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Department of Applied Social Sciences

THE EFFECT OF MENTORSHIP PROGRAM AND

MENTORING RELATIONSHIP QUALITY ON

ADOLESCENTS' DEVELOPMENT OUTCOMES, AND THE

INTERACTION BETWEEN MENTORING AND PARENT

RELATIONSHIP IN ADOLESCENTS

By

ZHOU Xiao Chun

A thesis submitted in partial fulfilment of the requirements for

the degree of Doctor of Philosophy

February 2013

CERTIFICATE OF ORIGINALITY

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ZHOU Xiao Chun

ABSTRACT

Mentorship program has been developed in western society for more than one hundred years, and the effects of mentorship program have been studied and verified. Mentoring relationship is very important to the success of mentorship programs and also to the effect of mentorship program on participants. But its effectiveness has not been examined in Chinese society, and the interaction between mentoring relationship and the relationship with parents is not empirically tested. The purpose of this study is to answer the question whether mentorship program is effective in Chinese society, and specifically, what are the effects of mentoring relationship and the patterns of interaction between mentoring relationship and the relationship with parents. Meanwhile, this research tests theoretical frameworks on mentoring, improves understanding on effects of mentorship and complex interaction between mentoring relationship and other important relational context of adolescents.

Built from Rhodes' theoretical framework on youth mentoring (J. E. Rhodes, 2005), the relationship with parents can affect the mentoring relationship and the mentoring relationship can affect the relationship with parents of participants. Studying these complex reciprocal effect pathways can provide supporting evidence for practitioners on promoting the development of mentoring

relationship, improving the relationship with parents of participants, thus helping

participants to achieve positive outcomes more effectively and upgrading the

operation of the mentorship program.

In the research both a longitudinal design and a semi-experimental design

have been utilized. Data were collected from three rounds of the survey of a

participated group of 310 participants and comparison groups of 208 adolescents

with similar background as the participating adolescents. Hierarchical regression

and rANOVA are used to test the effects of mentorship program and mentoring

relationship, and Path analysis has been applied to explore the interaction pattern

between mentoring relationship and the relationship with parents.

The findings of this research indicate that mentorship program were

beneficial for the youth in promoting self-esteem, general mental health, develop

life goals and in making long-term planning, establishing relationships with

family, peers, and other significant adults, enhancing academic study with less

delinquent behaviors and more involved in positive activities. Mentoring

relationship and relationship with parents interacts dynamically at the three

rounds of survey of this research.

This research confirms that mentorship program is effective in Chinese

society and mentoring relationship can affect the development of adolescents.

Mentoring relationship and relationship with parents are dynamically interacting with each other. Limitations of the study, implications to mentoring practice and future research directions are discussed.

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CHAPTER 1 – INTRODUCTION

Adolescents' development is important to all societies, especially in the rapidly changing social context of a Chinese society. The relationship between parents and adolescents confronts changes, such as the family structure, the high costs of living which lead to increase working hours and less time for family, in the contemporary Chinese society and needs to be taken seriously. Parents of the poor families are spending less time for the development of their children. Due to changes in the global economic environment, economic inequality has become more prominent and development opportunities for the poor are getting fewer. Intergenerational poverty has become another important issue to the development of adolescents. Adolescents and their parents have living patterns that are not for the benefit of the development of adolescents (Hakanen, Schaufeli, & Ahola, 2008). About 15% to 30% of adolescents back to home after school with no parents at home, whereas the percent of Hong Kong's students is 10.5%. Thus the intervention towards the adolescents' development must be inputted. The pioneer project of Child development foundation (CDF) of Hong Kong government was put in practice in 2008 which had delivered triple services including mentoring, personal development planning and matched saving plan to adolescent from disadvantaged family in Hong Kong.

Background

In 2005, the government of the Hong Kong Special Administrative Region

established the former Commission on Poverty (CoP) to enhance understanding

of poverty situation in Hong Kong, to make immediate improvements, and to

identify direction for future work. CoP examined existing pro-child-development

policies and measures, especially those targeted at the needs of children from a

disadvantaged background, and proposed some improvements in policies and

measures.

CoP considered the children from a disadvantaged background could be

assisted with asset-based mode to build up habits of asset accumulation as a way

to help their long-term development apart from the traditional mode in

supporting children. CoP recommended the government of the Hong Kong

Special Administrative Region (the Government) to establish a fund for children,

which was known as the Child Development Fund (CDF).

The Government established the $300 million CDF in 2008 so as to draw on

and consolidate the resources from the family, the private sector, the community

and the government effectively in supporting the long-term development of

children from a disadvantaged background. CDF seeks to provide more personal

development opportunities to help children build their financial and non-financial

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assets (such as positive mindset, learning ability and self-image) through

developing and implementing personal development plans. It is anticipated that

the process will empower them to improve the quality of life for their families

and themselves in the future. The target group of the Projects is children aged ten

to sixteen from families either receiving Comprehensive Social Security

Assistance (CSSA) / full grants from student finance schemes administered by

the Student Financial Assistance Agency, or having household income less than

75% of the Median Monthly Domestic Household Income.

The Child Development Fund (CDF) Pioneer Projects

The first batch of seven CDF Pioneer Projects (the Projects) was operated

by six operating NGOs in seven districts (Table 1.1). Each Project lasted for

three years and was fully launched in April 2009. The projects recruited 750

participating children. As children aged between fourteen to sixteen years old

were given priority to participate the Projects, there were not less than 70% of

participants being of this age group in each project.

Table 1.1: Operating NGOs of the Projects in the seven districts

Regions / Districts	Operating NGOs
Hong Kong Island	Baptist Oi Kwan Social Service
Kowloon East	Christian Action
Kowloon West	Industrial Evangelistic Fellowship
New Territories East	Tung Wah Group of Hospitals
New Territories West	The Hong Kong Federation of Youth Groups
Tung Chung	Hong Kong Sheng Kung Hui Welfare Council
Tin Shui Wai	Tung Wah Group of Hospitals

The three major components of CDF Projects are personal development plan (PDP), mentorship program and targeted savings.

Personal development plan

Participating children are required to draw up PDP with short-term and long-term goals during the first two years of CDF Projects under guidance from non-governmental organizations (operating NGOs), mentors, and parents. They are expected to implement their plans and achieve the planned short-term goals in the third year. Operating NGOs will utilize the amount of $12,600 (Hong Kong dollars; the same hereafter) set aside by CDF for each participating child to provide various kinds of training and activities in education, personal skills or career-related skills, so as to assist them to build up a mindset to plan for their future and develop non-financial assets.

Mentorship program

Operating NGOs will match a mentor, who is a volunteer, for each participating child. Mentors will provide guidance to children in drawing up and implementing their personal development plans with specific development targets. In the process, mentors can also share life experience with participating children and assist them as well as their parents or guardians to build up non-financial assets.

Targeted savings

Participating children will accumulate financial assets during the first

two-year period of CDF and to use their savings to realize their personal

development plans in the third year. Although the monthly saving target is $200,

the children and their families can agree with the operating NGOs to set a lower

savings target if they have special needs or circumstances. At the same time,

operating NGOs will seek partnership from the business sector or individual

donors to provide at least 1:1 matching contribution for the savings accumulated

by participating children under targeted savings. The Government will also

provide special financial incentive ($3,000) for each participating child upon

completion of targeted savings. Operating NGOs will monitor the progress of

participating children in spending the savings for their implementation of PDP in

the third year.

Asset-based models and programs

The matched saving programs, Saving for Education, Entrepreneurship, and

Downpayment (SEED) and Individual Development Account (IDA), in the US

were launched in 2003 and 1993, respectively. The idea of matched saving was

initiated by American scholar Professor Michael Sherraden and has been

promoted to places around the world. The SEED program was led by university

and community partners. With the financial support from government tax policy

and charitable foundations, the SEED program served more than 1200 low

income children and families from 12 communities in the period from 2003 to

2008. The participants could complete the targets of education/training, home

purchase and small business development through matched saving and other

financial rewards. IDA program is the precedent of SEED and it is still running

throughout the US. More than 100,000 low income families opened a matched

saving account in IDA program which allowed them to build assets and achieve

the same targets as the SEED program.

In view of the unique social-political context and traditional-cultural

characteristics, there were differences in the goals of implementing targeted

saving. Nevertheless, the goals of targeted saving programs in different places

were all connected to concrete and socially recognized personal development and

aiming at achieving these developments. The US and other western countries

perceive saving differently from the Asian communities. Saving behaviors in the

US and western countries are also not as common as in Asian communities.

Building saving behaviors and nurturing saving habits, therefore, were both

important goals of asset-based programs in the US. The targeted savings

component in the Projects also promotes participants and families to build and

develop saving habits and behaviors, and use the savings to implement PDPs.

The Projects further provides opportunities to participants and families to

understand and build non-financial assets of planning, saving, implementing and

developing through the experience of making good use of savings to achieve

personal development plan.

Mentorship program

Mentorship program developed rapidly in many countries and places. The

US and Canada Big Brothers Big Sisters programs (BBBS) have a history of

over 100 years and have been promoted to over 10 countries worldwide. In many

countries, the government departments are to coordinate and to lead mentoring

work and development, to establish national mentorship network, to promote

support and assist in planning work on mentoring. The US large scale mentorship

programs, BBBS, have started since year 1904 and are implemented in

communities and schools. Children of 6 to 18 years old are matched with a

mentor. In the process of building trust relationship, mentees would be assisted to

exhibit their potential.

The mentors joined BBBS as they wished to bring positive changes to the

mentees. Community-based programs encourage mentors to spend several hours

every weekend or at after-school hours to meet their mentees, to improve

mentees' behaviors and family relationship (Herrera, Grossman, Kauh, Feldman, & McMaken, 2007). Meeting activities of school-based programs are conducted in the schools. Less time is required as compared to community-based program and it is focused in improving relationships of mentees with teachers and schools. Evaluation studies and continuous improvements are being carried out at different times in these programs to provide evidence-based practice suggestions. Consistent impact was identified in mentorship program including fewer negative behaviors, improved academic performance and psychosocial outcomes in mentees. They all demonstrated good example for worldwide mentorship programs.

The goals of many mentorship programs, especially those in the US, are to accompany with adolescents in their development and help them to become responsible adults. Providing adult support and guidance to adolescent in mentorship programs was of greater importance to adolescents of disadvantaged background. The programs could provide learning role model and establish proper attitude and value about self and society, to realize personal potential, build and utilize community resources and network.

Mentorship programs in different places all put life planning and personal development goal setting as their objectives. They also cared about mentees'

social and relational development. Mentorship programs continued to develop

and meet the demands of adolescents and society in different places. Mentors of

the Projects in Hong Kong were required to provide guidance to mentees on the

formulating and implementation of their Personal Development Plans (Martino,

Collins, & Ellickson, 2005).

Training was provided to mentors and mentees in mentorship programs of

CDF Projects. The Projects also provided training relevant to the programs, to

develop positive attitude and right mindset, personal resilience and competence,

and social network. Financial and life planning training were provided to

participating children, parents and mentors so that the participating children

would receive guidance and support on the formulating and implementation of

their Personal Development Plans. Such services were not provided in the other

mentorship programs in the overview. This is unique compared with other

mentorship programs worldwide (Martino et al., 2005).

Families and Society in Hong Kong

Some characteristics of the Chinese culture and society would influence the

operation of mentorship program in Hong Kong. First, the Chinese tradition has

its characteristics in family relationship. Parents played dominant roles in the

development of their children, thus want to control their children psychologically

(D. T. L. Shek, Han, & Lee, 2006). However, this tradition would get weaker gradually especial in adolescence. Another characteristic is that, parents attach extreme importance to and expect outstanding academic achievements from their children.

This has special effect on the participants and their family in a mentorship program. The participating families all come from a poverty background. Parents have to work long hours, had little time, less energy, limited knowledge and skills in communicating with their children in promoting their development. Also because of poverty, parents will tend to be more anxious on the achievements of their children, especially educational aspect. This limitation could bring undue tension to the relationship between parents and child. A resourceful volunteer with broader social networks, richer knowledge and skills can seize the opportunity to promote the communication between parents and children, thus improve their relationship.

Another characteristic of the Chinese culture is that, Chinese are not accustomed to building relationship with strangers. Traditionally, Chinese live in a familiar' and close society, and have different level of relationships with others based on the strength of social ties among them (Kang-zhi, 2008). Thus they do not tend to trust a stranger and not easy to build relationships with strangers. In

addition, mentoring has not been widely accepted by the public as a common type of volunteerism. The trust with the families is not easy to build as parents and their children may feel reluctant to receive the help from volunteers.

These two characteristics may exist both in Hong Kong and Mainland China, and must be considered when studding the mentorship program in the Chinese context.

Goals and objectives

The goal of this study is to understand the impacts of mentorship program on the development of adolescents from disadvantaged backgrounds from a social ecological perspective, and in a longitudinal quasi-experimental framework.

There are three objectives of this study, which are:

1. to understand the program's impacts of mentorship program on adolescents' development outcomes in comparison with a control group,

2. to discuss the effects of Mentoring Relationship Quality (MRQ) on participating adolescents' development outcomes, and

3. to explore the interaction between mentoring relationship and adolescent-parent relationship in participating adolescents.

Research questions

This present study mainly researches on three questions:

Research question 1: Does mentorship program provide positive impact on adolescent development outcomes among Chinese adolescents from disadvantaged background?

Research question 2: What are the effects of quality mentoring relationship towards the development outcomes in participants?

Research question 3: What are the patterns of interaction between mentoring relationships and relationships with parents during the mentorship program period? Does relationship with parents affect mentoring relationship? Does mentoring relationship affect the relationship with parents?

In the following parts of the thesis, the author firstly reviewed existing literatures in Chapter Two. Chapter Three introduced the research methods used in this thesis. Chapter Four reported the results to the first research question, the impacts of mentorship program on adolescents' development outcomes and relationships. Chapter Five reported the results to the second research question on the effects of good mentoring relationship on adolescents' development outcomes. Chapter Six reported the inter-relations and interactions between mentoring relationship and relationship with parents. Finally, Chapter Seven

presented the discussions of the findings to the three research questions and

detailed contributions to the goals of this thesis.

CHAPTER 2 – LITERATURE REVIEWS

The purpose of this chapter is to review the research literatures relevant to the field of mentoring relationship and adolescent relationship with parents. Literatures will be discussed as follows: (1) necessity and development of mentorship program, (2) relevant theory and research findings on relationships with parents, (3) theory and research findings on non-parental adults and mentoring, (4) theory and research findings on mentoring relationship quality, (5) outcomes in the development of adolescents relating to mentorship program (6) interaction between mentoring relationship and family relationship.

Mentorship program

Mentorship program can help young people because it provides the youth a caring adult to help them deal with worries in everyday life. The components of mentorship program, structure of mentorship program, large scale programs, goal, objective, and benefits of mentorship programs will be discussed.

Components of mentorship program

Structured mentorship program has been developed for more than one hundred years. There are about 5,000 mentorship programs, and about three million youth have participated in these programs in the United States according to recent data from Dubois et al. (D.L. DuBois, Portillo, Rhodes, Silverthorn, &

Valentine, 2011). Mentorship programs, varying in context, structure and goals,

have been applied in many fields (Michael J. Karcher, Kuperminc, Portwood,

Sipe, & Taylor, 2006). In an introduction article of youth mentoring, three core

components of mentoring are summarized, which are: (a) mentor is someone

who is with greater experience or wisdom than mentee, (b) mentor offers

guidance or instruction that intends to facilitate the growth and development of

the mentee and (c) there is an emotional bond between mentor and mentee (D.L.

DuBois & Karcher, 2005). Mentorship program is defined in a broad sense as a

program or intervention that is intended to promote positive youth outcomes via

relationships between young persons (18-years-old and younger) and specific

non-parental adults (or older youth) who are acting in a nonprofessional helping

capacity (p.66) in a recent review article on effectiveness of mentorship

programs by DuBois and his colleagues (D.L. DuBois et al., 2011). Therefore,

components of mentorship programs are: (1) mentee, programs with frequent

focus on children, adolescents and youth who are in disadvantaged background

or in developmental risk, (2) mentor, normally a caring adult with better

experience and knowledge than mentee, (3) mentor providing support or

guidance or instruction on the development of mentee and (4) a relationship

between mentor and mentee who share emotional connections.

Structure of mentorship programs

Traditional mentorship programs used to apply one-to-one format for the regular meeting between mentors and mentees. The manual of international mentorship programs recommended mentor-mentee matches meeting at least four hours monthly and providing supportive supervision to mentors in order to ensure that mentoring relationship could develop and could influencing mentees positively. There were certain requirements to the matched ratio and regular meeting in the mentorship programs of the programs, because mentors were required to provide guidance to mentees and fulfill different functions according to the different goals of mentorship programs.

All mentorship programs recognized the importance and challenges of the recruitment, selection, training and support work to the development of mentorship program. The work requires regional and even national integration, coordination and support so that mentorship programs could sustain and continue to develop. The work of mentorship program requires expertise and resource support of different types, including program implementation and recruitment, training, monitoring and supportive supervision, and evaluation.

Besides traditional one-to-one or face-to-face mentoring, youth mentorship programs concern about the organization of program and the target participants

of programs. Mentorship programs have different structures. Karcher and his

colleagues (Michael J. Karcher et al., 2006) have discussed four kinds of

structures of mentoring apart from the traditional one-to-one, adult with youth

structure: cross-age peer mentoring, group mentoring, e-mentoring,

intergenerational mentoring .

Cross-age peer mentoring. This kind of mentoring can be named as peer

mentoring too, which becomes a component of larger intervention and as

independent intervention in recent years. A well-known example is cross-age

peer mentoring implemented in school by Big brothers/Big Sisters of America

and Youth Friends, which are both kind of site based program in school. Two

components should be addressed to this kind of mentoring. One is an "older and

wiser" youth as the mentor and the other is the relationship is prefer to less

task-focused. relationally focused (Michael J. Karcher et al., 2006).

Group mentoring. This kind of mentoring has not been defined consistently,

but this structure can be very promising because it provides a unique

environment and interaction mode. Group mentoring has one or more mentors

meet with a group of youth in a period of time. This mentoring enables youth to

learn how adult mentors negotiate, cooperate and understand others in the group.

In addition, the group mentoring environment can provide a safe learning

environment for youth to try their social skills and get positive feedbacks from

mentor and their peer (Michael J. Karcher et al., 2006). Group mentoring is

typically site based in school or community.

     E-mentoring. E-Mentoring are emerged with the arising of internet society,

in which mentors interact with mentees through a range of media including

telephone, email, instant messaging, video conferencing, fax, and written

correspondence. The new technology provides a chance to mentors or mentees

who are willing to but cannot access to traditional face-to-face interaction

mentorship program because of their economical or physical status. The program

period can vary from one time to longer term commitments (Michael J. Karcher

et al., 2006), and short term mentoring may prefer target instrumental outcomes

in academic or career development, while long term mentoring developing

mentoring relationship (Michael J. Karcher et al., 2006). Another related but not

exactly example of long distance mentoring is Big Pen Friends of New Path

Foundation in China. Volunteers from big cities provided mentoring to rural

adolescents by mail, which makes the entrance gate of mentorship programs even

lower in developing countries (Ye, Li, & Zuo, 2010).

     Intergenerational mentorship programs. Mentors of intergenerational

mentorship programs are seniors aged 55 or above and other components are

quite the same with traditional face-to-face mentorship programs. Seniors are

more experienced and active to commit to volunteer works and the numbers of

senior citizens increased very quickly so that they become ideal human resources

of human-capital-intensive industry, mentorship programs. Intergenerational

mentorship programs are still in its infancy (Michael J. Karcher et al., 2006).

Large-scale programs

Mentorship program developed rapidly in many regions and countries. The

US and Canada Big Brothers Big Sisters programs (BBBS) have a history of

over 100 years and have more than ten branches that span across the world.

There are special administrations set up to coordinate and supervise mentor

matching work and development, to establish national mentorship network, to

promote support and assist in planning mentoring. The US large-scale

mentorship program, BBBS, has started in 1904 and been implemented in

communities and schools. Children aged from 6 to 18 are matched with a mentor.

Large-scale programs have not only been hold in the US, but also been

developed in Chinese society, including "Century Education Mentors" of Taiwan,

National Youth Mentoring Plan of Singapore and Pioneer Projects of Child

Development Found of Hong Kong SAR China. Mentoring in Taiwan and

Singapore will be discussed since mentorship program in Hong Kong has been

introduced in former chapter of this thesis.

Mentoring in Taiwan. The Century Education Mentors program is a national

mentorship program. In the period of March 8 to December 6, 2004, the Office

of the President and Executive Yuan, together with the Ministry of Education

and the Public Network Foundation of the Republic of China (Taiwan) held a

Taiwan mentorship program named "Century Education Mentors" program,

aiming at promoting learning campaign for all. In the nine months period of the

first batch of the program, sixty-four people from one hundred private enterprises

and organizations were chosen to be official members, holding 541 activities,

recruiting 3,133 promotional groups, and having 31,988 attendances.

A hundred social elites were chosen to form the Century Education Mentors.

An environment supportive to development was built through these mentors. The

program also recruited 1,000 members for the promotional groups, participating

in the "Irrigating Taiwan Tour" campaign, visiting twenty-five counties to

promote, evaluate and discuss, in order to promote the idea and spirit of the

"Irrigating Taiwan Program". Besides, there were 10,000 people participated in

"Taiwan Number One Scholars Reward Scheme" to encourage the public and

adolescents to improve their potentials and develop (Schermelleh-Engel,

Moosbrugger, & Müller, 2003). The program assisted adolescents to establish

positive values through the three-tier program structure. Resources were mainly

invested in the process of tremendous coordinating and promotional work.

Mentors were holding certain socio-economical and professional status. They

were not required to receive training nor regular one-to-one meeting. The

program also provides different public service training to the adolescents on

topics about "action and care", "education and continuity", "ecology and

environmental protection", "technology application", "art human research", and

"inclusion and innovation".

Mentoring in Singapore. Mentorship program in Singapore was jointly

organized by the Youth Sectoral Network and the National Youth Council of the

government after 2004. Educational achievements in adolescents of

disadvantageous background were enhanced by positive youth development

program combined with mentorship program. Before this there were only

individual mentorship program run by community organizations or operated in

schools. The National Youth Council realized mentorship program could help to

change the value held by adolescents, establish right development directions and

strengthen their resilience. To achieve this, they established the Mentoring

Workgroup to provide framework suggestions to mentorship programs and

developed the National Youth Mentoring Plan to promote mentorship programs.

One of the representative examples was the Youth-in-Action (YIA) mentorship

program which was jointly organized by local government and Yayasan Mendaki,

a Malay / Muslim community leading group (Jonge et al., 2001).

Yayasan Mendaki realized adolescents' concerns on aspects of education,

family and career. In 2004, YIA was established to provide mentoring service to

Malay / Muslim adolescents aged from ten to seventeen, to assist them complete

the first year of primary and secondary education and continue schooling. They

anticipated providing adolescent executable positive youth development

programs, and monitoring program process and effectiveness at the same time.

Through building knowledge and skills to at-risk adolescents in Malay / Muslim

community, their competitiveness could be enhanced. Adolescents built

relationship with an adult within a formal system and received support from

families, schools, and communities. They could receive positive influence on

their development from at least one adult who could become their role model.

Then their potentials could be stimulated soon. A mentor who was assigned to

each adolescent should spend two hours per month meeting, encouraging and

supporting the adolescent during the period of ten months. Besides, the program

encouraged mentors and mentees to attend YIA activities together in order to increase meeting opportunities.

Mentorship programs in Singapore have started as the government endorsed the National Youth Mentoring Plan in year 2008. Apart from Yayasan Mendaki, there are more than ten organizations providing mentorship programs. The major developments are as follows: 1) Established a web-based mentoring platform to provide services like registration, communication, networking and other program information; 2) Set up a National Mentoring Workgroup to coordinate different mentorship programs and work on promotion and development; 3) Realized community capacity and tapped on community resources to create community-based mentorship programs; and 4) held two national mentoring conferences to share program information and mentoring knowledge outcomes, and to commend and recognize mentoring work.

Goals and objectives of mentorship programs

The aims of mentorship programs are to facilitate participants to develop their life plan and enable them on personal development goal setting. They not only care about mentees' social and relational development but also develop and meet the demands of adolescents and society in different places. For instance, mentorship programs in Singapore care about academic performance and

encourage mentors and mentees to meet weekly to provide learning service. The

national mentorship program in Taiwan focuses on bringing out elite mentors to

create social environment which could be advantageous to development, to

provide clear expectation to children and adolescents, and to serve as role and

learning models. Thus, mentors of the Projects in Hong Kong are required to

provide guidance to mentees on the drafting and implementation of their

Personal Development Plans.

The goals of many mentorship programs, especially those in the US, are to

spend time with adolescents in their development and help them to become

responsible adults. Providing adult support and guidance to adolescent in

mentorship programs was of critical importance to adolescents of disadvantaged

background. The programs could provide learning role model and establish right

attitude and value about self and society, to realize personal potential, build and

apply community resources and network.

Specific objectives of mentoring can be divided into two kinds,

developmental/ psychological, and instrumental (Michael J. Karcher et al., 2006).

Developmental/psychological. The main focus of this kind of mentoring is

on promoting the mentoring relationship between mentor and mentee as a

pathway for youth's social, emotional and cognitive development. Programs can

entail mentors playing games or joining in recreational activities with their

mentees

Instrumental. Specific goals on learning skill, academic, conduct or

behavior and so on instead of promoting mentoring relationship are set in

mentorship programs.

These two kinds of goals can be combined in a specific mentorship program.

And each kind of programs with different goals can produce the results in

developmental or instrumental of youth development.

Benefits of mentorship programs

There were over 240,000 matches of mentors and mentees having

one-to-one regular meeting activities in the US, with the heart of bringing

positive life changes in mentees. Community-based programs encourage mentors

to spend several hours every weekend or at after-school hours to meet their

mentees, to improve mentees' behaviors and family relationship. Meeting

activities of school-based programs are conducted in the schools. Less time is

required as compared to community-based program and improving relationships

of mentees with teachers and schools is emphasized.

Evaluation studies and continuous improvements are being carried out at

different phases in these programs to provide suggestions for evidence-based

practice. The unified effects of mentorship program include fewer negative

behaviors, improved academic performance and psychosocial outcomes in

mentees. They are all good evidence for mentorship program worldwide.

In the organizational BBBS programs report, good mentoring relationship

could improve academic performance and family relationship; reduce substances

use, initiation of alcohol use and behaviors like truancy and skipping classes

(Hansen, 2007). Two meta-analysis research studies by the US scholar Dubois

and others in 2002 and 2011 also confirmed the positive effects on outcomes of

adolescents by mentorship programs, which include: reduced risk behaviors,

enhanced social competence, improvement on academic achievements and career

development, improved psychological health and reduced negative behaviors

(David L. DuBois, Holloway, Valentine, & Cooper, 2002; D.L. DuBois et al.,

2011).

Summary

Mentorship programs have been developed more than one hundred years in

western countries. Large scale programs have serviced tremendous amount of

youths. Most of them were come from disadvantaged family. Different kinds of

mentorship program have diversified structure, goals and objectives. Plenty of

evaluation and academic research have been done to find the effect of mentorship

program to participant. Several Chinese societies have begun to run mentorship

programs in recent years, but have not been studied systematically. The

effectiveness of mentorship program which has been verified in western

countries still needs to be examined in Chinese societies.

Although the benefits for youth of mentorship program have been accepted

widely, not all the mentorship programs can bring positive outcomes for all the

participated youth. In the review paper of DuBois (2002), seven from 59

evaluated programs have negative direction of effects. For example, this effects

could be school attendance, GPA, number of courses passed. In another recently

published review paper of DuBois et al (2011), 10 of 82 evaluations have

reported negative direction of effect size.   Specifically, the association between

negative outcomes and the termination of the mentoring relationship was tested

by Grossman and Rhodes (Grossman & Rhodes, 2002). The negative outcomes

include reported drops in self-worth and perceived scholastic competence.

