adolescent: _____

Name of adolescent: _____

Date: _____

Official use	
Date:	
Unit:	
No.:	
Staff name:	

Part 1: Paternal Sacrifice for Children's Education (PSA)

Please read the following statements carefully and choose one option that is the most representative of your feelings and views on your father's (step-father's) contribution of your education. Please circle the number that represents your answer. Please answer all questions.

Example: My father gives up his job for the sake of my education.

If you find that the statement strongly inaccurately describe your thought, please circle 1 (i.e. strongly disagree).

If you find that the statement inaccurately describe your thought, please circle 2 (i.e. disagree).

If you find that the statement slightly inaccurately describe your thought, please circle 3 (i.e. slightly disagree).

If you find that the statement slightly accurately describe your thought, please circle 4 (i.e. slightly agree).

If you find that the statement accurately describe your thought, please circle 5 (i.e. agree).

If you find that the statement strongly accurately describe your thought, please circle 6 (i.e. strongly agree).

		Options					
		Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly Agree
1	To fulfill my educational needs, my father eats and wears less.	1	2	3	4	5	6
2	My father saves money for me to study in university, despite how hard the work he faces.	1	2	3	4	5	6
3	The expense of my education is more important than my father's personal expenses.	1	2	3	4	5	6
4	If I need tutoring, my father would fulfill my needs even if family expenses have to be tightened.	1	2	3	4	5	6
5	If I need to join extra-curricular activities, my father would fulfill my needs even if family expenses have to be tightened.	1	2	3	4	5	6
6	My father saves rigorously as to reserve funds for my education.	1	2	3	4	5	6
7	Even if the family faces financial stress, my father will not stop any educational expenses of me.	1	2	3	4	5	6
8	If I need to buy reference books, my father would fulfill my needs even if family expenses have to be tightened.	1	2	3	4	5	6
9	In case the family faces financial stress, my father will borrow money to fulfill my educational needs.	1	2	3	4	5	6
10	During the examination period, my father will try his best to stay at home and accompany with me.	1	2	3	4	5	6

Part 1: Paternal Sacrifice for Child's Education (PSA) (Cont.)

		Options					
		Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly Agree
11	If the teacher calls my father to discuss about me, he will stop his work and see the teacher even he is busy at the time.	1	2	3	4	5	6
12	My father always reserves the time for participating in the parent day of school.	1	2	3	4	5	6
13	Even my father is tired, he tries his/her best to understand my school life.	1	2	3	4	5	6
14	When I study at mid-night, my father will never sleep.	1	2	3	4	5	6
15	My father's life routine is adjusted according to my educational needs.	1	2	3	4	5	6
16	During the examination period, my father is more conscious in taking care of me.	1	2	3	4	5	6
17	My father will change the family habits in order to fit my educational needs.	1	2	3	4	5	6
18	In order to have a silent environment for my study, my father gives up family entertainment.	1	2	3	4	5	6
19	My father gives up his hobbies for my education.	1	2	3	4	5	6
20	My father sacrifices his aspiration for my education.	1	2	3	4	5	6
21	My father gives up his social life for my education.	1	2	3	4	5	6
22	My father will hide the family worries in front of me in order not to disturb my studying.	1	2	3	4	5	6
23	In order not to affect my study, my father will hide his sickness when it happens.	1	2	3	4	5	6

Part 2: Paternal Parenting Style Scale (APPS)

In the following questions, we would like to know your perception on paternal parenting. Please read each question carefully and think of your situation, then choose the option that represents your answer. Please put a "✓" on the appropriate box.

What do you think is usually true or usually false about your father (step father, male guardian)?

Example Items

Usually true

Usually false

I can count on my father to help me out, if I have some kind of problem.

☐
☐

My father keeps pushing me to do my best in whatever I do.

☐
☐

Part 3: Chinese Paternal Control Scale (APCS)

In the following statements, please circle the option that represents your thought and feelings according to how your father parents you in the present situation. Please answer every question.

Example: My father expects me to wash his /her hands before eating.

If you find that the statement strongly inaccurately describe your thought, please circle 1 (i.e. strongly disagree).

If you find that the statement inaccurately describe your thought, please circle 2 (i.e. disagree).

If you find that the statement accurately describe your thought, please circle 3 (i.e. agree).

If you find that the statement strongly accurately describe your view, please circle 4 (i.e. strongly agree).

Example Items	Strongly disagree	Disagree	Agree	Strongly Agree
My father expects me to be mature (<i>sheng xing</i>).	1	2	3	4
My father expects me to have good behaviour so that I shall not be criticized by others as having no family teaching (<i>wu jiao jiao</i>).	1	2	3	4

Part 4: Maternal Sacrifice for Children's Education (MSA)

Please read the following statements carefully and choose one option that is the most representative of your feelings and views on your mother's (step-mother's) contribution of your education. Please circle the number that represents your answer. Please answer all questions.

Example: My father gives up his job for the sake of my education.

If you find that the statement strongly inaccurately describe your thought, please circle 1 (i.e. strongly disagree).

If you find that the statement inaccurately describe your thought, please circle 2 (i.e. disagree).

If you find that the statement slightly inaccurately describe your thought, please circle 3 (i.e. slightly disagree).

If you find that the statement slightly accurately describe your thought, please circle 4 (i.e. slightly agree).

If you find that the statement accurately describe your thought, please circle 5 (i.e. agree).

If you find that the statement strongly accurately describe your thought, please circle 6 (i.e. strongly agree).

		Options					
		Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly Agree
1	To fulfill my educational needs, my mother eats and wears less.	1	2	3	4	5	6
2	My mother saves money for me to study in university, despite how hard the work she faces.	1	2	3	4	5	6
3	The expense of my education is more important than my mother's personal expenses.	1	2	3	4	5	6
4	If I need tutoring, my mother would fulfill my needs even if family expenses have to be tightened.	1	2	3	4	5	6
5	If I need to join extra-curricular activities, my mother would fulfill my needs even if family expenses have to be tightened.	1	2	3	4	5	6
6	My mother saves rigorously as to reserve funds for my education.	1	2	3	4	5	6

		Options					
		Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly Agree
7	Even if the family faces financial stress, my mother will not stop any educational expenses of me.	1	2	3	4	5	6
8	If I need to buy reference books, my mother would fulfill my needs even if family expenses have to be tightened.	1	2	3	4	5	6
9	In case the family faces financial stress, my mother will borrow money to fulfill my educational needs.	1	2	3	4	5	6
10	During the examination period, my mother will try her best to stay at home and accompany with me.	1	2	3	4	5	6
11	If the teacher calls my mother to discuss about me, she will stop her work and see the teacher even she is busy at the time.	1	2	3	4	5	6
12	My mother always reserves the time for participating in the parent day of school.	1	2	3	4	5	6
13	Even my mother is tired, she tries her best to understand my school life.	1	2	3	4	5	6
14	When I study at mid-night, my mother will never sleep.	1	2	3	4	5	6
15	My mother's life routine is adjusted according to my educational needs.	1	2	3	4	5	6
16	During the examination period, my mother is more conscious in taking care of me.	1	2	3	4	5	6
17	My mother will change the family habits in order to fit my educational needs.	1	2	3	4	5	6
18	In order to have a silent environment for my study, my mother gives up family entertainment.	1	2	3	4	5	6
19	My mother gives up her hobbies for my education.	1	2	3	4	5	6
20	My mother sacrifices her aspiration for my education.	1	2	3	4	5	6
21	My mother gives up her social life for my education.	1	2	3	4	5	6
22	My mother will hide the family worries in front of me in order not to disturb my studying.	1	2	3	4	5	6
23	In order not to affect my study, my mother will hide her sickness when it happens.	1	2	3	4	5	6

Part 5: Maternal Parenting Style Scale (AMPS)

In the following questions, we would like to know your perception on maternal parenting. Please read each question carefully and think of your situation, then choose the option that represents your answer. Please put a “✓” on the appropriate box.

What do you think is usually true or usually false about your mother (step mother, female guardian)?

Example Items	Usually true	Usually false
I can count on my mother to help me out, if I have some kind of problem.	<input type="checkbox"/>	<input type="checkbox"/>
My mother keeps pushing me to do my best in whatever I do.	<input type="checkbox"/>	<input type="checkbox"/>

Part 6: Chinese Maternal Control Scale (AMCS)

In the following statements, please circle the option that represents your thought and feelings according to how your mother parents you in the present situation. Please answer every question.

Example: My mother expects me to wash her /her hands before eating.

If you find that the statement strongly inaccurately describe your thought, please circle 1 (i.e. strongly disagree).

If you find that the statement inaccurately describe your thought, please circle 2 (i.e. disagree).

If you find that the statement accurately describe your thought, please circle 3 (i.e. agree).

If you find that the statement strongly accurately describe your view, please circle 4 (i.e. strongly agree).

Example Items	Strongly disagree	Disagree	Agree	Strongly Agree
My mother expects me to be mature (<i>sheng xing</i>).	1	2	3	4
My mother expects me to have good behaviour so that I shall not be criticized by others as having no family teaching (<i>wu jiao jiao</i>).	1	2	3	4

Part 7: The Chinese Family Assessment Inventory (C-FAI)

In the following statements, please circle the option that represents your thought and feelings on your family in the present situation.

Example: My family member is selfish.

If you find that the statement is not very similar to your family situation, please circle 1 (i.e. not very similar).

If you find that the statement is not similar to your family situation, please circle 2 (i.e. not similar).

If you find that the statement is in between similar and not similar to your family situation, please circle 3 (i.e. between similar and not similar).

If you find that the statement is similar to your family situation, please circle 4 (i.e. similar).

If you find that the statement is very similar to your family situation, please circle 5 (i.e. very similar).

Example Items	Not very similar	Not similar	Between similar and not similar	Similar	Very similar
Family members support each other	1	2	3	4	5
Family members care each other	1	2	3	4	5

Part 8: Social Oriented Achievement Motivation (SOAM)

The following questions are related to your life situation. Please circle the option that represents your thought and feelings.

Example: I think that success and failure is not important.

If you find that the statement is very inappropriate, please circle 1 (i.e. very inappropriate).

If you find that the statement is inappropriate, please circle 2 (i.e. inappropriate).

If you find that the statement is slightly inappropriate, please circle 3 (i.e. slightly inappropriate).

If you find that the statement is slightly appropriate, please circle 4 (i.e. slightly appropriate).

If you find that the statement is appropriate, please circle 5 (i.e. appropriate).

If you find that the statement is very appropriate, please circle 6 (i.e. very appropriate).

Example Items	Options					
	Very inappropriate	Inappropriate	Slightly inappropriate	Slightly appropriate	Appropriate	Very appropriate
In order not to disappoint my parents, I always try to do what they expected.	1	2	3	4	5	6
Why I study hard is because only by studying hard I could have a better future.	1	2	3	4	5	6

Part 9: Chinese Positive Youth Development Scale (PYD)

Please read the following statements carefully and choose one option that is the most representative of your feelings and views. Then circle the number that represents your answer. Please note that the numbers run from one extreme (such as “1”) to another extreme (such as “7”), and the numbers represent different levels of feelings. “4” represents “no comment” (or could not be judged). It is suggested that this answer can be avoided as far as possible.

Example Item

I am usually						
1	2	3	4	5	6	7
Very bored about life much			No comment		Enjoy life very	

Part 10: Chinese Positive Youth Development Scale (PYD)

The following statements are related to your life situation. Please circle the option that represents your thought and feelings according to your present situation.

Example: I am confident of myself.

If you find that the statement strongly inaccurately describe your thought, please circle 1 (i.e. strongly disagree).

If you find that the statement inaccurately describe your thought, please circle 2 (i.e. disagree).

If you find that the statement slightly inaccurately describe your thought, please circle 3 (i.e. slightly disagree).

If you find that the statement slightly accurately describe your thought, please circle 4 (i.e. slightly agree).

If you find that the statement accurately describe your thought, please circle 5 (i.e. agree).

If you find that the statement strongly accurately describe your thought, please circle 6 (i.e. strongly agree).

Example Items	Options					
	Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly Agree
When I face difficulty, I will not give up easily.	1	2	3	4	5	6
My belief is that even though tomorrow will become worse, I will still live in a good manner.	1	2	3	4	5	6

Part 11: Demographic information

Please read every question. Choose one option that is the most representative of your information, and put a “✓” on the appropriate box.

- Sex: ☐ Male ☐ Female
- Age: _____
- Educational Level: ☐ Junior 5 or below ☐ Junior 6 ☐ Form 1 ☐ Form 2 ☐ Form 3 ☐ Form 4 ☐ Form 5 and above ☐ Others: _____
- Duration of stay in Hong Kong: ☐ Born in Hong Kong ☐ 1-3 years ☐ 4-6 years ☐ 7-9 years ☐ 10 years and above
- How many siblings do you have? ☐ No ☐ 1 ☐ 2 ☐ 3 ☐ 4 and above
- The type of your accommodation is:
 - ☐ Public houses ☐ Home Ownership Scheme ☐ Self-owned houses
 - ☐ Rented private houses (entire flat) ☐ Rented private houses (room and apartment)
 - ☐ Temporary houses or squatters ☐ Others: _____
- Do you live with your father?
 - ☐ Yes
 - ☐ No → ☐ Father is divorced ☐ Father is separated ☐ Father is at Mainland China ☐ Father is abroad ☐ Others: _____
- Do you live with your mother?
 - ☐ Yes
 - ☐ No → ☐ Mother is divorced ☐ Mother is separated ☐ Mother is at Mainland China ☐ Mother is abroad ☐ Others: _____

9. What is the marital status of your parents living with you?
☐ Married (the first marriage) ☐ Married (the second or more marriage)
☐ divorced, but not remarried ☐ separated, but not remarried ☐ widowed
☐ Others: _____
10. Your monthly household income is:
☐ \$5,000 or less ☐ \$5,001-\$10,000 ☐ \$10,001-\$20,000 ☐ \$20,001-\$30,000
☐ \$30,001 or more
11. Does your family receive Comprehensive Social Security Assistance (CSSA) at present?
☐ No ☐ Yes
12. Do you receive Textbook Allowance (TBA)?
☐ No ☐ Yes, Full Textbook Allowance ☐ Yes, Half Textbook Allowance
13. Your academic performance is:
☐ very poor ☐ poor ☐ average ☐ good ☐ excellent
14. Your school conduct is:
☐ very poor ☐ poor ☐ average ☐ good ☐ excellent

-End of questionnaire-

Thank you very much

Bibliographies

- 香港小童群益會. (2006). 「打破跨代貧窮・建設兒童資產」貧窮兒童的成長資源調查. 摘自 2009 年 12 月 27 日. <http://www.bgca.org.hk/bgca06/main/newscontent.asp?id=457&lang=C&nid=17>.
- 香港社會服務聯會. (2008). 香港低收入住戶統計概覽. 香港：香港社會服務聯會.
- 香港社會服務聯會. (2009). 2009 年最新貧窮及失業數據分析. 摘自 2009 年 11 月 13 日. <http://www.hkcss.org.hk/cm/cc/press/documents/2009poverty.doc>.
- 趙維生. (2005). 貧窮聲音：參與性貧窮評估 .香港社會服務聯會.
- Abramson, L.Y., Seligman, M.E.P., & Teasdale, J. (1978). Learned helplessness in humans: critiques and reformulation. *Journal of Abnormal Psychology*, 87, 49-74.
- Achenbach, T.M. (2011). Commentary: Definitely more than measurement error: But how should we understand and deal with informant discrepancies? *Journal of Clinical Child & Adolescent Psychology*, 40(1), 80-86.
- Achenbach, T.M., McConaughy, S.H., & Howell, C.T. (1987). Child / adolescent behavioural and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, 101, 213-232.
- Adler, N.E., Marmot, M., McEwen, B.S., & Stewart, J. (Eds.). (1999). *Socioeconomic status and health in industrial nations: Social, psychological, and biological pathways*. New York: The New York Academy of Sciences.
- Adler, N.E. & Ostrove, J.M. (1999). Socioeconomic status and health: What do we know and what we don't. In N.E. Adler, M. Marmot, B.S. McEwen, & J. Stewart (Eds.). *Socioeconomic Status and Health in Industrial Nations: Social, Psychological, and Biological Pathways* (pp. 3-15). New York: The New York Academy of Sciences.
- Aiken, M. (Ed.) (1992). *Encyclopedia of educational research* (6th Ed.). New York: Macmillan.
- Aldous, J. (1978). *Family careers: Developmental change in families*. New York: Wiley.
- Alexander, K.L., Entwisle, D.R., & Bedinger, S.D. (1994). When expectations