According to Spencer's study, six factors can have negative effect on MRQ,

which are mentor or mentee withdrawal from program, mentee's lack of

motivation, program not meeting the expectation of participants, mentor without

social skills , family interference and agency not having enough support(Spencer,

2007). These factors are originated from four aspects, which are: program

support, mentor, mentee and family. All the four aspects can produce positive and negative influences to the mentoring relationship, thus a better understanding of them could reduce negative effect in mentorship program on the development of participants.

From the aspect of program, if a program has negligence at program level, neglect screening, supervising, training and ongoing support, organizing group activities, the program may produce potential negative effects. Mentor and mentee may drop out or the mentoring relationship will be terminated before the program finishes.

From the aspect of mentor, their motivation and competence may be insufficient so as not to provide quality mentoring services for participating adolescents. They cannot develop good mentoring relationship by adopting a youth centered approach. Participants may not feel accepted, respected and valued. This is of special importance when mentees are with vulnerable relationship history. The failure to develop a good mentoring relationship will further produce negative effects on their social and emotional aspects.

From the aspect of mentee, some mentees may be unable to develop interpersonal relationships and cannot development good mentoring relationship successfully. They may feel very insecure and anxious with adults including their

parents and mentors, thus very sensitive with being close and accepted by others.

If the relationship terminates before schedule, they may feel disappointed and

experience rejection which may affect them negatively on their development of

emotional, behavioral and academic outcomes.

Family involvement in the mentorship program and support to mentees can

help build mentoring relationship favorably. Otherwise, if parents cumber the

communication between mentors and their child, or decide to quit the mentorship

program, negative impact on the establishment and development of a good

mentoring relationship would be expected.

All these four aspects can have negative influence on the building and

maintenance of mentoring relationship in a mentorship program. The core of

mentorship program, thus, is to prevent any opportunities to impose the potential

negative effects on the development of participated adolescents so that a positive

mentoring relationship could produce the desired favorable development

outcomes in adolescents. Therefore, whether a mentorship program would

influence the youth positively in a non-Western context, i.e., a Chinese society,

cannot be taken for granted but need to be studied empirically with the same

standard methods and procedures. Study therefore should try to answer if the

mentorship program is effective, what is the role of mentoring relationship in the

development of participating adolescents, and what is the reciprocal effects

pattern of relationship with parents and mentoring relationship of these

adolescents. Studies on these problems can improve the understanding of the

operation of mentorship program in Chinese societies, especially in Mainland

China where abundant adolescents grow in disadvantaged background and

urgently need to experience good mentoring relationship with quality mentors so

as to gain the benefits from the relationship to their growth and development.

Such a study can also improve the understanding of the mechanism and effect of

good mentoring relationship on the development of adolescents, and of the

complex relationship interaction between adolescents' relationship with parents

and with mentors.

Family relationship

Mentorship programs normally provide mentoring service for the youth

from disadvantaged background. Their parents may have to work hard so that

they have limited time to spend with their children, or they don't have the ability

to direct or support their children effectively. But, as the most important

developmental context of human, the effects of relationship with parents are very

important. Theories on this issue, and the operationalization, instruments,

findings and the relationship to this study will be reviewed and discussed.

Two perspectives on adolescence development and relationship with parents

Relationship with parents is the core to the development of adolescents. There are plenty of studies focusing on specific aspects of the relationship between adolescents and parents. The effects of relationship with parents towards adolescent have long been recognized and the mechanism of this effect can be dividing into two streams based on the perspectives on youth/adolescent development.

There are two main perspectives about the development of adolescents. The first one is preventive perspective, which treats adolescents as "broken" or at the risk of being broken, and the relationship with parents is a protective factor of children. Relating to the prevention science, this perspective emphasizes the difficulty of learning, emotional disturbing and anti-social behaviors problem of youth, focuses on the method to resolve these problems. This idea originated from a negative view on adolescents aims to amend adolescents' problem into lesser ones. Researchers and practitioners are accustomed to this perspective and have made tremendous contributions to academy and practice. Researchers treat relationship with parents as protective factor for adolescents which can protect them from performing risky behaviors.

The second perspective, on the other hand, treats the relationship with parents as developmental assets of youth development. Positive youth development perspective treats adolescent with potential for positive changes, emphasizes the advantage, competence, potential and the methods to develop these potentials. This theoretical perspective roots in the bio-ecological theory, which put human in the development context systems. Human interacts with different bio-ecological systems and get developed. Interpersonal relations experienced by the person in development belong to microsystems of his four layer of developmental ecosystems (Bronfenbrenner, 1999). Benson developed 40 important developmental assets contributing to the development of children and adolescents. Family support and positive family communication are two among the 40 assets. It was found that the more assets an adolescent possesses, the greater the possibility of his or her positive healthy development will be (Benson, 1997).

Operationalization of family relationship

The operationalization of relationship with parents was verified. Some researchers measure the relationship in a simple way, by asking for adolescents' evaluation on and feelings about the relationships with parents (McBride et al., 2005); on single dimension, for example, intimacy (Field, Diego, & Sanders,

2002), or satisfaction in the parent-adolescent relationship (DeCato, Donohue,

Azrin, Teichner, & Crum, 2002).Other studies have operationalized this

relationship into diversified dimensions.

   Closeness is one of the important dimensions of these complex

operationalizations of relationship with parents. The Relatedness Questionnaire

measures relationship with parents from two dimensions, that is, *emotional*

quality and *psychological proximity seeking* (Lynch & Cicchetti, 1997).

Psychological proximity seeking is to measure the closeness between parents and

children. Laursen operationalize parents relationship into three dimensions, one

of them is closeness (Laursen, Wilder, Noack, & Williams, 2000).

   Emotional aspect is another important dimension of relationship between

parents and adolescents. *Emotional quality* is one of two dimensions of the

Relatedness Questionnaire, which has two dimensions (Lynch & Cicchetti, 1997).

Manders et al. have mentioned that, warmth and hostility are two emotional

dimensions (Manders, Scholte, Janssens, & De Bryuyn, 2006). The seven

dimensions of parent-adolescent relationship instrument in the study of Matza et

al. also have emotional factors, which are general warmth and displays of

warmth (Matza, Kupersmidt, & Glenn, 2001).

Plenty of studies address the importance of support from parents to

adolescents. Parker and Benson (2004) identified support and monitoring as two

dimensions of relationship with parents. Support and communication, caring,

control and valued relationship quality were five parent-adolescent relationship

dimensions in the study by Crockett et al. (Crockett, Brown, Russell, & Shen,

2007). Dimensions in other studies included reciprocal support (Rosnati & Marta,

1997), support and communication in parent-adolescent relationships (Marta,

1997).

Apart from the dimensions discussed above, *monitoring* (Matza et al., 2001;

Miyuki Nagamatsu, Hisako Saito, & Takeshi Sato, 2008; Parker & Benson,

2004), *communication* (Crockett et al., 2007; Manders et al., 2006; Marta, 1997;

Smetana, Metzger, & Campione‐Barr, 2004), *trust*, *parental strictness and*

decision making opportunity (Fuligni & Eccles, 1993), *skill deficits/angry*

complaints, family structure, and *internalized beliefs* (Robin, Koepke, & Moye,

1990) were dimensions of relationship with parents used in adolescent research.

Measuring relationship with parents

Abundant instruments are applied to measure the relationship between

parents and children, such as parents-adolescents relationship questionnaire,

closeness, perceived parents-child relationships, the relatedness questionnaire,

parent-teenager relationship questionnaire, and quality of relationship with

parents, parent-adolescents relationship, network of relationship inventory and

parents' environment questionnaire.

Parents-adolescents relationship questionnaire, PARQ. Robin et al. (Robin

et al., 1990) developed this multidimensional instrument to measure the

relationship. The self-report inventory includes 16 subscales to measure three

aspects of assessing problem solving communication skills, beliefs/attributions,

and family structure. First factor is skill deficits/overt conflict, including eight

subscales, i.e., Global Distress, Communication, Problem Solving,

Warmth/Hostility, Cohesion, School Conflict, Sibling Conflict, and Conventional.

Global Distress assesses the l degree of conflict, dissatisfaction, and desire for

improve relationship. An example item is "There is conflict between my teenager

and me". *Communication* measures the perception of specific positive and

negative communication skills, for example, "My teenager provokes me into an

argument at least twice a week". *Problem Solving* assesses the ability to resolve

disputes and reaching agreements, for example, "My teenager and I usually reach

an agreement". *Warmth/Hostility* assesses hatred and anger, love and affect, with

example item like "I can't forgive my mom for the horrible things she has done to

me". *Cohesion* assesses engagement or bonding within the family and involves

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loyalty, mutual support, privacy and autonomy. Items are like "There is a lot of group spirit in our family"; "I feel alone in our family"; "We understand each other's feelings without having to talk". *School Conflict* measures conflict on issues about school. For example, "When I offer to help my teenager with schoolwork, we end up arguing". *Sibling Conflict* assesses conflicts between adolescents with another child in the family, including items like: "My children fight too much"; "My parents usually take my brother's/sister's side against me". *Conventionalization* scale was to assess the extent to which family members are responding in a socially desirable manner, including exaggerating the positive characteristics and minimizing the negative characteristics of the family.

The second factor is Beliefs, which includes five subscales: Ruination, Obedience, Perfectionism, Self-Blame, and Malicious Intent. *Ruination* measures restrictions/freedom to adolescents. Example item is "Teenagers who get involved with undesirable friends will ruin their futures". *Obedience* measures demands for obedience of adolescents, items like "My teenager should follow rules because parents know what is best". *Perfectionism* assesses if the adolescent should be flawlessly, items like that "My adolescent should do what is right without first hearing about it from me". *Self-Blame* measures the belief that parents should blame themselves for the misbehaviors of their children, items

like "when you come right down to it, parents are really to blame for adolescents'

bad behavior". *Malicious Intent* assesses if the parents attribute misbehaviors of

adolescents as on purpose, items like "Adolescents misbehave on purpose to

annoy parents".

The third factor is family structure, which include three subscales,

Coalitions, Triangulation and Somatic Concern. *Coalitions* scale assesses the

extent that two family member collaborate to against the third family member.

Examples items like: "My spouse and I often take sides against our teenager",

"My adolescent and I often take sides against my spouse", and "My spouse and

adolescent often take sides against me". *Triangulation* measures two competing

member seek the support from the third member, items like "Our teenager is

often caught in the middle when my spouse and I disagree", "My spouse is often

caught in the middle when my teenager and I disagree" and "I'm often caught in

the middle when my spouse and teenager disagree". *Somatic Concerns* scale

measures family members use complaints to avoided closeness, items like "My

teenager behaves better when I'm sick than at any other time".

Closeness. Four items (5-point scale) (Paulson, Hill, & Holmbeck, 1990) are

used to measure closeness with each parent *(quite a bit* to *not at all).* Higher

summed scores represent greater closeness.

Perceived parent-child relationships. This instrument has seven items from

a modified version of Epstein and McPartland's (1977) Family Decision-Making

Scale (FDM). Two factors were derived, *parental strictness* and *decision-making*

opportunity. First factor has five items and measure the perceptions of parental

control and power assertion in this relationships, whereas the second factor has

two items assesses the opportunities for children participate in the decision

making of parents. items were rated as a 4-point(Fuligni & Eccles, 1993).

The Relatedness Questionnaire. This instrument has been used to measure

two dimensions about the relationship with adolescents and their specific relating

figure. The emotional quality scale consists of items that assess children's

feelings of specific emotions (positive and negative) when they are with the

specified relationship figure. Children rate on a 4-point scale items such as:

"When I'm with *[name],* I feel happy." The psychological proximity seeking

scale consists of items that assess the degree to which children wish they were

psychologically closer to the relationship figure. In this case, children rate items

on a 4-point scale such as: "I wish *[name]* paid more attention to me," and "I

wish *[name]* understood me better." (Lynch & Cicchetti, 1997).

*Parent-teenager relationship questionnair*e (PTRQ). This instrument is

derived from the Network of Relationship Inventory, which used to measure the

perceptions of important relationships of children's. Adolescents' cognitions of

their relationships with their parents and expends new questions especially

relevance to adolescents. The seven qualities were *general impressions of*

warmth, *overt display of warmth*; *adolescents intimate self- disclosure*, *parental*

monitoring, *parent-adolescent conflict*, *instrumental aid* and *parental provisions*

of autonomy. For example, "How much do you feel you mother cares about

you?", "how much do you feel your mother should care about you" each to

measure the perception and standard of general warmth. Scales for this quality

are calculated by the mean of items in each quality rated on five point Likert

scales. This instrument can divide items into two parallel parts, one is perception

of relationship quality , the other is the expectation of the quality of relationships

(Matza et al., 2001).

   Quality of relationships with parents / friends assesses the level of intimacy

with mother, father and best friends. A total of 24 questions from three subscales

measure the intimacy with mother, father, friends. Questions are like: "How

important is your mother to you?" Five response options are from "not at all" to

"very much" (Field et al., 2002).

   Network of Relationship Inventory (NRI) was applied to test the relationship

with parents too. Adolescents was ask to rate the quality of their relationships

with parents. The NRI assesses qualitative features of different relationships on

11 dimensions, each of which includes three items assessed on Likert-type scales

ranging from 1 (little or none) to 5 (the most). Factor analyses of the items

revealed that the measure can be reduced to two broadband dimensions of

interpersonal relationships (Adler & Furman, 1988): one assessing perceptions of

positive social support and the other assessing perceptions of negative

interactions (Smetana et al., 2004).

Parent Environment Questionnaire (PEQ). The PEQ is a 42-items

self-report inventory that assesses five factors derived aspects of the relationship

of each parent- child dyad in the family (Elkins et al., 1997): *Conflict, Parent*

Involvement, Regard for Parent, Regard for Child, and *Structure*. This

instrument aims to assess the overall family climate, rather than assess the

specific dyadic relationships exists within a family. The PEQ scales were

organized around the two broad dimensions of parent- child relationships:

nurturance/warmth versus conflict, and control (McGue, Elkins, Walden, &

Iacono, 2005). Conflict subscale consists of 12 items to measure the extent of

disagreement between parents and children, for example, "My parent often

criticizes me" and "My parent sometimes hits me in anger".

Parent Involvement has 12 items to measure the communication, closeness and support between parents and children, example items are "I talk about my concerns and my experiences with my parent", "My parent and I do not do a lot of things together", and "My parent comforts me when I am discouraged or have had a disappointment". Regard for Parent has 8 items to measures children proud of or respect to their parents, items like "I am really proud of my parent", "I respect my parent". *Regard for Child* has 5 items to assess perception of child on parents' regards to them. Example item is "I know my parent loves me". The Structure has 5 items to measure parents control to children. Example Item is "My parent makes it clear what he or she wants me to do or not to do". Items are answered on a 4-point scale from "1"(*definitely true*) to "4"(*definitely false*).

Parent-adolescent relationship. Eight items to measure the relationship with parents, included how much the adolescent (1) enjoys spending time with parent; (2) wants to be like parent; (3) thinks highly of parent; and how much the adolescent thinks that his/her mother (father) (4)praises adolescent for doing well; (5) criticizes adolescent or adolescent's ideas; (6) helps adolescent with things important to him/her; (7) blames adolescent for parent's problems; and (8) cancels plans with adolescent for good reason (Hair, Moore, Garrett, Ling, & Cleveland, 2008).

Influence of relationship with parents on adolescence development

Relationship between parents and children can impact on both sides of the relationship; the effect on children and adolescents can be classified into four kinds. The first is on their adjustment, the second is on their behavior, the third is on their psychological well-being and the last is on the relational aspects.

Adjustment. The parent-child/adolescent relationship can influence children's adjustment by both improving emotional adjustment and preventing maladjustment. Rosnati & Marta(1997) found parent-adolescent interactions prevent adolescent's maladjustment by comparing parent-adolescent interactions between inter-racial adoptive and non-adoptive families. Noack and Puschner found adolescents on higher connectedness with parents show less aggressiveness and depressive mode (1999). Chen, Liu and Li,(2000) found that parenting warmth have significant impact on children's emotional adjustment and social, as well as school achievement. Meanwhile, Barber (2000) also found conflict with parent can predict adolescents' adjustment.

Behavior. A study of 1696 eleventh grade children from the United State, China, Korea and Czech Republic by structural equation modeling tested the role of parent-adolescents relationships on the process of negative life events and depression and problem behavior. Parents' involvement and parent-adolescents

conflict, perceived scansions of adolescent misconduct can mediate the

correlation between family related life events and adolescents' depression and

problem behaviors (Dmitrieva, Chen, Greenberger, & Gil‑Rivas, 2004).

McBride et al. (2005) survey of 1,078 students (aged from 14 to 18) to rate their

relationship with their parents showed that, a 'great' relationship with both

parents, as perceived by the student, was significantly associated with lower rates

of tobacco and alcohol use as well as lower rates of sexual activity. An

investigation of 140 children aged from 11 to 18 and their parents, found that,

relationship with parents can mediate the associations between agreeableness.

The relationship with parents also has positive effect on reducing sexual behavior.

risk (Hair et al., 2008; M. Nagamatsu, H. Saito, & T. Sato, 2008; Somers &

Vollmar, 2006).

 Psychological well-being. Relationship with parents can affect and promote

the psychological well-being and behaviors of children. Marta (1997) used the

sample of 279 intact families with a late adolescent and their parents found that a

supportive relationship and adequate communication between parents and

adolescents are correlated to the absence or presence of psychosocial risk.

 Shek (1998) found the conflict with parents can affect adolescents'

hopelessness, life satisfaction, self-esteem, purpose in life and so on in a 378

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Chinese participants longitudinal research. Field et al. (2002) studied 89 high

school senior students and found that, students who had high quality of

relationship with parents had lower levels of depression and drug use and higher

grade point average (GPA). Parker and Benson (2004) conducted a longitudinal

study with 16,794 adolescents and confirmed that high parental support and

monitoring were related to self-esteem and risk behavior. Research of Hair et al.

have tested a longitudinal study on 4,671 adolescents and found that, adolescents

who had a positive parent-adolescent relationship had better mental well-being

and fewer delinquency, and this effects can be mediated by parental monitoring

and supportiveness (Hair et al., 2008).

Relational outcomes. The relationship between parents and adolescents

interacted with other kinds of relationships between adolescent and people from

other development context (Lynch & Cicchetti, 1997; Matza et al., 2001). Some

studies tested the relationships effects towards relationship with peers and other

kinds of relationships. Deković and Meeus,(1997) have studied 508 families with

adolescents from 12 to 18 and found paternal child-rearing style has an

independent effect on the adolescent's involvement with peers, and warm

supportive parenting contribute unique variance to satisfactory peer relations.

Similarly, Field et al.'s study of (2002) found that adolescents have high parents relationship scores had more friends.

Relationship with parents in the present study

Relationship with parents is a very important developmental context for human, and most of studies have concluded that relationship with parents produces positive outcomes to the development of adolescent. Some researches focus on relational outcomes, to test how the relationship with parents as developmental context of adolescents can affect other developmental contexts of youth. But the research on this area is not much compared with researches on other kinds of outcomes. Further, study on factors can affect this relationship, and the relational outcome of this relationship should be emphasized since parent-child relationship is the most important development asset and protective factor. The present study will test, to what degree, the relational outcomes of relationship with parents that affect the other kind of important relationship, mentoring relationship of adolescents, meanwhile, whether the mentoring relationship can affect relationship with parents or not will be tested too. Specifically, the dimensions of psychological proximity seeking and emotional closeness studied by Lynch and Cicchetti (1997) on relationship were used in this study as emotional closeness is an important relational constructs of the current

state of parent-adolescent relationship whereas psychological proximity seeking

would be understood as an expectation about the relationship.

Relationship with mentors, the non-familial adults

Theory of mentors' influence on adolescence development

Influence from parents will be weakened when the adolescents grow up, the

relationship with parents will vary as they develop, and the contexts other than

family should be paid more attention to. This relationship will be affected by

other relationships outside of the family. The importance of social contexts for

child and adolescent development has been well recognized (Steinberg, 1999).

Plenty of researches test the effects on the development of adolescent from

importance socially-defined extra familial contexts such as school, neighborhood.

Another kind of perspective is to study on the subjective social contexts that

adolescents regard as important to their development. Building positive

relationship with non-parental adults (NPA) or having a very important person

(VIP) in adolescents' lives is beneficial to their development, especially among

adolescents in poverty (Cowen & Work, 1988; Garmezy, 1991; Greenberger,

Chen, & Beam, 1998; Luthar & Zigler, 1991; Werner & Smith, 1982). And quite

a few terms are used to describe this special relationship. There are (formal)

mentor (R. M. Lerner, Brittian, Fay, & Partnership, 2007; Jean Rhodes & Lowe,

2008), natural mentor (; Cavell, Meehan, Heffer, & Holladay, 2002; Nancy

Darling, Hamilton, Toyokawa, & Matsuda, 2002; D.L. DuBois & N. Silverthorn,

2005; David L. DuBois & Naida Silverthorn, 2005; Klaw, Rhodes, & Fitzgerald,

2003; J. E. Rhodes, Ebert, & Fischer, 1992), non-parental adults (VIPs) (Beam,

Chuansheng, & Greenberger, 2002; C. Chen, Greenberger, Farruggia, Bush, &

Dong, 2003; Greenberger et al., 1998; Haddad, Chen, & Greenberger, 2011) or

very important non-parental adults (C. Rishel, Sales, & F. Koeske, 2005; C. W.

Rishel et al., 2007), significant individuals, etc. (Blyth, Hill, & Thiel, 1982;

Hendry, Roberts, Glendinning, & Coleman, 1992; Tatar, 1998).

Mentor refers to three core components which are: the mentor has greater

experience or wisdom than the mentee; the mentor offers guidance or instruction

that is intended to help the growth and development of mentee (to facilitate the

development of the mentee); there is an emotional bond between the mentor and

mentee. Besides, this kind of non-parental adults is a given one in a formal

program. Compared with formal mentor, natural mentor is non-parental adults,

such as extend family members, teachers, and neighbors. Youth can perceive

support and guidance as a result of a relationship development apart from a

formal mentorship program (Zimmerman, Bingenheimer, & Behrendt, 2005)

VIPs. VIP is defined as a non-parental adult who plays the role of VIP.

VIPs – non-parental adults who have had a significant influence on the

adolescent and on whom the adolescent can rely for support (C. Chen et al.,

2003). Study use VIPs specifically point out that the mentor belongs to many

kinds of VIPs (Haddad et al., 2011), but Zimmerman and his colleagues argued

that VIPs may not be the same focus as natural mentor because youth may not

express very clearly the kind of support and guidance received from VIPs, while

adults who do not act as a mentor may be included as a VIPs.

Adolescents' significant others is to whom adolescents feel attached and

from whom they receive social support. This support has a direct positive and

indirect stress-reducing effects on adolescents, and their opinions, attitudes,

response can influence adolescents (Tatar, 1998). They can be parents, siblings,

extend family members, teachers or friends. The scope can include any kind of

relationships, such as mentors, natural mentors and so on although their

empirical studies found that, parents, siblings and teacher, friends may be the

most popular significant others.

Therefore, the distinctions among four kinds of terms are not very simple

and clear. The target figures are varied in age, type of relationship, and if it is

developing in an organic context. Let's constrict the range of age but consider

adult's figures only and exclude parents from VIPs, significant others, then the

sibling and friends can be excluded from the scope of significant others of

adolescents. All mentors and natural mentor can be classified into VIPs, and

belongs to Significant others, VIPs equal to Significant others. If we exclude

mentor from VIPs and significant other, the distinctions among four terms of

non-parental adult can be divided into two types, one is (formal) mentor, the

other is non-parent adult (VIPs, significant others, natural mentor). Compared

with mentor, the other kind of important non-parental adults are acquired in a

nature way and by the perception of adolescents to be important to their

development. In general, they are all important non-parental adult, who can

provide support and guidance to adolescents. And they are all important

development contexts for adolescents to be studied. Studies on formal mentor are

very plentiful, but studies on non-parental adults are relatively limited.

Effects of non-parental adults on adolescence development

Researches on all non-parental adults can be divided into two parts,

researches on the nature of relationship between adolescents with their

non-parental adults and the outcomes brought by these relationships.

Nature of relationship. Some studies pay attention to the nature of the

relationship with NPA itself. Rishel, Crttrell et al. (2007) explored the

relationship between adolescents and their NPAs by considering the frequency

and enjoyment of adolescent contact with their various non-parental adults using

an inventory the Non-parental Adult Inventory (N.P.A.I.). This inventory fails to

measure the supportive and emotional aspects of non-parental relationship, thus

needs to be further developed. Studies on relationship to natural mentoring have

relatively advanced. Dubois and Silverthorn measure characteristics of (natural)

mentoring relationship by analyzing mentor's role in the youth's life, frequency

of contact, emotional closeness, duration (D.L. DuBois & N. Silverthorn, 2005).

Cavell and his colleagues (Cavell et al., 2002) developed a five-item Natural

Mentor Questionnaire (NMQ) to evaluate the experience of having a relationship

with non-parental adult during participants' childhood. These five items are

related to five aspects including: closeness, influence, supportiveness, care and

help of feeling good about self, with participants responding yes or no to each

item. But these studies are relatively imperfect on the dimensions of relationship.

Darling et al. (2002) found four items common to the mentor factor in both

US and in Japan which were "I learned how to do things by watching this person

do them"; "I acquired knowledge, information, or skills from this person"; "I got

a lot of my values from this person"; and "This person served as a role model of

achievement for me." The number of items (functions) adolescents used to describe each associate was summed to create that associate's mentoring score.

Outcomes of relationship with non-parental adults. Outcomes of relationship with non-parental adults can be education/work, reducing problem behavior, psychological wellbeing and health (David L. DuBois & Naida Silverthorn, 2005).

Vesely et al. (2004) treated relationships with adults as an adolescent asset. They interviewed 1253 teenagers and their parents, and found that Non-Parental Adult Role Models were significantly related to teenagers' risk of sexual behavior (whether or not youth had ever participated in sexual intercourse). In other words, NPAs are seen as a protective factor in adolescent sexual risk behaviors. Rishel et al. (2005) asked 75 mothers to rate the children's contact with non-parental adult and behavior of their children. It turned out that children with more frequent and high quality contact with NPA have fewer behavior problems.

With the study of 201 adolescents from different backgrounds with average age of 16.7, Greenberger et al. (1998) found VIPs' characteristics, especially their behavior, were negatively related to adolescent misconduct and depression. Adolescents reported that their VIPs' positive qualities are more important than

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those of their parents and peers. VIPs' characteristics were significantly

associated with adolescent outcomes in misconducts and depressive symptoms.

VIPs positive characteristics can predict a lower incidence of depressed mood,

while negative characteristics such as illegal behavior can predict misconduct

and depressive symptom. In contrast to the effects of parents and peers, the VIP

attributes made a unique contribution to the explanation of misconduct and

depressive symptoms. Cavell and his colleagues (2002) interviewed 107 students

who had status as children of alcoholics (COAs) and found that the quality of the

(natural) mentoring relationship could significantly predict the psychiatric

symptomatology (SCL 90).

In the study of effects of Natural mentoring relationship of 129 young,

African-American mothers, women with mentors were reported as at lower

levels of depression than those without mentors. In addition, woman who had

natural mentor could use support better than those who didn't have (J. E. Rhodes

et al., 1992). Rhodes and his colleagues investigated 54 inner-cities, Latina

adolescent mothers, and found that women with mentors were reported as

significantly lower stress exposure and anxiety than those who didn't have

mentor, and reported more satisfied with support and good at cope relationship

problems; and recall their relationships with mothers in childhood more

accepting. Thus, the mentoring relationship may enhance women's capacity to gain benefits from supportive resources.

Dubois and Silverthorn, have surveyed nationally representative sample of 2053 late adolescents and youth, and found natural mentoring relationships could predict a higher possibility of favorable outcomes in education, work, problem behavior and physical health (D.L. DuBois & N. Silverthorn, 2005). In another research based on the same sample, they found that youth who had a mentoring relationship had more possibility to attain positive outcomes, including education and work, reducing problem behavior, higher self-esteem and life satisfaction and better health condition.

Relationship with mentors in the present study

Formal mentors, natural mentor, very important person, non-parental adults of adolescents and significant others are all developmental context for adolescents and most of them refer to relationships out of family. Different terms used in different researches emphasize different aspects of this important unfamiliar relationship. Natural mentor, very important non-parental adults and significant others, are developed in natural environments, and tends to be the subjective context for adolescents. Formal mentoring relationship developed in a given institutional environment is the combination of subjective and socially

defined nature of developmental context. Although they are different kinds of

context for adolescents, they can be treated as one kind. Being different from

parents and peers (significant others exclude this group), they both provide

support and directions to adolescents with emphasis on the relational nature of

this emotional bond, and can be all developmental assets for adolescents.

Based on the statistical report which concludes most of the mentoring

relationships take place as a natural one (Zimmerman et al., 2005), the amount of

current study on natural mentor were quite insufficient. Studies on VIPs are

relatively limited compared with studies on natural mentor, and both of these

kinds of researches fall far behind the studies of mentoring. The present study

treats mentoring relationship as one of the different kinds of non-parental

relationships and tests the complicated interactions with other developmental

contexts and the relationship with parents.

Mentoring relationship quality

Theory of mentoring relationship quality

In the model of youth mentoring of Rhodes, mentoring relationship with

mutuality, trust and empathy, can affect the social-emotional development,

cognitive development and identity development. Through these three

developments of youth, youth can get positive outcomes. Mentoring relationship

is the core of mentorship program. Positive youth development model also highly

emphasize the importance of relationship with adults for the development of

youth. They identify a sustained and caring adult-youth relationship as one of the

big three important features of effectiveness of positive youth developmental

programs (R. Lerner, Alberts, Jelicic, & Smith, 2006).

On the other hand, the factors which can affect mentorship programs are

important to discussion because of the importance of mentoring relationship to

the success of mentorship program. Factors that affect the mentoring relationship

can be classified into three aspects, that is, the characteristics of a mentor, the

characteristics of a mentee, and the operation of mentorship program. According

to the model of Rhodes, mentoring relationship will be affected by different

elements, including interpersonal history, family and community context, which

manifests the youth's relationship with peers and family, can affect the

mentorship program. Karcher, Nakkula and Harris (M.J. Karcher, Nakkula, &

Harris, 2005) found that the self-efficacy can influence mentor's perception on

the quality of mentoring relationship. Elements of program such as training,

supervision of mentors have directly affected mentor's retention (David L.

DuBois et al., 2002).

Measuring mentoring relationship quality

In the review article on the assessment of mentoring relationship, Nakkula and Harris (Nakkula & Harris, 2005) gave a comprehensive summery on dimensions of mentoring relationship. They mainly adopted two dimensions, one as internal and external, and the other subjective and objective. First level classification is that, the construct of mentoring relationship can be divided into internal and external, the former referring to what happened within the mentoring relationship or traits of relationship itself, the latter referring to environmental aspects of mentoring relationship, including both subjective and objective supports from program, parents and social connections. The internal aspects can be divided into two categories, which are relational/experimental and instrumental/ goal-oriented, two parts being further divided into subjective and objective.

Relational/experimental aspect focuses on relationship itself. Subjective aspects of this category include relational/experimental compatibility, mentors approach, youth engagement, precursors to closes, closeness; objective aspects of this category include characteristics of the contact mentor and mentee, such as their frequency, intensity, longevity and duration. In the Instrumental/goal-oriented perspective, mentees perceived the support from mentor for specific achieve goals, and mentors viewed he or she can be helpful in

this direction. Subjective aspects include instrumental compatibility, mentor's

instrumental orientation, and mentee's instrumental orientation, perceived

support of mentor or mentee. The objective aspects are received support,

including engaged goal directed activity, topics discussed, advocacy, details see

Table 1.2.

Table 1.2 Dimensions of mentoring relationship (Nakkula & Harris, 2005)

Internal		*External*
Relational/Experiential	*Instrumental/Goal-Oriented*	*Environmental*
Subjective	Subjective	Both subjective &objective

Subjective
- Relational/experiential compatibility
  o Traits
  o Focuses
- Mentor's approach
  o Youth-centeredness
  o Youth feels sense of control
  o Positive regard
- Youth's engagement
  o Youth's desire to participate
  o Youth actively engages
  o Youth's behavior interferes with engagement
- Precursors to closeness
  o Empathy
  o Trust
  o Respect
- Closeness
  o Feeling connected
      · Mentee feelings of being cared for
      · Mentee has sense of belonging to reciprocal network
  o Intimacy
      · Genuine conversation/ sharing
      · Mutuality
      · Intensity
  o Satisfaction with relationship

Objective
- Current meeting frequency
- Historic meeting frequency
- Current meeting intensity
- Historic meeting intensity
- Longevity of the relationship
- Durability/resilience

Subjective
- Instrumental compatibility
  o Nature of goals/focuses
  o Preferred intensity of pursuing goals/focuses
- Mentor's instrumental orientation
  o Mentor seen as role model
  o Mentor seen as supporting goal/growth orientation
  o Mentor validates achievement
  o Mentor seen as source of inspiration
- Mentee's Instrumental orientation
  o Initiates goal-oriented activity
  o Youth seeks support
- Perceived support
  o Youth's satisfaction with relationship's instrumentality
  o Mentor's perceived efficacy in relation to instrumentality

Objective
- Received support
  o Engaged, goal-directed activity
  o Topics discussed
  o Advocacy

Both subjective &objective
- Programmatic support
  o Supervision
  o Training
  o Provides structured activities
- Parents' or guardians' engagement
- Support networks

In the article (Nakkula & Harris, 2005), they discuss five kinds of instruments to measure mentoring relationship which are Youth-Mentor Relationship Questionnaire (YMRQ) , The Youth Survey, YS, The Match Characteristics Questionnaire (v1.l & v2.0) and the Youth Mentoring Survey, Relational Health Indices (RBI), Mentoring Scale. The last one is aimed to measure the relationship with natural mentor, which have been discussed in the previous part of this chapter. Besides, the Mentor Youth Alliance Scale, MYAS, will be discussed in the following parts.

Youth-Mentor Relationship Questionnaire (YMRQ) is developed by Rhodes,

Reddy, Roffman and Grossman (2005). They empirically derive 15 items from

73 items by factor analysis that there are four factors organized in mentoring

relationship quality in the youth mentoring relationship questionnaire. The first

factor is Not dissatisfied, measuring the youth's dissatisfaction with mentors; the

second is Helped to cope, mentors helping youth in dealing with problems; the

third is Not unhappy, representing negative emotions towards mentor, such as

feeling mad, ignored; the fourth is Trust not broken, representing the trust

between the mentee and mentor. YMRQ comprises items empirically derived

from subscales, four dimensions, i.e., not dissatisfied (Sometimes my mentor

promises/promised that we will do something and then we don't do it; My mentor

makes fun of me in ways I don't like; I wish my mentor was different), helped to

cope (When something is bugging me; my mentor listens while I get it off my

chest, My mentor has lots of good ideas about how to solve a problem; My

mentor helps me take my mind off things by doing something with me), not

unhappy (When my mentor gives me advice, s/he makes me feel kind of stupid;

When I am with my mentor, I feel ignored; When I am with my mentor, I feel

bored; When I am with my mentor, I feel mad; I feel that I can't trust my mentor

with secrets because s/he would tell my parent/guardian; When I am with my

mentor, I feel disappointed), trust not broken have (When my mentor gives me

advice, s/he makes me feel kind of stupid; I wish my mentor knew me better; I

wish my mentor spent more time with me ; I wish my mentor asked me more

what I think; I feel that I can't trust my mentor with secrets because s/he would

tell my parent/guardian; Sometimes my mentor promises that we will do

something and then we don't do it). All the items are rated by youth from 1 to 4

which means very true to not at all true, or from hardly ever to pretty often. The

subscales will be scored separately. This instrument measures the precursors to

closeness, perceived support, and has been validated by substantial evidence. But

the difference between two subscales, not dissatisfied and not unhappy, is quite

unclear make the focus of this measurement narrow.

Youth Survey (YS). YS was developed by Jucovy, Public/Private Ventures, &

Northwest Regional Educational Lab, (2002). YS have 19 questions measuring

three dimensions of the qualities mentoring relationship. The first dimension of

mentoring relationship is youth centered, concerning to what extent the

relationship between mentor and youth is centered on the youth, instead of

centered on the mentor. The items are: My mentor almost always asks me what I

want to do. My mentor is always interested in what I want to do. My mentor and

I like to do a lot of the same things. My mentor thinks of fun and interesting

things to do. My mentor and I do things I really want to do. The second

dimension is emotional engagement, measuring if youth enjoy the relationship.

There are eight items, that is, "When I'm with my mentor, I feel special. When

I'm with my mentor, I feel excited. When I'm with my mentor, I feel sad. When

I'm with my mentor, I feel important. When I'm with my mentor, I feel bored.

When I'm with my mentor, I feel mad. When I'm with my mentor, I feel

disappointed. When I'm with my mentor, I feel happy." The third dimension is

dissatisfied, measuring the dissatisfaction of youth with their mentor. Six items

are included: My mentor makes fun of me in ways I don't like. Sometimes my

mentor promises we will do something; then we don't do it. When my mentor

gives me advice, it makes me feel stupid. I feel I can't trust my mentor with

secrets—my mentor would tell my parent/guardian. I wish my mentor asked me

more about what I think. I wish my mentor knew me better. The measure uses a

four-point, Likert-type response scale which ranges from (1) not true at all to (4)

very true. Four items should be reverse-scored items. YS measures the mentor's

approach, precursors to closeness and closeness, and provides a standard norms

to make the comparison between programs. The limitation of these

measurements is similar to YMRQ because they derived from the same original

items.

Match Characteristics Questionnaire, MCQ. MCQ is designed for adult to

rate the mentoring relationship and developed by Harris and Nakkula (M.J.

Karcher et al., 2005). This 29-item questionnaire assesses six mentor-reported

characteristics of the 29 items, six subscales. The first subscale is the

mentor-perceived Self-Efficacy scale composed of four items, i.e. "I feel like I

am having a positive effect on my mentee" and "It is hard to tell whether my

mentee is getting anything out of the mentoring" (reverse scored). The second

subscale is Mentee Disposition measuring characteristics of the child beyond his

or her behavior in the mentoring relationship. It includes seven items such as

"My mentee has good friends," "My mentee has a pretty difficult life at home"

(reverse scored), and "My mentee receives or has been referred for professional

psychological help" (reverse scored). The third subscale is Mentee Support

Seeking with four items to measure the degree of mentees using their mentors for

support regarding friendship problems, school, and other concerns, such as "My

mentee talks with me when she or he is upset about family matters." The fourth

subscale is Program Quality including seven items about the quality of program,

Include training, program goal, guidance and supervision from program. The

fifth subscale is Mentee Parental Involvement including three questions on how

involved, supportive, and influential the mentee's parents are to their child's

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participation. The sixth subscale is Mentoring Relationship Quality including

seven items to measure the quality of the mentor-mentee relationship, such as

"My mentee and I trust each other" and "I feel close with my mentee." This

instrument uses Likert kind rate scale, ranging from 1 to 6 which means from

"not true at all" to "very true", and four items need to be revise scored. This

instrument measures internal and external aspects of mentorship programs.

Internal aspects include relational/experiential compatibility, youth's engagement,

and precursors to closeness, looseness, durability/resilience, instrumental

compatibility and youth's instrumental orientation. External aspects include

programmatic support, parent's/guardian's engagement and received support.

This measurement has no negative aspects or objective aspects on mentoring

relationship, and without solid validation.

The Relational Health Indices (RhI), RhI (Liang et al., 2002) were

developed by Liang et al, to measure relationship with peer, mentors and

communities, scale to measure mentoring relationship (RHI-M). There are three

subscales of this instrument. The first subscale is engagement, including three

items: "My mentor tries hard to understand my feelings and goals (academic,

personal, or whatever is relevant)", "my mentor's commitment to and

involvement in our relationship exceeds that required by his/her

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social/professional role". "My mentor gives me emotional support and encouragement". The second is empowerment/zest, including four items: "I feel uplifted and energized by interactions with my mentor". "My relationship with my mentor inspired me to seek other relationships like this one", "I feel as though I know myself better because of my mentor". "I try to emulate the values of my mentor (such as social, academic, religious, physical/athletic)". The third is authenticity, including four items: "my mentor shares stories about his/her own experimented with me in a way that enhances my life". "I can be genuinely myself with my mentor". "I believe my mentor values me as a whole person (e.g., professionally/ academically and personally)". "I feel comfortable expressing my deepest concerns to my mentor". All the items are rated as Likert kind, ranging from 1("Never") to 5 ("Always"). This instrument measured aspects such as, Relational/experiential compatibility, Mentor's approach, Closeness, Mentor's instrumental orientation, Perceived support, and received support of Rhodes' framework.

Mentor Youth Alliance Scale, MYAS. MYAS was developed by Zand at el. (Zand et al., 2009), to measure the perception of relationship with mentor. Ten items include "My mentor cares about me," "My mentor is happy when good things happen to me," and "I look forward to the time I spend with my mentor".

This instrument is rated by a four-point scale, ranging from 1 (very false) to 4 (very true).

All these instruments reviewed above have different limitations and measure different aspects of mentoring relationship. They need further validation on the applicability of different programs and cultural contexts. For example, Chan and Ho (2008) have made contribution to the localization work for MRQ; using qualitative methods to explore themes in Chinese society, and further discover the relationship between the mentor and mentee as a determinant of effective mentorship program. They also found two factors of MRQ by factor analysis, which were Relationship Intimacy and Relationship Asymmetry. The two factors were derived from Chinese society and had a different structure from that of the YMRQ by Rhodes et al. (2005).

There are three paths to extend the measurement of mentoring relationship. First, we can put the widely used scales together, refine items and reorganize scales as applied in a culturally different society. Second, review literatures to find the essence of mentoring relationship and devise new scales on mentoring relationship. Third, develop mentoring relationship scales from local mentors, using local language on relationship. The current study used the first approach to

refine mentoring relationship scales as and when they were used in a Chinese

mentorship program.

Studies on the mentoring relationship quality

Research on mentoring relationship can also be classified into three types.

One is on the relationship itself. The second type of research tests the outcomes

of mentoring relationship with mentees as most of current literatures focus on it.

The last type of research study factors which affect the mentoring relationship.

Plenty of researches have studied the impact brought by the mentoring

relationship. Generally speaking, mentoring relationship has correlated with

positive outcomes of youth. In the study of Perra and his colleagues, 50 mentors

and 50 mentees were investigated, and the result shows that the mentor rated

more extensive amounts of mentor-youth contact and feelings of closeness each

associated with ratings of greater benefits for youth (Parra, DuBois, Neville,

Pugh-Lilly, & Povinelli, 2002). This outcome drawn from the research of a

sample size of 205 multiethnic subjects average age of 12.07 supported that the

quality of the mentor-youth bond significantly predicted the scores of mentee in

most relationship-based outcomes (such as friendship with and self-disclosure to

adults) during 8 to 16 months (Thomson & Zand, 2010). Langhout et al. (2004)

studied 1138 youth aged from 10 to 16 and matched randomly, they classified

four kinds of mentoring relationships used of cluster analysis which are moderate,

unconditionally support, active and low-key (group ranked relatively high on

levels of support and reported moderate structure). The four groups tended to

distinguish themselves from one another on the basis of perceived support,

structure, and activity. The youth who characterized their mentor relationships as

providing moderate levels of both activity and structure and unconditional

support derived the largest number of benefits (improvements in social,

psychological, and academic outcomes) from the relationships. Using a sample

composed of 276 subjects with average age of 12.7 from four program sites in

US. The MYAS predicted youth scores in four competency domains, family

bonding, relationship with adults, school bonding and life skill (Zand et al.,

2009).

Still, in the meta-analytic review in 2002, DuBios et al. (David L. DuBois et

al., 2002) found that, the intensity and quality of mentoring relationship had a

strong association with youth's development outcome benefits. But the effect to

the development of youth was varied. Rhodes and DuBois made a conclusion in

their paper that current literatures indicated mentoring relationships could

promote positive development of youth and adolescent, but the benefits (effect

size) were modest in size. All the available researches indicate that, although

mentoring relationships can indeed promote positive development among young

people, these benefits are modest in size (2008).

From a developmental science perspective, age and gender may influence

the mentoring relationship, but different articles have different findings. Age and

gender did not have significant correlations with mentoring relationship in the

analysis of Rhodes, Reddy, and Grossman, (2005), but Darling, Bogat, Cavell,

Murphy, and Sánchez(2006) found age difference can lead to different

mentor-mentee relationships.

Mentoring relationship quality in the present study

Mentoring relationship is important to both the success of mentorship

program and the positive development of youth with relational outcomes. This

relationship can affect the outcome of mentoring through multiple pathways.

Meanwhile, this relationship can be affected by other elements, such as

interpersonal history, family context and so on.

Although the dimensions and components of mentoring are complicated and

the instruments on mentoring relationship are diversified, further studies need to

be continued in different programs and contexts. In view of this, assessment of

MRQ for the current study would use items representing the different MRQ

dimensions from the different instruments in order to provide a good coverage of

different aspects of mentoring relationship in a Chinese sample. Similarly to the relationship with parents, emotional engagement, psychological proximity seeking and support are important dimensions. Furthermore, youth-centeredness, trust and role modeling are unique features in mentoring relationship as an intergenerational relationship. Study on MRQ helps mentors to improve their relationship with mentees (Jucovy et al., 2002). Mentoring relationship can also be affected by other relationships and affect other important relationships with adolescents, such as the relationship with parents, but that is to be support with more empirical evidences.

There are two schools of thoughts in mentoring relationship, namely prescriptive and developmental approaches. These two approaches treat the interaction between mentor and mentee in different ways and it is useful to compare some important dimensions of these two approaches which will guide the better choice on scales of mentoring relationship quality.

Firstly, the two approaches are compared on the ability dimension as mentoring relationship for adolescents is about actualizing potential in adolescents. Prescriptive approach focuses on the limitations of mentee and tries to concentrate on remedial interaction. On the contrary, developmental approach focuses on developing the potential of mentee by mentors through the sharing of

ideas, introducing new skills, providing chance to enrich themselves, which

closely resembles the empowerment and performance standard dimensions in

mentoring relationship quality.

Secondly, prescriptive and developmental approaches also differ in the

dimension of control and learning output. Mentors using prescriptive approach

will have the authority and control in the interaction between mentors and

mentees. Mentees are expected to learn from mentors only. The developmental

approach, however, will shear the authority with mentees and put them in the

same level when mentors provide help to mentees. They are expected to learn

from each other. This help to cope with the dimension of mentoring relationship

quality would reflect the developmental approach as mentors could listen and

provide suggestions to help adolescents cope with their problems, rather than to

instruct   adolescents to adopt mentors' solutions.

Thirdly, mentors adopting the prescriptive or developmental approach

would show different understanding about mentees' level of maturity.

Prescriptive approach will treat mentees as immature, irresponsible and must be

closely supervised. Developmental approach treats mentees equally, thinking

mentees are the center of the relationship and encourage them to make their own

choices. Youth-centeredness would reflect the level of maturity mentees

perceived from their mentors.

Lastly, it is about the relationship. In the prescriptive approach, the

relationship between mentors and mentees should be formal, and the trust

between them is low. The developmental approach encourages trust between

mentors and mentees, as relationship is defined and built among the pairs instead

of being restricted by a prescribed formal structure. At the same time, emotional

engagement and proximity seeking in a developmental mentoring relationship

would be higher than in prescriptive mentoring relationship.

All the reviewed scales can be grouped according to these two kinds of

mentoring relationship orientations. The Match Characteristics Questionnaire and

Youth Mentoring Survey adhere to the prescriptive approach.   YMRQ, RHI and

MS , YS belong to developmental approach and as derived from them,

sub-dimensions of "Youth-centered relationship", "Positive emotional

engagement", "No negative emotional engagement", "Trust", "Psychological

proximity seeking", "Help to cope" and "Empowerment and performance

standard" could be used to represent important characteristics of developmental

approach.

It is hard for adolescents to build new relationship with adults, especially in

Chinese societies. And it is very important for scholars and practitioners to

understand the important dimensions in mentoring relationship; otherwise,

mentorship program cannot achieve their goal because of the failure to build

good mentoring relationships effectively.

Therefore, prescriptive and developmental approaches on mentorship

program have emphasis on different aspects of the relationship between mentors

and mentees. The seven dimensions of the mentoring relationship quality scales

utilized in the present study are all representing the developmental approach and

they would be expected to produce positive developmental outcomes in

participating adolescents.

Outcomes in the development of adolescents relating to mentorship program

Outcomes of mentorship program

Rhodes's model of youth mentoring (D.L. DuBois et al., 2011; J. E. Rhodes,

2005) can conceptually explain why mentoring can bring changes for participants.

There are three kinds of developmental processes i.e., social-emotional, cognitive

and identity. Mentoring can affect the developmental process of social-emotional

aspect. Mentors may change youth's viewpoint that, positive relationships are

possible to them, which may provide model of communication, improve their

understanding, expression and regulate their emotion, and that good

social-emotional experience enables youth to interact with other social relations

more effectively. Mentoring relationship can affect many cognitive

developmental processes, improve the receptive adult values, advice, and

perspectives and improve their academic and vocational outcomes. Mentoring

relationships can also affect the development of identity. Mentor can help youth

improve the conceptions of their current and future identities increase the

opportunities to participate in activities and provide resources and chances for

the development of their identity.

Keller (2007) has developed another framework on how mentoring affects

youth. In addition to Rhodes's model, three pathways of the effects from

mentoring to youth have been discussed: protecting from psychosocial risk,

enhancing personal competence, and promoting social integration. The idea that

mentoring can protect youth from psychological risk comes along with the

research on resilience and social support. For example, when youth coping with

the stress, mentor can provide protection in three ways: one is the mentoring

relationship provides effective means to cope, and the youth accepts the mentor

is trustworthy and reliable, can brought valuable change in the working model of

relationship. The second way is that, mentor's caring can make youth regard

themselves as worthy to care. The last way, the dependable support from mentor

can make youth feel more confidential to explore and develop knowledge, skills

and competence. The idea of mentoring can help youth enhance personal

competence corresponding to the paradigm of positive youth development.

Mentor can equip youth with the knowledge, skills and experiences to facilitate

them to chase their dreams and be more effective social members by interacting

with them because of their senior and experience. For example, mentor can

promote youth's self-efficacy and competence by providing learning

opportunities to achieve the goal, by observing the appropriate the behavior of

role models, and by giving encouragement to youth. These methods may affect

the outcomes relating to outcomes of academic, vocational, and recreational

pursuits and managing emotions. The ideas of mentoring can promote the social

integration of youth have connection to theory of social capital. A mentor can

enrich and expand the relational system of a youth's social network. This may

affect the relationship with parents and peers by changing the perception,

dynamics, and working model of relationship.

These two theoretical models have shared some merits. Firstly, they both

classified the influence into three specific pathways, which make the functions of

mentoring more clearly. The social-emotional development, cognitive

development and identity development of Rhodes have been discussed in the

model of Keller too. Secondly, the theoretical base such as attachment theory has

been discussed in both modes, and both of them emphasis relational outcomes of

mentoring, such as the relationship with family and peers. Finally, specific

outcomes such as self-efficacy have been discussed in both models. Generally

speaking, , Rhodes' model seems to be more holistic because of its including not

only the pathways to influence the outcome of youth, but also factors that may

affect the mentoring relationship. That is to say, the mentoring relationship has

been discussed both as an independent factor and a dependent factor.

There are plenty of evaluations on the outcomes brought by mentorship

programs. The most influential review of outcomes of mentoring was presented

by Dubois and his colleagues by using the theoretical framework of Rhodes in

2002 and 2011. In the meta-analytic review in 2002, the outcomes were

classified into five categories (David L. DuBois et al., 2002), which included

emotional/psychological, problem/high-risk behavior, social competence,

academic/educational and career/employment. In recent meta-analysis of

effective of mentorship programs for youth (D.L. DuBois et al., 2011), the

outcomes have been classified into six categories, which are

attitudinal/motivational, social/relational, psychological/ emotional, conduct

problems, academic/school, physical health, and career/ employment.

Attitudinal/motivational includes outcomes such as youth career interests,

educational and occupational experience, achievement motivation and prosocial

attitudes; social/relational outcomes include social skills and peer relationships,

peer skill, social influence and conflict resolution. Psychological/emotional

outcomes include anxious behavior, self-esteem, self-efficacy, possible self,

internalizing problems and depressive symptoms. Conduct problems include

disciplinary referrals, out of school suspensions, externalizing behavior problems,

substance use, bullying, discipline problems and sexual activity. Academic/

school outcomes include behavior control and task orientation, grade and

attendance. Physical health can include height and weight, physical activity,

dietary patterns, eating disorder, repeated pregnancy and fat-free body. And they

found that the average effect size was positive for all the six categories, and

didn't present clear difference. In the former meta-analysis of reviewed study,

they also found that mentorship programs brought effects on youth's

career/employment area.

Development outcomes of adolescents in the present study

The outcomes of mentoring have been theoretically discussed and

empirically tested, but these studies are not sufficient especially in comparison

with the speedy development of mentorship program both in the United States

and in Chinese societies.

This research hopes to learn about development outcomes of mentorship program held in Hong Kong, and to test the social relational outcomes of mentoring. In addition, by considering mentoring relationship from the developmental perspective, this study treated mentoring relationship as an important developmental asset of adolescents which could produce positive influence on adolescents' relationship with parents and other development outcomes. However, development of mentoring relationship would also be influenced by the existing family relationship context of adolescents. Thus, the present study would evaluate mentoring relationship as both independent and dependent variables.

Mentorship program has started and developed in Western societies for more than one hundred years, and the positive outcomes of mentorship programs have been consistently found by Western scholars. Large scale mentorship program have been promoted by government or non-government organizations in Hong Kong, Singapore and Mainland China, but there is no empirical evidence on whether the successful model in Western countries will work in Chinese societies as there is no large scale mentorship program operated in these areas. The Hong Kong Child Development Fund project is a good opportunity for such a research to empirically study the positive effects of mentorship program.

Although there are limitations in the design and context/setting for a study design using randomized controlled experiment, because of the program parameters set by the government in the implementation of the program, this study would produce the very little important and useful evidence to the field of mentorship program and mentoring relationship.

Also, the positive effects of mentorship program have been generally accepted, but effects of different kinds of mentorship programs varied and need to be further studied. Mentorship programs have diversified characteristics into goals and operating models. Mentorship programs in the Hong Kong Child Development Fund focus on the goal of poverty alleviation, in combination with two other components, namely target saving and personal development plan. Whether this special arrangement will have positive outcomes still need to be tested.

At the program level, these two components can make the mentorship more easily recognized by public and participating family for they seem to more directly account for poverty alleviation, an emerging problem of the Hong Kong society. At the relationship level of the program, the other two components can provide opportunities and topics for the communications, and hence guide the development of relationship between mentors and mentees. The building of

relationship with a stranger is not easy in the Chinese culture, especially when

two parts do not have some specific goals in their conversation. Similarly, the

personal development plan can further enhance the development of goal setting

and ability to plan for future in mentees. In other words, target saving and

personal development plan require the   family members to participate and

discuss with their children and mentors, which in turn can enhance the

interaction between parents, participated adolescents and mentors. If the

effectiveness of this mentorship program model is tested and confirmed, the

useful experience can be helpful to the promotion and development of

mentorship program in Mainland China because of the same reasons. Poverty

alleviation is a severe social problem in Mainland China, and it is difficult for

adolescents to build relationships with strangers.

The unique structure of this mentorship program from all other mentorship

programs worldwide makes it important to study these research questions: the

effectiveness of mentorship program, the effects of mentoring relationship on the

development of participated adolescents and the complex relation between

relationship with parents and mentoring relationships of participated adolescents.