- work: Race and socioeconomic differences in school performance. *Social Psychology Quarterly*, 57, 283-299.
- Allison, D.B., Gorman, B.S., & Primavera, L. (1993). Some of the most common questions asked of statistical consultants: Our favorite responses and recommended readings. *Genetic, Social, and General Psychology Monographs*, 119(2), 153-185.
- American Psychological Association, American Education Research Association, & National Council on Measurement in Education. (1985). *Standards for educational and psychological testing*. American Psychological Association.
- Ames, C., & Ames, R.E. (eds). (1989). *Research on motivation in education. Vol. 3: Goals and cognition*. New York: Academic Press.
- Anderson, N.B. (1999). Solving the puzzle of socioeconomic status and health: the need for integrated, multilevel, interdisciplinary research. In N.E. Adler, M. Marmot, B.S. McEwen, & J. Stewart (Eds.), *Socioeconomic status and health in industrial nations: Social, psychological, and biological pathways* (pp. 302-312). New York: The New York Academy of Sciences.
- Ashworth, K., Hill, M., & Thorton, A. (1994). Patterns of childhood poverty: the dynamics of spell. *Journal of Policy Analysis and Management*, 13(4), 658-680.
- Atkinson A. (Ed.). (1980). *Wealth, income, and inequality*. New York: Oxford University Press.
- Atkinson, J.W. (1964). *An introduction to motivation*. Princeton, N.J.: D. Van Nostrand Co.
- Axinn, J., & Levin, H. (1979). The family life cycle and economic security. *Social Work*, 24, 540-546.
- Balter, L., & Tamis-LeMonda, C.S. (Eds.). (2006). *Child psychology: A handbook of contemporary issues (2nd Ed.)*. New York: Taylor & Francis Group, LLC.
- Bandura, A. (1974). Behaviour theory and the models of man. *American Psychologist*, 29, 859-869.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1994). *Self-efficacy: The exercise of control*. New York: Freeman.
- Barajas, R.G., Philipsen, N., & Brooks-Gunn, J. (2008). Cognitive and Emotional

- Outcomes of Children in Poverty. In D.R. Crane, & T.B. Heaton, *Handbook of families and poverty* (pp. 311-333). Los Angeles: Sage Publications.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Barrera, M., Jr., & Garrison-Jones, C. (1992). Family and peer social support as specific correlates of adolescent depressive symptoms. *Journal of Abnormal Child Psychology*, 20, 1-15.
- Baum, A., Garofalo, J.P. & Yali, A.M. (1999). Socioeconomic status and chronic stress: Does stress account for SES effects on health? In N.E. Adler, M. Marmot, B.S. McEwen, & J. Stewart (Eds.), *Socioeconomic Status and Health in Industrial Nations: Social, Psychological, and Biological Pathways* (pp. 131-144). New York: The New York Academy of Sciences.
- Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behaviour. *Genetic Psychology Monographs*, 75, 43-88.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychological Monographs*, 4 (1, Part 2).
- Baumrind, D. (1991). Parenting styles and adolescent development. In J. Brooks-Gunn, R. Lerner, & A.C. Peterson, (Eds.), *The encyclopedia of adolescence* (pp. 746-758). New York: Garland.
- Beavers, W.R., Hampson, R.B., & Hugles, Y.F. (1985). The Beavers Systems approach to family assessment. *Family Process*, 24, 398-405.
- Beavers, W.R., Hampson, R.B., & Hugles, Y.F. (1990). *Beavers systems model manual*. Dallas, TX: Southwest Family Institute.
- Beaver, W.R., & Hampson, R.B. (2003). Measuring family competence: The Beavers Systems Model. In F. Walsh (Ed.), *Normal family processes: Growing diversity and complexity (3rd Ed.)* (pp. 549-580). New York: Guilford.
- Becker, G.S. & Tomes, N. (1985). Human capital and the rise and fall of families. *Journal of Labor Economics*, 4, 1-39.
- Belsky, J. (1981). Early human experience: A family perspective. *Developmental Psychology*, 17, 1-23.
- Bem, S.L. (1974). The measurement of psychological androgyny. *Journal of*

- Consulting and Clinical Psychology*, 42, 155-162.
- Bempechat, J., Graham, S.E., & Jimenez, N.V. (1999). The socialization of achievement in poor and minority students: A comparative study. *Journal of Cross-cultural Psychology*, 30(2), 139-158.
- Bengtson, V.L., & Allen, K.R. (1993). The life course perspective applied to families over time. In P.G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, & S.K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 469-499). New York: Plenum Press.
- Bengtson, V.L., & Kuypers, J.A. (1971). Generational differences and the developmental stake. *Aging and Human Development*, 2, 249-260.
- Benner, A.D., & Mistry, R.S. (2007). Congruence of Mother and Teacher Educational Expectations and Low-Income Youth's Academic Competence. *Journal of Educational Psychology*, 99(1), 140-153.
- Benson, P.L. (1997). *All kids are our kids: What communities must do to raise caring and responsible children and adolescents*. San Francisco: Jossey-Bass.
- Berrick, J.D. (1995). *Faces of poverty: Portraits of women and children on welfare*. New York: Oxford University Press.
- Black, T.R. (1999). *Doing quantitative research in the social sciences*. London: Sage Publications.
- Blair, S.L., & Qian, Z. (1998). Family and Asian students' educational performance: A consideration of diversity. *Journal of Family Issues*, 19, 355-374.
- Blau, P. (1975). *Approaches to the study of social structure*. New York: Free Press.
- Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. Englewood cliffs, NJ: Prentice Hall.
- Bolger, K.E., Patterson, C.J., Thompson, W.W., & Kupersmidt, J.B. (1995). Psychosocial adjustment among children experiencing persistent and intermittent family economic hardship. *Child Development*, 66, 1107-1129.
- Bond, M.H. (Ed.). (1986). *The psychology of Chinese people*. Hong Kong: Oxford University Press.
- Bond, M.H. (Ed.). (1996). *The handbook of Chinese psychology*. Hong Kong: Oxford University Press.
- Borkowski, J.G., Weyhing, R.S., & Carr, M. (1988). Effects of attributional

- retaining on strategy-based reading comprehension in learning-disabled students. *Journal of Educational Psychology*, 80, 46-53.
- Bornstein, M.H. (Ed.). (2002a). *Handbook of parenting. Vol. 2: Biology and ecology of parenting*. Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers.
- Bornstein, M.H. (Ed.) (2002b). *Handbook of parenting, Vol. 3: Being and becoming a parent*. Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers.
- Bornstein, M.H. (Ed.). (2002c). *Handbook of parenting. Vol. 4: Social conditions and applied parenting*. Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers.
- Bornstein, M.H. (eds.) (2002d). *Handbook of parenting, Vol. 5: Practical issues in parenting*. Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers.
- Bornstein, M.H., & Bradley, R.H. (Eds.). (2003). *Socioeconomic status, parenting, and child development*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Bornstein, M.H., Hahn, C.S., Suwalsky, J.T.D., & Haynes, O.M. (2003). Socioeconomic Status, parenting, and child development: the Hollingshead Four-factor Index of Social Status and the Socioeconomic Index of Occupation. In M.H. Bornstein, & R.H. Bradley (Eds.), *Socioeconomic status, parenting, and child development* (pp. 29-82). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Bronstein, P. Briones, M., Brooks, T., & Cowan, B. (1996). Gender and family factors as predictors of late adolescent emotional expressiveness and adjustment: A longitudinal study. *Sex Roles*, 34, 734-765.
- Bosma, H.A. & Gerrits, R.S. (1985). *Family functioning and identity status in adolescence*. *Journal of Early Adolescence*, 5(1), 69-80.
- Boss, P. G., Doherty, W. J., LaRossa, R., Schumm, W.R. & Steinmetz, S.K. (Eds.). (1993). *Sourcebook of family theories and methods: a contextual approach*. New York: Plenum Press.
- Bourdieu, P. (1977). *Outline of a theory of practice*. Cambridge: Cambridge University Press.
- Bradburn, N.M. (1969). *The structure of psychological well-being*. Chicago: Aldine.
- Bradley, R.H., & Corwyn, R.F. (2002). Socioeconomic status and child

- development. *Annual Review of Psychology*, 53, 371-399.
- Bradley, R.H., & Corwyn, R.F. (2006). The family environment. In L. Balter & C.S. Tamis-LeMonda (Eds.), *Child psychology: A handbook of contemporary issues* (2nd Ed.) (pp. 493-519), New York: Taylor & Francis Group, LLC.
- Bradley, R.H., Corwyn, R.F., Caldwell, B.M., Whiteside-Mansell, L., Wasserman, G.A., & Mink, I.T. (2000). Measuring the home environments of children in early adolescence. *Journal of Research on Adolescence*, 10, 247-289.
- Bradley, R.H., Corwyn, R.F., & Whiteside-Mansell, L. (1996). Life at Home: same time, different places. An examination of the HOME Inventory in different cultures. *Early Development and Parenting*, 5, 251-269.
- Brody, G.H., Stoneman, Z., Flor, D., McCracy, C., Hastings, L., & Conyers, O. (1994). Financial resources, parent psychological functioning, co-caregiving, and early adolescent competence in rural two-parent African-American families. *Child Development*, 65, 590-605.
- Brody, G.H., Flor, D.L., & Gibson, N.M. (1999). Linking maternal efficacy beliefs, developmental goals, parenting practices, and child competence in rural single-parent African American families. *Child Development*, 70(5), 1197-1208.
- Brody, L.R. (1985). Gender differences in emotional development: A review of theories and research. *Journal of Early Adolescence*, 9, 67-81.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: research perspectives. *Developmental Psychology*, 22(6), 723-742.
- Brooks-Gunn, J. (1995). Strategies for altering the outcomes of poor children and their families. In P.L. Chase-Lansdale, & J. Brooks-Gunn (Eds.), *Escape from poverty: What makes a difference for children?* (pp. 87-117). New York: Cambridge University Press.
- Brooks-Gunn, J., Britto, P.R., & Brady, C. (1999). Struggling to make ends meet. In M.E. Lamb (Ed.), *Parenting and child development in "nontraditional" families* (pp. 279-304). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Brooks-Gunn, J., Duncan, G., & Maritato, N. (1997). Poor families, poor

- outcomes: The well-being of children and youth. In G.J. Duncan, & J. Brooks-Gunn (Eds.), *Consequences of growing up poor* (pp. 1-17). New York: Russell Sage.
- Brooks-Gunn, J., Duncan, G., & Aber, J.L. (eds.) (1997). *Neighbourhood Poverty: Context and Consequences for Children, Vol. 1*. New York: Russell Sage.
- Brooks-Gunn, J., Lerner, R., & Peterson, A.C. (Eds.). (1991). *The encyclopedia of adolescence*. New York: Garland.
- Brower, A.M. (1988). Can the ecological model guide social work practice? *Social Service Review*, 411 – 429.
- Bryant, K.W. (1995). *The economic organization of the household*. New York: Cambridge University Press.
- Bubolz, M.M., & Sontag, M.S. (1993) Human ecology theory. In P.G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, & S.K. Steinmetz. (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp.419-448). New York: Plenum Press.
- Bugental, D.B., & Goodnow, J.J. (1998). Socialization processes. In W. Damon, & N. Eisenberg, (Eds.), *Handbook of child psychology. Vol. 3: Social, emotional and personality development (5th ed.)* (pp. 389-461). N.Y.: John Wiley & Sons Inc.
- Bugental, D.B., & Happaney, K. (2002). Parental attributions. In M.H. Bornstein, (Ed.), *Handbook of parenting, Vol. 3: Being and becoming a parent* (pp.509-535). Lawrence Erlbaum Associates, Publishers.
- Bullock, H.E., & Waugh, I.M. (2005). Beliefs about poverty and opportunity among Mexican immigrant farm workers. *Journal of Applied Social Psychology*, 35(6), 1132-1149.
- Burton, L. (2007). Childhood adultification in economically disadvantaged families: a conceptual model. *Family Relations*, 56, 329-345.
- Burton, L., & Jarrett, R.L. (2000). In the mix, yet on the margins: The place of families in urban neighborhood and child development research. *Journal of Marriage and the Family*, 62(4), 1114-1135.
- Burton, L., Olbeidallah, D.O., & Allison, K. (1996). Ethnographic perspective on social context and adolescent development among inner-city African American teens. In R. Jessor, A. Colby, & R. Shweder (Eds), *Essays on ethnography and human development* (pp. 395-418). Chicago: University of

Chicago Press.

- Caldwell, B.M., & Bradley, R.H. (2003). *HOME Inventory Administration Manual*. Little rock: University of Arkansas at Little Rock.
- Caplan, P.J., & Hall-McCorquodale, I. (1985). Mother-blaming in major clinical journals. *American Journal of Orthopsychiatry*, 55, 345-353.
- Carlson, C.I., Cooper, C.R., & Spradling, V.Y. (1991). Developmental implications of shared versus distinct perceptions of the family in early adolescence. In R.L. Paikoff (Ed.). *New directions for child development: Shared views in the family during adolescence* (Vol. 51, pp. 13-32). San Francisco: Jossey-Bass.
- Carter, B., & McGoldrick, M. (Eds.). (2005). *The expanded family life cycle: Individual, family, and social perspectives*. Boston, MA: Allyn & Bacon.
- Castañeda, T., & Aldaz-Carroll, E. (1999). The intergenerational transmission of poverty: some causes and policy implications. *Inter-American Development Bank Discussion Paper*. [Electronic version]. Retrieved August 28, 2011 from <http://www.iadb.org/sds/doc/1258eng.pdf>
- Catalano, R.F., Berglund, M.L., Ryan, J.A.M., Lonczak, H.S., & Hawkins, J.D. (2002, June 24). Positive youth development in the United States: Research findings on evaluation of positive youth development programs. *Prevention and Treatment*, 5(Article 15), 1-111.
- Census and Statistics Department (2007a). *2006 Population By-census. Main tables*. Hong Kong Special Administrative Region.
- Census and Statistics Department (2007b). *2006 Population By-census. Thematic Report : Household income distribution in HK*. [Electronic version]. Retrieved November 30, 2008 from http://www.bycensus2006.gov.hk/FileManager/EN/Content_962/06bc_hhinc.pdf
- Census and Statistics Department. (2009). Feature Article: Statistics on Comprehensive Social Security Assistance Scheme, 1998 to 2008. *Hong Kong monthly digest of statistics*. Hong Kong Special Administrative Region.
- Census and Statistics Department. (2010). Feature Article: Statistics on Comprehensive Social Security Assistance Scheme, 1999 to 2009. *Hong Kong monthly digest of statistics*. Hong Kong Special Administrative Region.
- Census and Statistics Department (2011a). *Hong Kong statistics – Statistical report* [Electronic version]. Retrieved July 2, 2011 from

http://www.statistics.gov.hk/publication/stat_report/national_income_bop/B10300012011QQ01B0100.pdf.