Interaction between mentoring relationship and relationship with parents

Adolescents are developed in interpersonal relationships, such as

relationship with parents, with peers, with non-parental adults (mentor) in

different contexts. All these interpersonal relationships are important

developmental contexts for human, and the interaction among different

relationships is inevitable and necessary and these complex interaction of

relationships composing the *microsystem* of youth development (Bronfenbrenner,

1995). Among empirical studies on interaction between the relationship with

parents and the relationship with peer, there is one good example of a

meta-analysis of 63 on the effects of child-parent relationship on children's

relationship with peers. Schneider, Atkinson and Tardif found that, the effects of

child-mother attachment to adolescents' relationship with peer were common in

the reviewed studies and the effect sizes were quite similar (Schneider, Atkinson,

& Tardif, 2001). Relationship with parents affects youth social skills and

competence. The research on 412 subjects aged from 12 to 18, found that, in

elder group aged from 15 to 18, parental attachment was related to social skills of

youth, and then affected by the competence of friendship and romantic

relationships (Engels, Finkenauer, Meeus, & Deković, 2001). These two research

studies showed that in adolescents, an interpersonal relationship can affected

another kind of interpersonal relationship, especially relationship with parents

being the effect-producing one.

Two important relationships exist in the mentorship program, that is, the

relationship with parents, and the relationship with mentor. The interaction

between the two important relationships has been conceptually manifested by

Rhodes' model of mentoring (J. E. Rhodes, 2005), and Keller's systemic model of

mentoring (Keller, 2005). In the model of youth mentoring, Rhodes suggests that,

there are three interrelated pathways of the effects from mentoring relationship: a)

enhancing social skills and emotional well-beings b) improving the cognitive

skills through instructions and dialogues, and c) fostering identity development

by serving as role model and advocate. The positive social-emotional

development can enable youth to interact more effectively with other social

relations such as peer and parents. On the other hand, the relationship between

youth and mentor can be affected by the interpersonal history and social

competencies, family and community context and other factors.

Keller (2005) proposed a systemic model of youth mentoring intervention,

which treats the four kinds of factors: mentor, child (adolescent, mentee), parent

and caseworker of the operative organization, as a system. These four factors

have a different kind of relationship, thus can influence the others' relationship

directly and indirectly (see figure 1). The arrows are bidirectional between two

actors in the system delegating the interactions as reciprocal. For example, the

relationship between mentor and child, that is mentoring relationship, can be

affected by the characteristic of workers of program directly and indirectly, will

also be affected by the relationship between parents.
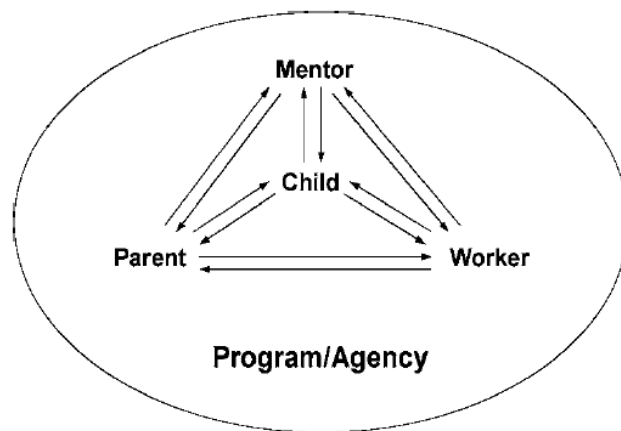
Figure1.1 A systemic model of mentoring (Keller, 2005)

In the model of youth mentoring of Rhodes, there are two parts of one-way

effect. Interpersonal history and family context of youth can affect mentoring

relationship, and mentoring relationship can affect the parental relationships by

social-emotional development. The pathways in Rhodes' model are conceptually

rich and clear, but there are two kinds of effects which seem to be separated. In

Keller's model, the relationship between four factors in the mentoring system can

be interacted reciprocally directly or indirectly.

In empirical tests of two kinds of effects separately, the current studies have

found there are links between mentorship program and the relationships between

adolescents and parents. Mentoring can change the views or perceptions of

mentee with others' relationships, such as parental and peers. For example, the

research on a sample size of 205 multi-races with average age of 12.07 has tested

that, the quality of the mentor-youth bond is significantly predicted by the scores

of mentee in most relationship-based outcomes (such as friendship with and

self-disclosure to adults) at 8 and 16 months (Thomson & Zand, 2010).

The effect of mentoring relationship can be influenced by the

pre-intervention relational profiles. Schwartz, Rhodes, Chan and Herrera test the

relation between mentoring outcomes and youth's former relationship profiles by

using a randomized sample of 1139 youth from grade four to grade nine of

diverse backgrounds come from school-based mentorship programs of Big

Brothers Big Sisters, The result turned out that the effects from mentoring varied

in accordance with different pre-intervention relational profiles. Youth with

moderate and satisfied relationships benefited more than youth with strong

positive or negative relationships (Schwartz, Rhodes, Chan, & Herrera, 2011).

Academia have been an increased emphasis on the studies of test on the

multiple interactions among different contexts, such as family, schools, and

neighborhoods (Smetana, Campione-Barr, & Metzger, 2006), the relationship

with parents and the relationship with mentor are both very important to youth

participated in mentorship program, especially to youth in disadvantaged

background. This study has two-fold importance, the first being that the two

relationships are very important to the development of youth, and the second

being that the two relationships can affect the outcomes brought by mentorship

programs. Although there are theoretical discussions on adolescent relationships

with mentors and relationships with their parents which affect each other

reciprocally, the empirical research, especially the research on the complex

reciprocal interaction in different rounds in this field are still not sufficient.

Relationship with parents can affect the development of mentoring

relationship as a former relational context, and mentoring relationship can affect

relationship with parents according to Rhodes's model of youth mentoring. These

two kinds of relationships can affected each other in one specific mentoring

relationship along with time. That is, firstly, relationship with parents as former

relational context can affect mentoring relationship. Then, mentoring relationship

in the program can affect relationship with parents in participating adolescents.

These two effects are of two chronological orders and arise based on the progress

of mentorship program. The former starts before the beginning of mentorship

program and the latter occurs during and after the end of mentorship program. Therefore, it is important to study the interaction between these two important relationships along with the development of mentorship program.

Therefore, this study hopes to contribute to the understanding of mentoring theory and practice of mentorship program in three aspects.

First, this study aimed to understand the outcomes, including relational outcomes of mentorship programs in Chinese context through a quasi-experimental design. The second aim was to understand the outcomes, including relational outcomes, of quality mentoring relationship. The third aim was to understand the complex interaction of youth's two important relationships: the relationship with parents and the relationship with mentor, in multiple rounds of survey. Apart from providing further support to the value of mentorship program on the development of adolescents and relationship with parents, completing these three aims would provide a comprehensive understanding about the relational influence brought by mentorship programs on the development of adolescents.

Relationship with parents is a core factor in adolescents' development and this kind of relationship could not be isolated from other kinds of relationships of adolescents. Researchers have found that, adolescents who do not value spending

time with parents were more intended to choose friends who show negative

behaviors, such as cigarettes smoking (Urberg, Luo, Pilgrim, & Degirmencioglu,

2003).

Adolescents want greater autonomy in decision making than their parents

granted them, but parents' views prevailed less with age. Thus, the effects of peer

relationship seem to have competitive role on the relationship with parents of

adolescents. Relationship with non-familial adults is different from relationship

with peers.   Adults may have more sophisticated social skills to act as a more

acceptable supportive partner and as a role model, thus, the effect from MRQ to

relationship with parents may be positive. As suggested in Rhodes model (J. E.

Rhodes, 2005), good mentoring relationship improves relationship with parents

in adolescents as their social-emotional development is improved.

Meanwhile, the MRQ is another core factor which can promote the

development of participating adolescents in mentorship programs. This

relationship is also affected by the other relationships of participated adolescents.

In the theoretical mentoring model of Rhodes (J. E. Rhodes, 2005) , interpersonal

history will influence MRQ which in turn will affect youth outcomes.

Relationship with parents should be one of these interpersonal relationships

included in study of mentees outcomes.

The effect of mentoring relationship can be influenced by the pre-intervention relational profiles. Schwartz, Rhodes, Chan and Herrera have tested the relation between mentoring outcomes and youth's former relationship profiles by using a randomized sample of 1139 youth from grade four to grade nine of diverse backgrounds. The youth came from school-based mentorship programs of Big Brothers Big Sisters. The result turned out that the effects from mentoring varied in accordance with different pre-intervention relational profiles. Youth in moderate and satisfied relationships benefited more than youth in strong positive or negative relationships (Schwartz et al., 2011).

Therefore, the relationship with parents can affect the MRQ. Adolescents with good parent-child relationship are easier and feeling more secure to get contact with new adults in their life, thus make the building of good mentoring relationship more easily. MRQ can affect relationship with parents too. The interaction between mentors and mentees can bring new contents to their daily communication between adolescents and their parents, hence improving the social and emotional stability of mentees. In this way, the interaction between mentee and their family could be improved. In short, the relationship with parents and mentoring relationship with mentors may have reciprocal and dynamic effects on each other. In order to study these complex effect pathways,

longitudinal data on relationship with parents and with mentors should be

available and analyzed by advanced statistical modeling techniques.

Hypotheses

Mentorship program have been developed for more than a hundred years.

Plenty of studies have tested and identified the positive effects on the

development of adolescents, though not all the mentorship program has positive

effects. The mentorship program in the Child Development Fund projects came

with two additional components to alleviate poverty in Hong Kong and it

provided a good research opportunity to study if this unique program in a

Chinese society can produce similar positive effects on participated adolescents.

Mentoring relationship is the core of mentorship program that can affect

adolescents in multiple aspects. The CDF project utilizes developmental

approach mentoring relationship scales to measure and empirically test the

quality of mentoring relationship program. Furthermore, the reciprocal effects on

adolescent relationship with parent and mentoring relationship have the

theoretical basis from Rhodes's model of youth mentoring (J. E. Rhodes, 2005)

and the system model of Keller (Keller, 2005), but it is still in lack of empirically

basis. Thus, this study was designed to be empirically tested based on

understanding of dynamic progress of the development of mentoring relationship

and the benefits for the adolescents with consideration of the existing

parent-child relationship context.

According to the literature reviewed above, the present research has

hypotheses as follows:

Hypothesis one: youth who have participated in mentorship program get

positive development outcomes including better social connection in other

contexts (Figure 1.2) as compare to those who have not participated in formal

mentorship program.

Hypothesis two: youth who have quality mentoring relationship with

mentors will have better development outcomes (Figure 1.3).

Hypothesis three: mentoring relationship and relationship with parents

influence each other and interact in three rounds (Figure 1.4).

1. The relationship with parents in round one can positively affect

mentoring relationship in round two.

2. Mentoring relationship of round two positively affect relationship with

parent at round three.

3. Relationship with parents in round two positively affect mentoring
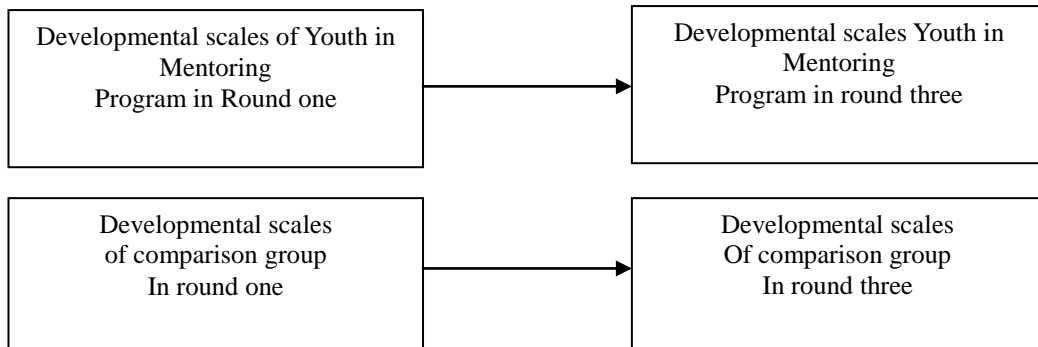
relationship.

```
┌─────────────────────────────┐              ┌─────────────────────────────┐
│ Developmental scales of Youth in│          │ Developmental scales Youth in│
│          Mentoring          │ ────────────▶│          Mentoring          │
│     Program in Round one    │              │     Program in round three  │
└─────────────────────────────┘              └─────────────────────────────┘

┌─────────────────────────────┐              ┌─────────────────────────────┐
│     Developmental scales    │              │     Developmental scales    │
│    of comparison group      │ ────────────▶│     Of comparison group     │
│        In round one         │              │        In round three       │
└─────────────────────────────┘              └─────────────────────────────┘
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Figure 1.2 A theoretical model of effects of mentorship program
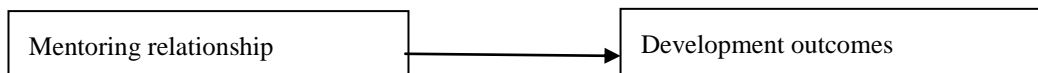
```
┌─────────────────────────────┐              ┌─────────────────────────────┐
│   Mentoring relationship    │ ────────────▶│   Development outcomes      │
└─────────────────────────────┘              └─────────────────────────────┘
```
Figure1.3 A theoretical model of effects of mentoring relationship

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┌──────────────────┐      ┌──────────────────┐      ┌──────────────────┐
│ Relationship with│      │ Relationship with│      │ Relationship with│
│      parents     │ ───▶ │      parents     │ ───▶ │      parents     │
│    Of round one  │  ╲ ╱ │    of round two  │  ╲ ╱ │    of round three│
└──────────────────┘   ╳  └──────────────────┘   ╳  └──────────────────┘
                      ╱ ╲                        ╱ ╲
┌──────────────────┐      ┌──────────────────┐      ┌──────────────────┐
│Mentoring Relationship│  │    Mentoring     │      │    Mentoring     │
│   of round one   │ ───▶ │   Relationship   │ ───▶ │   Relationship   │
│                  │      │   of round two   │      │   of round three │
└──────────────────┘      └──────────────────┘      └──────────────────┘
```
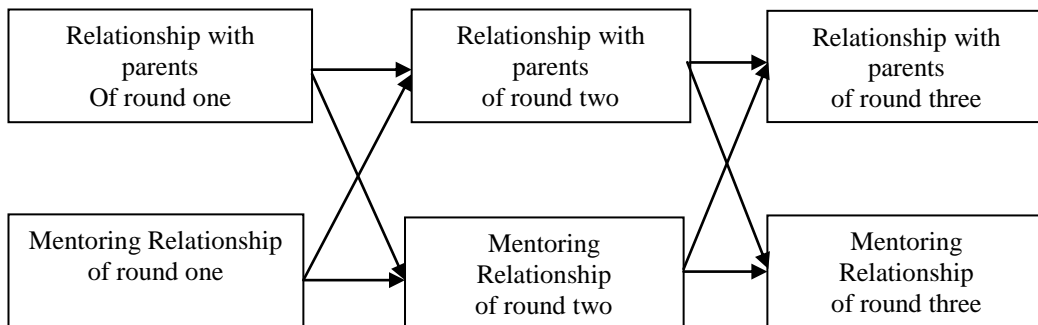Figure1.4 A theoretical model of interaction of mentoring relationship and relationship with parents

CHAPTER 3 – METHODS

The purpose of this research is to investigate the effect on adolescents' development brought by mentorship program and mentoring relationship, and the interaction between mentoring relationship and relationship with parents. The participants of research, research procedures, research design, major instruments, and data analyses were presented in this chapter.

Participants

Though the research project have interviewed participants, their parents/guardians and mentors, it is more appropriate for the present study to only utilize data collected from the participants because received responses from parents were below 50%. Furthermore, it is more valid to use participants' data on the perception of their relationship with their parents in the analyses.

This research studied all participants of the first batch CDF Projects and therefore, no sampling procedure is required. The sampling of comparison group participants was that, we first sent out letters asking permission from school principals of the CDF Projects participants to let us conduct form survey to all students studying the same form of the participants, with the help of the teachers to distribute and collect the questionnaires. In the questionnaires, we obtained the financial background of the respondents and their agreement (informed consent)

to participate in the future rounds of survey. The final sample of comparison

group participants was students who met the financial background criteria and

studying in the same geographic locations of the participating schools with

informed consent.

A total of 750 adolescents participated in the Child Development Fund first

batch pioneer projects and they were children with age ranging from 10 to 16

years old from families of disadvantaged background. In the studied sample of

310 adolescents (41.33%) who had completed the surveys at all rounds, the mean

age of the studied sample is 13.72 (SD=1.89). There were 36.77% boys and

63.23% girls. All the participating adolescents were either receiving

Comprehensive Social Security Assistance or full grants from Student Finance

Schemes administered by the Student Financial Assistance Agency, or whose

household income was less than 75% of the Median Monthly Domestic

Household Income, 81 adolescents (31.27%) reported household monthly income

less than HK$7,000. Among the participants, 10.97% of them are not permanent

residence in Hong Kong (Table3.2).

Table 3.1 Samples of three rounds of data

	Participation group (N = 750)		Comparison group (N = 471)	
	n	Rate	n	Rate
Round 1	528	70.40%	471	100.00%
Round 2	564	75.20%	381	80.89%
Round 3	526	70.13%	301	63.91%
All	310	41.33%	208	44.16%

A total of 471 adolescents agreed to take part in the survey as a comparison

group but only 208 of them (44.16%) completed all three rounds of surveys.

These adolescents were recruited from the schools of the participating children

with of similar background. The mean age of the studied sample is 12.94

(*SD*=1.77). There were 35.58% boys and 64.42% girls. Among the comparison

group, 14.01% of them are not permanent residence in Hong Kong, 32

adolescents (30.48%) had household monthly income less than

HK$7,000(Table3.2).

Table 3.2 Descriptive statistics of background of both groups

		Participation group (N = 310)	Comparison group (N = 208)
Sex	N	310	208
	Boys	36.77	35.58
	Girls	63.23	64.42
Age	N	310	208
	MEAN	13.72	12.94
	SD	310	208
	Minimum	1.89	1.77
	Maximum	9	10
Household income	N	259	105
	HK$0-6999	31.27%	30.48%
	HK$7000-8999	16.22%	15.24%
	HK$9000-10999	20.08%	20.00%
	HK$11000-12999	13.13%	7.62%
	HK$13000 or above	19.31%	26.67%
Hong Kong resident	N	310	207
	No	10.97%	14.01%
	Yes	89.03%	85.99%

Research Procedure

In the three rounds of surveys, self-administered questionnaires were either sent to participating adolescents' home address, distributed at activities and meetings of the mentorship program, or collected by participating adolescents at the operating organization offices. Completed questionnaires were either collected on site or returned to the research office through mailing. Telephone calls were made to increase response rate and also fill up unanswered items. In the comparison group, only mailing and telephone calling were used in the data collection.

The ethical approval was obtained from the Human Subjects Ethics Sub-committee (HSESC) of The Hong Kong Polytechnic University.

Research design

The present study adopted a quasi-experimental longitudinal design, which lasted for 27 months from February 2009 to May 2011. Based on a quasi-experimental design, this study compared the development outcomes of the participating adolescents and adolescents in the comparison group. The longitudinal research design served two main purposes: one was to study the predictive effect of mentoring relationship on development outcomes; the other was to study the reciprocal interaction between mentoring relationship and relationship with parents in the period of a mentorship program. To achieve the

purpose of study and to test the interaction in different rounds, the present study

conducted three rounds of survey at the different stages of the program. At the

beginning of the mentorship program, the study conducted round one survey to

collect baseline data of the participating adolescents and adolescents of the

comparison group. Two rounds of follow-up surveys were conducted in the

second and last year of the program (Table 33).

Table 3.3: Fieldwork timeline

Progress of the Projects	Year	Period	Fieldwork conducted
First year	2009	February 14 – April 30	Round one survey
Second year	2010	February 1 – May 7	Round two survey
Third year	2011	March 9 – May 31	Round three survey

Instruments

Basic demographic statistics such as age, gender, grade, residence and

household income were collected through the questionnaire. Besides, the

questionnaire also collected data on participation in extra-curriculum activities,

daily behaviors, academic behavior and performance, relationship with parents

and the various development outcomes and mentoring relationship. Development

outcomes studied included self-esteem, general mental health, future planning

and goal setting (Appendix A).

All the instruments were translated into Chinese and back-translated into

English for checking the meaning consistency. Then a panel of social workers,

clinical psychologists, government officials, researchers, and teachers evaluated

and selected the appropriate items. A pilot testing was implemented in a school

class and 5 children of disadvantaged background from a community center.

Then the items were further revised and finalized.

Relationship with parents. In the present study, family relationship is mainly

assessed by participated adolescent's questionnaire with the Relatedness

Questionnaire (Lynch & Cicchetti, 1997; Matza et al., 2001) . This scale has two

dimensions which are relevant and important to the present study, namely

emotional quality and *psychological proximity seeking.*

This scale measures children's and parents' (guardians') understanding of

the quality of emotion and level of closeness in relationship with each other.

These two aspects were assessed by the "Emotional quality" scale and the

"Psychological proximity seeking" scale respectively. There are eleven items in

the "Emotional quality" scale. Items are like: "I enjoy the time I spend with my

parent (guardian)" and "When I am with my parent (guardian), I feel happy".

Five items were used in the "Psychological proximity seeking" scale, such as "I

wish my parent (guardian) would pay more attention on me." and "I wish my

parent (guardian) would spend more time with me". Two items ("I wish my

parents knew more about how I feel", "When I am with my parents, I feel sad")

have been eliminated when translated into Chinese since their meanings was

contained by other items and hard to understand the difference in a Chinese

culture. At the same time, one item ("When I am with my parents, I feel love")

has been added to this instrument because of its importance in Chinese families.

These two dimensions showed good internal consistency. The original

Cronbach's alpha of "Emotional quality" ranged from 0.67 to 0.83, and

"Psychological proximity seeking" from 0.83 to 0.93. The Cronbach's alphas of

"Emotional quality" were 0.90, 0.91 and 0.91 in the first, second and third rounds

of survey, respectively. The Cronbach's alphas of "Psychological proximity

seeking" were 0.87, 0.85 and 0.88 in the three rounds of survey, respectively. The

Cronbach's alphas for the whole scale of 16 items, from round one to round three,

were 0.91, 0.90 and 0.91, respectively.

Mentoring relationship. The mentoring relationship scale used in this study

used items selected from four mentoring relationship scales and a total of 40

items from the original ten dimensions of mentoring relationship were chosen.

These items came from the Youth Mentoring Relationship Questionnaire

(YMRQ)(J. Rhodes et al., 2005), which originally have 25 items and four

subscales, including "Youth-centered relationship", "Positive emotional

engagement", "No dissatisfaction", and "Help to cope", the Relational Health

Indices (Liang et al., 2002), which originally have 11 items in three subscales, including "Engagement", "Empowerment" and "Authenticity", and the Mentoring Scale (Nancy Darling et al., 2002) which have 25 items in five subscales, including "Instrumental and role modeling", "Performance standards", "Positive emotions", "Negative aspects of the relationship", and "Autonomy in the relationship". After analyses with psychometric and factor analysis, it was confirmed that the 40 selected items of mentoring relationship could reliably reflect and represent seven dimensions of mentoring relationship, including "Youth-centered relationship", "Positive emotional engagement", "No negative emotional engagement", "Trust", "Psychological proximity seeking", "Help to cope" and "Empowerment and performance standard".

Overall internal consistency were high in all three waves (Wave 1: α = .96; Wave 2: α= .97; Wave 3: α= .97). A closer look at the individual factors suggested that, except *trust* which consisted of only 2 items (Wave 1: α= .69; Wave 2: α= .58; Wave 3: α= .63), all other dimensions have α over .80 (range of : Wave 1 α= .81 - .97; Wave 2 α= .86 - .97; Wave 3 α= .89 - .98).

Development outcomes of adolescents measured in this study included self-esteem, general mental health, academic behavior and performance, future planning and career goal setting, personal resilience, extra-curricular activities

participation, behaviors, and relationship with parents.

Academic. Academic behavior and performance were ranking in class and form, aspiration, school attendance, attitude toward going to school, parents' expectation of children's education, and the chance to achieve this expectation. The questions are list as below:

Future Planning and Career Goal Setting. Standard scales were used to measure "Future planning" and career "Goal setting". The "Goal setting" scale - is a measure of self-efficacy in career goal setting(Mark Sherer et al., 1982).The scale of "Future planning" has five items (Prenda & Lachman, 2001), such as "I like to make plan for the future", and "I find it helpful to set goals for the near future". All items were rated on a four points Likert-type scale. The Cronbach's alphas of this scale ranged from 0.70 to 0.73.

The career "Goal setting" scale has six items (M. Sherer et al., 1982), such as "I am confident that I am able to set my career or study goals according to my interest" and "I am confident that I am able to understand my abilities so as to help myself choose a career or study goals". Items were rated on a seven points Likert-type scale, with Cronbach's alphas ranged from 0.91 to 0.93.

Other questions were used to assess the development outcomes about studying and graduation in the questionnaire, including: with whom adolescents

can discuss their plan after graduation, expectation about future work can give to adolescents, whether the parents know the expectations on work and development of their children, the study or work planning regularity of adolescents, how to planning for future, whether adolescents have long term life goal and how to attain this goal.

Personal resilience. Resilience is very important to the development of adolescents, and was measured by the Resilience Scale – 15 (Wagnild & Guinn, 2009) in this study. This instrument has 15 items and divided into two subscales: "Personal competence" and "Acceptance of self and life". "Personal competence" has eleven items, such as "I have self-discipline" and 'When I make plans I follow through with them'. The Cronbach's alphas ranged from 0.90 to 0.91. "Acceptance of self and life" has four items, such as "My life has meaning" and "I can usually find something to laugh about", with Cronbach's alphas ranged from 0.77 to 0.78. All items were rated on a seven point Likert-type scale, from "totally disagree" to "totally agree". Higher Cronbach's alphas (> 0.90) were achieved with the overall scale of 15 items.

Extra-curricular activities and behaviors. Adolescents were asked to report the time spent on various types of extra-curricular activities, including "Financial planning and personal asset development", "Personal development planning and

interpersonal communication development activities", "Career planning /

extra-curricular learning activities", "Voluntary services", Regular and tutor-led

sports, cultural art activities, "religious activities", and " Private tuition".

Self-esteem. It is important for adolescents to have high level of self-esteem

in their development. A ten items instrument was utilized to measure the

self-esteem of adolescents (Rosenberg, 1965). Sample items were "I feel that I'm

a person of worth, at least on an equal plane with others" and "I feel that I have a

number of good qualities". All items were rated on a four points Likert-type scale,

from "totally disagree" to "totally agree". The Cronbach's alphas ranged from

0.79 to 0.82.

General Health Questionnaire 12 (GHQ-12). The General Health

Questionnaire-12 was used to assess the risk of developing psychiatric disorders

(Goldberg & Williams, 2000) and in this study, the general mental health. There

are twelve items in GHQ-12, such as "In the past few weeks, I have been able to

concentrate on what I'm doing" and "In the past few weeks, I lost much sleep

over worry". Responses were rated on a four points Likert-type scale from "much

less than usual" to "much more than usual". All Cronbach's alphas were at the

0.81 level.

Besides, there were questions asking about with whom the adolescents can

discuss about their emotional and interpersonal problems.

Plan of Data Analysis

This research examined the effects of mentorship program on adolescents

with the use of different statistical analyses for the different types of data, which

included the repeated-measures analysis of variance (rANOVA) for the outcome

evaluation of a quasi-experimental design, multiple regression for longitudinal

data with basic demographic variables and the outcome at baseline effect

removed, and also logistic regression for binary outcome data.

Hierarchical regression analyses were performed to study the effects of

mentoring relationship on the development outcomes of adolescents.

Adolescence development outcome measures, which were the psychosocial

scales, were put as dependent variables, whereas the dimensions of mentoring

relationship were put as predictors in the regression models. Regression analyses

were conducted with two steps. First, development outcomes at round two were

predicted by age, sex, household monthly incomes, and baseline score of

outcomes as control variables. Second, dimensions of mentoring relationship at

baseline were used as independent variables in the regression models.

Data are mainly analyzed using the SPSS software program for the above

statistical method.