- Census and Statistics Department (2011b). *Hong Kong statistics – Statistical tables* [Electronic version]. Retrieved July 2, 2011 from http://www.censtatd.gov.hk/hong_kong_statistics/statistical_tables/index.jsp?
- Chan, D.W. (1989). Dimensionality and adjustment: Correlates of locus of control among Hong Kong Chinese. *Journal of Personality Assessment*, 53, 145-160.
- Chan, H. & Lee, R.P.L. (1995). Hong Kong families: at the crossroads of modernism and traditionalism. *Journal of Comparative Family Studies*, Vol. 26(1), 83-99.
- Chan, L.K.S. (1994). Relationship of motivation, strategic learning and achievement in Grades 5,7, and 9. *Journal of Experimental Education*, 62, 319-342.
- Chan, L.K.S. (1996). Combined strategy and attributional training for seventh grade average and poor readers. *Journal of Research in Reading*, 19, 111-127.
- Chan, L.K.S., & Moore, P.J. (2006). Development of attributional beliefs and strategic knowledge in Years 5-9: A longitudinal analysis. *Educational Psychology*, 26(2), 161-185.
- Chang, W.C., Wong, W.K., & Teo, G. (2000). The socially oriented and individually oriented achievement motivation of Singaporean Chinese students. *Journal of Psychology in Chinese Societies*, 1(2), 39-63.
- Chant, S. (2007). *Gender, generation and poverty*. Cheltenham: Edward Elgar.
- Chao, R.K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child Development*, 65, 1111-1119.
- Chao, R.K. (1995). Chinese and European American cultural models of the self reflected in mothers' childrearing beliefs. *Ethos*, 23(3), 328-354.
- Chao, R.K. (1996). Chinese and European American mothers' beliefs about the role of parenting in children's school success. *Journal of Cross-Cultural Psychology*, 27(4), 403-423.
- Chao, R.K. (2000). The parenting of immigrant Chinese and European American mothers: Relations between parenting styles, socialization goals and parental

- practices. *Journal of Applied Developmental Psychology*, 21(2), 233-248.
- Chao, R.K., & Kaeochinda, K.F. (2010). Parental sacrifice and acceptance as distinct dimensions of parental support among Chinese and Filipino American adolescents. In S.T. Russell, L.J. Crockett, & R.K. Chao (Eds.), *Asian American parenting and parent-adolescent relationships* (pp.61-77). New York: Springer Science and Business Media.
- Chao, R.K., & Sue, S. (1996). Chinese parental influence and their children's school success: a paradox in the literature on parenting styles. In S. Lau (Ed.), *Growing up the Chinese way --- Chinese child and adolescent development* (pp. 93-120). Hong Kong: The Chinese University Press.
- Chao, R.K., & Tseng, V. (2002). Parenting in Asians. In M.H. Bornstein (Ed.), *Handbook of parenting. Vol. 4: Social conditions and applied parenting* (pp.59-93). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Chase-Lansdale, P.L., & Brooks-Gunn, J. (Eds.). (1995). *Escape from poverty: What makes a difference for children?* New York: Cambridge University Press.
- Cheal, D. (1996). *New poverty: Families in postmodern society*. Westport, CT: greenwood Press.
- Chen, C.S., & Uttal, D. (1988). Cultural values, parents' beliefs, and children's achievement in the United States and China. *Human Development*, 31, 351-358.
- Cherlin, A.J. (Ed.). (1988). *The Changing American Family and Public Policy*. Washington, DC: Urban Institute.
- Cheung, C.S., & McBride-Chang, C. (2008). Relations of perceived maternal parenting style, practices, and learning motivation to academic competence in Chinese children. *Merrill-Palmer Quarterly*, 54(1), 1-22.
- Child Development Fund (2010). *Introduction of Child Development Fund*. Retrieved November 30, 2010 from http://www.cdf.gov.hk/english/aboutcdf/aboutcdf_int.html
- Chinese University of Hong Kong. (2009). *A literature review of family policy in four East Asian societies*. Retrieved August 28, 2011 from [http://www.cpu.gov.hk/english/documents/new/press/Lituration Review of 4 East Asian Societies.pdf](http://www.cpu.gov.hk/english/documents/new/press/Lituration%20Review%20of%204%20East%20Asian%20Societies.pdf)
- Chiu, L.H. (1987). Child-rearing attitudes of Chinese, Chinese-American, and

- Anglo-American mothers. *International Journal of Psychology*, 22, 409-419.
- Chow, S.S.Y., & Chu, M.H.T. (2007). The impact of filial piety and parental involvement on academic achievement motivation in Chinese secondary school students. *Asian Journal of Counseling*, 14(1-2), 91-123.
- Cierpka, M. (2005a). Introduction to family assessment. In M. Cierpka, V. Thomas, & D.H. Sprenkle (Eds.), *Family assessment: Integrating multiple clinical perspectives* (pp. 3-14). Cambridge MA: Hogrefe & Huber Publishers, Inc.
- Cierpka, M. (2005b). The three-level model of family assessment. In M. Cierpka, V. Thomas, & D.H. Sprenkle (Eds.), *Family assessment: Integrating multiple clinical perspectives* (pp. 15-32). Cambridge MA: Hogrefe & Huber Publishers, Inc.
- Cocca, C. (2002). From “welfare queen” to exploited teen”: Welfare dependency, statutory rape, and moral panic. *NWSA Journal*, 14(2), 56-79.
- Cohen, J. (1988). *Statistical power analysis for the behavioural behavioural sciences*. New Jersey: Lawrence Erlbaum Associates, Inc.
- Coleman, J.S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94 (Suppl 95), S95-S120.
- Coleman, J.S. (1990). *Foundations of social theory*. Cambridge, MA: Harvard University Press.
- Collins, W.A., & Russell, G. (1991). Mother-child and father-child relationships in middle childhood and adolescence: A developmental analysis. *Developmental Review*, 11, 99-136.
- Commission on Poverty. (2005). *Concept and measurements of poverty*. [Electronic version]. Retrieved November 13, 2009 from http://www.cop.gov.hk/eng/concept_intro.htm
- Commission on Poverty. (October 2005). *Tackling intergenerational poverty – concept Paper. CoP/TFCY Paper 4/2005*. [Electronic version]. Retrieved June 5, 2011 from [http://www.cop.gov.hk/eng/pdf/TFCY Paper 4_2005E.pdf](http://www.cop.gov.hk/eng/pdf/TFCY_Paper_4_2005E.pdf)
- Conger, R.D., & Conger, K.J. (2002). Resilience in Midwestern families: selected findings from the first decade of a prospective, longitudinal study. *Journal of Marriage and the Family*, 64(2), 361-373.
- Conger, R.D. & Conger, K. J. (2008). Understanding the processes through which economic hardship influences families and children. In D.R. Crane, &

- T.B. Heaton (Eds.), *Handbook of families and poverty* (pp.64-81). Los Angeles: Sage Publications.
- Conger, R.D., Conger, K.J., Elder, G.H., Jr., Lorenz, F.O., Simons, R.L., & Whitbeck, L.B. (1992). A family process model of economic hardship and adjustment of early adolescent boys. *Child Development*, 63, 526-541.
- Conger, R.D., Conger, K.J., Elder, G.H., Jr., Lorenz, F.O., Simons, R.L., & Whitbeck, L.B. (1993). Family economic stress and adjustment of early adolescent girls. *Developmental Psychology*, 29(2), 206-219.
- Conger, R.D. & Donnellan, M.B. (2007). An interactionist perspective on the socioeconomic context of human development. *Annual Review of Psychology*, 58, 175-199.
- Conger, R.D., Ge, Xiaojia, Elder, G.H., Jr., Lorenz, F.O., & Simons, R.L. (1994). Economic stress, coercive family process, and developmental problems of adolescents. *Child Development*, 65, 541-561.
- Conger, R.D., Wallace, L.E., Sun, Y., Simons, R.L., McLoyd, V.C., & Brody, G.H. (2002). Economic pressure in African American families: a replication and extension of the family stress model, *Developmental Psychology*, 38, 179-193.
- Cook, T.D., Church, M.B., Ajanaku, S., Shadish, W.R., Kim, J., & Cohen, R. (1996). The development of occupational aspirations and expectations among inner-city boys. *Child Development*, 67, 3368-3385.
- Cooper, C.E., & Crosnoe, R. (2007). The engagement in schooling of economically disadvantaged parents and children. *Youth and Society*, 38(3), 372-391.
- Costello, E.J., Compton, S.N., Keeler, G., & Angold, A. (2003). Relationships between poverty and psychopathology: A natural experiment. *Journal of the American Medical Association*, 290, 2023-2029.
- Cottrell, L., Li, X., Harris, C., D' Alessandri, D., Atkins, M., Richardson, B., & Stanton, B. (2003). Parent and adolescent perceptions of parental monitoring and adolescent risk involvement. *Parenting: Science and Practice*, 3, 179-195.
- Coverman, S. (1985). Explaining husbands' participation in domestic labor. *Sociological Quarterly*, 26, 81-97.
- Crane, D.R., & Heaton, T.B. (Eds.) (2008). *Handbook of families and poverty*.

- Los Angeles: Sage Publications.
- Crano, W.D., & Brewer, M.B. (2002). *Principles and methods of social research*. Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers.
- Crittenden, K.S. (1996). Causal attribution processes among the Chinese. In M.H. Bond (Ed.), *The handbook of Chinese psychology* (pp. 263-279). New York: Oxford University Press.
- Cronbachm, L.J., & Meehl, P.E. (1955). Construct validity in psychological tests. *Psychological Bulletin*, 52, 281-302.
- Crosbie-Burnett, M., & Lewis, E.A. (1993). Theoretical contributions from social and cognitive-behaviourbehavioural psychology. In P.G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, & S.K. Steinmetz. (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp.531-558). New York: Plenum Press.
- Crosnoe, R., Mistry, R., & Elder, G.H. Jr. (2002). Economic disadvantage, family dynamics, and adolescent enrollment in higher education. *Journal of Marriage and Family*, 94, 690-702.
- Cross, T.L. (1995). Understanding family resiliency from a relational world-view. In H.I. McCubbin, E.A. Thompson, A.I. Thompson, & J.E. Fromer (Eds.), *Resiliency in ethnic minority families: Native and immigrant American families, Volume I*. Madison, W.I.: University of Wisconsin System.
- Crouter, A.C., & Head, M.R. (2002). Parental monitoring and knowledge of children. In M.H. Bornstein (Ed.), *Handbook of parenting, Vol. 3: Being and becoming a parent* (pp. 461-483). Mahwah, NJ: Erlbaum.
- Cummings E.M., Davies, P.T., & Campbell, S.B. (2000). *Developmental psychopathology and family process: Theory, research, and clinical implications*. New York: Guilford Press.
- D'Andrade, R.G., & Strauss, C. (Eds.). (1992). *Human motives and cultural models*. Cambridge, England: Cambridge University Press.
- Dalal A.K., & Misra, G. (Eds.). (2002). *New directions in Indian psychology: social psychology (Vol. 1)*. New Dalhi: Sage Publications.
- Damon, W. (2004). What is positive youth development? *Annals of the American Academy of Political and Social Science*, 591, 13-24.
- Damon, W., & Eisenberg, N. (Eds.). (1998). *Handbook of child psychology, Vol. 3: Social, emotional and personality development*. N.Y.: John Wiley & Sons

Inc.

- Damen, W., Sigel, I.E., & Ronninger, K.A. (Eds.). (1998). *Handbook of child psychology, Vol. 4: Child psychology in practice*. N.Y.: John Wiley & Sons Inc.
- Darling, N., & Steinberg, L. (1993). Parenting style as context: an integrative model. *Psychological Bulletin*, 113(3), 487-496.
- Darlington, R.B. (1990). *Regression and linear models*. New York: McGraw-Hill.
- Davis, L. (1992). Instrument review: Getting the most from your panel of experts. *Applied Nursing Research*, 5, 194-197.
- Davis-Kean, P.E. (2005). The influence of parent education and family income on child achievement: The indirect role of parental expectations and the home environment. *Journal of Family Psychology*, 19, 698-710.
- Day, R.D., Gavazzi, S., & Acock, A. (2001). Compelling family processes. In A. Thornton (Ed.), *The well-being of children and families – research and data needs* (pp.103-126). Michigan: University of Michigan.
- De Los Reyes, A. (2011). More than measurement error: discovering meaning behind informant discrepancies in clinical assessments of children and adolescents. *Journal of Clinical Child & Adolescent Psychology*, 40(1), 1-9.
- De Los Reyes, A., Goodman, K.L., Kliwer, W., & Reid-Quñones, K.R. (2010). The longitudinal consistency of mother-child reporting discrepancies of parental monitoring and their ability to predict child delinquent behaviours two years later. *Journal of Youth and Adolescence*, 39, 1417-1430.
- De Los Reyes, A., & Kazdin, A.E. (2004). Measuring informant discrepancies in clinical child research. *Psychological Assessment*, 16, 330-334.
- De Los Reyes, A., & Kazdin, A.E. (2005). Informant discrepancies in the assessment of childhood psychopathology: A critical review, theoretical framework, and recommendations for future study. *Psychological Bulletin*, 131, 483-509.
- de Vos, G.A. (1973). *Socialization for achievement: essays on the cultural psychology of the Japanese*. Berkeley: University of California Press.
- de Vos, G.A. (1998). Confucian family socialization: the religion, morality, and aesthetics of propriety. In W.H. Slote, & G.A. de Vos (Eds.), *Confucianism and the Family* (pp. 329-380). New York: State University of New York

Press.

- Dearing, E., McCartney, K., & Taylor, B.A. (2001). Change in family income-to-needs matters more for children with less. *Child Development*, 72, 1779-1793.
- Deci, E. L., & Ryan, R. M. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well being. *American Psychologist*, 55, 68-78.
- Denzin N.K., & Lincoln, Y.S. (2000). *Handbook of qualitative research*. Thousand Oaks, Calif. : Sage Publications.
- Deutsch, M. (1968). The disadvantaged child and the learning process. In L.A. Ferman, J.L. Kornbluh, & A. Haber. (Eds.), *Poverty in America* (pp. 476-493). Ann Arbor: The University of Michigan Press.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, 95, 542-575.
- Duncan, G.J., & Brooks-Gunn, J. (Eds.). (1997). *Consequences of growing up poor*. New York: Russell Sage.
- Duncan, G.J., & Brooks-Gunn, J. (2000). Family poverty, welfare reform, and child development. *Child Development*, 71, 188-196. .
- Duncan, G.J., Brooks-Gunn, J., & Klebanov, P.K. (1994). Economic deprivation and early childhood development. *Child Development*, 65, 296-318.
- Duncan, G.J., & Raudenbush S.W. (1999). Assessing the effects of context in studies of children and youth development. *Educational Psychologist*, 34, 29-41.
- Duncan, G.J., Yeung, W., Brooks-Gunn, J., & Klebanov, P.K. (1998). How much does childhood poverty affects the life chances of children? *American Sociological Review*, 63, 406-423.
- Durkheim, E. (1951). *Suicide*. New York: Free Press.
- Eccles, J.S. (1993). School and family effects on the ontogeny of children's interests, self-perceptions, and activity choice. In J. Jacobs (Ed.), *Nebraska Symposium on motivation* (Vol. 40, pp. 145-208). Lincoln: University of Nebraska Press.
- Eccles, J.S., Poeser, R., Vida, M., Fredricks, J., & Wigfield, A. (2006). Motivational and achievement pathways through middle childhood. In L. Balter, & C.S. Tamis-LeMonda (Eds.), *Child psychology: A handbook of contemporary issues* (pp. 325-355), New York: Taylor & Francis Group, LLC.

- Eccles, J.S, Wigfield, A., & Schiefele, U. (1998). Motivation to succeed. In W. Damon, & N. Eisenberg (Eds.), *Handbook of child psychology, Vol. 3: Social, emotional and personality development* (pp.1017-1097). N.Y.: John Wiley & Sons Inc.
- Edin, K., & Lein, L. (1997). *Making ends meet: How single mothers survive welfare and low-wage work*. New York: Russell. Sage.
- Eisenberg, N. (Ed.). (1987). *Contemporary topics in developmental psychology*. New York: Wiley.
- Elder, G.H., Jr. (1999). *Children of the Great Depression: Social change in life experience*. Boulder, Coloumbia: Westview Press.
- Englund, M.M., Egeland, B., & Collin, W.A. (2008). Exceptions to high school dropout prediction in a low-income sample: do adults make a difference? *Journal of Social Issues*, 64(1), 77-93.
- Epstein, J.L. (1987). Parent involvement: What research says to administrators. *Education Urban Society*, 19(2), 119-136.
- Epstein, J.L. (1992). School and family partnerships. In M. Aiken (Ed.), *Encyclopedia of educational research* (pp. 1139-1151). New York: Macmillan.
- Epstein, N.B., Bishop, D.S., & Levin, S. (1978). The McMaster model of family functioning. *Journal if Marriage and Family Counseling*, 4, 19-31.
- Epstein, N.B., Ryan, C.E., Bishop, D.S., Miller, I.W., & Keitner, G.I. (2003). The McMaster Model: A view of healthy family functioning. In F. Walsh (Ed.). *Normal family processes: Growing diversity and complexity* (pp. 581-607). New York: Guilford.
- Eurostat. (2000). *European social statistics: Income, poverty and social exclusion*. Luxembourg. Eurostat Press Enterprises Ltd.
- Fan, X., & Chen, M. (2001). Parental involvement and student's achievement: A meta-analysis. *Educational Psychology Review*, 13, 1-22.
- Farrington, K. & Chertok, E. (1993). Social conflict theories of the family. In P.G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, & S.K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 357-381). New York: Plenum Press.
- Feather, N.T. (1965). The relationship of expectation of success to n Achievement and test anxiety. *Journal of Personality and Social Psychology*,

1, 118-216.

- Feinberg, M.E., Howe, G.W., Reiss, D., & Hetherington, E.M. (2000). Relationship between perceptual differences of parenting and adolescent antisocial behaviour and depressive symptoms. *Journal of Family Psychology*, 14, 531-555.
- Ferdinand, R.F., van der Ende, J., & Verhulst, F.C. (2004). Parent-adolescent disagreement regarding psychopathology in adolescents from the general population as a risk factor for adverse outcome. *Journal of Abnormal Psychology*, 113, 198-206.
- Ferman, L.A., Kornbluh, J.L., & Haber, A. (Eds.). (1968). *Poverty in America*. Ann Arbor: The University of Michigan Press.
- Field, F. (1989). *Losing out: The emergence of Britain's underclass*. Oxford: Blackwell.
- Fisher, B.A. (1978). *Perspectives on human communication*. New York: Macmillan.
- Folkman, S., Schaefer, C., & Lazarus, R.S. (1979). Cognitive processes as mediators of stress and coping. In V. Hamilton, & J. Warburton (Eds.), *Human stress and cognition* (pp. 265-298). New York: Wiley.
- Forehand, R., & Nousiainen, S. (1993). Maternal and paternal parenting: Critical dimensions of adolescent functioning, *Journal of Family Psychology*, 7(2), 213-221.
- Friedman, H. (1982). Simplified determinations of statistical power, magnitude of effect and research sample sizes. *Educational and Psychological Measurement*, 42, 521-526.
- Furstenberg, F.F., Jr. (1988). Good dads--- bad dads: Two faces of fatherhood. In A.J. Cherlin (Ed.), *The Changing American Family and Public Policy* (pp. 193-218). Washington, DC: Urban Institute.
- Furstenberg, F.F., Jr., Cook, T.D., Eccles, J., Elder, G.H., Jr., & Sameroff, A. (1999). *Managing to make it: Urban families and adolescent success*. Chicago: The University of Chicago Press.
- Fuligni, A.J. (1997). The Academic Achievement of Adolescents from Immigrant Families: The Roles of Family Background, Attitudes, and Behaviour. *Child Development*, 68(2), 351-363
- Fuligni, A.J., & Yoshikawa, H. (2003). Socioeconomic resources, parenting,

- poverty, and child development among immigrant families. In M.H. Bornstein, & R.H. Bradley (Eds.), *Socioeconomic status, parenting, and child development* (pp. 107-124). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Gambrill, E. (1999). Evidence-based practice: An alternative to authority-based practice. *Families in Society*, 80, 341-350.
- Gans, H.J. (1973). *More equality*. New York: Vintage Books.
- Garmezy, N. (1993). Children in poverty: resilience despite risk, *Psychiatry*, 56, 127-136.
- Gaylord, K.K., Kitzmann, K.M., & Coleman, J.K. (2003). Parents' and children's perceptions of parental behaviour: Associations with children's psychosocial adjustment in the classroom. *Parenting: Science and Practice*, 3, 23-47.
- Georgiou, S.N. (1999). Parental attributions as predictors of involvement and influences on child achievement. *British Journal of Educational Psychology*, 69, 409-429.
- Giddens, A. (1976). *New rules of sociological method: A positive critique of interpretive sociologies*. London: Hutchinson.
- Gilbert, D., Ficke, S., & Lindzey, G. (Eds.). (1998). *The handbook of social psychology, Vol. 1*. Boston, MA: McGraw-Hill.
- Gilbert, N.G., & Terrell, P. (2005). *Dimensions of social welfare policy*. Pearson Education, Inc.
- Gill, S., & Reynolds, A. (1999). Educational expectations and school achievement in urban African American children. *Journal of School Psychology*, 37, 403-424.
- Gjerde, P.F. (1986). The interpersonal structure of family interaction settings: Parent-adolescent relations in dyads and triads. *Developmental Psychology*, 22(3), 297-304.
- Glick, P.C. (1947). The family cycle. *American Sociological Review*, 12, 164-174.
- Gofen, A. (2009). Family capital: How first-generation higher education students break the intergenerational cycle. *Family Relations*, 58, 104-120.
- Goyette, K., & Xie, Y. (1999). Education expectations of Asian American youths: Determinants and ethnic differences. *Sociology of Education*, 72, 22-36.
- Grant, K.E., McCormick, A., Poindexter, L., Simpkins, T., Janda, C.M., Thomas,

- K.J., Campbell, A., Carleton, R., Taylor, J. (2005). Exposure to violence and parenting as mediators between poverty and psychological symptoms in urban African American adolescents. *Journal of adolescence*, 28, 504-527.
- Gravetter, F.J., & Forzano, L. (2006). *Research methods for the behavioural behavioural sciences*. Belmont, Calif.: Thomson Wadsworth.
- Green, R., Klevzon, M., & Vosler, N. (1985). The Beavers-Timberlawn Model of Family Functioning and the Circumplex Model of Family Functioning: Separate but equal? *Family Process*, 24, 385-398.
- Grolnick, W.S., & Slowiaczek, M.L. (1994). Parents' involvement in children's schooling: a multidimensional conceptualization and motivational model. *Child Development*, 65, 237-252.
- Grolnick, W., Benjet, C., Kurowski, C., & Apostoleris, N. (1997). Predictors of parent involvement in children's schooling. *Journal of Educational Psychology*, 89(3), 538-548.
- Gross, R. (2001). *Psychology: The Science of Mind and Behaviour*, 4th Ed. London: Hodder and Stoughton.
- Grotevant, H.D., & Cooper, C.R. (1986). Individuation in family relationships: A perspective on individual differences in the development of identity and role-taking skills in adolescence. *Human Development*, 29, 82-100.
- Grusec, J.E. (2002). Parental socialization and children's acquisition of values. In M.H. Bornstein (Ed.), *Handbook of Parenting, Vol. 5: Practical issues in parenting* (pp. 143-167). Lawrence Erlbaum Associates, Publishers.
- Guba, E.G. (Ed.). (1990). *The paradigm dialog*. Newbury Park, CA: Sage.
- Guion, K., Mrug, S., & Windle, M. (2009). Predictive value of informant discrepancies in reports of parenting: Relations to early adolescents' adjustment. *Journal of Abnormal Child Psychology*, 37, 17-30.
- Guo, G. (1998). The timing of the influences of cumulative poverty in children's cognitive ability and achievement. *Social Forces*, 77, 257-288.
- Hair, J.H., Anderson, R.E., Tatham, R.L., & Black, W.C. (2010). *Multivariate data analysis*. NJ: Prentice Hall.
- Halle, T., Kurtz-Costes, B., & Mahoney, J. (1997). Family influences on school achievement in low-income African American children. *Journal of Educational Psychology*, 89(3), 538-548.
- Hamid, P.N. (1994). Self-monitoring, locus of control, and social encounters of

- Chinese and New Zealand students. *Journal of Cross-cultural Psychology*, 25, 353-368.
- Hamilton V., & Warburton, J. (Eds.). (1979). *Human stress and cognition*. New York: Wiley.
- Hampson, R.B., Beavers, W.R., & Hulgus, Y.F. (1989). Insiders' and outsiders' views of family: The assessment of family competence and style. *Journal of Family Psychology*, 3, 118-136.
- Hango, D. (2007). Parental investment in childhood and educational qualifications: can greater parental involvement mediate the effects of socio-economic disadvantage? *Social Science Research*, 36(4), 1371-1390.
- Hao, L., & Bonstead-Bruns, M. (1998). Parent-child differences in educational expectations and the academic achievement of immigrant and native students. *Sociology of Education*, 71, 175-198.
- Haralambos, M, & Holborn, M. (1995). *Sociology: Themes and perspectives*. London: Collins educations.
- Harman, H.H. (1976). *Modern factor analysis*. Chicago: University of Chicago Press.
- Harrell, J.S., Bangdiwala, S.I., Deng, S., Webb, J.P., & Bradley, C. (1998). Smoking initiation in youth: the roles of gender, race, socioeconomic status, and developmental status. *Journal of Adolescence and Health*, 23, 271-79.
- Harvey, D.L. (1993). *Potter Addition: Poverty, family, and kinship in a heartland community*. New York: Viking.
- Hau, K.T., & Salili, F. (1996). Achievement goals and causal attributions of Chinese students. In S. Lau, (Ed.), *Growing up the Chinese way: Chinese child and adolescent development* (pp. 121-145). Hong Kong: The Chinese University Press.
- Haveman, R., & Wolfe, B. (1994). *Succeeding generations: On the effects of investment in children*. New York: Russell Sage.
- Haveman, R., & Wolfe, B. (1995). The determinants of children's attainments: A review of methods and findings. *Journal of Economic Literature*, 33(4), 1829-1878.
- Hayek, F.A. (1952). *The counter-revolution of science*. Illinois.
- Haynes, S.N., Richard, D.C.S., & Kubany, E.S. (1995). Content validity in psychological assessment: A functional approach of concepts and methods.

Psychological Assessment, 7(3), 238-247.

- Hertzman, C. (1999). The biological embedding of early experience and its effects on health in adulthood. In N.E. Adler, M. Marmot, B.S. McEwen, & J. Stewart (Eds.), *Socioeconomic status and health in industrial nations: Social, psychological, and biological pathways* (pp. 85-95). New York: The New York Academy of Sciences.
- Hess, R.D., Chang, C.M., & McDevitt, T.M. (1987). Cultural variations in family beliefs about children's performance in Mathematics: comparison about People's Republic of China, Chinese-American, and Caucasian-American families. *Journal of Educational Psychology*, 51(1), 179-188.
- Hines, P.M. (2005). The family life cycle of African American families in poverty. In B. Carter, & M. McGoldrick (Eds.), *The expanded family life cycle: Individual, family, and social perspectives* (pp. 327-345). Boston, MA: Allyn & Bacon.
- Hjelle, L.A., & Ziegler, D.J. (1986). *Personality theories: Basic assumptions, research, and applications*. Singapore: McGraw-Hill Inc.
- Ho, D.Y.F. (1986). Chinese patterns of socialization: A critical review. In M.H. Bond (Ed.), *The handbook of Chinese psychology* (pp. 1-37). Hong Kong: Oxford University Press.
- Ho, D.Y.F. (1987). Fatherhood in Chinese culture. In ME. Lamb (Ed.). *The father's role: Cross-cultural perspectives* (pp. 227-245). Hillsdale, N.J.: Erlbaum.
- Ho, D.Y.F. (1993). Relational orientation in Asian social psychology. In U. Kim, & J.W. Berry (Eds.), *Indigenous psychologies: Research and experience in cultural context* (pp. 240-259). Thousand Oaks, CA: Sage.
- Ho, D.Y.F. (1995). Selfhood and identity in Confucianism, Taoism, Buddhism, and Hinduism: contrasts with the West. *Journal for the Theory of Social Behaviour*, 25(2), 115-139.
- Ho, D.Y.F. (1996). Filial piety and its psychological consequences. In M.H. Bond (Ed.), *The handbook of Chinese psychology* (pp. 155-165). Hong Kong: Oxford University Press.
- Hoff, E., Laursen, B., & Tardif, T. (2002). In M.H. Bornstein, (Ed.), *Handbook of Parenting, Vol. 2: Biology and Ecology of Parenting* (pp. 231-252). Mahwah, N.J.: Lawrence Erlbaum Associates, Publishers.

- Hoffman, L.W. (2003). Methodological issues in studies of SES, parenting, and child development. In M.H. Bornstein, & R.H. Bradley (Eds.), *Socioeconomic status, parenting, and child development* (pp. 125-143). Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Holman, R. (1978). *Poverty: Explanations of social deprivation*. New York: St. Martin's Press.
- Hosley, C.A., & Montemayor, R. (1997). Fathers and adolescents. In M.E. Lamb (Ed.), *The Role of the Father in Child Development* (pp. 162-178). New York: John Wiley.
- Hsieh, Y.W., Shybut 1969; & Lotsof, E. (1969). Internal versus external control and ethnic group membership. *Journal of Consulting and Clinical Psychology*, 33, 122-124.
- Hsu, F.L.K. (1953). *Americans and Chinese: Two ways of life*. New York: Henry Schuman.
- Hull, C.L. (1943). *Principles of behaviour*. New York: Appleton-Century-Crofts.
- Hung, Y.Y. (1974). Socio-cultural environment and locus of control [in Chinese]. *Acta Psychologica Taiwanica*, 16, 187-198. Coded in M.H. Bond (Ed.). *The handbook of Chinese psychology* (p. 250). New York: Oxford University Press.
- Huston, A.C., Duncan, G.J., McLoyd, V.C., Crosby, D.A., Ripke, M.N., & Weisner, T.S. (2005). Impacts on children of a policy to promote employment and reduce poverty for low-income parents. New Hope after 5 years. *Developmental Psychology*, 41, 902-918.
- Ingoldsby, B.B., Smith, S.R., & Miller, J.E. (2004). *Exploring family theories*. Loss Angeles, CA: Roxbury Pub. Co.
- Jacobs, J. (Ed.) (1993). *Nebraska Symposium on motivation. Vol. 40*. Lincoln: University of Nebraska Press.
- James, W. (1890). *Principles of psychology (Vol. 1)*. New York: Holt.
- Jencks, C. & Mayer, S. (1990). The social consequences of growing up in a poor neighbourhood. In L. Lynn, & M. McGeary (Eds.), *Inner City Poverty in the United States* (pp. 111-186). Washington DC: National Academy Press.
- Jessor, R., Colby, A. & Shweder, R. (Eds.). (1996). *Essays on ethnography and human development*. Chicago: University of Chicago Press.
- Jimerson, S., Egeland, B., & Teo, A. (1999). A longitudinal study of achievement

- trajectories: factors associated with change, *Journal of educational Psychology*, 91(1), 116-126.
- Jordan, D.K. (1998). Filial piety in Taiwanese popular thought. In W.H. Slote & G.A. de Vos (Eds.), *Confucianism and the family* (pp. 267-283). New York: State University of New York Press.
- Judd, C.M., & Kennym D.A. (1981). Process analysis: estimating mediation in treatment evaluation. *Evaluation Review*, 5, 602-619.
- Kane, M.J. (Ed.). (2005). *Contemporary issues in parenting*. New York: Nova Science Publishers, Inc.
- Kane, T.J. (1987). Giving back control: Long-term poverty and motivation. *Social Service Review*, 63(3), 405-419.
- Kao, G., & Tienda, M. (1998). Educational aspirations of minority youth. *American Journal of Education*, 106, 349-384.
- Katz, M. (1989). *The undeserving poor: From the war on poverty to the war on welfare*. New York: Pantheon.
- Kellaghan, T., Slone, K., Alvarez, B., & Bloom, B.S. (1993). *The home environment and school learning: Promoting parental involvement in the education of children*. San Francisco, California: Jossey-Bass.
- Kenny, D.A., Kashy, D.A., & Bolger, N. (1998). Data analysis in social psychology. In D.Gilbert, S. Ficke, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 1, pp. 233-265). Boston, MA: McGraw-Hill.
- Kerr, M., & Stattin, H. (2000). What parents know, how they know it, and several forms of adolescent adjustment: Further support for a reinterpretation of monitoring. *Developmental Psychology*, 36, 366-380.
- Kim, H., Rendon, L., & Valadez, J. (1998). Student characteristics, school characteristics, and educational aspirations of six Asian American ethnic groups. *Journal of Multicultural Counseling and Development*, 26, 166-176.
- Kim, U., & Berry, J.W. (Eds.). (1993). *Indigenous psychologies: Research and experience in cultural context*. Thousand Oaks, CA: Sage.
- Kittay, E.F. (1998). Welfare, dependency, and a public ethic of care. *Social Justice*, 25(1), 123-145.
- Kluwer, E.S., Heesink, J.A.M., & Van de Vliert, E. (2000). The division of labor in close relationships: An asymmetrical conflict issue. *Personal Relationships*, 7, 293-282.