Path analysis was used to investigating the multiple and structural interactions between adolescent's relationship with parents and with mentor at three different rounds. Path analysis models often portray a graphical path diagram indicating how the variables are related to one another. It has the advantage in allowing predictor and outcome variables of more than one round to be included in a system of multiple regression and the relationship among these variables estimated through a path analysis model simultaneously (Fuller & Hester, 2001). AMOS was used for conducting the path analysis.(Shpigelman & Gill, 2013)

The main advantage of the path analysis method is simultaneous estimation of a system of equations that specify all the possible linkages among a set of variables. It enables researchers to break down or decompose correlations among variables into causal components within a model and helps researchers to disentangle the complex interrelationships among variables through the identification of the most significant pathways involved in prediction of outcomes. Meanwhile, path analysis method also provides parameters for model fit. The goodness-of-fit indices help researchers to evaluate the fitness of a model by the observed data (Lleras, 2005).

In the present study, a hypothetical model based on theory was established.

Then all the pathways between mentoring relationship in former rounds and

relationship with parents in the later rounds were tested in the model, so were the

pathways between relationship with parents in the former rounds and mentoring

relationship in the later rounds. Structuring model pathways in this way is called

cross-lagged panel models which would be implemented with structural equation

modeling techniques. Lastly, the significant regression coefficients were

identified on the premise of model good-fit.

Cross-lagged panel models use structural equation models (SEMs) method

to analyze longitudinal data. It is one of the panel model designs used to examine

the structural relations of repeatedly measured variables. This model

demonstrates bidirectional causal paths from an earlier time-point of one variable

to the latter time-point of another variable. Cross-lagged panel models make it

easier to examine reciprocal relations by specifying cross-lagged effects in the

model. It can be used to determine whether cross-lagged effects occur in both

directions and to assess the relative strength of the cross-lagged effects.

Researchers can focus on change overtime rather than just static relations

between variables at different time-points, and provide a stronger support to a

causal claim. Also, cross-lagged model is proved to be useful in identifying the

relations between variables cross time (Martino et al., 2005).

However, analyzing longitudinal data with the cross-lagged panel model also has limitations. It is not sensitive to the type of individual level changes and the intra-individual changes. And the panel model itself cannot produce a causal claim.

A series of model fit characteristics were used to evaluate the adequacy of model fit of these panel models. Model evaluation criteria for satisfactory model fit included: $\chi2$ divided by degree of freedom (CMIN/DF) smaller than 3, CFI larger than 0.90, and RMSEA less than 0.08 (Hu & Bentler, 1998; Shpigelman & Gill, 2013).

CHAPTER 4 – RESULTS ON IMPACTS OF MENTORSHIP PROGRAM

The research question about the effects of mentorship program brought to the development of adolescents will be examined in detail in this chapter. The studied samples and descriptive statistics, and the comparisons between participation and comparison groups on various outcomes of adolescence development are reported.

Description of the participants

In study 1, there were 208 adolescents in the comparison group who had completed all three rounds of survey. The numbers of adolescents in the participation group varied across the three rounds of survey and can be seen from Table 4.1. The present study will be based on the datasets of 310 adolescents in the participation group who had completed all three rounds of survey.

Table 4.1 Samples of three rounds of data

	Participation group (N = 750)		Comparison group (N = 471)	
	n	Rate	n	Rate
Round 1	528	70.40%	471	100.00%
Round 2	564	75.20%	381	80.89%
Round 3	526	70.13%	301	63.91%
All	310	41.33%	208	44.16%

Demographic variables of both participating and comparison group adolescents will be reported in Table 4.2, including sex, age, household income and citizenship.

Table 4.2 Descriptive statistics of both groups

		Participation group (N = 310)	Comparison group (N = 208)
Sex	N	310	208
	Boys	36.77	35.58
	Girls	63.23	64.42
Age	N	310	208
	MEAN	13.72	12.94
	SD	310	208
	Minimum	1.89	1.77
	Maximum	9	10
Household income	N	259	105
	HK$0-6999	31.27%	30.48%
	HK$7000-8999	16.22%	15.24%
	HK$9000-10999	20.08%	20.00%
	HK$11000-12999	13.13%	7.62%
	HK$13000 or above	19.31%	26.67%
Hong Kong resident	N	310	207
	No	10.97%	14.01%
	Yes	89.03%	85.99%

Sex. As shown in Table 4.2, the majority of both participation and comparison groups are girls. Of the 208 comparison group adolescents, 64.42% are female. Of the participating adolescents, 63.23% are female.

Age of participants. The comparison group adolescents under studied were mainly from grade 7 to grade 11. The mean of the age of comparison group is 12.94 with a standard deviation of 1.77, and the mean of the age of participation group is 13.72, with a standard deviation of 1.89.

Family incomes. All adolescents came from low income families. In the comparison group, 32 adolescents (30.48%) had household monthly income less

than HK$7,000. In the participation group, 81 adolescents (31.27%) reported

household monthly income less than HK$7,000.

Hong Kong Residence. In the comparison group, 29 adolescents (14.01%)

were not permanent Hong Kong residents, and the number and percentage of

adolescents in the participation group are 34 and 10.97%.

Impact of mentorship program

It was found that, mentorship program can produce positive effect on

adolescents' mental health, future planning and goal setting, personal network,

academic performance and delinquencies.

Self-esteem and GHQ

The self-esteem score of adolescents in the participation group was more

positive than the score of adolescents in the comparison groups, after controlling

for the baseline level of self-esteem ($F(2, 428)$=7.00, $p<0.05$,η^2=0.032). Multiple

regression analysis confirmed that group status can predict self-esteem score of

adolescents uniquely ($p<0.05$). When predicting self-esteem score at round two

survey, the significance level of group status approached 0.05 ($p = 0.08$) after

controlling for the age, sex and household income level of the adolescents as well

as their self-esteem score at round one survey. Psychological well-being was

conceptualized as the general mental health of adolescents and was measured by

the instrument of General Health Questionnaire 12 (GHQ-12). With the use of

rANOVA, the effect of group status by time on the GHQ-12 score was near

significant ($F(2, 419)=2.70$, $p=0.08$, $\eta^2=0.012$).

Formulating personal goals and plans.

Adolescents in the participation group showed better performance in "future

planning", after controlling the influence of sex, age, and household income. The

rANOVA results showed that, the group status by time effect on the score of

future planning was significant ($F(2, 433)=5.29$, $p<0.05$, $\eta^2=0.012$). Besides,

after controlling for the baseline score effect of future planning, sex, household

income and age in the multiple regression analysis, group status significantly

predicted future planning score at round two and three surveys ($t(306)=2.20$,

$p<0.05$).

For the long-term life goal setting and future academic/career planning,

20.5% of adolescents in the participation group who did not have any goal at

round one survey (as compared to 12.5% adolescents in the comparison group in

the same round) reported that they had developed long-term life goal at round

two survey which was the second year of the program. Also, it was found that

participating in the mentorship program significantly increases the probability of

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setting long-term life goal and future academic/career planning among young

people as seen in the logistic regression analyses ($1.47 < ORs < 2.37, p < 0.05$).

In addition, more parents of adolescents in the participation group knew

about their children's expectation towards career and future when compared to

the adolescents in the comparison group. At round three survey, about 69.5% of

the comparison group adolescents' parents knew about their children's

expectations towards career and future, while consistently more than 75.8% of

participation group adolescents' parents knew about it. Participating in the

mentorship program significantly promoted the probability of parents'

understanding of their children's expectations towards future/career as seen in the

logistic regression analyses ($1.53 < ORs < 1.82, p < 0.05$).

Relationship with parents and social network with adults

International studies indicate that mentorship program always provides

opportunities for young people to be in touch with the community and to stay

connected with adults. Apart from having more resources to tackle problems,

young people's increased level of social networks can promote their interpersonal

connections and exposure. Through keeping contact with adults and people in the

community, adolescents may obtain information related to their development,

which would become an important asset for self-improvement and development.

Engagement with people and in community work also promoted character development and caring, which are important positive youth developmental assets. Hence, mentorship program increases children and young people's developmental assets which would be resulted in better development outcomes.

Relationship with parents of adolescents, as shown in this study, could be affected positively by the mentorship program. Using rANOVA, the relationship with parents score at round three survey was significantly higher than the score at round one survey ($F(1, 465)=4.69$, $p<0.05$, $\eta^2=0.024$). Adolescents in the participation group showed a better relationship with parents.

The present study also found that adolescents' social network could be benefited from the mentorship program. Adolescents in the participation group showed an increase in types of people they would discuss about their plans after graduation and saving issues ($F(2, 444)=11.12$, $p<0.05$, $\eta^2=0.048$). Moreover, the number of people whom adolescents in the participation group could discuss with was positively affected by the mentorship program. Participants had improved in the number of people they could approach to discuss on their plans after graduation ($F(2, 445)=5.32$, $p<0.05$, $\eta^2==0.023$) and emotional and interpersonal issues ($F(2, 438)=6.18$, $p<0.05$, $\eta^2==0.027$).

In multiple regression analyses, after controlling the effect of age, sex, household monthly income and scores of baseline, group status could uniquely predict the number of types of adults whom adolescents would discuss with on their plans after graduation, family saving issues, and emotions and interpersonal issues (Table 4.3).

Table 4.3 Result of multiple regression analyses on discussion of different issues

	b	$SE(b)$	β	t	p
Development after graduation					
Type of adults at round 2	.459	.102	0.24	4.48	<0.01
Type of adults at round 3	.609	.118	0.28	5.16	<0.01
Saving					
Type of adults at round 2	.194	.062	0.17	3.11	<0.01
Type of adults at round 3	.311	.071	0.25	4.37	<0.01
Emotions and interpersonal					
Type of adults at round 2	.189	.077	0.14	2.47	0.01
Type of adults at round 3	.090	.083	0.06	1.00	0.28

Data from the study showed that when compared with the comparison group, adolescents in the participation group would discuss with more people (including parents, classmates / friends, teacher, social worker, mentors, etc.) about their plan after graduation. Furthermore, the number of people they could discuss with on their personal and interpersonal issues was increased ($F(1, 40)=5.12$, $p<0.05$, $\eta^2=0.113$), In addition, when compared to the comparison group, more adolescents in the participation group would discuss and talk to non-familial

adults, such as teacher, social worker and mentor on the above issues, which

would indicate that the mentorship program had successfully broadened the

social network of adolescents, as shown in the greater increase in contact with

non-familial adults and peers.

Academic performance and delinquencies

Analyses indicated that, mentorship program could reduce delinquent

behaviors of adolescents in participation group, and promote positive activities

involvement. The study showed positive influences on adolescents' academic

study in participation group, as reflected in their academic performances,

expectations to academic performances and promotion to university, and views

and sense of importance towards studying.

Adolescents in participation group consistently gave higher ratings on their

academic rankings in class than adolescents in the comparison group. At the end

of the third year, after controlling for baseline data influence, the difference in

academic ranking was found at a significance level, suggesting that the

mentorship program promoted academic performance of adolescents in the

participation group.

Furthermore, adolescents in the participation group had significantly higher

academic aspiration than adolescents in the comparison group. For example, their

academic aspirations were mainly at the level of junior high, senior high or

tertiary education and they would belief they can and expect to obtain these

education levels. Adolescents in the participation group also perceived studying

having significantly greater importance than adolescents in the comparison group,

and their expectation to study at university was significantly higher as well.

In the first two years of the mentorship program, the number of hours which

adolescents in the participation group wandering in the streets with their friends

in a week was significantly fewer than the adolescents in the comparison group (;

$F(2, 427)$=3.39, $p<0.05$, η^2=0.018). Besides, after controlling for background

data and score in baseline, group status was shown to be a unique predictor of

hours spent on wandering on the street with friends ($t(307)$=-2.17, $p<0.05$).

Meanwhile, adolescents who have participated in mentorship program spent

more time on voluntary services than adolescents in the comparison group, after

controlling for the background variables ($F(2, 193)$=3.82, $p<0.05$, η^2==0.024).

Besides, the personal development planning and interpersonal communication

development activities have been affected by mentorship program significantly

($F(1, 280)$=5.086, $p<0.05$). The effect of participating in mentorship program on

participation in regular religious activities were also ($F(1, 429)$=17.73, $p<0.05$),

based on the analyses on round one and three surveys.

Summary

The main findings on the effects of mentorship program to adolescents participating in mentorship program could be summarized into four aspects.

First, the mentorship program showed an effect on the self-esteem and general mental health of participated adolescents. Second, the program showed significant effect in promoting adolescents to develop life goals and long-term planning. Apart from being more positive towards future planning, the program also provided concrete opportunities to participating adolescents to develop life goals and future plan. Third, the mentorship program demonstrated positive effects on promoting adolescent relationship with family, peers, and other significant adults. Finally, the study also documented positive influences on participating adolescents' academic study, as reflected in their academic performances, expectations on academic performances, promotion to university, and attitude towards studying. Adolescents participate in mentorship program can spend more time in structured and constructive activities and hence exhibited less delinquent behaviors. Findings of the present study were consistent with the findings of Dubois and his colleagues (DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011), in which outcomes of mentorship program were categorized into six types, namely attitudinal/motivational, social/relational,

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psychological/emotional, conduct problems, academic/school, physical health, and career/employment. Outcomes of the present study identified the positive influence of mentorship program on the first five types of outcomes, which are attitudinal/motivational, social/ relational, psychological/emotional, conduct problems and academic/school. Furthermore, Rhodes' theoretical framework on youth mentorship program (2005) was confirmed, in which adolescents in mentorship program develop through three pathways, which are social-emotional, cognitive and identity. Participating adolescents would be benefited from mentorship programs through making improved interpersonal connections and have more people to discuss with on different issues, improvement on academic aspects as an indication of improvement on cognitive ability, and the development of self-identify from setting life goals and better future planning.

CHAPTER 5 – RESULTS ON MENTORING RELATIONSHIP

In this chapter, the results on the effects of mentoring relationship quality (MRQ) on the developmental outcomes of adolescents were examined. The studied samples and descriptive statistics, analyses of MRQ with outcomes of adolescence development were reported in detail.

Description of the samples

The analyses of MRQ with outcomes of adolescence development were performed only with the adolescents in the participation group, because adolescents in the comparison group were not matched with mentors and therefore, they did not have mentoring relationship. Adolescents in the participation group who had completed three rounds of survey were analyzed on the relationship of MRQ with outcomes in adolescence development, in which there were 310 participating adolescents (Table 4.1).

Descriptive statistics

The following figures and tables provide summary statistics for mentoring relationship at three different rounds, which were the first year of the program at round one, the second year at round two and the third year at round three. Mentoring relationship of participating children displayed slight, but significant changes. The magnitude of change was less than 0.20 from a possible range from

1 to 5 in the MRQ scale and it could be assumed that changes in MRQ among adolescents in the participation group are negligible. The mean scores on the sub-scales of "No negative emotion", "Trust" and "Empowerment and performance standard" were higher among the seven dimensions of mentioning relationship in all three rounds, and they were shown in Figure 5.1 and Table 5.1.

Table 5.2 provides summary statistics for several important developmental aspects of adolescents, including resilience, future planning, career developing and goal setting, general health question, self-esteem and relatedness to parents.

Table 5.1 Descriptive statistics of dimensions of MRQ in three rounds

	Mean	*SD*	Range.	N
Round 1				
MRQ – Youth centered relationship	2.75	0.59	1.00-4.00	540
Positive emotional engagement	2.88	0.65	1.00-4.00	547
No negative emotional engagement	3.48	0.56	1.00-4.00	548
Trust	3.38	0.61	1.00-4.00	545
Psychological proximity seeking	2.68	0.67	1.00-4.00	547
Help to cope	2.73	0.75	1.00-4.00	546
Empowerment and performance standard	3.29	0.87	1.00-5.00[a]	537
Round 2				
MRQ – Youth centered relationship	2.77	0.61	1.00-4.00	542
Positive emotional engagement	2.87	0.66	1.00-4.00	553
No negative emotional engagement	3.40	0.55	1.00-4.00	548
Trust	3.23	0.56	1.00-4.00	551
Psychological proximity seeking	2.65	0.67	1.00-4.00	553
Help to cope	2.83	0.74	1.00-4.00	553
Empowerment and performance standard	3.27	0.89	1.00-5.00[a]	542
Round 3				
MRQ – Youth centered relationship	2.67	0.68	1.00-4.00	503
Positive emotional engagement	2.79	0.72	1.00-4.00	504
No negative emotional engagement	3.34	0.62	1.00-4.00	505
Trust	3.24	0.61	1.00-4.00	508
Psychological proximity seeking	2.66	0.70	1.00-4.00	502
Help to cope	2.75	0.82	1.00-4.00	500
Empowerment and performance standard	3.20	1.01	1.00-5.00[a]	494

[a] Rating scale from "1" to "5".

Table 5.2 Descriptive statistics of developmental scales

	Mean	*SD*	Range.	N
Round 2				
Resilience – Personal competence	5.02	0.78	1.58-7.00[b]	562
Resilience – Self and life acceptance	5.46	1.02	1.00-7.00 [b]	566
Future planning	2.86	0.57	1.00-4.00	560
Career plan and goal setting	4.29	0.83	1.00-6.00[c]	555
Self-esteem	2.74	0.43	1.20-4.00	558
GHQ-12	2.57	0.42	1.00-4.00	549
Relatedness – Emotional quality	3.14	0.48	1.45-4.00	558
Relatedness – Psychological proximity seeking	2.89	0.53	1.00-4.00	559
Round 3				
Resilience – Personal competence	5.07	0.75	1.00-7.00[b]	512
Resilience – Self and life acceptance	5.53	0.93	1.00-7.00[b]	518
Future planning	2.88	0.54	1.00-4.00	518
Career plan and goal setting	4.39	0.71	1.00-6.00[c]	524
Self-esteem	2.73	0.42	1.20-4.00	515
GHQ-12	2.54	0.41	1.00-3.83	519
Relatedness – Emotional quality	3.13	0.47	1.00-4.00	517
Relatedness – Psychological proximity seeking	2.91	0.50	1.00-4.00	521

[b] rate from "1" to "7".
[c] rate from "1" to "6".

Effects of MRQ on adolescents' development outcomes

Inter-correlations between dimensions of MRQ at round one, round two and round three and outcomes at round two and round three were calculated. Multiple linear regression analyses of dimensions of mentoring relationship with outcomes of adolescence development were also reported in order to study the effects of MRQ on the outcomes.

Correlation of MRQ with outcomes

Mentoring relationship reported by participating adolescents generally displayed significant positive correlations with their development outcomes, as measured by the psychosocial scales.

First, correlations between dimensions of mentoring relationship at round one and development outcomes at round two were examined. Two MRQ dimensions, "Positive emotional engagement" and "Empowerment and performance standard", showed significant positive correlations with all the development outcomes of adolescents. This would suggest the key qualities in mentoring relationship for positive outcomes in adolescent development. Two development outcomes, "Resilience" and "Future Planning" correlated positively and significantly with all the seven dimensions of MRQ. Besides, the general mental health of adolescents as measured by GHQ-12 positively correlated with "Positive emotional engagement" and "Empowerment and performance standard" (Table 5.3).

Second, correlation between dimensions of mentoring relationship at round one and outcomes at round three were shown in Table 5.4. Resilience – Personal competence showed significant positive correlations with all seven dimensions of mentoring relationship. General mental health correlated significantly only with "Trust". "Psychological proximity seeking" of MRQ only correlated significantly with Relatedness – Psychological proximity seeking.

Finally, the results of correlation analyses between dimensions of MRQ at round two and development outcomes at round three were shown in Table 5.5.

"Help to cope" and "Empowerment and performance standard" showed

significant correlations with all subscales of the outcome psychosocial scales.

General mental health only significantly correlated with "Positive emotional

engagement". Future planning significant correlated with all seven dimensions of

MRQ.

Table 5.3 Inter-correlation between MRQ at round one and outcome variables at round two

		R2 Resilience – Personal competence	R2 Resilience – Acceptance of self and life	R2 Future planning	R2 Career plan and goal setting	R2 SE	R2 GHQ	R2 Related PPS	R2 Related EQ
R1 Youth-centered relationship	r	.196**	.160**	.121*	.239**	.124*	.076	.232**	.188**
	N	424	427	421	419	422	415	423	421
R1 Positive emotional engagement	r	.205**	.171**	.143**	.250**	.122*	.104*	.202**	.207**
	N	428	431	425	423	426	419	427	425
R1 No negative emotional engagement	r	.152**	.138**	.109*	.075	.117*	.062	.085	.166**
	N	429	432	426	424	427	420	428	426
R1 Trust	r	.141**	.154**	.188**	.075	.130**	.090	.095	.214**
	N	426	429	423	421	425	418	425	423
R1 Psychological proximity seeking	r	.138**	.149**	.096*	.160**	.067	.037	.280**	.098*
	N	427	430	424	422	425	418	426	424
R1 Help to cope	r	.149**	.119*	.053	.149**	.082	.063	.168**	.172**
	N	426	429	423	421	424	417	425	423
R1 Empowerment and performance standard	r	.213**	.210**	.146**	.218**	.134**	.111*	.223**	.247**
	N	417	420	414	412	415	408	416	414

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

R1: Round one; R2: Round two; SE: Self-esteem; GHQ: General health questionnaire; PPS: Psychological proximity seeking; EQ: Emotional quality

Table 5.4 Inter-correlation between MRQ at round one and outcome variables at round three

		R3 Resilience – Personal competence	R3 Resilience – Acceptance of self and life	R3 Future planning	R3 Career plan and goal setting	R3 SE	R3 GHQ	R3 Related PPS	R3 Related EQ
R1 Youth-centered relationship	r	.214**	.196**	.139**	.217**	.115*	.031	.063	.150**
	N	392	397	398	401	395	398	400	398
R1 Positive emotional engagement	r	.235**	.189**	.146**	.246**	.142**	.073	.059	.182**
	N	394	399	401	403	397	400	402	400
R1 No negative emotional engagement	r	.131**	.115*	.092	.090	.225**	.096	-.004	.220**
	N	395	400	401	404	398	401	403	401
R1 Trust	r	.143**	.113*	.097	.127*	.239**	.102*	.009	.243**
	N	394	399	400	403	397	400	402	400
R1 Psychological proximity seeking	r	.104*	.098*	.068	.062	.037	.048	.225**	.160**
	N	395	400	401	404	398	401	403	401
R1 Help to cope	r	.167**	.024	.069	.114*	.054	-.023	.025	.123*
	N	394	399	400	403	397	400	402	400
R1 Empowerment and performance standard	r	.232**	.134**	.147**	.141**	.125*	.033	.067	.212**
	N	388	393	393	396	390	393	395	393

**. Correlation is significant at the 0.01 level (2-tailed)
*. Correlation is significant at the 0.05 level (2-tailed)
R1: Round one; R3: Round three; SE: Self-esteem; GHQ: General health questionnaire; PPS: Psychological proximity seeking; EQ: Emotional quality

Table 5.5 Inter-correlation between MRQ at round two and outcome variables at round three

		R3 Resilience – Personal competence	R3 Resilience – Acceptance of self and life	R3 Future planning	R3 Career plan and goal setting	R3 SE	R3 GHQ	R3 Related PPS	R3 Related EQ
R2 Youth-centered relationship	r	.189**	.188**	.132**	.248**	.136**	.095	.064	.205**
	N	413	417	418	424	413	419	421	418
R2 Positive emotional engagement	r	.207**	.232**	.164**	.267**	.144**	.135**	.081	.204**
	N	418	423	424	430	419	426	427	424
R2 No negative emotional engagement	r	.106*	.138**	.250**	.164**	.107*	.070	.159**	.241**
	N	418	422	423	429	418	424	426	423
R2 Trust	r	.006	.035	.148**	.102*	.133**	.063	.039	.240**
	N	420	424	425	431	420	426	428	425
R2 Psychological proximity seeking	r	.084	.144**	.101*	.085	-.016	-.009	.151**	.024
	N	422	426	427	433	422	428	430	427
R2 Help to cope	r	.163**	.164**	.144**	.143**	.035	.003	.127**	.205**
	N	421	425	426	432	421	427	429	426
R2 Empowerment and performance standard	r	.257**	.235**	.160**	.313**	.131**	.087	.160**	.229**
	N	411	415	416	422	411	417	419	416

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

R2: Round two; R3: Round three; SE: Self-esteem; GHQ: General health questionnaire; PPS: Psychological proximity seeking; EQ: Emotional quality

Regression

Regression analyses of development outcomes in participating adolescents

at round two were summarized in Table 5.6 and 5.7, with the Adjusted R^2 and

changes in Adjusted R^2 (ΔR^2) reported. For studying outcomes at round two

survey (Table 5.6), the regression model was built hierarchically with three steps

of entering predictors into the model: (i) baseline outcome score and

demographic variables, (ii) MRQ sub-scales at round 1, and (iii) MRQ sub-scales

at round two. In the study of outcomes at round three survey (Table 5.7), the

regression model was built similarly but with the fourth step: (iv) MRQ

sub-scales at round three. The regression coefficients (b), standard error of b

($SE(b)$), standardized b (β), t statistics and the associated p were reported.

Predictors at significance level of smaller than 0.05 were reported. In the test of

round two development outcomes in participating adolescents, the "Help to cope"

dimension of MRQ at round one predicted the change in "Relatedness –

Psychological proximity seeking". "Psychological proximity seeking" at round

two predicted the two aspects of relationship with parents, namely

"Relatedness – Psychological proximity seeking" and "Relatedness – Emotion

quality". "Positive emotional engagement" of MRQ at round two uniquely

predicted "Resilience – Acceptance of self and life". The details of regression

coefficients for each development outcomes at round two were shown in Tables 5.8a to 5.8h.

In the regression analyses of development outcomes in participating adolescents at round three, regression models to all eight outcome measures were significant (Table 5.7) with significant increase in the Adjusted R^2. Two subscales of relatedness with parents showed relatively higher Adjusted R^2 than the other six psychosocial outcome measures. The Adjusted R^2 of "Future planning" was the highest among the six outcome subscales. General mental health as measured by GHQ-12 had the lowest Adjust R^2, and the detail information of the regression models are presented in Table 5.7.

"Positive emotional engagement" of MRQ at round two predicted "Resilience – Acceptance of self and life" at a statistically significance level. "Help to cope" of MRQ at round one predicted "Resilience – Acceptance of self and life" significantly. "Psychological proximity seeking" of MRQ at round two predicted "Relatedness-emotional quality", "Psychological proximity seeking" at round three predicted "Relatedness-psychological proximity seeking. "Empowerment and performance standard" of MRQ predicted "Resilience – Personal competence" significantly. "Trust" of MRQ at round two predicted "GHQ", and "Trust" at round three predicted "Relatedness-emotional quality"

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significantly. "Youth-centered relationship" of MRQ at round three predicted "Resilience – Personal competence" significantly. Details of the regression coefficients for each outcome at round three survey were shown in Table 5.9a to 5.9h.

Summary

These hierarchical regression models used the stringent approach of prospective analysis to analyze relationships of "mentoring relationship" with development outcomes in participating adolescents and the baseline outcome scores were being controlled for. To summarize from the above findings, the series of regression analyses confirmed:

1. Mentoring relationship as assessed by the MRQ dimensions exerted positive influences on "Resilience", and "Family relatedness" ($0.16 < \beta < 0.37$).

2. "Youth-centered relationship" positively predicted scores in "Resilience -Acceptance of self and life ".

3. The "Positive emotional engagement" dimension of MRQ positively associated with "Resilience – Acceptance of self and life".

4. The "Trust" dimension of MRQ predicted general mental health as measured by the GHQ-12

5. The "Psychological proximity seeking" dimension of MRQ positively associated with "Family relatedness – Psychological proximity seeking" and "Family relatedness – Emotional quality".

6. "Help to cope" of MRQ associated with "Family relatedness – Psychological proximity seeking".

7. The "Empowerment and performance standard" dimension of MRQ positively associated with "Resilience-Personal competence.

8. "No negative emotional engagement" of MRQ predicted "Relatedness-Emotional quality"

As shown in the results of regression analyses, the different aspects of mentoring relationship, as measured by the MRQ dimensions, predicted different measured development outcomes in adolescents. A higher score in "youth-centered relation", "Positive emotional engagement" and "Help to cope" of MRQ would lead to better resilience in participating adolescents. Adolescents would become more self-accepted and also competent when they received quality mentoring relationship in mentorship program. Seeking psychological proximity with mentors promoted better relationship with parents. Having a trusting relationship with mentors and mentors providing help to adolescents in resolving stressful personal and interpersonal issues would lead to better general

mental health. Furthermore, having empowering mentor promoted identity

development and thus mentee's confidence on themselves..