- Kohn, A. (1993). *Punished by rewards*. New York: Houghton Mifflin.
- Korenman, S., Miller, J.E., & Sjaastad, J.E. (1995). Long-term poverty and child development in the United States: Results from the NLSY. *Children and Youth Services Review*, 17, 127-155.
- Kraemer, H.C., Measelle, J.R., Ablow, J.C., Essex, M.J., Boyce, W.T., & Kupfer, D.J. (2003). A new approach to integrating data from multiple informants in psychiatric assessment and research: mixing and matching contexts and perspectives. *The American Journal of Psychiatry*, 160, 1566-1577.
- Kraemer, H.C., & Thiernann, S. (1987). *How many subjects? Statistical power analysis in research*. Newbury Park: Sage.
- Kroeber, A.L., & Kluckhohn. (1952). Culture: A critical review of concepts and definitions. *Papers of the Peabody Museum of American archeology and ethnology*, 47(1).
- Lahey, B.B., & Kazdin, A.E. (Eds.). (1985). *Advances in clinical child psychology*, Vol. 8. New York: Plenum.
- Lam, C.M. (2005). In search of the meaning of parent education in the Hong Kong-Chinese context. In M.J. Kane (Ed.), *Contemporary issues in parenting* (pp. 111-124). New York: Nova Science Publishers, Inc.
- Lam, C.M. (2011). Psychological stress and parenting behaviour among Chinese families: findings from a study on parent education for economic disadvantaged families. *Social Indicators Research*, 100, 451-462.
- Lam, C.M., Lam, M.C., Shek, D.T.L., & Tang, V.M.Y. (2004). Coping with economic disadvantage. A qualitative study of Chinese adolescents from low-income families. *International Journal of Adolescent Medicine and Health*, 16(4), 343-357.
- Lamb, M.E. (Ed.). (1987). *The father's role: Cross-cultural perspectives*. Hillsdale, N.J.: Erlbaum.
- Lamb, M.E. (Ed.). (1997). *The role of the father in child development* (3rd Ed.). New York: John Wiley.
- Lamb, M.E. (ed.). (1999). *Parenting and child development in "nontraditional" families*. Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers.
- Lamb, M.E. (Ed.) (2010). *The role of the father in child development* (5th Ed.). New York: John Wiley.
- Lamb, M.E., & Lewis, C. (2010). The development and significance of

- father-child relationships in two-parent families. In M.E. Lamb (Ed.), *The Role of the Father in Child Development* (5th Ed.) (pp. 94-153). New York: John Wiley.
- Lamborn, S.D., Mounts, N.S., Steinberg, L., & Dornbusch, S.M. (1991). Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*, 62, 1049-1065.
- Lao, R.C. (1977). Levenson's IPC (internal-external control) scale: A comparison of Chinese and American students. *Journal of Cross-Cultural Psychology*, 9, 113-124.
- Lareau, A. (2004). *Unequal childhoods: Class, race, and family life*. Berkeley: University of California Press.
- LaRossa, R., Bennett, L.A. & Gelles, R.J. (1981). Ethical dilemmas in qualitative family research. *Journal of Marriage and the Family*, 43, 303-313.
- LaRossa, R. & Reitzes, D.C. (1993). Symbolic interactionism and family studies. In P.G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, & S.K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp.135-163). New York: Plenum Press.
- Larson, R., & Richards, M.H. (1994). *Divergent realities: The emotional lives of mothers, fathers and adolescents*. New York: Basic Books.
- Larzelere, R.E., & Mulaik, S.A. (1977). Single-sample tests for many correlations. *Psychological Bulletin*, 84(3), 557-569.
- Lau, S. (Ed.). (1996). *Growing up the Chinese way --- Chinese child and adolescent development*. Hong Kong: The Chinese University Press.
- Lau, S., & Cheung, P.C. (1987). Relationships between Chinese adolescents' perception of parental control and organization and their perception of parental warmth. *Developmental Psychology*, 23, 726-729.
- Lau, S., Lew, W.J. F., Hau, K.T., Cheung, P.C., & Berndt, T.J. (1990). Relations among perceived parental control, warmth, indulgence, and family harmony of Chinese in mainland China. *Developmental Psychology*, 26, 674-677.
- Lau, S.K. (1981). Chinese familism in an urban industrial setting: The case of Hong Kong. *Journal of Marriage and the Family*, 43, 977-992.
- Lau, S.K. (1982). *Society and politics in Hong Kong*. Hong Kong: Chinese University Press.

- Lave, J. (1991). Situating learning in communities of practice. In L.S. Resnick, J.M. Levine, & C.D. Teasley (Eds.), *Perspectives on Socially Shared Cognition* (pp. 63-84). Washington DC: American Psychological Association.
- Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer Publishing Company.
- Leacock, E.B. (Ed.). (1971). *The culture of poverty: A critique*. New York: Simon & Schuster, Inc.
- Lee, R.P.L. (1985). *Social stress and coping behaviour in Hong Kong*. Academic Press, Inc.
- Lee, Y. (1987). *Academic success of East-Asian Americans: an ethnographic comparative study of East-Asian American and Anglo-American academic achievement*. Seoul. American Studies Institute, Seoul National University Press.
- Legge, J. (1966). *The four books: Confucian analects, the great learning, the doctrine of the mean, and the works of Mencius*. New York: Paragin Book Reprint Corp.
- Lerner, R.M., & Knapp, J.R. (1975). Actual and perceived intra-familial attitudes of late adolescents and their parents. *Journal of Youth and Adolescence*, 4, 17-36.
- Lerner, R.M., Petersen, A.C., & Brooks-Gunn, J. (Eds.). (1991). *Encyclopedia of adolescence*. New York: Garland.
- Lerner, R.M., & Spanier, G.B. (1980). *Adolescent development: A life-span perspective*. New York: McGraw-Hill.
- Lerner, R.M., & Steingberg, L. (Eds.). (2009). *Handbook of adolescent psychology, Vol. 2: Contextual influences on adolescent development*. Hoboken, N.J.: John Wiley & Sons, Inc.
- Leung, J.T.Y., & Shek, D.T.L. (2011a). "All I can do for my child" ---Development of the Chinese Parental Sacrifice for Child's Education Scale. *International Journal of Disability and Human Development*, 10(3), 201-208.
- Leung, J.T.Y., & Shek, D.T.L. (2011b). Expecting my child to become "Dragon" --- Development of the Chinese Parental Expectation on Child's Future Scale. *International Journal of Disability and Human Development*, 10(3), 257-265.
- Leung J.T.Y, & Shek, D.T.L. (2011c). Validation of the Chinese Parental Expectation on Child's Future Scale. *International Journal of Disability and*

- Human Development*, 10(3), 267-274.
- Leung J.T.Y., & Shek, D.T.L. (2011d). Validation of the Chinese Parental Sacrifice for Child's Education Scale. *International Journal of Disability and Human Development*, 10(3), 209-215.
- Leung, K. (1996). The roles of beliefs in Chinese culture. In M.H. Bond (Ed.), *The handbook of Chinese psychology* (pp. 247-262). Hong Kong: Oxford University Press.
- Lewis, O. (1968). The culture of poverty. In D.P. Moynihan (Ed.), *On understanding poverty: Perspectives from the social sciences* (pp.187-200). New York: Basic Books, Inc., Publishers.
- Li, J. (2004). Parental expectations of Chinese immigrants: a folk theory about children's school achievement. *Race Ethnicity and Education*, 7(2), 167-183.
- Lin, C.Y., & Fu, V. (1990). A comparison of child-rearing practices among Chinese, immigrant Chinese, and Caucasian-American parents. *Child Development*, 61, 429-433.
- Lincoln, Y.S., & Guba, E.G. (2000). Paradigmatic controversies, contradictions, and emerging confluences. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research* (pp.163-187). Sage Publications.
- Lindheim, R. & Syme, S.L. (1983). Environments, people and health. *Annual Reviews of Public Health*, 4, 335-359.
- Littlejohn, S.W. (1989). *Theories of human communication*. Balmont, CA: Wadsworth.
- Lofland, J. (1971). *Analyzing social settings*. Belmont, CA: Wadsworth.
- Loomis, C.P., & Hamilton, C.H. (1936). Family life cycle analysis. *Social Forces*, 15, 225-231.
- Lord, S.A. (1993). *Social welfare and the feminization of poverty*. New York: Garland Publishing, Inc.
- Luthar, S.S. (1997). Sociodemographic disadvantage and psychological adjustment: Perspectives from developmental psychopathology. In S.S. Luthar, J.A. Burack, D. Cicchetti, & J.R. Weisz (Eds.), *Developmental psychopathology* (pp. 459-585). New York: Cambridge University Press.
- Luthar, S.S. (2003). *Resilience and vulnerability: Adaptation in the context of childhood adversities*. Cambridge: Cambridge University Press.
- Luthar, S.S., Burack, J.A., Cicchetti, D., & Weisz, J.R. (Eds.). (1997).

- Developmental psychopathology*. New York: Cambridge University Press.
- Luthar, S.S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: a critical evaluation and guidelines for future work. *Child Development*, 71(3), 543-562.
- Maccoby, E.E., & Martin, J.A. (1983). Socialization in the context of the family: Parent-child interaction. In P.H. Mussen, (Series Ed.), & E.M. Hetherington, (Vol. Ed), *Handbook of child psychology, Vol. 4: Socialization, personality, and social development* (pp.1-100). New York: Wiley.
- MacPherson, S., & Chan, C.K. (1996). *Preliminary on the life-Styles of the low-income families in Sham Shui Po*. City University of Hong Kong.
- Magnuson, K.A., & Duncan, G.J. (2002). Parents in poverty. In M.H. Bornstein, (Ed.), *Handbook of Parenting, Vol. 4: Social Conditions and Applied Parenting* (pp. 95-121). Mahwah, N.J.: Lawrence Erlbaum Associates Publishers.
- Malone, T. W. (1981). Toward a theory of intrinsically motivating instruction. *Cognitive Science*, 4, 333-369.
- Manicas, P. (2007). The social sciences since World War II: the rise and fall of Scientism. In W. Outhwaite, & S.P. Turner, (Eds.), *The SAGE handbook of social science methodology* (pp. 7-31). London: SAGE.
- Mann, K. (1992). *The making of an English underclass*. Milton Keynes: Open University Press.
- Marcoulides, G.A., & Schumacker, R.E. (1996). *Advanced structural equation modeling: issues and techniques*. Mahwah, N.J.: Lawrence Erlbaum Associates Publishers.
- Masten, A.S., Best, K.M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*, 2, 425-444.
- Masten, A.S., & Coatsworth, J.D. (1998). The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *American Psychologist*, 53(7), 205-220.
- Masten A.S., & Garmezy, N. (1985). Risk, vulnerability, and protective factors in the developmental psychology. In B.B. Lahey, & A.E. Kazdin (Eds.), *Advances in clinical child psychology* (Vol. 8, pp.1-51). New York: Plenum.
- McBride-Chang, C. (1998). Adolescent-parent relations in Hong Kong: Parenting

- styles, emotional autonomy, and school achievement. *The Journal of Genetic Psychology*, 159(4), 421-436.
- McCreary, L.L., & Dancy, B. L. (2004). Dimensions of family functioning: perspectives of low-income African American single-parent families. *Journal of Marriage and Family*, 66, 690-701.
- McCubbin, H. I., Thompson, A.I., & McCubbin, M.A. (1996). *Family assessment: Resiliency, coping and adaptation, Inventories for research and practice*. , Madison, Wisconsin: University of Wisconsin Publishers.
- McCubbin, H.I., Thompson, E.A., Thompson, A.I. & Fromer, J.E. (Eds.). (1995). *Resiliency in ethnic minority families: Native and immigrant American families, Volume 1*. Madison, W.I.: University of Wisconsin System.
- McCubbin, H. I., Thompson, E.A., Thompson, A.I. & Fromer, J.E. (1998a). *Stress, coping, and health in families --- Sense of coherence and resiliency*. Thousand Oaks, Calif.: SAGE Publications.
- McCubbin, H. I., Thompson, E.A., Thompson, A.I., & Futrell, J.A. (1998b). *Resiliency in African-American families*. Thousand Oaks, Calif.: SAGE Publications.
- McGuire, W.J. (1969). Suspiciousness of experimenter's intent. In R. Rosenthal, & R.L. Rosnow, (Ed.), *Artifact in behaviourbehavioural research*. New York: Academic Press.
- McKinney, C. & Renk, K. (2008). Differential parenting between mothers and fathers: Implications for late adolescents. *Journal of Family Issues*, 29(6), 806-827.
- McLeod, J. (1987). *Ain't no makin' it: Aspirations and attainment in a low-income neighbourhood*. Boulder, CO: Westview Press.
- McLeod, J.D., & Shanahan, M.J. (1996). Trajectories of poverty and children's mental health. *Journal of Health and Social Behaviour*, 37, 207-220.
- McLoyd, V.C. (1998a). Children in poverty: Development, public policy and practice. In W. Dams, I.E. Sigel, & K.A. Renninger (Eds.), *Handbook of child psychology, Vol. 4: Child psychology in practice* (pp. 138-208). N.Y.: John Wiley & Sons Inc.
- McLoyd, V.C. (1998b). Socioeconomic disadvantage and child development. *American Psychologist*, 53(2), 185-204.
- McLoyd, V.C., Kaplan, R., Purtell, K.M., Bagley, E., Hardaway, C.R., & Smalls,

- C. (2009). Poverty and socioeconomic disadvantage in adolescence. In R.M. Lerner, & L. Steingberg (Eds.). *Handbook of adolescent psychology, Vol. 2: Contextual influences on adolescent development* (pp. 444-491). Hoboken, N.J.: John Wiley & Sons, Inc.
- Mead, G.H. (1934). *Mind, self and society*. Chicago: University of Chicago.
- Mehryar, A. H. (1984). The role of psychology in national development: Wishful thinking and reality. *International Journal of Psychology, 19*, 59-67.
- Mickelson, R.A. (1990). The attitude-achievement paradox among Black adolescents. *Sociology of Education, 63*, 44-61.
- Miles, M.B., & Huberman, A.M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.
- Minuchin, P. (1985). Families and individual development: Provocations from the field of family therapy. *Child Development, 56*, 289-302.
- Minuchin, S. (1974). *Families and family therapy*. Cambridge, MA: Harvard University Press.
- Mistry, R.S., Vandewater, E.A., Huston, A.C., & McLoyd, V.C. (2002). Economic well-being and children's social adjustment: the role of family process in an ethnically diverse low-income sample. *Child Development, 73*, 935-951.
- Mok, M.M.C., Moore, P.J., Chan, L.K.S., Lai, P.Y., Au, W.K., & Lau, N.W.J. (2002, January). The development and norming of performance indicators in the social and affective domain for secondary and primary students. *Paper presented at the International Congress on School Effectiveness and Improvement, Denmark*.
- Montemayor, R., & Flannery, D.J. (1991). Parent-adolescent relations in middle and late adolescence. In R.M. Lerner, A.C. Petersen, & J. Brooks-Gunn (Eds.), *Encyclopedia of adolescence* (pp. 729-734). New York: Garland.
- Morris, P.A., Huston, A.C., Duncan, G.J., Corsby, D.A. & Bos, J.M. (2001). *How welfare and work policies affect children: A synthesis of research*. New York: MDRC.
- Mussen, P.H. (Series Ed.) & Hetherington, E.M. (Vol. Ed). (1983). *Handbook of child psychology: Vol. 4, Socialization, personality, and social development*. New York: Wiley.
- National Association of Social Workers. (2012). *Code of Ethics: Preamble*.