The resilience in participating youth with good mentoring relationship can

be improved because their mentors treat them as mature and equal, and put

mentees at the center of their mentoring relationships. Therefore, mentees' sense

of worth is being cared for and they will become more acceptance about

themselves. Meanwhile, positive emotional engagement of mentors and mentees

in the relationships can promote positive development in youth, hence feeling

more confident and positive about oneself. Adolescents who are positive towards

oneself are more resilience to difficulties in their development. Trust from the

developmental approach in mentoring relationship can make participants feel

accepted and confident and reduce their anxiety. These participants may start

feeling comfortable and confident to communicate with their own parents as they

would also trust their parents like trusting their mentors. Proximity seeking in

mentees towards mentors would motivate mentees to maintain communication

with their mentors and urge to build similar relationships with their family

members and other adults. This development would also improve their

relationships with parents. In the mentorship program, mentors help mentees to

cope with bugging things in their life by listening, providing ideas and doing

things for mentees. These interactions between them can improve mentees'

ability on the desire to communicate with adults and improve their acceptance of

society and their lives. Mentoring relationship with a focus on developing the

potential of mentees by empowerment and performance standard can also

enhance their resilience.

Table 5.6 Models summary of regression of outcomes at round two

	R2 Resilience – Personal competence		R2 Resilience – Acceptance of self and life		R2 Future planning		R2 Career plan and goal setting		R2 SE		R2 GHQ		R2 Relatedness-PPS		R2 Relatedness-EQ	
	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2
Model A	.182	.197	.147	.162	.281	.294	.232	.245	.243	.257	.219	.233	.255	.269	.344	.356
Model B	.184	.028	.157	.037	.295	.032	.247	.031	.237	.011	.212	.001	.276	.036	.335	.013
Model C	.218	.057	.228	.091	.300	.028	.258	.031	.248	.027	.214	.019	.351	.090	.381	.064

Model A. Predictors: (Constant), household income, baseline score of outcome, age, sex

Model B. Predictors: (Constant),household income , baseline score of outcome, age, sex, Dimensions of MRQ at round one.

Model C. Predictors: (Constant),household income , baseline score of outcome, age, sex, Dimensions of MRQ at round one, Dimensions at round two.

R2: Round two; SE: Self-esteem; GHQ: General health questionnaire; PPS: Psychological proximity seeking; EQ: Emotional quality

Table 5.7 Models summary of regression of outcomes at round three

	R3 Resilience – Personal competence		R3 Resilience – Acceptance of self and life		R3 Future planning		R3 Career plan and goal setting		R3 SE		R3 GHQ		R3 Relatedness-PPS		R3 Relatedness-EQ	
	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2
Model A	.128	.150	.139	.160	.207	.227	.211	.230	.266	.284	.107	.127	.144	.163	.339	.356
Model B	.124	.036	.134	.028	.227	.034	.191	.006	.257	.015	.100	.003	.174	.034	.346	.037
Model C	.140	.042	.176	.071	.221	.029	.198	.036	.270	.035	.099	.024	.185	.034	.344	.023
Model D	.165	.061	.172	.028	.252	.056	.188	.025	.241	.007	.088	.000	.266	.102	.386	.066

Model A. Predictors: (Constant),household income , baseline score of outcome, age, sex

Model B. Predictors: (Constant),household income , baseline score of outcome, age, sex, Dimensions of MRQ at round one.

Model C. Predictors: (Constant),household income , baseline score of outcome, age, sex, Dimensions of MRQ at round one and round two..

Model D Predictors: (Constant),household income , baseline score of outcome, age, sex, Dimensions of MRQ at round one, two and three. R3: Round three; SE: Self-esteem; GHQ: General health questionnaire; PPS: Psychological proximity seeking; EQ: Emotional quality

Table 5.8a Coefficients of regression on **Resilience – Personal competence** at round two

	b	SE(b)	β	t	p
Demographics and baseline score					
Resilience – Personal competence at round 1	.344	.067	.343	5.122	.000
Sex	.012	.101	.007	.115	.908
Age	-.008	.028	-.019	-.303	.762
Household income	.000	.026	.000	.006	.995
MRQ at Round 1					
Youth-centered relationship	.181	.152	.125	1.193	.234
Positive emotional engagement	-.036	.121	-.030	-.299	.765
No negative emotional engagement	-.068	.114	-.049	-.600	.549
Trust	.057	.108	.043	.522	.602
Psychological proximity seeking	.071	.088	.058	.812	418
Help to cope	-.190	.114	-.165	-1.673	096
Empowerment and performance standard	-.010	.102	-.010	-.097	923
MRQ at Round 2					
Youth-centered relationship	-.109	.141	-.082	-.770	.442
Positive emotional engagement	.201	.130	.165	1.548	.123
No negative emotional engagement	-.030	.115	-.020	-.259	.796
Trust	.108	.109	.076	.991	.323
Psychological proximity seeking	.077	.083	.065	.932	.353
Help to cope	-.018	.122	-.016	-.148	.883
Empowerment and performance standard	.164	.109	.173	1.505	.134

Table 5.8b Coefficients of regression on **_Resilience – Acceptance of self and life_**
at round two

	b	SE(b)	β	t	p
Demographics and baseline score					
Resilience –Acceptance of self and life at round 1	.290	.063	.309	4.582	.000
Sex	.048	.127	.023	.374	.709
Age	.025	.034	.045	.724	.470
Household income	-.006	.032	-.012	-.193	.847
MRQ at Round 1					
Youth-centered relationship	.270	.187	.149	1.444	.150
Positive emotional engagement	-.101	.150	-.067	-.674	.501
No negative emotional engagement	-.162	.143	-.094	-1.137	.257
Trust	.027	.135	.016	.201	.841
Psychological proximity seeking	.145	.107	.094	1.349	.179
Help to cope	-.130	.141	-.089	-.920	.359
Empowerment and performance standard	-.057	.128	-.048	-.448	.654
MRQ at Round 2					
Youth-centered relationship	-.123	.176	-.073	-.702	.483
Positive emotional engagement	.430	.156	.281	2.749	**.007**
No negative emotional engagement	.055	.141	.030	.393	.695
Trust	.230	.136	.128	1.686	.093
Psychological proximity seeking	.007	.101	.005	.074	.941
Help to cope	-.113	.148	-.078	-.764	.446
Empowerment and performance standard	.156	.131	.131	1.191	.235

Table 5.8c Coefficients of regression on *Future planning* at round two

	b	SE(b)	β	t	p
Demographics and baseline score					
Future planning at round 1	.457	.062	.447	7.312	.000
Sex	-.005	.072	-.004	-.065	.948
Age	-.045	.019	-.138	-2.311	.022
Household income	.017	.019	.055	.943	.347
MRQ at Round 1					
Youth-centered relationship	.092	.108	.087	.849	.397
Positive emotional engagement	.024	.085	.026	.279	.781
No negative emotional engagement	-.018	.081	-.018	-.221	.826
Trust	.093	.077	.097	1.212	.227
Psychological proximity seeking	-.006	.063	-.006	-.094	.925
Help to cope	-.085	.079	-.099	-1.073	.284
Empowerment and performance standard	.025	.072	.035	.346	.730
MRQ at Round 2					
Youth-centered relationship	-.084	.101	-.085	-.825	.411
Positive emotional engagement	.089	.089	.099	.995	.321
No negative emotional engagement	.095	.080	.087	1.193	.234
Trust	.009	.076	.009	.122	.903
Psychological proximity seeking	.094	.056	.109	1.671	.096
Help to cope	-.027	.084	-.032	-.323	.747
Empowerment and performance standard	.043	.075	.061	.566	.572

Table 5.8d Coefficients of regression on *Career plan and goal setting* at round two

	b	SE(b)	β	t	p
Demographics and baseline score					
Career plan and goal setting at round 1	.431	.072	.413	6.017	.000
Sex	.170	.111	.094	1.535	.126
Age	-.025	.030	-.050	-.810	.419
Household income	-.027	.029	-.056	-.928	.355
MRQ at Round 1					
Youth-centered relationship	.216	.168	.135	1.289	.199
Positive emotional engagement	.030	.132	.023	.230	.819
No negative emotional engagement	-.069	.124	-.045	-.557	.578
Trust	-.027	.118	-.018	-.228	.820
Psychological proximity seeking	.122	.096	.089	1.262	.208
Help to cope	-.237	.123	-.185	-1.931	.055
Empowerment and performance standard	-.098	.111	-.092	-.883	.378
MRQ at Round 2					
Youth-centered relationship	-.026	.153	-.017	-.169	.866
Positive emotional engagement	.095	.142	.069	.670	.503
No negative emotional engagement	-.031	.124	-.019	-.249	.804
Trust	-.017	.118	-.010	-.143	.887
Psychological proximity seeking	.046	.090	.034	.506	.614
Help to cope	-.076	.130	-.059	-.582	.562
Empowerment and performance standard	.212	.118	.200	1.791	0.75

Table 5.8e Coefficients of regression on *Self- esteem* at round two

	b	SE(b)	β	t	p
Demographics and baseline score					
Self- esteem at round 1	.499	.067	.475	7.492	.000
Sex	.011	.057	.012	.194	.846
Age	-.004	.016	-.016	-.260	.795
Household income	.019	.015	.079	1.324	.187
MRQ at Round 1					
Youth-centered relationship	.154	.086	.185	1.798	**.074**
Positive emotional engagement	-.040	.069	-.058	-.588	.557
No negative emotional engagement	.018	.064	.022	.279	.781
Trust	-.048	.060	-.063	-.788	.431
Psychological proximity seeking	.063	.049	.090	1.294	.197
Help to cope	-.105	.064	-.156	-1.634	.104
Empowerment and performance standard	-.019	.058	-.034	-.327	.744
MRQ at Round 2					
Youth-centered relationship	-.019	.080	-.024	-.237	.813
Positive emotional engagement	.097	.072	.137	1.347	.179
No negative emotional engagement	-.024	.064	-.028	-.381	.704
Trust	.083	.061	.100	1.361	.175
Psychological proximity seeking	.057	.046	.082	1.234	.219
Help to cope	-.062	.068	-.092	-.911	.363
Empowerment and performance standard	.028	.060	.051	.463	.644

Table 5.8f Coefficients of regression on *GHQ* at round two

	b	SE(b)	β	t	p
Demographics and baseline score					
GHQ at round 1	.404	.064	.427	6.315	.000
Sex	-.048	.057	-.054	-.847	.398
Age	-.023	.016	-.095	-1.427	.155
Household income	.013	.015	.055	.892	.374
MRQ at Round 1					
Youth-centered relationship	.042	.084	.053	.507	.613
Positive emotional engagement	.007	.067	.010	.097	.923
No negative emotional engagement	.010	.063	.014	.165	.869
Trust	-.048	.060	-.068	-.806	.421
Psychological proximity seeking	.012	.050	.018	.246	.806
Help to cope	-.103	.062	-.159	-1.652	.100
Empowerment and performance standard	.030	.057	.055	.515	.607
MRQ at Round 2					
Youth-centered relationship	.065	.078	.088	.827	.409
Positive emotional engagement	-.018	.070	-.027	-.253	.801
No negative emotional engagement	-.075	.063	-.092	-1.192	.235
Trust	.088	.060	.112	1.467	.144
Psychological proximity seeking	.064	.045	.098	1.431	.154
Help to cope	-.038	.067	-.060	-.573	.567
Empowerment and performance standard	.048	.060	.092	.807	.420

Table 5.8g Coefficients of regression on ***Relatedness-Psychological proximity seeking*** at round two

	b	SE(b)	β	t	p
Demographics and baseline score					
Relatedness-Psychological proximity seeking at round 1	.311	.054	.355	5.776	.000
Sex	.108	.059	.104	1.810	.072
Age	-.017	.016	-.063	-1.085	.279
Household income	.001	.015	.005	.088	.930
MRQ at Round 1					
Youth-centered relationship	.030	.088	.033	.344	.731
Positive emotional engagement	.053	.071	.069	.750	.454
No negative emotional engagement	.062	.067	.070	.923	.357
Trust	-.040	.063	-.048	-.636	.525
Psychological proximity seeking	.043	.051	.055	.845	.399
Help to cope	-.171	.066	-.233	-2.593	**.010**
Empowerment and performance standard	.046	.060	.076	.766	.444
MRQ at Round 2					
Youth-centered relationship	.023	.083	.027	.273	.785
Positive emotional engagement	.029	.075	.037	.383	.702
No negative emotional engagement	-.027	.066	-.029	-.412	.681
Trust	.089	.063	.096	1.415	.159
Psychological proximity seeking	.222	.050	.285	4.470	**.000**
Help to cope	.026	.071	.035	.363	.717
Empowerment and performance standard	.020	.062	.033	.316	.753

Table 5.8h Coefficients of regression on *Relatedness Questionnaire-Emotional quality* at round two

	b	SE(b)	β	t	p
Demographics and baseline score					
Relatedness Questionnaire-Emotional quality at round 1	.487	.057	.538	8.513	.000
Sex	.067	.057	.068	1.178	.240
Age	.018	.015	.067	1.178	.240
Household income	-.009	.014	-.034	-.610	.543
MRQ at Round 1					
Youth-centered relationship	.085	.085	.098	.999	.319
Positive emotional engagement	.003	.068	.004	.040	.968
No negative emotional engagement	-.056	.063	-.069	-.896	.371
Trust	.053	.059	.067	.891	.374
Psychological proximity seeking	-.023	.047	-.032	-.489	.626
Help to cope	-.036	.063	-.052	-.570	.569
Empowerment and performance standard	-.059	.057	-.103	-1.034	.302
MRQ at Round 2					
Youth-centered relationship	.038	.077	.048	.496	.620
Positive emotional engagement	.085	.072	.115	1.179	.240
No negative emotional engagement	.069	.062	.078	1.126	.262
Trust	.069	.060	.077	1.143	.255
Psychological proximity seeking	.112	.046	.155	2.436	**.016**
Help to cope	.000	.066	.000	.002	.998
Empowerment and performance standard	-.030	.059	-.053	-.506	.613

Table 5.9a Coefficients of regression on **Resilience – Personal competence** at round three

	b	*SE(b)*	*β*	*t*	*p*
Demographics and baseline score					
Resilience – Personal competence at round 1	-.067	.121	-.046	-.557	.578
Sex	.006	.033	.015	.184	.855
Age	-.017	.033	-.043	-.533	.595
Household income	-.067	.121	-.046	-.557	.578
MRQ at Round 1					
Youth-centered relationship	.222	.198	.168	1.124	.263
Positive emotional engagement	-.041	.145	-.038	-.283	.777
No negative emotional engagement	-.020	.129	-.017	-.155	.877
Trust	-.063	.128	-.054	-.493	.623
Psychological proximity seeking	-.034	.111	-.031	-.305	.761
Help to cope	-.112	.131	-.106	-.851	.396
Empowerment and performance standard	.085	.122	.096	.695	.488
MRQ at Round 2					
Youth-centered relationship	.059	.165	.048	.359	.720
Positive emotional engagement	.228	.155	.206	1.474	.143
No negative emotional engagement	-.143	.145	-.101	-.984	.327
Trust	-.101	.132	-.076	-.763	.447
Psychological proximity seeking	-.089	.097	-.083	-.916	.362
Help to cope	-.183	.148	-.177	-1.235	.219
Empowerment and performance standard	.097	.132	.114	.736	.463
MRQ at Round 3					
Youth-centered relationship	-.332	.168	-.298	-1.970	.051
Positive emotional engagement	.163	.155	.156	1.053	.294
No negative emotional engagement	-.120	.130	-.099	-.923	.358
Trust	.109	.125	.088	.877	.382
Psychological proximity seeking	.046	.096	.041	.477	.634
Help to cope	-.071	.139	-.075	-.510	.611
Empowerment and performance standard	.273	.112	.368	2.431	**.016**

Table 5.9b Coefficients of regression on *Resilience – Acceptance of self and life* at round three

	b	SE(b)	β	t	p
Demographics and baseline score					
Resilience –Acceptance of self and life at round 1	.259	.076	.300	3.387	.001
Sex	-.189	.148	-.104	-1.283	.202
Age	.011	.039	.023	.290	.772
Household income	.009	.038	.017	.223	.824
MRQ at Round 1					
Youth-centered relationship	.585	.235	.355	2.493	.014
Positive emotional engagement	.044	.176	.032	.253	.801
No negative emotional engagement	.031	.155	.021	.198	.843
Trust	-.160	.154	-.109	-1.033	.303
Psychological proximity seeking	-.190	.134	-.138	-1.416	.159
Help to cope	-.336	.157	-.257	-2.142	**.034**
Empowerment and performance standard	-.047	.147	-.042	-.318	.751
MRQ at Round 2					
Youth-centered relationship	-.094	.197	-.062	-.475	.636
Positive emotional engagement	.377	.184	.275	2.049	**.042**
No negative emotional engagement	-.191	.167	-.116	-1.140	.256
Trust	.199	.159	.126	1.251	.213
Psychological proximity seeking	.036	.117	.027	.305	.761
Help to cope	-.151	.175	-.118	-.865	.389
Empowerment and performance standard	.122	.159	.115	.764	.446
MRQ at Round 3					
Youth-centered relationship	-.233	.202	-.169	-1.152	.251
Positive emotional engagement	.147	.183	.113	.804	.423
No negative emotional engagement	-.066	.154	-.043	-.425	.671
Trust	-.014	.149	-.009	-.091	.928
Psychological proximity seeking	-.059	.121	-.042	-.484	.629
Help to cope	-.064	.165	-.055	-.390	.697
Empowerment and performance standard	.245	.132	.270	1.856	.066

Table 5.9c Coefficients of regression on *Future planning* at round three

	b	SE(b)	β	t	p
Demographics and baseline score					
Future planning at round 1	.403	.078	.400	5.168	.000
Sex	-.020	.091	-.017	-.216	.829
Age	.014	.024	.044	.576	.566
Household income	-.026	.024	-.080	-1.085	.280
MRQ at Round 1					
Youth-centered relationship	.200	.146	.186	1.376	.171
Positive emotional engagement	.019	.110	.021	.172	.864
No negative emotional engagement	-.022	.097	-.023	-.222	.824
Trust	-.004	.095	-.004	-.038	.970
Psychological proximity seeking	.059	.084	.066	.700	.485
Help to cope	-.178	.095	-.209	-1.864	.064
Empowerment and performance standard	.050	.092	.070	.546	.586
MRQ at Round 2					
Youth-centered relationship	.010	.125	.010	.083	.934
Positive emotional engagement	.102	.116	.114	.878	.381
No negative emotional engagement	.114	.104	.105	1.091	.277
Trust	-.108	.096	-.105	-1.126	.262
Psychological proximity seeking	-.039	.073	-.046	-.540	.590
Help to cope	.162	.109	.194	1.493	.138
Empowerment and performance standard	-.163	.097	-.235	-1.670	**.**097
MRQ at Round 3					
Youth-centered relationship	-.125	.125	-.138	-.999	.320
Positive emotional engagement	-.104	.114	-.121	-.913	.363
No negative emotional engagement	.017	.095	.017	.175	.862
Trust	.127	.093	.127	1.366	.174
Psychological proximity seeking	.136	.072	.149	1.888	.061
Help to cope	-.053	.102	-.069	-.522	.603
Empowerment and performance standard	.147	.082	.246	1.783	.077

Table 5.9d Coefficients of regression on *Career plan and goal setting* at round three

	b	SE(b)	β	t	p
Demographics and baseline score					
Career plan and goal setting at round 1	.363	.080	.408	4.558	.000
Sex	-.080	.117	-.054	-.679	.498
Age	-.016	.031	-.042	-.528	.598
Household income	-.050	.031	-.125	-1.637	.104
MRQ at Round 1					
Youth-centered relationship	.141	.189	.105	.743	.459
Positive emotional engagement	-.062	.142	-.056	-.438	.662
No negative emotional engagement	-.016	.125	-.014	-.130	.897
Trust	-.156	.124	-.132	-1.255	.211
Psychological proximity seeking	.007	.107	.007	.068	.946
Help to cope	.023	.123	.022	.191	.849
Empowerment and performance standard	-.058	.117	-.065	-.498	.619
MRQ at Round 2					
Youth-centered relationship	-.067	.158	-.054	-.423	.673
Positive emotional engagement	.054	.151	.048	.355	.723
No negative emotional engagement	.144	.132	.107	1.087	.279
Trust	-.052	.123	-.041	-.424	.672
Psychological proximity seeking	-.140	.094	-.132	-1.491	.138
Help to cope	-.111	.140	-.106	-.792	.430
Empowerment and performance standard	.209	.125	.243	1.670	.097
MRQ at Round 3					
Youth-centered relationship	-.177	.160	-.159	-1.106	.270
Positive emotional engagement	.167	.147	.157	1.137	.257
No negative emotional engagement	-.071	.123	-.059	-.583	.561
Trust	.043	.119	.035	.360	.719
Psychological proximity seeking	.038	.093	.034	.407	.685
Help to cope	-.125	.131	-.131	-.953	.342
Empowerment and performance standard	.162	.106	.220	1.531	.128

Table 5.9e Coefficients of regression on *Self-esteem* at round three

	b	SE(b)	β	t	p
Demographics and baseline score					
Self-esteem R1	.489	.079	.494	6.188	.000
Sex	.001	.068	.001	.016	.987
Age	.022	.018	.097	1.238	.218
Household income	.034	.018	.145	1.931	.056
MRQ at Round 1					
Youth-centered relationship	-.015	.111	-.019	-.132	.895
Positive emotional engagement	.076	.083	.118	.916	.361
No negative emotional engagement	.065	.071	.094	.917	.361
Trust	-.003	.070	-.005	-.046	.964
Psychological proximity seeking	-.017	.062	-.027	-.282	.778
Help to cope	-.005	.071	-.008	-.067	.947
Empowerment and performance standard	-.074	.068	-.142	-1.095	.276
MRQ at Round 2					
Youth-centered relationship	.017	.091	.023	.181	.856
Positive emotional engagement	.134	.085	.204	1.574	.118
No negative emotional engagement	.060	.076	.077	.798	.426
Trust	-.119	.073	-.159	-1.638	.104
Psychological proximity seeking	-.080	.054	-.128	-1.483	.140
Help to cope	-.018	.082	-.029	-.215	.830
Empowerment and performance standard	.043	.072	.084	.594	.554
MRQ at Round 3					
Youth-centered relationship	-.046	.093	-.068	-.491	.624
Positive emotional engagement	.050	.084	.079	.594	.554
No negative emotional engagement	-.021	.071	-.030	-.304	.762
Trust	.033	.069	.045	.474	.636
Psychological proximity seeking	.014	.053	.021	.263	.793
Help to cope	-.059	.075	-.105	-.786	.434
Empowerment and performance standard	.029	.061	.065	.467	.641

Table 5.9f Coefficients of regression on *GHQ* at round three

	b	SE(b)	β	t	p
Demographics and baseline score					
GHQ R1	.343	.081	.393	4.223	.000
Sex	-.015	.070	-.019	-.218	.828
Age	-.011	.019	-.051	-.586	.559
Household income	.018	.018	.082	1.005	.317
MRQ at Round 1					
Youth-centered relationship	-.149	.112	-.200	-1.330	.186
Positive emotional engagement	.111	.085	.180	1.308	.193
No negative emotional engagement	.022	.073	.033	.304	.762
Trust	-.098	.072	-.149	-1.366	.174
Psychological proximity seeking	.023	.063	.038	.369	.713
Help to cope	.038	.072	.065	.533	.595
Empowerment and performance standard	-.028	.070	-.056	-.400	.690
MRQ at Round 2					
Youth-centered relationship	.051	.095	.074	.540	.590
Positive emotional engagement	.058	.087	.094	.664	.508
No negative emotional engagement	.073	.078	.098	.934	.352
Trust	-.154	.074	-.217	-2.073	**.040**
Psychological proximity seeking	-.027	.056	-.047	-.494	.622
Help to cope	-.140	.084	-.241	-1.674	.096
Empowerment and performance standard	.081	.073	.168	1.101	.273
MRQ at Round 3					
Youth-centered relationship	-.095	.096	-.152	-.995	.322
Positive emotional engagement	-.006	.087	-.011	-.074	.941
No negative emotional engagement	.018	.074	.027	.251	.802
Trust	.010	.070	.014	.143	.887
Psychological proximity seeking	.024	.055	.038	.427	.670
Help to cope	-.007	.077	-.014	-.095	.924
Empowerment and performance standard	.057	.063	.139	.917	.361

Table 5.9g Coefficients of regression on **Relatedness – Psychological proximity seeking** at round three

	b	SE(b)	β	t	p
Demographics and baseline score					
Relatedness – Psychological proximity seeking R1	.237	.074	.267	3.223	.002
Sex	-.009	.085	-.008	-.107	.915
Age	-.021	.022	-.074	-.964	.337
Household income	.019	.022	.065	.873	.384
MRQ at Round 1					
Youth-centered relationship	.200	.133	.204	1.505	.135
Positive emotional engagement	-.064	.099	-.079	-.644	.521
No negative emotional engagement	-.113	.088	-.130	-1.285	.201
Trust	.017	.087	.019	.195	.846
Psychological proximity seeking	.070	.076	.087	.918	.360
Help to cope	-.152	.086	-.198	-1.757	.081
Empowerment and performance standard	.017	.082	.026	.205	.838
MRQ at Round 2					
Youth-centered relationship	-.017	.112	-.019	-.157	.876
Positive emotional engagement	-.138	.106	-.169	-1.303	.195
No negative emotional engagement	.069	.093	.071	.745	.458
Trust	.027	.087	.030	.317	.752
Psychological proximity seeking	.030	.066	.038	.449	.654
Help to cope	.031	.099	.041	.313	.754
Empowerment and performance standard	.040	.090	.063	.440	.660
MRQ at Round 3					
Youth-centered relationship	-.070	.113	-.085	-.618	.538
Positive emotional engagement	.102	.104	.131	.979	.329
No negative emotional engagement	.055	.088	.061	.624	.534
Trust	.121	.084	.132	1.443	.151
Psychological proximity seeking	.227	.066	.274	3.419	**.001**
Help to cope	-.153	.092	-.220	-1.662	.099
Empowerment and performance standard	.109	.075	.202	1.452	.149

Table 5.9h Coefficients of regression on *Relatedness – Emotional quality* at round three

	b	SE(b)	β	t	p
Demographics and baseline score					
Relatedness – Emotional quality R1	.458	.075	.459	6.095	.000
Sex	.074	.074	.070	.996	.321
Age	.030	.019	.105	1.533	.128
Household income	.011	.020	.038	.576	.566
MRQ at Round 1					
Youth-centered relationship	.072	.118	.076	.611	.542
Positive emotional engagement	.042	.089	.053	.467	.641
No negative emotional engagement	.107	.078	.124	1.368	.174
Trust	-.113	.078	-.132	-1.440	.152
Psychological proximity seeking	.052	.067	.066	.775	.440
Help to cope	.045	.080	.059	.557	.578
Empowerment and performance standard	-.059	.075	-.093	-.785	.434
MRQ at Round 2					
Youth-centered relationship	.075	.102	.084	.739	.461
Positive emotional engagement	.103	.098	.127	1.044	.299
No negative emotional engagement	-.084	.088	-.081	-.954	.342
Trust	.046	.080	.047	.573	.567
Psychological proximity seeking	-.144	.059	-.189	-2.457	**.015**
Help to cope	-.063	.088	-.083	-.713	.477
Empowerment and performance standard	.031	.083	.049	.371	.711
MRQ at Round 3					
Youth-centered relationship	.054	.102	.068	.532	.596
Positive emotional engagement	-.057	.094	-.076	-.609	.543
No negative emotional engagement	.309	.080	.346	3.852	**.000**
Trust	-.020	.076	-.021	-.257	.798
Psychological proximity seeking	.060	.059	.074	1.011	.314
Help to cope	-.062	.083	-.091	-.748	.456
Empowerment and performance standard	.002	.070	.003	.025	.980

CHAPTER 6 – RESULTS ON THE INTERACTION OF

RELATIONSHIPS

In this chapter, the results on the interaction between adolescents' relationship with parents and mentoring relationship were reported. The descriptive statistics on the measures of relationship with parents and the correlations between relationship with parents and mentoring relationship were presented first. Multiple linear regression analyses were used to test if one relationship can predict the other at different rounds. Finally, path analysis was utilized to explore the complex interaction among these two kinds of relationships across three rounds.

Descriptive statistics

Table 6.1 provides descriptive statistics for adolescents' relationship with parents at three different rounds, the rounds one, two and three surveys. Relationship of participating children with their parents showed slight changes. "Emotion quality" had a higher average than "Psychological proximity seeking" at all three rounds.

Table 6.1 Descriptive statistics of dimensions of relationship with parents at three rounds

	Mean	*SD*	Min.	Max.	N
Psychological proximity seeking					
Round 1	3.01	0.57	1.00	4.00	663
Round 2	2.89	0.53	1.00	4.00	559
Round 3	2.91	0.50	1.00	4.00	521

Emotion quality					
Round 1	3.19	0.51	1.00	4.00	504
Round 2	3.14	0.48	1.45	4.00	558
Round 3	3.13	0.47	1.00	4.00	517

Inter-correlation between the seven dimensions of mentoring relationship

and the two dimensions of relationship with parents at across the three rounds

was reported. Multiple liner regressions of mentoring relationship with

relationship with parents will also be reported.

Correlation

First, Table 6.2 shows the results of correlations between dimensions of

MRQ and dimension of Relatedness in the same rounds. All dimensions of MRQ

were significantly and positively correlated with both dimensions of Relatedness

in round one. All dimensions of MRQ were significantly and positively

correlated with both dimensions of Relatedness in round two except "Trust"

didn't have significant correlation with "Psychological proximity seeking". All

dimensions of MRQ were significantly and positively correlated with both

dimensions of Relatedness in round three except "Help to cope" didn't have

significant correlation with "Psychological proximity seeking".

Second, correlation between relationship with parents and mentoring

relationship at next round is rifeness. Both dimensions of relationship with

parents at round one and all dimensions of mentoring relationship at round two

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were all positively and significantly correlated except the correlation between "Emotional quality" of relatedness and "Psychological proximity seeking" of MRQ. Both dimensions of relationship with parents at round two and all dimensions of mentoring relationship at round three were all positively and significantly correlated except correlation between "Psychological proximity seeking" of relatedness and "Help to cope", correlation between "Emotional quality" of relatedness and "Help to cope", "Empowerment and performance standard" of MRQ.

Third, correlation between mentoring relationship and relationship with parents at next round is quite plenty too. All dimensions of mentoring relationship at round one and both dimensions of relationship with parents at round two were all positively significant except the correlation between "No negative emotional engagement", "Trust" of mentoring relationship and "Psychological proximity seeking" of relatedness. All dimensions of mentoring relationship at round two and both dimensions of relationship with parents at round three were all positively significant except the correlation between "Youth-centered relationship", "Positive emotional engagement" "Trust" of MRQ and "Psychological proximity seeking" of Relatedness，correlation between

"Psychological proximity seeking" of MRQ and "Emotional quality" of

Relatedness.

Finally, "Psychological proximity seeking" of Relatedness at round one

have positive significant correlation with all dimensions of MRQ at round three,

while the "Emotional quality" of Relatedness only significantly correlated with

"No negative emotional engagement", "Trust" of MRQ at round three. All

dimension of MRQ at round one have significant positive correlation with

"Emotional quality" of Relatedness at round three, while only "Psychological

proximity seeking" of MRQ was correlated with "Psychological proximity

seeking" of Relatedness at round three.

Table 6.2 Inter-correlation between MRQ and relationship with parents at the
three rounds of survey

		R1 PPS	R1 EQ	R2 PPS	R2 EQ	R3 PPS	R3 EQ
Round 1							
Youth-centered relationship	r	.29**	.21**	.23**	.19**	.06	.15**
	N	540	378	423	421	400	398
Positive emotional engagement	r	.29**	.28**	.20**	.21**	.06	.18**
	N	547	382	427	425	402	400
No negative emotional engagement	r	.14**	.19**	.085	.17**	-.004	.22**
	N	548	383	428	426	403	401
Trust	r	.11**	.19**	.095	.21**	.009	.24**
	N	545	383	425	423	402	400
Psychological proximity seeking	r	.32**	.14**	.28**	.10*	.225**	.16**
	N	547	382	426	424	403	401
Help to cope	r	.21**	.18**	.17**	.17**	.025	.12*
	N	546	383	425	423	402	400
Empowerment & performance standard	r	.28**	.30**	.22**	.25**	.067	.21**
	N	537	374	416	414	395	393

Empowerment & performance standard	r	.22**	.22**	.21**	.21**	.064	.21**
	N	503	369	533	532	421	418
Positive emotional engagement	r	.22**	.22**	.26**	.24**	.081	.20**
	N	513	377	544	543	427	424
No negative emotional engagement	r	.21**	.22**	.16**	.29**	.16**	.24**
	N	509	374	539	538	426	423
Trust	r	.13**	.26**	.064	.28**	.039	.24**
	N	512	377	421	541	428	425
Psychological proximity seeking	r	.15**	.018	.35*	.14**	.15**	.024
	N	514	378	544	543	430	427
Help to cope	r	.17**	.18**	.18**	.16**	.13**	.21**
	N	514	378	544	543	429	426
Empowerment & performance standard	r	.22**	.23**	.23**	.24**	.16**	.23**
	N	503	369	533	532	419	416
Round 3							
Youth-centered relationship	r	.13**	.105	.17**	.18**	.11*	.16**
	N	465	346	411	411	497	493
Positive emotional engagement	r	.16**	.080	.21**	.12*	.16**	.21**
	N	467	347	412	412	498	494
No negative emotional engagement	r	.10*	.21**	.20**	.24**	.20**	.36**
	N	467	348	412	412	499	495
Trust	r	.15**	.23**	.12*	.24**	.14**	.26**
	N	470	350	416	416	502	498
Psychological proximity seeking	r	.23**	.056	.27**	.13*	.35**	.16**
	N	465	348	410	410	496	492
Help to cope	r	.13**	.100	.082	.067	.012	.12**
	N	463	345	409	409	494	490
Empowerment & performance standard	r	.11*	.103	.098*	.082	.105*	.16**
	N	458	341	404	404	488	485

**. Correlation is significant at the 0.01 level (2-tailed)

*. Correlation is significant at the 0.05 level (2-tailed)

Regression

Two groups of hierarchical multiple linear regressions were utilized to test

the effects of mentoring relationship on relationship with parent in adolescents

and the effects of relationship with parents on mentoring relationship. The first group of regressions treated relationship with parents of adolescents as dependent variables and mentoring relationship as predictors, with baseline scores of relationship with parents adjusted, to test the effects of mentoring relationship on relationship with parents. The second group of regressions used mentoring relationship of adolescents as dependent variables and use relationship with parents as predictors, with baseline scores of mentoring relationship adjusted, to test the effects of relationship with parents on mentoring relationship.

Regression on relationship with parents

In the first group of regressions, there were two subgroups based on different rounds. The first subgroup used relationship with parents at round two as dependent variables and MRQ at round one and round two as predictors. The second subgroup used relationship with parents at round three as dependent variables and MRQ at rounds one, two and three as predictors. All the regressions were control for the baseline scores of outcomes.

All the regression models of the second group, with relationship with parents as dependent variables and mentoring relationship as predictors, were significant and the adjusted R^2 ranged from 0.086 to 0.313 at round two (Table

6.4) and from 0.085 to 0.233 at round three (Table 6.5). The last subgroup model

also showed the highest adjusted R^2.

"Relatedness-Psychological proximity seeking" at round two was uniquely

and significantly predicted by "Psychological proximity seeking" dimension of

MRQ at round two (Table 6.6a). "Relatedness-Emotional quality" at round two

was predicted by "Trust" and "Psychological proximity seeking" of MRQ at

round two significantly (Table 6.6b).

"Relatedness-Psychological proximity seeking" at round three significantly

predicted by "Psychological proximity seeking" and "Help to cope" of MRQ at

round three (Table 6.6c). "Relatedness- Emotional quality" at round three was

uniquely predicted by "Psychological proximity seeking" of MRQ at round two

and "No negative emotional engagement" of MRQ at round three significantly

(Table 6.6d).

Regression on mentoring relationship

There were also two subgroups in the second group of regressions. The first

subgroup used MRQ at round two as dependent variable and relationship with

parents at round one and round two as predictors. The second subgroup used

MRQ at round three as dependent variables and relationship with parents at

rounds one, two and three as predictors.

All the regression models of the first group, which treated MRQ as dependent variables and relationship with parents as predictors, were significant , with the adjusted R^2 ranging from 0.277 to 0.431 at round two and from 0.126 to 0.433 at round three (Table 6.3). The regression model in the last subgroup showed the highest adjusted R^2.

"No negative emotional engagement" of MRQ at round two was predicted by "Relatedness- Emotional quality" at round two significantly (Table 6.7c). "Trust" at round two was uniquely predicted by "Relatedness- Emotional quality" at round one significantly (Table 6.7d). "Psychological proximity seeking", "Help to cope" and "Empowerment and performance standard" of MRQ were all uniquely predicted by "Relatedness- Psychological proximity seeking" at round two (Table 6.7e to Table 6.7g).

"No negative emotional engagement" of MRQ at round three was predicted by "Relatedness- Psychological proximity seeking" at rounds one and three, and "Relatedness- Emotional quality" at round three (Table 6.8c). "Trust" and "Psychological proximity seeking" of MRQ at round three were uniquely predicted by "Relatedness- Psychological proximity seeking" at round three significantly (Table 6.8d & Table 6.8e).

Relationship is one of the core factors in mentorship program in which the

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relationship with parents and the one with mentors are two important

relationships to participants' development. The findings from the path model

analyses show that these two relationships at an earlier stage can predict each

other at a later stage of the program. On one hand, mentoring relationship can

improve the relationship with parents. Mentees would tend to get closer to their

parents, if they have experienced psychological proximity with their mentors.

The trust and psychological proximity seeking dimensions of mentoring

relationship can enhance the ability and willingness of participating adolescents

to hold more positive attitudes on their emotional quality with their parents.

Mentees can also develop a closer relationship with their parents as they can get

help from mentors on coping with stress and difficult matters in relationship with

their parents.

On the other hand, relationship with parents can positively predict

mentoring relationship. Firstly, the willingness of psychological proximity can

make mentees more receptible to get help from mentors and easier to feel their

kindness and closeness. This also makes mentees value the experience of

empowerment and role modeling from mentors when they interact with mentors.

Secondly, psychological proximity and the quality of emotion with parents can

make them easier to seek closeness with mentors, feel the emotional engagement

with mentors and develop trust between mentors and mentees.

Table 6.3 Models summary of regression of relatedness at round two and round three

	R2 Relatedness- EQ		R2 Relatedness- EQ		R3 Relatedness- PPS		R3 Relatedness- EQ	
	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2
Model A	.270	.272	.388	.390	.126	.129	.357	.361
Model B	.277	.021	.382	.011	.126	.023	.362	.029
Model C	.353	.087	.431	.063	.161	.055	.378	.039
Model D					.241	.096	.433	.072

Model A. Predictors: (Constant), baseline score of outcome
Model B. Predictors: (Constant), baseline score of outcome, Dimensions of MRQ at round one
Model C. Predictors: (Constant), baseline score of outcome, Dimensions of MRQ at round one, Dimensions at round two.
Model D Predictors: (Constant), baseline score of outcome, Dimensions of MRQ at round one, Dimensions at round two, dimensions of MRQ at round three
R2: Round two; R3: Round three; PPS: Psychological proximity seeking; EQ: Emotional quality

Table 6.4 Models summary of regression of MRQ at round two

	R2youth-centered relationship		R2 Positive emotional engagement		R2 No negative emotional engagement		R2trust		R2 Psychological proximity seeking		R2 Help to cope		R2 Empowerment and performance standard	
	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2
Model A	.246	.248	.193	.196	.112	.115	.051	.054	.079	.082	.224	.227	.275	.278
Model B	.266	.026	.212	.024	.142	.036	.102	.057	.086	.013	.237	.018	.284	.015
Model C	.282	.020	.232	.025	.165	.029	.107	.011	.176	.095	.248	.016	.313	.033

a. Predictors: (Constant), baseline score
b. Predictors: (Constant), baseline score, R1 Relatedness
c. Predictors: (Constant), baseline score, R1 Relatedness, R2Relatedness
R2: Round two

Table 6.5 Models summary of regression of MRQ at round three

	R3 Youth-centered relationship		R3 Positive emotional engagement		R3 No negative emotional engagement		R3 Trust		R3 Psychological proximity seeking		R3 Help to cope		R3 Empowerment and performance standard	
	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2	Adj. R^2	ΔR^2
Model A	.138	.142	.185	.188	.030	.034	.078	.082	.123	.127	.123	.127	.103	.107
Model B	.147	.017	.195	.017	.085	.063	.123	.053	.133	.018	.133	.018	.111	.016
Model C	.153	.014	.207	.020	.120	.043	.128	.013	.161	.035	.161	.035	.112	.008
Model D	.146	.001	.205	.005	.183	.069	.139	.018	.232	.076	.232	.076	.107	.003

a. Predictors: (Constant), baseline score
b. Predictors: (Constant), baseline score, R1 Relatedness
c. Predictors: (Constant), baseline score, R1 Relatedness, R2Relatedness.
d. Predictors: (Constant), baseline score, R1 Relatedness, R2Relatedness. R3Relatedness.
R3: Round three

Table 6.6a Coefficients of regression on *Relatedness – Psychological proximity seeking* at round two

	b	SE(b)	β	t	p
Baseline score					
Relatedness – Psychological proximity seeking at round 1	.400	.042	.435	9.501	.000
MRQ at Round 1					
Youth-centered relationship	.035	.064	.040	.539	.590
Positive emotional engagement	-.025	.054	-.032	-.466	.641
No negative emotional engagement	-.050	.050	-.054	-.993	.321
Trust	.044	.047	.052	.947	.345
Psychological proximity seeking	.040	.039	.053	1.039	.299
Help to cope	-.041	.045	-.058	-.901	.368
Empowerment and performance standard	.004	.042	.007	.104	.917
MRQ at Round 2					
Youth-centered relationship	-.053	.066	-.062	-.800	.424
Positive emotional engagement	.061	.059	.076	1.026	.305
No negative emotional engagement	.045	.052	.047	.876	.381
Trust	.025	.050	.026	.503	.615
Psychological proximity seeking	.228	.040	.285	5.712	**.000**
Help to cope	.014	.051	.019	.266	.790
Empowerment and performance standard	.003	.047	.005	.062	.951

Table6.6b Coefficients of regression on ***Relatedness-Emotional quality*** at round two

	b	SE(b)	β	t	p
Baseline score					
Relatedness-Emotional quality at round 1	.529	.050	.568	10.683	.000
MRQ at Round 1					
Youth-centered relationship	.077	.074	.088	1.041	.299
Positive emotional engagement	-.023	.059	-.032	-.387	.699
No negative emotional engagement	-.055	.056	-.066	-.993	.322
Trust	.057	.053	.071	1.085	.279
Psychological proximity seeking	.008	.040	.012	.210	.834
Help to cope	-.058	.055	-.083	-1.046	.297
Empowerment and performance standard	-.032	.050	-.056	-.637	.525
MRQ at Round 2					
Youth-centered relationship	.072	.070	.090	1.042	.299
Positive emotional engagement	.043	.065	.057	.652	.515
No negative emotional engagement	.066	.056	.072	1.186	.237
Trust	.116	.054	.129	2.162	**.032**
Psychological proximity seeking	.108	.043	.146	2.535	**.012**
Help to cope	.004	.058	.005	.066	.948
Empowerment and performance standard	-.039	.053	-.068	-.735	.463

Table 6.6c Coefficients of regression on *Relatedness – Psychological proximity seeking* at round three

	b	SE(b)	β	t	p
Baseline score					
Relatedness – Psychological proximity seeking at round 1	.235	.055	.261	4.255	.000
MRQ at Round 1					
Youth-centered relationship	.015	.090	.018	.170	.865
Positive emotional engagement	-.017	.070	-.022	-.244	.807
No negative emotional engagement	-.062	.065	-.070	-.962	.337
Trust	-.001	.060	-.001	-.019	.985
Psychological proximity seeking	.045	.053	.059	.837	.403
Help to cope	-.042	.058	-.061	-.722	.471
Empowerment and performance standard	-.057	.056	-.098	-1.009	.314
MRQ at Round 2					
Youth-centered relationship	-.051	.086	-.061	-.599	.550
Positive emotional engagement	-.077	.077	-.099	-.997	.320
No negative emotional engagement	.120	.068	.129	1.771	**.078**
Trust	-.065	.067	-.071	-.979	.329
Psychological proximity seeking	.032	.052	.042	.617	.538
Help to cope	.022	.068	.030	.325	.746
Empowerment and performance standard	.065	.062	.108	1.035	.302
MRQ at Round 3					
Youth-centered relationship	-.003	.084	-.004	-.035	.972
Positive emotional engagement	.081	.072	.115	1.117	.265
No negative emotional engagement	.127	.065	.140	1.950	**.052**
Trust	.076	.065	.084	1.176	.241
Psychological proximity seeking	.198	.048	.264	4.127	**.000**
Help to cope	-.141	.065	-.214	-2.167	**.031**
Empowerment and performance standard	.049	.052	.097	.940	.348

Table6.6d Coefficients of regression on *Relatedness-Emotional quality* at round three

	b	SE(b)	β	t	p
Baseline score					
Relatedness – Emotional quality at round 1	.473	.063	.484	7.467	.000
MRQ at Round 1					
Youth-centered relationship	.079	.097	.087	.814	.417
Positive emotional engagement	.005	.072	.006	.065	.948
No negative emotional engagement	.070	.068	.083	1.028	.305
Trust	-.071	.066	-.086	-1.075	.284
Psychological proximity seeking	.076	.053	.102	1.425	.156
Help to cope	.060	.065	.084	.922	.358
Empowerment and performance standard	-.074	.064	-.125	-1.160	.248
MRQ at Round 2					
Youth-centered relationship	.052	.084	.061	.615	.540
Positive emotional engagement	.096	.082	.125	1.176	.241
No negative emotional engagement	-.085	.076	-.087	-1.123	.263
Trust	.052	.071	.055	.734	.464
Psychological proximity seeking	-.162	.052	-.215	-3.087	**.002**
Help to cope	-.017	.072	-.024	-.239	.811
Empowerment and performance standard	.003	.071	.006	.048	.962
MRQ at Round 3					
Youth-centered relationship	.028	.089	.039	.313	.755
Positive emotional engagement	-.012	.077	-.018	-.155	.877
No negative emotional engagement	.275	.069	.313	3.976	**.000**
Trust	.007	.067	.008	.107	.915
Psychological proximity seeking	.057	.049	.078	1.162	.247
Help to cope	-.071	.069	-.112	-1.016	.311
Empowerment and performance standard	.010	.060	.020	.162	.872

Table6.7a Coefficients of regression on *youth-centered relationship* at round two

	b	SE(b)	β	t	p
Baseline score					
Youth-centered relationship at round 1	.481	.062	.428	7.817	.000
RELATEDNESS at Round 1					
Psychological proximity seeking	.043	.072	.041	.596	.552
Emotional quality	.046	.091	.038	.510	.610
RELATEDNESS at Round 2					
Psychological proximity seeking	.125	.083	.105	1.515	.131
Emotional quality	.120	.094	.096	1.282	.201

Table6.7b Coefficients of regression on *Positive emotional engagement* at round two

	b	SE(b)	β	t	p
Baseline score					
Positive emotional engagement at round 1	.364	.055	.371	6.653	.364
RELATEDNESS at Round 1					
Psychological proximity seeking	.007	.075	.007	.097	.923
Emotional quality	.071	.097	.056	.733	.464
RELATEDNESS at Round 2					
Psychological proximity seeking	.176	.088	.142	2.010	045
Emotional quality	.104	.099	.079	1.043	298

Table6.7c Coefficients of regression on *No negative emotional engagement* at round two

	b	SE(b)	β	t	p
Baseline score					
No negative emotional engagement at round 1	.276	.052	.293	5.276	.000
RELATEDNESS at Round 1					
Psychological proximity seeking	.088	.064	.098	1.367	.173
Emotional quality	-.007	.082	-.007	-.085	.933
RELATEDNESS at Round 2					
Psychological proximity seeking	-.031	.075	-.030	-.410	.682
Emotional quality	.247	.085	.231	2.908	**.004**

Table6.7d Coefficients of regression on *Trust* at round two

	b	SE(b)	β	t	p
Baseline score					
Trust at round 1	.160	.051	.178	3.115	.002
RELATEDNESS at Round 1					
Psychological proximity seeking	-.034	.066	-.038	-.520	.603
Emotional quality	.192	.085	.184	2.267	**.024**
RELATEDNESS at Round 2					
Psychological proximity seeking	-.044	.077	-.043	-.579	.563
Emotional quality	.161	.088	.149	1.828	**.069**

Table6.7e Coefficients of regression on **Psychological proximity seeking** at round two

	b	SE(b)	β	t	p
Baseline score					
Psychological proximity seeking at round 1	.197	.057	.198	3.457	.001
RELATEDNESS at Round 1					
Psychological proximity seeking	-.013	.080	-.012	-.164	.870
Emotional quality	-.110	.100	-.085	-1.100	.272
RELATEDNESS at Round 2					
Psychological proximity seeking	.474	.093	.373	5.126	**.000**
Emotional quality	-.022	.105	-.017	-.211	.833

Table6.7f Coefficients of regression on *Help to cope* at round two

	b	SE(b)	β	t	p
Baseline score					
Help to cope at round 1	.443	.054	.435	8.213	.000
RELATEDNESS at Round 1					
Psychological proximity seeking	-.004	.080	-.004	-.052	.959
Emotional quality	.112	.102	.082	1.099	.273
RELATEDNESS at Round 2					
Psychological proximity seeking	.201	.093	.149	2.168	**.031**
Emotional quality	-.004	.106	-.003	-.041	.967

Table6.7g Coefficients of regression on *Empowerment and performance standard* at round two

	b	SE(b)	β	t	p
Baseline score					
Empowerment and performance standard at round 1	.478	.055	.472	8.728	.000
RELATEDNESS at Round 1					
Psychological proximity seeking	-.003	.097	-.002	-.035	.972
Emotional quality	.000	.122	.000	.001	.999
RELATEDNESS at Round 2					
Psychological proximity seeking	.308	.113	.185	2.724	.007
Emotional quality	.116	.128	.065	.908	.365

Table6.8a Coefficients of regression on *Youth-centered relationship* at round three

	b	SE(b)	β	t	p
Baseline score					
Youth-centered relationship at round 1	.396	.082	.321	4.812	.000
RELATEDNESS at Round 1					
Psychological proximity seeking	.057	.092	.050	.621	.535
Emotional quality	-.012	.131	-.009	-.090	.928
RELATEDNESS at Round 2					
Psychological proximity seeking	.104	.119	.078	.878	.381
Emotional quality	.115	.133	.085	.861	.390
RELATEDNESS at Round 3					
Psychological proximity seeking	-.003	.103	-.003	-.034	.973
Emotional quality	.045	.126	.032	.357	.721

Table6.8b Coefficients of regression on *Positive emotional engagement* at round three

	b	SE(b)	β	t	p
Baseline score					
Positive emotional engagement at round 1	.412	.070	.379	5.910	.000
RELATEDNESS at Round 1					
Psychological proximity seeking	.080	.094	.066	.857	.392
Emotional quality	-.006	.133	-.004	-.048	.962
RELATEDNESS at Round 2					
Psychological proximity seeking	.212	.123	.150	1.727	**.086**
Emotional quality	-.142	.137	-.099	-1.038	.301
RELATEDNESS at Round 3					
Psychological proximity seeking	.079	.105	.057	.749	.455
Emotional quality	.076	.128	.051	.588	.557

Table6.8c Coefficients of regression on *No negative emotional engagement* at round three

	b	SE(b)	β	t	p
Baseline score					
No negative emotional engagement at round 1	.143	.062	.145	2.319	.021
RELATEDNESS at Round 1					
Psychological proximity seeking	-.185	.074	-.194	-2.486	**.014**
Emotional quality	.130	.104	.114	1.247	.214
RELATEDNESS at Round 2					
Psychological proximity seeking	.107	.097	.097	1.106	.270
Emotional quality	-.020	.108	-.018	-.188	.851
RELATEDNESS at Round 3					
Psychological proximity seeking	.197	.084	.181	2.349	**.020**
Emotional quality	.291	.103	.248	2.821	**.005**

Table6.8d Coefficients of regression on *Trust* at round three

	b	SE(b)	β	t	p
Baseline score					
Trust at round 1	.235	.061	.245	3.867	.000
RELATEDNESS at Round 1					
Psychological proximity seeking	-.079	.076	-.082	-1.041	.299
Emotional quality	.176	.109	.155	1.616	.108
RELATEDNESS at Round 2					
Psychological proximity seeking	-.115	.099	-.104	-1.164	.246
Emotional quality	.176	.111	.156	1.578	.116
RELATEDNESS at Round 3					
Psychological proximity seeking	.173	.085	.160	2.030	**.044**
Emotional quality	.022	.105	.018	.206	.837

Table6.8e Coefficients of regression on *Psychological proximity seeking* at round three

	b	SE(b)	β	t	p
Baseline score					
Psychological proximity seeking at round 1	.253	.067	.247	3.783	.000
RELATEDNESS at Round 1					
Psychological proximity seeking	.058	.090	.050	.643	.521
Emotional quality	-.095	.126	-.069	-.752	.453
RELATEDNESS at Round 2					
Psychological proximity seeking	.049	.113	.036	.428	.669
Emotional quality	.104	.132	.077	.790	.430
RELATEDNESS at Round 3					
Psychological proximity seeking	.428	.094	.332	4.533	**.000**
Emotional quality	-.029	.122	-.020	-.234	.815

Table6.8f Coefficients of regression on *Help to cope* at round three

	b	SE(b)	β	t	p
Baseline score					
Help to cope at round 1	.355	.079	.299	4.508	.000
RELATEDNESS at Round 1					
Psychological proximity seeking	.135	.116	.097	1.166	.245
Emotional quality	.198	.164	.120	1.209	.228
RELATEDNESS at Round 2					
Psychological proximity seeking	.066	.148	.041	.444	.657
Emotional quality	-.256	.170	-.156	-1.511	.132
RELATEDNESS at Round 3					
Psychological proximity seeking	-.096	.123	-.062	-.779	.437
Emotional quality	.100	.160	.059	.628	.530

Table6.8g Coefficients of regression on *Empowerment and performance standard* at round three

	b	SE(b)	β	t	p
Baseline score					
Empowerment and performance standard at round 1	.529	.080	.444	6.641	.000
RELATEDNESS at Round 1					
Psychological proximity seeking	.023	.135	.014	.168	.866
Emotional quality	.149	.193	.075	.775	.439
RELATEDNESS at Round 2					
Psychological proximity seeking	.030	.175	.016	.170	.865
Emotional quality	-.277	.203	-.138	-1.364	.174
RELATEDNESS at Round 3					
Psychological proximity seeking	.113	.141	.062	.799	.425
Emotional quality	.064	.185	.031	.349	.728

Path analysis

Many correlations between mentoring relationship and relationship with parents of adolescents, and the regression models for predicting mentoring relationship and relationship with parents provided invaluable information on the inter-relationship between the two types of relationships in adolescents. These two relationships correlated with each other in same round of surveys and both the relationships correlated with the other relationship of later rounds. Findings from the regression analyses among the two relationships at different rounds implied a systemic interaction among themselves.