Retrieved February 24, 2012 from <http://socialworkers.org/pubs/code/code.asp>

- Newton, R.R., & Rudestam, K.E. (1999). *Your statistical consultant: answers to your data analysis questions*. Thousand Oaks, Calif.: Sage Publications.
- Nichols, W.C. (Ed). (2000). *Handbook of family development and intervention*. New York: Wiley.
- Niemi, R.G. (1974). *How family members perceive each other: Political and social attitudes in two generations*. New Haven, CT: Yale University Press.
- Nivison, D.S. (1996). *The ways of Confucianism: Investigations in Chinese philosophy*. Chicago: Open Court.
- Noller, P., & Callan, V.J. (1986). Adolescent and parent perceptions of family cohesion and adaptability. *Journal of Adolescence*, 9, 97-106.
- Noller, P., & Callan, V.J. (1990). Adolescent perceptions of the nature of communication with parents. *Journal of Youth and Adolescence*, 15(2), 101-114.
- Nurmi, J.E. (1991). How do adolescents see their future? A review of the development of future orientation and planning. *Developmental Review*, 11, 1-59.
- Ohannessian, C.M., Lerner, R.M., Lerner, J.V., & von Eye, A. (1995). Discrepancies in adolescents' and parents' perceptions of family functioning and adolescent emotional adjustment. *The Journal of Early Adolescence*, 15(4), 490-516.
- Ohannessian, C.M., Lerner, R.M., Lerner, J.V., & von Eye, A. (2000). Adolescent-parent discrepancies in perceptions of family functioning and early adolescent self-competence. *International Journal of Behavioural Development*, 24(3), 362-372.
- Olds, D., & Kitzman, H. (1990). Can home visitation improve the health of women and children at environmental risk? *Pediatrics*, 86, 108-116.
- Olds, D., & Kitzman, H. (1993). Review of research on home visiting for pregnant women and parents of young children. *The Future of Children*, 3, 53-92.
- Olson, D. H., & Gorall, D.M. (2003). Circumplex Model of Marital and Family Systems. In F. Walsh (Ed.), *Normal family processes: Growing diversity and complexity* (pp. 514-544). New York: Guilford.

- Olson, D.H., McCubbin, H.I., Larsen, A.S., Muxen, M.J., & Wilson, M.A. (1983). *Families: What makes them work*. Thousand Oaks, CA: Sage.
- Olson, D.H., Russell, C.S., & Sprenkle, D.H. (1989). *Circumplex Model: Systemic assessment and treatment of families*. New York: Haworth Press.
- Orthner, D.K., Jones-Sanpei, H., & Williamson, S. (2004). The resilience and strengths of low-income families. *Family Relations*, 53, 159-168.
- O'Sullivan, J. & Howe, M. (1996). Causal attributions and reading achievement: individual differences in low income families. *Contemporary Educational Psychology*, 21(4), 363-387.
- Outhwaite, W. (1987). *New philosophies of social science: Realism, hermeneutics and critical theory*. Basingstoke (England): Macmillan Press.
- Outhwaite, W., & Turner, S.P. (Eds.). (2007). *The SAGE handbook of social science methodology*. London: SAGE.
- Oxfam Hong Kong, & Policy 21. (August 2011). *Survey on Impact of Soaring Food Price on Poor Families in Hong Kong*. [Electronic version]. Retrieved August 22, 2011 from http://www.oxfam.org.hk/filemgr/1630/FoodSurveyReportAug2011_revised.pdf.
- Padmawidjaja, I.A., & Chao, R.K. (2010). Parental beliefs and their relation to the parental practices of immigrant Chinese Americans and European Americans. In S.T. Russell, L.J. Crockett, & R.K. Chao (Eds.), *Asian American parenting and parent-adolescent relationships* (pp.37-60). New York: Springer Science and Business Media.
- Paikoff, R.L., Carlton-Ford, S., & Brooks-Gunn, J. (1993). Mother-daughter dyads view the family: Associations between divergent perceptions and daughter well-being. *Journal of Youth and Adolescence*, 22, 473-492.
- Pareek, U. (2002). Poverty and motivation: Figure and ground. In A.K. Dalal & G. Misra (Ed.), *New directions in Indian psychology: Social psychology* (Vol. 1, pp. 262-279). New Dalhi: Sage Publications.
- Park, C., & Dudycha, A. (1974). A cross-validation approach to sample size determination for regression model. *Journal of the American Statistical Association*, 69, 214-218.
- Parke, R.D., & Buriel, R. (1998). Socialization in the family: Ethnic and ecological perspectives. In W. Damon, & N. Eisenberg. (Eds.), *Handbook of child Psychology, Vol. 3: Social, emotional and personality development*

- (pp.463-552). N.Y.: John Wiley & Sons Inc.
- Parke, R.D., Coltrane, S., Duffy, S., Buriel, R., Dennis, J., Powers, J., French, S., & Widaman, K. F. (2004). Economic stress, parenting, and child adjustment in Mexican American and European American families. *Child Development*, 75, 1632-1656.
- Parrish, M. (2010). *Social work perspectives on human behaviour*. Berkshire: Open University Press.
- Parsons, T. (1937). *The Structure of social action*. New York: McGraw-Hill.
- Parsons, T. (1951). *The social system*. Glencoe, Ill.: Free Press.
- Parsons, T., & Bales, R. (1955). *Family, socialization and interaction process*. Glencoe, IL: Free Press.
- Patterson, J.M. (2002). Understanding family resilience. *Journal of Clinical Psychology*, 58, 233-246.
- Patton, M.Q. (1990). *Qualitative evaluation and research methods*. Thousand Oaks, CA: Sage Publications, Inc.
- Patton, M.Q. (2002). *Qualitative research & evaluation methods*. Thousand Oaks, CA: Sage, 2002.
- Paulson, S.E., & Sputa, C.L. (1996). Patterns of parenting during adolescence: Perception of adolescents and parents. *Adolescence*, 31(12), 369-381.
- Pelie, C. (1988, March). Research paradigms in social work: from stalemate to creative synthesis. *Social Service Review*, 1-19.
- Pelton, J., Steele, R.G., Chance, M.W., & Forehand, R. (2001). Discrepancy between mother and child perceptions of their relationship: II. Consequences for children considered within the context of maternal physical illness. *Journal of Family Violence*, 16, 17-35.
- Peng, S.S., & Wright, D. (1994). Explanation of academic achievement of Asian American students. *Journal of Educational Research*, 87, 346-352.
- Philips, D.C. (1990). Postpositivistic science: Myths and realities. In E.G. Guba (Ed.), *The paradigm dialog* (pp.31-45). Newbury Park, CA: Sage.
- Phillips, M.R., West, C.L., Shen, Q., & Zheng, Y.P. (1998). Comparison of schizophrenic patients' families and normal families in China, using Chinese version of FACES-II and the Family Environment Scales, *Family Process*, 37, 95-106.
- Phillipson, S. (2006). Cultural variability in parent and child achievement

- attributions: a study in Hong Kong. *Educational Psychology*, 26(5), 625-642.
- Phinney, J.S. (1992). The multigroup ethnic identity measure: A new scale for use with diverse groups. *Journal of Adolescent Research*, 7, 156-176.
- Pittman, J.F. (1993). Functionalism may be down, but it surely is not out. In P.G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, & S.K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp.218-221). New York: Plenum Press.
- Popper, K.R. (1952). *The open society and its enemies*. London: Routledge & Kegan Paul Ltd.
- Preacher, K.J., & Hayes, A.F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behaviour Research Methods, Instruments, & Computers*, 36(4), 717-731.
- Preacher, K.J., & Leonardelli, G.J. (2010 March). *Calculation for the Sobel test: An interactive calculation tool for mediation tests*. [Electronic version]. Retrieved August 27, 2011 from www.quantpsy.org/sobel/sobel.htm.
- Presser, H.B. (1994). Employment schedules among dual-career spouses and the division of household labour by gender. *American Sociological Review*, 59, 348-364.
- Quatman, T. (1997). High functioning families: Developing a prototype. *Family Therapy*, 24, 143-165.
- Rank, M.R. (1994). *Living on the edge: The realities of welfare in America*. New York: Colombia University Press.
- Rank, M.R. (2000). Socialization of socioeconomic status. In W.C. Nichols (Ed), *Handbook of family development and intervention* (pp. 129-142). New York: Wiley.
- Rank, M.R., & Cheng, L.C. (1995). Welfare use across generations: How important are the ties that bind? *Journal of Marriage and the Family*, 57, 673-684.
- Ravallion, M, Chen S., & Sangraula, P. (2009) Dollar a day. *The World Bank Economic Review*, 23(2), pp. 163-184.
- Raymondo, J.C. (1999). *Statistical analysis in the behaviourbehavioural sciences*. McGraw-Hill College.
- Redding, S.G (1990). *The spirit of Chinese Capitalism*. New York: de Gruyter.
- Reiss, D. (1981). *The family's construction of reality*. Cambridge, M.A: Harvard

University Press.

- Research and Library Services Division, the Legislative Council Secretariat, (September, 1996). *Income and expenditure patterns of low income households in Hong Kong*. [Electronic version]. Retrieved February 25, 2012 from <http://www.legco.gov.hk/yr97-98/english/sec/library/956rp20.pdf>
- Resnick, L.S., Levine, J.M., & Teasley, C.D. (Eds.). (1991). *Perspectives on socially shared cognition*. Washington DC: American Psychological Association.
- Reynolds, E.K., MacPherson, L., Matusiewicz, A.K., Schreiber, W.M., & Lejuez, C.W. (2011). Discrepancy between mother and child reports of parental knowledge and the relation to risk behaviour engagement. *Journal of Clinical Child & Adolescent Psychology*, 40(1), 67-79.
- Ripke, M.N., & Huston, A.C. (2006). Poverty: consequences for children. In L. Balter, & C.S. Tamis-LeMonda (Eds.), *Child psychology: A handbook of contemporary issues* (pp. 521-544). New York: Taylor & Francis Group, LLC.
- Rist, R. (1970). Students social class and teacher expectations: the self-fulfilling prophecy in ghetto education. *Harvard Educational Review*, 40, 411-451.
- Ritzer, G. (1992). *Sociological theory*. New York: McGraw-Hill.
- Rodgers, R.H., & White, J.M. (1993). Family development theory. In P.G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, & S.K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp.225-254). New York: Plenum Press.
- Rolf, J., Masten, A.S., Cicchetti, D., Nuechterlein, K.H., & Weintraub, S. (Eds.). (1990). *Risk and protective factors in the development of psychopathology*. UK: Cambridge University Press.
- Rosenberg, M. (1979). *Conceiving the self*. New York: Basic Books.
- Rosenberg, M., & Pearlin, L. (1978). Social class and self-esteem among children and adults. *American Journal of Sociology*, 84, 53-77.
- Rosenblatt, P.C, & Fischer, L.R. (1993). Qualitative family research. In: P.G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, S.K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp.167-177). New York: Plenum Press.
- Rotter, J.B. (1966). Generalized expectancies for internal versus external control

- of reinforcement. *Psychological Monographs*, 80, 1-28.
- Rowntree, S. (1901). *Poverty: A study in town life*. London: Macmillan.
- Ruben, B.D., & Kim, J.Y. (1975). *General systems theory and human communication*. Rochelle Park, NJ: Hayden.
- Rubin, A., & Babbie, E.R. (2008). *Research methods for social work*. Belmont, Calif.: Thomson Brooks/Cole.
- Rubin, L.B. (1976). *Worlds of pain: Life in the working-class family*. New York: Basic Books.
- Rubio, D.M., Berg-Weger, M., Tebb, S.S., Lee, E.S., & Rauch, S. (2003). Objectifying content validity: Conducting a content validity in social work research. *Social Work Research*, 27(2), 94-104.
- Russell, A., Aloa, V., Feder, T., Glover, A., Miller, H., & Palmer, G. (1998). Sex-based differences in parenting styles in a sample with preschool children. *Australian Journal of Psychology*, 50, 89-99.
- Russell, G., & Russell, A. (1987). Mother-child and father-child relationships in middle childhood. *Child Development*, 58, 1573-1585.
- Russell, S. T., Crockett, L. J., & Chao, R. K. (Eds.). (2010). *Asian American Parenting and Parent-adolescent Relationships*. New York: Springer Science and Business Media.
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *British Journal of Psychiatry*, 147, 589-611.
- Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J. Rolf, A.S. Masten, D. Cicchetti, K.H. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp.181-214). UK: Cambridge University Press.
- Sackett, D.L., Richardson, W.S., Rosenberg, W., & Haynes, R.B. (1997). *Evidence-based medicine: How to practice and teach EBM*. New York: Churchill Livingstone.
- Saleebey, D. (1992). *The strengths perspective in social work practice*. New York: Longman Publishing Groups.
- Sampson, R. J., & Laub, J.H. (1994). Urban poverty and the family context of delinquency: a new look at structure and process in a classic study. *Child Development*, 65, 523-540.
- Sarantakos, S. (2005). *Social research*. Basingstoke: Palgrave Macmillan.

- Sarbin, T.R. (1970). The culture of poverty, social identity, and cognitive outcomes. In Allen, V.L. (Ed.), *Psychological factors in poverty* (pp. 29-46). Academic Press, Inc.
- Schiller, B.R. (1989) in Cheng, L. & Page-Adams, D. (1995). *Education, Assets, and Intergenerational Wellbeing: The Case of Female Headed Families. Working Paper (No. 96-3)*. St. Louis, MO: Washington University.
- Schneider, S.K., & Jacoby, W.G. (2003). A culture of dependence? The relationship between public assistance and public opinion. *British Journal of Political Science*, 33, 213-231.
- Schlee, B.M., Mullis, A.K., & Shriner, M. (2009). Parents social and resource capital: predictors of academic achievement during early childhood. *Children and Youth Services Review*, 31, 227-234.
- Schmitt, N. (1996). Uses and abuses of Coefficient Alpha. *Psychological Assessment*, 8(4), 350-353.
- Schoon, I., Parson, S., & Sacker, A. (2004). Socioeconomic adversity, educational resilience, and subsequent levels of adult adaptation. *Journal of Adolescent Research*, 19(4), 383-404.
- Schwandt, T.A. (1994). Constructivist, interpretivist approaches to human inquiry. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 118-137). Thousand Oaks, Calif.: SAGE Publications.
- Seccombe, K. (2002). 'Beating the odds' versus 'changing the odds': Poverty, resilience, and family policy. *Journal of Marriage and Family*, 64, 384-395.
- Seiginer, R. (1983). Parent's educational expectations and children's academic achievement: a literature review. *Merrill-Palmer Quarterly*, 29, 1-23.
- Shek, D.T. L. (1992). Meaning in life and psychological well-being: an empirical study using the Chinese version of the Purpose in Life Questionnaire. *Journal of Genetic Psychology*, 153, 185-200.
- Shek, D.T. L. (1993). Measurement of pessimism in Chinese adolescents: The Chinese Hopelessness Scale. *Social Behaviour and Personality*, 21, 107-119.
- Shek, D.T.L. (1995a). Chinese adolescents' perceptions of parenting styles of fathers and mothers. *Journal of Genetic Psychology*, 156(2), 175-190.
- Shek, D.T.L. (1995b). The relation of family environment to adolescent psychological well-being, school adjustment, and problem behaviour: what can we learn from the Chinese culture? *International Journal of Adolescent*

- Medicine and Health*, 8(3), 199-218.
- Shek, D.T. L. (1997). The relation of parent-adolescent conflict to adolescent psychological well-being, school adjustment, and problem behaviour. *Social Behaviour and Personality*, 25, 277-290.
- Shek, D.T.L. (1998a). A longitudinal study of the relationship between family functioning and adolescent psychological well-being. *Journal of Youth Studies*, 1(2), 1998.
- Shek, D.T.L. (1998b). A longitudinal study of the relations between parent-adolescent conflict and adolescent psychological well-being. *Journal of Genetic Psychology*, 159, 53 – 67.
- Shek, D.T.L. (1998c). Adolescents' perceptions of paternal and maternal parenting styles in a Chinese context. *Journal of Psychology*, 132(5), 527-537.
- Shek, D.T. L. (1998d). Linking between marital quality and parent-child relationships: A longitudinal study in the Chinese culture. *Journal of Family Issues*, 19, 687-704.
- Shek, D.T.L. (1998e). The Chinese version of the Self-Report Family Inventory: Does culture make a difference? *Research on Social Work Practice*, 8(3), 315-329.
- Shek, D.T.L. (1999a). Assessment of global parenting style and specific parenting behaviour in a Chinese context. *Psychologia*, 42, 69-79.
- Shek, D.T. L. (1999b). Parenting characteristics and adolescent psychological well-being: A longitudinal study in a Chinese context. *Genetic, Social, and General Psychology Monographs*, 125, 27-44.
- Shek, D.T.L. (1999c). Paternal and maternal influences on the psychological well-being of Chinese adolescents. *Genetic, Social, and General Psychology Monographs*, 125(3), 269-296.
- Shek, D.T.L. (1999d). Perception of family functioning among Chinese parents and their adolescent children. *American Journal of Family Therapy*, 27, 304-314.
- Shek, D.T.L. (2000). Parental marital quality and well-being, parent-child relational quality, and Chinese adolescent adjustment. *American Journal of Family Therapy*, 28, 147-162.
- Shek, D.T. L. (2001a). Psychometric properties of the Chinese version of the

- Self-Report Family Inventory: Findings based on a longitudinal study. *Research on Social Work Practice*, 11, 485-502.
- Shek, D.T. L. (2001b). Reliability and factor structure of the Chinese version of the Self-Report Family Inventory in Chinese adolescent. *Journal of Clinical Psychology*, 57, 375-385.
- Shek, D. T. L. (2002a). Assessment of family functioning Chinese adolescents: The Chinese Family Assessment Instrument. In N. N. Singh, T. Ollen-dick, & A. N. Singh (Eds.), *International perspectives on child and adolescent Mental Health* (pp. 297-316). Amsterdam, Netherlands: Elsevier.
- Shek, D.T.L. (2002b). Family functioning and psychological well-being, school adjustment, and problem behaviour in Chinese adolescents with and without economic disadvantage. *The Journal of Genetic Psychology*, 163(4), 497-502.
- Shek, D.T.L. (2002c). Parenting characteristics and parent-adolescent conflict: A longitudinal study in the Chinese culture. *Journal of Family Issues*, 23(2), 189-208.
- Shek, D.T.L. (2002d). Special issue on "Research on social work practice in Chinese communities": Guest editors' forward. *Research on Social Work Practice*, 12(4), 485-489.
- Shek, D.T.L. (2002e). The relation of parental qualities to psychological well-being, school adjustment and problem behaviour in Chinese adolescents with economic disadvantage. *American Journal of Family Therapy*, 30, 215-230.
- Shek, D.T.L. (2003a). A longitudinal study of parenting and psychosocial adjustment among Chinese adolescents experiencing economic disadvantage. *International Journal of Adolescent Medicine and Health*, 15, 39-49.
- Shek, D. T. L. (2003b). Family functioning and psychological well-being, school adjustment, and substance abuse in Chinese adolescents: Are findings based on multiple studies consistent? In S. P. Shohov (Ed.), *Advances in psychology research* (Vol. 20, pp. 163-184). New York: Nova Science Publishers.
- Shek, D.T.L. (2004a). Beliefs about the causes of poverty in parents and adolescents experiencing economic disadvantage in Hong Kong. *The Journal of Genetic Psychology*, 165(3), 272-291.

- Shek, D.T.L. (2004b). Chinese cultural beliefs about adversity: its relationship to psychological well-being, school adjustment and problem behaviour in Hong Kong adolescents with and without economic disadvantage. *Childhood, 11*, 63-80.
- Shek D.T. L. (2005a). A longitudinal study of Chinese cultural beliefs about adversity, psychological well-being, delinquency and substance abuse in Chinese adolescents with economic disadvantage. *Social Indicators Research, 71*, 385-409.
- Shek, D.T. L. (2005b). A longitudinal study of perceived family functioning and adolescent adjustment in Chinese adolescents with economic disadvantage. *Journal of Family Issues, 26*(4), 518-543.
- Shek, D.T.L. (2005c). Economic stress, emotional quality of life and problem behaviour in Chinese adolescents with and without economic disadvantage. *Social Indicator Research, 71*, 363-383.
- Shek, D.T.L. (2005d). Parental and Maternal Influences on the Psychological Well-being, Substance Abuse, and Delinquency of Chinese Adolescents Experiencing Economic Disadvantage. *Journal of Clinical Psychology, 61*(3), 219-234.
- Shek, D.T. L. (2005e). Perceived parental control processes, parent-child relational qualities, and psychological well-being in Chinese adolescents with and without economic disadvantages. *The Journal of Genetic Psychology, 166*(2), 171-188.
- Shek, D.T.L. (2006a). Chinese family research: Puzzles, progress, paradigms, and policy implications. *Journal of Family Issues, 27*(3), 275-284.
- Shek D.T. L. (2006b). Perceived parental behaviourbehavioural control and psychological control in Chinese adolescents in Hong Kong. *American Journal of Family Therapy, 34*, 163-176.
- Shek, D.T. L. (2007a). A longitudinal study of perceived differences in parental control and parent-child relational qualities in Chinese adolescents in Hong Kong. *Journal of Adolescent Research, 22*, 156-188.
- Shek, D.T.L. (2007b). A longitudinal study of perceived parental psychological control and psychological well-being in Chinese adolescents in Hong Kong. *Journal of Clinical Psychology, 63*(1), 1-22.
- Shek, D.T. L. (2007c). Family life quality and emotional quality of life in

- Chinese adolescents with and without economic disadvantage. *Social Indicators Research*, 80, 393-410.
- Shek D.T. L. (2007d). Perceived parental control based on indigenous Chinese parental concepts in adolescents in Hong Kong. *The American Journal of Family Therapy*, 35, 123-137.
- Shek, D.T. L. (2008a). Economic disadvantage, perceived family life quality and emotional well-being in Chinese adolescents: A longitudinal studies. *Social Indicators Research*, 85, 169-189.
- Shek, D.T. L. (2008b). Perceived parental control and parent-child relational qualities in early adolescents in Hong Kong: Parent gender, child gender and grade differences. *Sex Roles*, 58, 666-681.
- Shek D.T.L. (2010). Quality of life of Chinese people in a changing world. *Social Indicators Research*, 95, 357-61.
- Shek, D.T.L., Lee, T.Y., Ngai, N.P., Law, W.O., & Chan, L.K. (1995). Assessment of perceived parenting styles, parenting characteristics, and family functioning in Chinese adolescents in Hong Kong. *Hong Kong Journal of Social Work*, 29, 74-76.
- Shek, D.T.L., & Chan, L.K. (1998). Perceptions of the happy family in a Chinese context. *Journal of Youth Studies*, 1, 178-189.
- Shek, D.T.L., & Chan, L.K. (1999). Hong Kong Chinese parents' perceptions of the ideal child. *The Journal of Psychology*, 133(3), 291-302.
- Shek, D.T. L., & Lai, Y.C. (2001). The Chinese version of the Self-Report Family Inventory: Reliability and validity. *American Journal of Family Therapy*, 29, 207-220.
- Shek. D.T.L., Lam, C.M., Lam, M.C., Tsoi, K.W., & Tsang, S.K.M. (2000). Growing up poor: Why adolescents with economic disadvantage succeed or fail. *Hong Kong Journal of Social Work*, 34(1& 2), 105-108.
- Shek, D.T. L., Lam, M.C., & Lam, C. M. (2004). Perceptions of present, ideal, and future lives among Chinese adolescents experiencing economic disadvantage. *Adolescence*, 39, 779-792.
- Shek, D.T. L., Lam, M.C., & Tsoi, K.W. (2004). Evidence-based practice in Hong Kong. In B. Thyer and M.A.F. Kazi (Eds.), *International perspectives on evidence-based practice in social work* (pp. 167-181). London: Venture Press.

- Shek, D.T.L., Lee, T.Y., & Chow, J.T.W. (2006). Perceived parental behaviourbehavioural control, psychological control and parent-child relational qualities in Chinese adolescents in Hong Kong. *Journal of Youth Studies*, 9, 138-155. [in Chinese].
- Shek, D.T.L., & Ma, C.M.S. (2010). The Chinese Family Assessment Instrument (C-FAI): Hierarchical confirmatory factor analyses and factorial invariance. *Research on Social Work Practice*, 20, 112-123.
- Shek, D.T.L., Siu, A.M.H., & Lee, T.Y. (2007). The Chinese Positive Youth Development Scale: A validation study. *Research on social Work Practice*, 17, 380-391.
- Shek, D.T.L., & Tang, V. (2003). Violent behaviour in Chinese adolescents with an economic disadvantage: Psychological, family and interpersonal correlates. *International Journal of Adolescent Medicine and Health*, 15(3), 219-233.
- Shek, D.T. L., Tang, V., Lam, C.M., Lam, M. C., Tsoi, K.W., & Tsang, K.M. (2003). The relationship between Chinese cultural beliefs about adversity and psychological adjustment in Chinese families with economic disadvantages. *The American Journal of Family Therapy*, 31, 427-443.
- Sherraden, M. (1991). *Assets and the poor: A new American welfare policy*. New York: M.E. Sharpe, Inc.
- Shiang, J, Kjellander, C., Huang, K., & Bogumill, S. (1998). Developing cultural competency in clinical practice: Treatment considerations for Chinese cultural groups in the United States. *Clinical Psychology: Science and Practice*, 5, 182-210.
- Shulman, S., & Collins, W.A. (Eds.). (1993). *Father-adolescent relationships*. San Francisco: Jossey-Bass.
- Shulman, S., & Klein, M.M. (1993). Distinctive role of the father in adolescent separation-individuation. In S. Shulman, & W.A. Collins (Eds.). *Father-adolescent relationships* (pp. 41-58). San Francisco: Jossey-Bass.
- Shweder, R.A., Goodnow, J., Levine, G.A., Markus, H. & Miller, P. (1998). The culture if psychology of development: one mind, many mentalities. In W. Damon, & R.M. Lerner (Eds.), *Handbook of child psychology, Vol. 1: Theoretical models of human development* (pp. 865-937). New York: Wiley.
- Sigel I.E. (1985a). A conceptual analysis of beliefs. In: I.E. Sigel (Ed.). *Parental belief systems: The psychological consequences for children* (pp. 345-71).

- Hillsdale, NJ: Lawrence Erlbaum Associates.
- Sigel, I.E. (Ed.). (1985b). *Parental belief systems: The psychological consequences for children*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Sigel, I.E., & McGillicuddy-De Lisi, A.V. (2002). Parent beliefs are cognitions: the dynamic belief systems model. In M.H. Bornstein (Ed.). *Handbook of parenting, Vol. 2: Biology and ecology of parenting* (pp. 485-508). Lawrence Erlbaum Associates, Publishers.
- Silverstein, L.B., & Auerbach, C.F. (1999). Deconstructing the essential father. *American Psychologist*, 54, 397-407.
- Singleton, R.A., Jr., Straits, B.C., & Straits, M.M. (1993). *Approaches to social research*. New York: Oxford University Press.
- Siu, A. M. H., & Shek, D. T. L. (2005a). Psychometric properties of the Chinese Family Assessment Instrument in Chinese adolescents in Hong Kong. *Adolescence*, 40, 817-830.
- Siu, A.M.H., & Shek, D.T.L. (2005b). The Chinese version of the Social Problem-solving Inventory: some initial results on reliability and validity. *Journal of Clinical Psychology*, 61, 347-360.
- Skinner, B.F. (1953). *Science and human behaviour*. New York: Macmillan.
- Skinner, B.F. (1974). *About behaviourism*. New York: Knopf.
- Slaughter-Defoe, D., Nakagawa, K., Takanishi, R., & Johnson, D. (1990). Toward cultural / ecological perspectives on schooling and achievement in African- and Asian-American children. *Child Development*, 61, 363-383.
- Slote, W.H., & De Vos, G.A. (1998). *Confucianism and the family*. New York: State University of New York Press.
- Smeeding, T., Rainwater, L., & Burtles, G. (2001) United States Poverty in a Cross-National Context. *Center for Policy Research. Paper 151*. Retrieved February 28, 2012 from <http://surface.syr.edu/cpr/151/>
- Smetana, J.G., Abernethy, A., & Harris, A. (2000). Adolescent-parent interactions in middle-class African American Families: Longitudinal change and contextual variations. *Journal of family Psychology*, 14(3), 458-474.
- Smith, C., & Carlson, B.E. (1997). Stress, coping, and resilience in children and youth. *Social Service Review*, 71(2), 231-256.
- Smith, J. R., Brooks-Gunn, J., & Klebanov, P.K. (1997). The consequences of living in poverty for young children's cognitive and verbal ability and early

- school achievement. In G.J. Duncan, & J. Brooks-Gunn (Eds.), *Consequences of growing up poor* (pp. 132-189). New York: Russell Sage.
- Smokowski, P.R., Reynolds, A.J., & Bezuckzo, N. (1990). Resilience and protective factors in adolescence: An auto-biographical perspective from disadvantaged youth. *Journal of School Psychology, 37*, 425-448.
- Social Welfare Advisory Committee. (July, 2011). *Report on Long-term Social Welfare Planning in Hong Kong* [Electronic version]. Retrieved August 20, 2011 from [http://www.swac.org.hk/documents/SWAC_consultation_report_\(Eng\).pdf](http://www.swac.org.hk/documents/SWAC_consultation_report_(Eng).pdf).
- Social Welfare Department (1998). *Report on Review of the Comprehensive Social Security Assistance Scheme* [Electronic version]. Retrieved December 18, 2009 from http://www.swd.gov.hk/doc/pubctn_en/sfsr.doc.
- Spence, G.J. (1993). Gender-related traits and gender ideology: Evidence for a multifactor theory. *Journal of Personality and Social Psychology, 64*, 624-635.
- Spencer, H. (1880). *First principles*. New York: A.C. Burt.
- Spera, C. (2005). A review of the relationship among parenting practices, parenting styles, and adolescent school achievement. *Educational Psychological Review, 17*(2), 125-146.
- Spera, C., Wentzel, K.R., & Matto, H.C. (2009). Parental Aspirations for Their Children's Educational Attainment: Relations to Ethnicity, Parental Education, Children's Academic Performance, and Parental Perceptions of School Climate. *Journal of Youth and Adolescence, 38*(8), 1140-1152.
- Spicker, P. (2007). *The idea of poverty*. Bristol: The Polity Press.
- Sprey, J. (1969). The family as a system in conflict. *Journal of Marriage and Family, 31*, 699-706.
- Steinberg, L.D. (1991). Parent-adolescent relations. In R.M. Lerner, A.C. Petersen, & J. Brooks-Gunn (Eds.), *Encyclopedia of adolescence* (pp. 724-728). New York: Garland.
- Steinberg, L., Elmen, J.D., & Mounts, N.S. (1989). Authoritative parenting, psychosocial maturity, and academic success among adolescents. *Child Development, 60*, 1425-1436.
- Steinberg, L., Lamborn, S., Dornbusch, S., & Darling, N. (1992). Impact of parenting practices on adolescent achievement: Authoritative parenting,

- school involvement, and encouragement to succeed. *Child Development*, 63, 1266-1281.
- Steinmetz, S.K., & Straus, M.A. (1974). *Violence in the family*. New York: Dodd, Mead.
- Stevens, J. (2002). *Applied multivariate statistics for the social sciences*. Mahwah, NJ: Lawrence Erlbaum.
- Stevenson, H., & Lee, S.Y. (1990). Contexts of achievement. *Monographs of the Society for Research in Child Development*, 55(1-2, Serial No. 221).
- Stevenson-Hinde, J., & Akister, J. (1995). The McMaster Model of Family Functioning: Observer and parental ratings in non-clinical sample. *Family Process*, 34, 337-347.
- Stice, E., & Barrera, M. Jr. (1995). A longitudinal examination of the reciprocal relations between perceived parenting and adolescents' substance use and externalizing behaviours. *Developmental Psychology*, 31, 322-334.
- Street, J., Harris-Britt, A., & Walker-Barnes, C. (2009). Examining relationships between ethnic identity, family environment, and psychological outcomes for African American adolescents. *Journal of Child and Family Studies*, 18(4), 412-420.
- Subcommittee to Study the Subject of Combating Poverty, Legislative Council of the Hong Kong Special Administrative Region. (2006). *Report on Working Poverty*. Legislative Council of the Hong Kong Special Administrative Region
- Tabachnick, B.G., & Fidell, L.S. (2007). *Using multivariate statistics*. New York: HarperCollins College Publishers.
- Taylor, A.Z., & Graham, S. (2007). An examination of the relationship between achievement values and perceptions of barriers among low-SES African American and Latino students. *Journal of Educational Psychology*, 99, 52-64.
- Teachman, J.D., Paasch, K.M., Day, R.D., & Carver, K.P. (1997). Poverty during adolescence and subsequent educational attainment. In G.J. Duncan & J. Brooks-Gunn (Eds.), *Consequences of growing up poor* (pp. 382-418). New York: Russell Sage.
- Tein, J.Y., Roosa, M.W., & Michaels, M. (1994). Agreement between parent and child reports on parental behaviours. *Journal of Marriage and the Family*, 56,

341-355.

- Thomas, W.I. & Thomas, D.S. (1928). *The Child in America: Behaviour problems and programs*. New York: Knopf.
- Thyer, B., & Kazi, M.A.F. (Eds.). (2004). *International perspectives on evidence-based practice in social work*. London: Venture Press.
- Townsend, P. (1979). *Poverty in the United Kingdom--- A survey of household resources and standards of living*. Penguin Books.
- Townsend, P. (1980). Research in poverty. In A. Atkinson (Ed.), *Wealth, income, and inequality* (pp. 299-306), New York: Oxford University Press.
- Trommsdorff, G., & Kornadt, H. (2003). Parent-child relations in cross-cultural perspective. In L. Kuczynski (Ed.), *Handbook of dynamics in parent-child relations* (pp. 271-306). Thousand Oaks: Sage Publications Inc.
- Tutty, L.M. (1995). Theoretical and practical issues in selecting a measure of family functioning. *Research on Social Work Practice*, 5, 80-106.
- Tzeng, W.H., & Hsu, J. (1972). The Chinese attitude toward parental authority as expresses in Chinese children's stories. *Archives of General Psychiatry*, 26, 28-34.
- United Nations. (1995). *Programme of Action. World Summit for Social Development in Copenhagen* [Electronic version]. Retrieved February 25, 2012 from <http://www.un.org/esa/socdev/wssd/text-version/agreements/poach2.htm>
- United Nations Development Programme (2009). *Human Development Report 2009* [Electronic version]. Retrieved December 2, 2009 from http://hdr.undp.org/en/media/HDR_2009_EN_Indicators.pdf.
- United Nations Development Programme (2010a). *Human Development Report 2010* [Electronic version]. Retrieved July 2, 2011 from http://hdr.undp.org/en/media/HDR_2010_EN_Tables_reprint.pdf.
- United Nations Development Programme (2010b). *Human Development Report 2010 --- Hong Kong, China (SAR)* [Electronic version]. Retrieved July 2, 2011 from <http://hdrstats.undp.org/en/countries/profiles/HKG.html>.
- U.S. Department of Education, National Center for Education Statistics. (2001). *Dropout rates in the United States: 2000* (NCES Report No. 2002-114). Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement.

- Van Horn, M.L., Bellis, J.M., & Snyder, S.W. (2001). Family Resource Scale-Revised: Psychometrics and validation of a measure of family resources in a sample of low-income families. *Journal of Psychoeducational Assessment, 19*, 54-68.
- Vazsonyi, A. T., Pickering, L., & Bolland, J.M. (2006). Growing up in a dangerous developmental milieu: the effects of parenting processes on adjustment in inner-city African American adolescents. *Journal of Community Psychology, Vol. 34*(1), 47-73.
- Vosler, N.R. (1996). *New approaches to family practice --- Confronting economic stress*. Thousand Oaks, Calif.: Sage Publications.
- Wadsworth, M.E., Raviv, T., Compas, B.E., & Connor-Smith, J.K. (2005). Parent and adolescent responses to poverty-related stress: Tests of mediated and moderated coping models. *Journal of Child and Family Studies, 14*(2), 283-298.
- Wakefield, J.C. (1996a). Does social work need the eco-systems perspective? Part 1: Is the perspective clinically useful? *Social Service Review, 70*, 1 -32.
- Wakefield, J.C. (1996b). Does social work need the eco-systems perspective? Part 2: Does the perspective save social work from incoherence? *Social Service Review, 70*, 183 – 213.
- Walker, C.O., Greene, B.A., & Mansell, R.A. (2006). Identification with academics, intrinsic/extrinsic motivation, and self-efficacy as predictors of cognitive engagement. *Learning and Individual Differences 16*, 1–12.
- Walsh, F. (Ed.). (1982). *Normal family processes*. New York: Guilford.
- Walsh, F. (Ed.). (1993). *Normal family processes (2nd Ed.)*. New York: Guilford.
- Walsh, F. (Ed.). (2003). *Normal family processes: Growing diversity and complexity*. New York: Guilford.
- Wampler, K.S., & Halverson, C.F. Jr. (1993). Quantitative measurement in family research. In P.G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, & S.K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 181-194). New York: Plenum Press.
- Watson, J.B. (1928). *The psychological care of infant and child*. New York: Appleton.
- Weiling, E. (2003). Do returns on investment for educating children in Oaxaca de Juárez, Mexico, pay off? A qualitative analysis. *International Journal of*

Qualitative Studies in Education, 16(6), 817-834.

Weiner, B. (1974). *Achievement motivation and attribution theory*. Morristown, NJ: General Learning Press.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92(4), 548-573.

Weiner, B. (1992). *Human Motivation: Metaphors, theories, and research*. Newbury Park: SAGE Publications.

Weiss. R.S. (1979). Growing up a little faster: the experience of growing up in a single-parent household. *Journal of Social Issues*, 35(4), 97-111.

Weissberg, R.P., & O'Brien, M.U. (2004). What works in school-based social and emotional learning programs for positive youth development. *Annals of the American Academy of Political and Social Science*, 591, 86-97.

Welsh, D.P., Galliher, R.V., & Powers, S.I. (1998). Divergent realities and perceived inequalities: Adolescents', mothers', and observers' perception of family interactions and adolescent psychological functioning. *Journal of Adolescent Research*, 13, 377-402.

Werner, E.E. (1989). High-risk children in young adulthood: A longitudinal study from birth to 32 years. *American Journal of Orthopsychiatry*, 59, 72-81.

Werner, E.E., & Smith, R.S. (1992). *Overcoming the odds: High risk children from birth to adulthood*. Ithaca, N.Y.: Cornell University Press.

Whitbeck, L.B., Simons, R.L., Conger, R.D., Lorenz, F.O., Huck S. & Elder, G.H., Jr. (1991). Family economic hardship, parental support, and adolescent self-esteem. *Social Psychology Quarterly*, 54(4), 353-363.

Whitbeck, L.B., Simons, R.L., Conger, R.D., Wickrama, K.A.S., Ackley, K.A. & Elder, G.H.Jr. (1997). The effects of parents' working conditions and family economic hardship on parenting behaviours and children's self-efficacy. *Social Psychology Quarterly*, 60(4), 291-303.

Whitchurch, G.G. & Constantine, L.L. (1993). Systems Theory. In P. G. Boss, W.J. Doherty, R. LaRossa, W.R. Schumm, & S.K. Steinmetz (Eds.), *Sourcebook of family theories and methods: A contextual approach* (pp. 325-352). New York: Plenum Press.

White, J.M., & Klein, D.M. (2008). *Family theories*. Sage Publications Inc.

White, K.R. (1982). The relation between socioeconomic status and academic achievement. *Psychological Bulletin*, 91, 461-481.

- Whitehead, A. (1929). *Process and reality*. New York: Macmillan.
- Wilson, R.W. (1974). *The moral state: A study of the political socialization of Chinese and American children*. New York: Free Press.
- Wilson, R.W., & Pusey, A.W. (1982). Achievement motivation and small-business relationship patterns in Chinese society. In S.L. Greenblatt, R.W. Wilson and A.A. Wilson (Eds.), *Social interaction in Chinese society* (pp. 195-208). New York: Praeger Publishers.
- Wilson, W.J. (1978). *The declining significance of race*. Chicago: Chicago University Press.
- Wilson, W.J. (1987). *The truly disadvantaged: The inner city, the underclass, and public policy*. Chicago: University of Chicago Press.
- Wine, J., & Syme, M. (Eds.). (1981). *Social competence*. New York: Guilford.
- Wolchik, S.A., Sandler, I.N., & Braver, S.L. (1987). Social support: Its assessment and relation to children's adjustment. In N. Eisenberg (Ed.), *Contemporary topics in developmental psychology* (pp. 319-349). New York: Wiley.
- Wong, C.K., & Lou, V.W.Q. (2010). "I wish to be self-reliant": Aspiration for self-reliance, need and life satisfaction, and exit dilemma of welfare recipients in Hong Kong. *Social Indicators Research*, 95(3), 519-534.
- Wrubel, J., Benner, P., & Lazarus, R.S. (1981). Social competence from the perspective of stress and coping. In J. Wine, & M. Syme, (Eds.). *Social competence* (61-99). New York: Guilford.
- Wu, A.D., & Zumbo, B.D. (2008). Understanding and using mediators and moderators. *Social Indicators Research*, 87(3), 367-392.
- Wu, C.X., & Chao, R.K. (2005). Intergenerational cultural conflicts for Chinese American youth with immigrant parents: Norms of parental warmth and the consequences. *International Journal of Behavioural Development*, 29, 516-523.
- Wu, D.Y.H. (1996). Chinese childhood socialization. In M.H. Bond (Ed.), *The handbook of Chinese psychology* (pp. 143-154). New York: Oxford University Press.
- Wyman, P.A. (2003). Emerging perspectives on context specificity of children's adaptation and resilience. In S.S. Luthar (Ed.), *Resilience and vulnerability: Adaptation in the context of childhood adversities* (pp. 293-317). Cambridge:

Cambridge University Press.

- Wyman, P.A., Cowen, E.L., Work, W.C., Raoof, A., Gribble, P.A., Parker, G.R., & Wannon, M. (1992). Interviews with children who experienced major life stress: family and child attributes that predict resilient outcomes. *Journal of the American Academy of Child and Adolescent Psychiatry*, 92, 31(5), 904-910.
- Wyman, P.A., Cowen, E.L., Work, W.C., Hoyt-Meyers, L., Magnus, K.B., & Fagen, D.B. (1999). Caregiving and developmental factors differentiating young at-risk urban children showing resilient versus stress-affected outcomes: a replication and extension. *Child Development*, 1999, 70(3), 645-659.
- Yang, K.S. (1981). The formation and change of Chinese personality: a cultural-ecological perspective. *Acta Psychologica Taiwanica*, 23, 39-55.
- Yang, K.S. (1986). Chinese personality and its change. In M.H. Bond (Ed.), *The psychology of Chinese people* (pp.106-170). Hong Kong: Oxford University Press.
- Yang, K.S. (1999). Towards an indigenous Chinese psychology: A selective review of methodological, theoretical, and empirical accomplishments. *Chinese Journal of Psychology*, 41(2), 181-211.
- Yang, K.S., & Yu, A.B. (1988). Social-oriented and individual-oriented achievement motivation: conceptualization and measurement. *Paper presented at the symposium on Chinese personality and social psychology. 24th International Congress of Psychology*. Sydney.
- Yao, E.L. (1985). Adjustment needs of Asian immigrant children. *Elementary School Guidance and Counseling*, 19, 222-227.
- Yao, X. (2000). *An introduction to Confucianism*. Cambridge: Cambridge University Press.
- Yeh, M.H., & Yang, K.S. (1997). Chinese familism: conceptual analysis and empirical assessment. *Bulletin of the Institute of Ethnology, Academia Sinica (Taiwan)*, 83, 169-225. [in Chinese].
- Yeung, W., Linver, M.R., & Brooks-Gunn, J. (2002). How money matters for young children's development: parental investment and family processes. *Child Development*, 73, 1861-1879.
- Yu, A. B. (1991). Socializational factors of an individual's achievement

- motivation in the family. *Bulletin of the Institute of Ethnology, Academia Sinica (Taiwan)*, 71, 87-132 [in Chinese].
- Yu, A. B. (1996). Ultimate life concerns, self, and Chinese achievement motivation. In M. H. Bond (Ed.), *The handbook of Chinese psychology* (pp. 227 – 246). Hong Kong: Oxford University Press.
- Yu, A. B., & Yang, K. S. (1989). Social-oriented and individual-oriented achievement motivation: a conceptual and empirical analysis. *Bulletin of the Institute of Ethnology, Academia Sinica (Taiwan)*, 64, 51-98 [in Chinese].
- Yu, E.S.H. (1980). Chinese collective orientation and need for achievement. *International Journal of Social Psychiatry*, 26, 184-189.