In order to further explore how the relationship with parents and mentoring relationship interacted across the three rounds of study, path analyses were performed. Figure 6.1 displayed the hypothesized model on the interaction among mentoring relationship (for short as MRQ in the figures) and relationship with parents (for short as RP in the figures) at the three rounds. Mentoring relationship at round two was affected by mentoring relationship and relationship with parents at round one. Relationship with parents at round two was affected by relationship with parents and mentoring relationship at round one. Mentoring relationship at round three were affected by mentoring relationship and relationship with parents at round two. Relationship with parents at round three

was affected by relationship with parents and mentoring relationship at round

two. Mentoring relationship was measured by the seven dimensions of MRQ and

relationship with parents was measured by the two dimensions of family

relatedness. Each dimension of mentoring relationship and relationship with

parents was studied separately in the path analyses. Model evaluation criteria for

satisfactory model fit included: χ^2 divided by degree of freedom (CMIN/DF)

smaller than 3, CFI larger than 0.90, and RMSEA less than 0.08 (Shpigelman &

Gill, 2013). The missing data of variables of mentoring relationship and

relationship with parents were replaced by the method of series mean of variables

in SPSS program.

Figure 6.1 Hypothesized model on the interaction among mentoring relationship
and relationship with parents in three rounds.
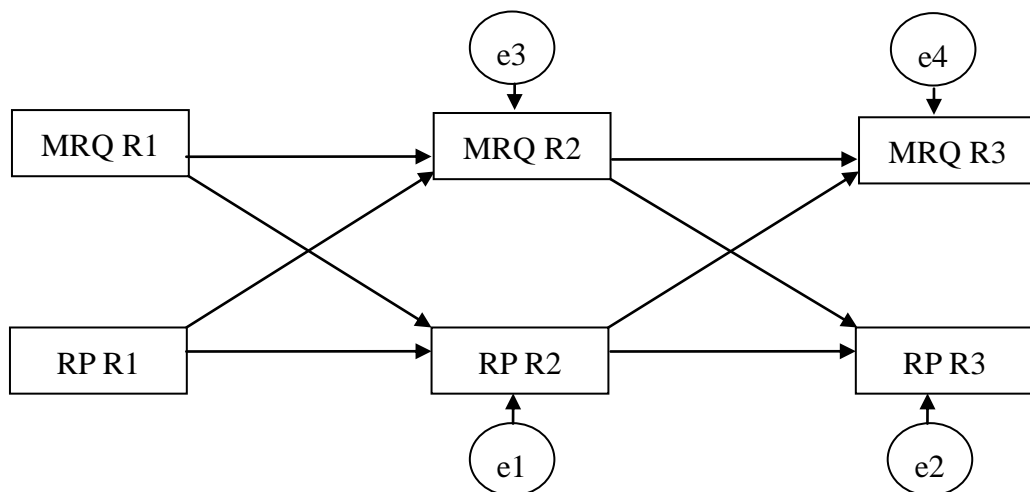
MRQ: Mentoring relationship quality, will be specific dimension in below
figures; RP: Relationship with parents, will be specific dimension in below
figures; R1: Round one; R2: Round two; R3: Round three; e: error.

Path analysis of Psychological proximity seeking (PPS) of family relatedness

Figure 6.2a displayed the interaction model of "Youth-centered relationship"

of MRQ and PPS of relationship with parents, with fit information:

CMIN/DF=2.516, RMSEA=.046, CFI=.992. The model fit is very good. The

regression coefficient of relationship with parents at round one to mentoring

relationship at round two was significant. The other three regression coefficients

were not significant. Besides, mentoring relationship at round one was close to

statistical significance (p=0.08).

Figure 6.2a Model on the interaction among **youth centered relationship** and **PPS** in three rounds.
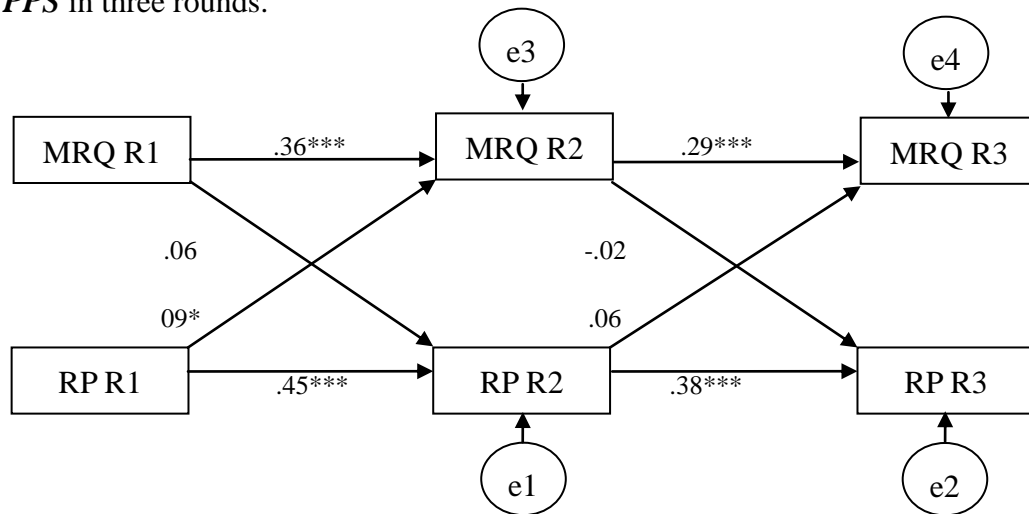
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.2b displayed the interaction model of *positive emotional*

engagement of MRQ and PPS of relationship with parents. CMIN/DF=.514,

RMSEA=.000, CFI=1.00, the model fit is very good. The regression of

relationship with parents in round one to mentoring relationship in round two is

significant and regression of relationship with parents to mentoring regression in

round three was significant.

Figure 6.2b Model on the interaction among ***positive emotional engagement*** and
PPS in three rounds.
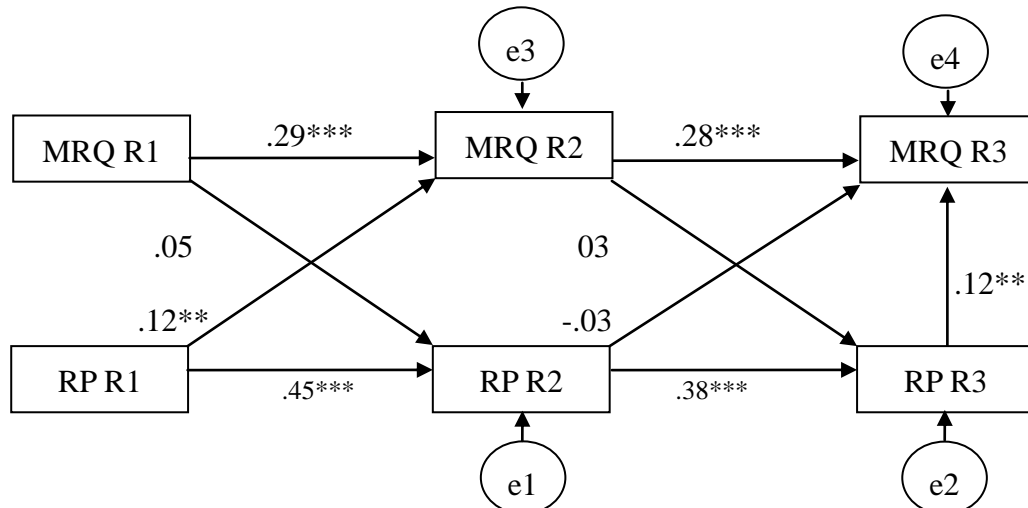
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.2c Model on the interaction among ***No negative emotional engagement***
and ***PPS*** in three rounds.
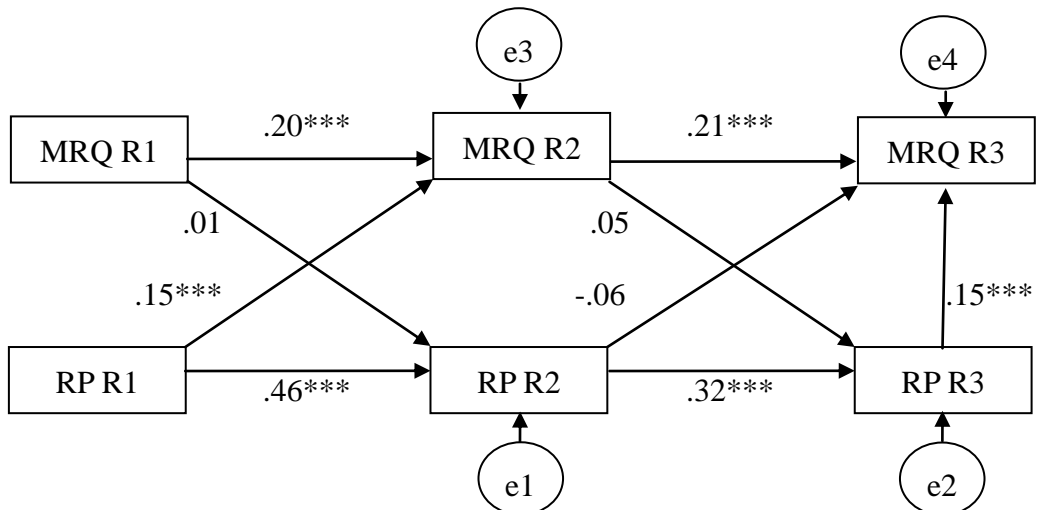
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.2c displayed the interaction model of *no negative emotional*

engagement of MRQ and PPS of relationship with parents. CMIN/DF=.889,

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RMSEA=.000, CFI=1.00, the model fit is very good. The regression of

relationship with parents in round one to mentoring relationship in round two is

significant and regression of relationship with parents to mentoring regression in

round three was significant. Besides, mentoring relationship in round two has

approaching significant (*p*=.08) predict to relationship with parents (p=.087).

Figure 6.2d display the interaction model of *trust* of MRQ and PPS of

relationship with parents. CMIN/DF=1.073, RMSEA=.007, CFI=1.000, the

model fit is very good. The regression of relationship with parents in round one

to mentoring relationship in round two is significant and regression of

relationship with parents to mentoring regression in round three was significant.

Figure 6.2d Model on the interaction among **Trust** and **PPS** in three rounds.
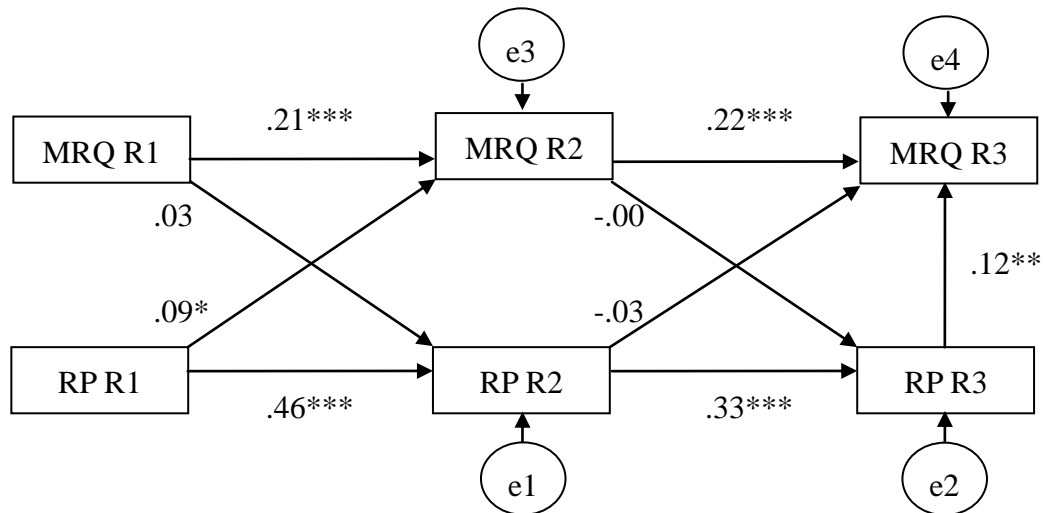
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.2e displayed the interaction model of *psychological proximity*

seeking of MRQ and PPS of relationship with parents. CMIN/DF=3.817,

RMSEA=.063, CFI=.995, the model fit is quite good. The regression of

mentoring relationship in round one to relationship with parents in round two is

significant, and regression of relationship with parents to mentoring regression in

round three was significant. Specially, mentoring in round one can predicted

relationship with parents in round three significantly and relationship with

parents in round one can predicted mentoring relationship in round three

significantly too. Besides, relationship with parents in round one to mentoring

relationship in round two have an approaching significant (p=.083).

Figure 6.2e Model on the interaction among *Psychological proximity seeking* and *PPS* in three rounds.
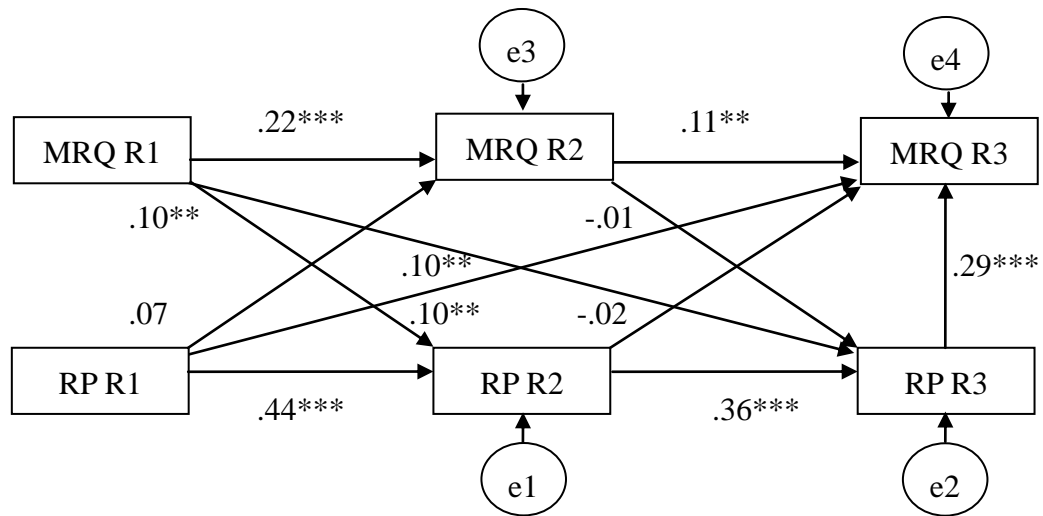
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.2f displayed the interaction model of *help to cope* of MRQ and

PPS of relationship with parents. CMIN/DF=2.202, RMSEA=.041, CFI=.995,

the model fit is very good. The regression of relationship with parents in round

one to in mentoring relationship round two is significant.

Figure 6.2f Model on the interaction among **Help to cope** and **PPS** in three rounds.
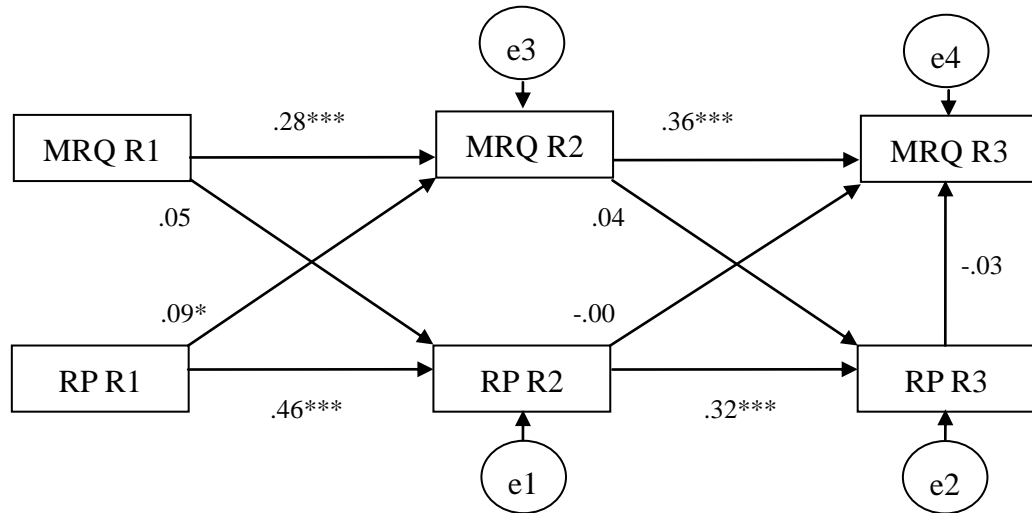
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.2g displayed the interaction model of *empowerment and*

performance standard of MRQ and PPS of relationship with parents.

CMIN/DF=.432, RMSEA=.000, CFI=1.000, the model fit is very good. The

regression of relationship with parents in round one to mentoring relationship in

round two is significant and regression of relationship with parents to mentoring

relationship in round three was significant. Besides, the regression of mentoring

relationship in round one relationship with parents in round two has approaching

significant (p=.061), and regression of relationship with parents to mentoring

regression in round three was approaching significant (p=.069).

Figure 6.2g final Model on the interaction among **Empowerment and performance standard** and **PPS** in three rounds.
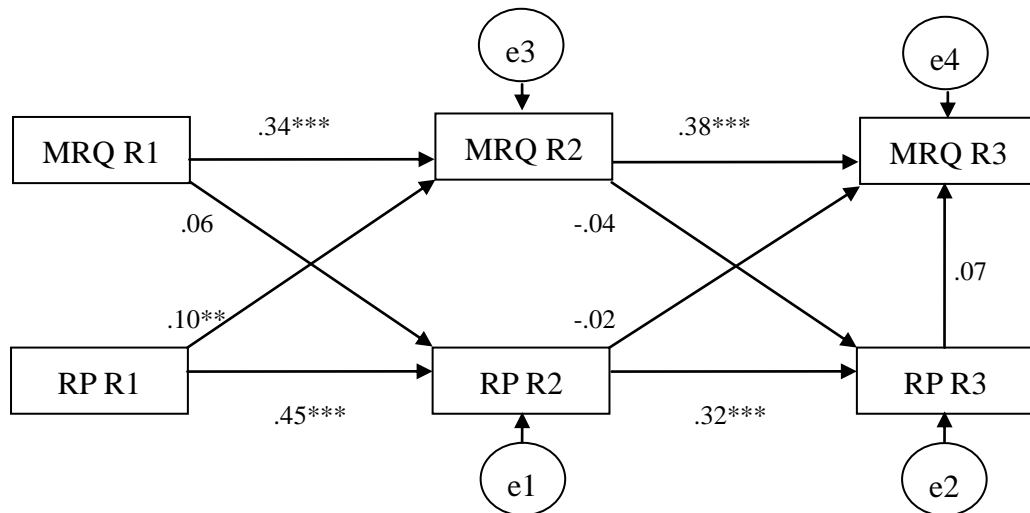
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Path analysis of emotional quality (EQ) of relatedness

Figure 6.3a displayed the interaction model of *youth centered relationship* of MRQ and emotion quality of relationship with parents. CMIN/DF=1.605, RMSEA=.029, CFI=.999, the model fit is very good. The regression of relationship with parents in round one to mentoring relationship in round two, and the regression of mentoring relationship in round one to relationship with parents in round two were significant. The regression of mentoring relationship in round two to relationship with parents in round three was significant.

Figure 6.3b displays the interaction model of *positive emotional engagement* of MRQ and emotion quality of relationship with parents. CMIN/DF=3.797, RMSEA=.063, CFI=.995, the model fit is quite good. The regression of relationship with parents in round one to mentoring relationship in round two,

and the regression of mentoring relationship in round one to relationship with

parents in round two were significant. The regression of mentoring relationship

in round two to relationship with parents in round three was an approaching

significant (p=.057).

Figure 6.3a Model on the interaction among *Youth centered relationship* and *EQ* in three rounds.
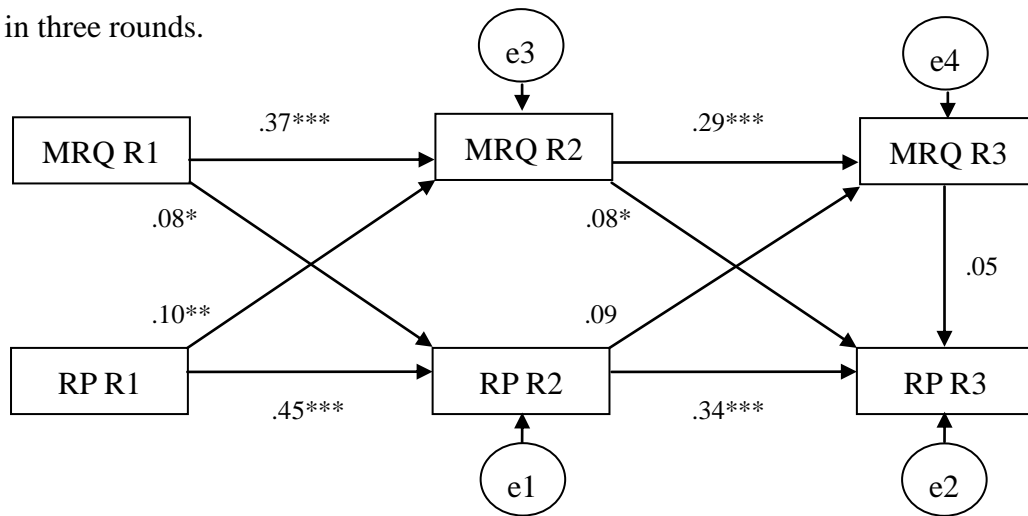
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.3b Model on the interaction among *Positive emotional engagement* and *EQ* in three rounds.
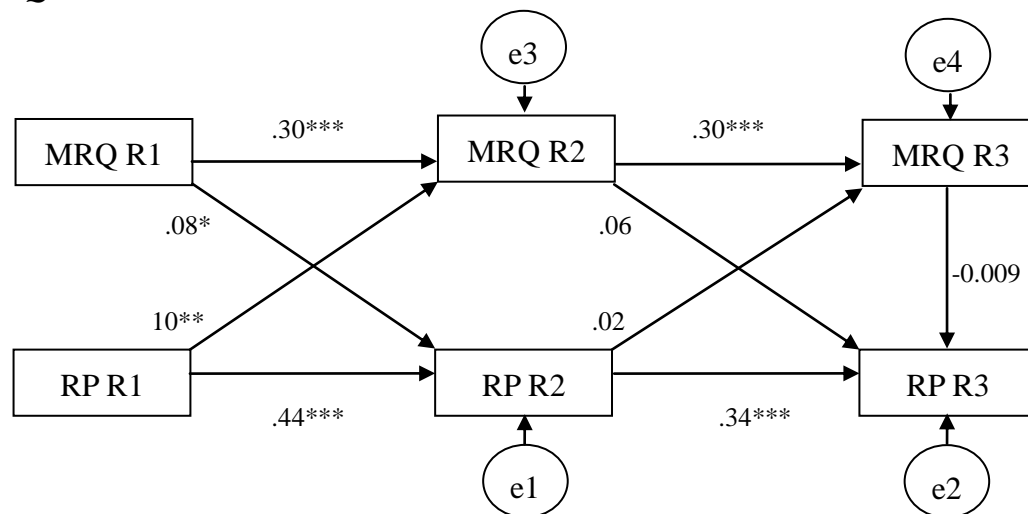
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.3c displayed the interaction model of *no negative emotional*

engagement of MRQ and *emotion quality* of relationship with parents.

CMIN/DF=3.062, RMSEA=.054, CFI=.996, the model fit is quite good. The

regression of relationship with parents in round one to mentoring relationship in

round two was significant. The regression of relationship with parents in round

two to mentoring relationship in round three was significant. Specially,

regression of mentoring relationship to relationship with parents in round three

was significant.

Figure 6.3c Model on the interaction among *No **negative emotional engagement***
and ***EQ*** in three rounds.
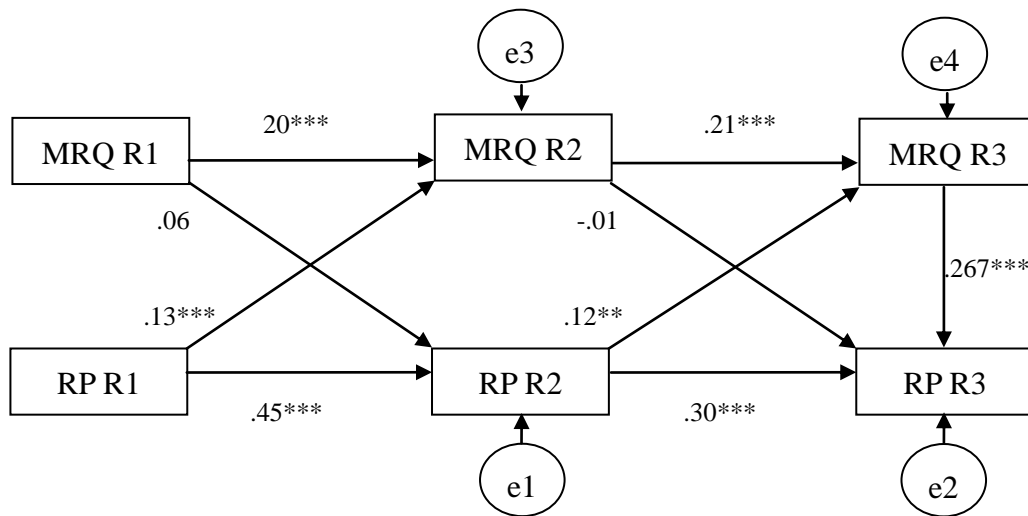
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.3d displayed the interaction model of *trust* of MRQ and *emotion*

quality of relationship with parents. CMIN/DF=3.939, RMSEA=.064, CFI=.995,

the model fit is quite good. The regression of relationship with parents in round

one to mentoring relationship in round two and regression of mentoring

relationship in round one to relationship with parents in round two were

significant. The regression of relationship with parents in round two to mentoring

relationship in round three was significant.

Figure 6.3d Model on the interaction among *Trust* and *EQ* in three rounds.

***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)
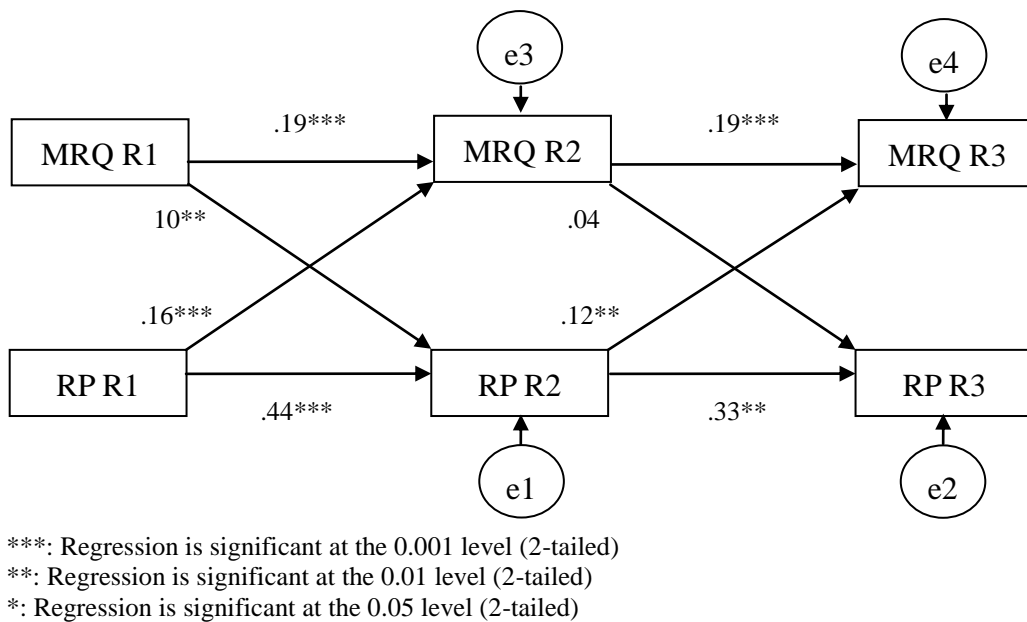
Figure 6.3e displayed the interaction model of psychological proximity

seeking of MRQ and emotion quality of relationship with parents.

CMIN/DF=.000, RMSEA=.000, CFI=1.000, the model fit is very good. The

regression of relationship with parents in round two to mentoring relationship in

round three and regression of mentoring relationship in round two to relationship

with parents in round three were significant. Specially, the regression of

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relationship with mentoring relationship to relationship with parents in round

three was significant.

Figure 6.3e Model on the interaction among ***Psychological proximity seeking***
and ***EQ*** in three rounds.
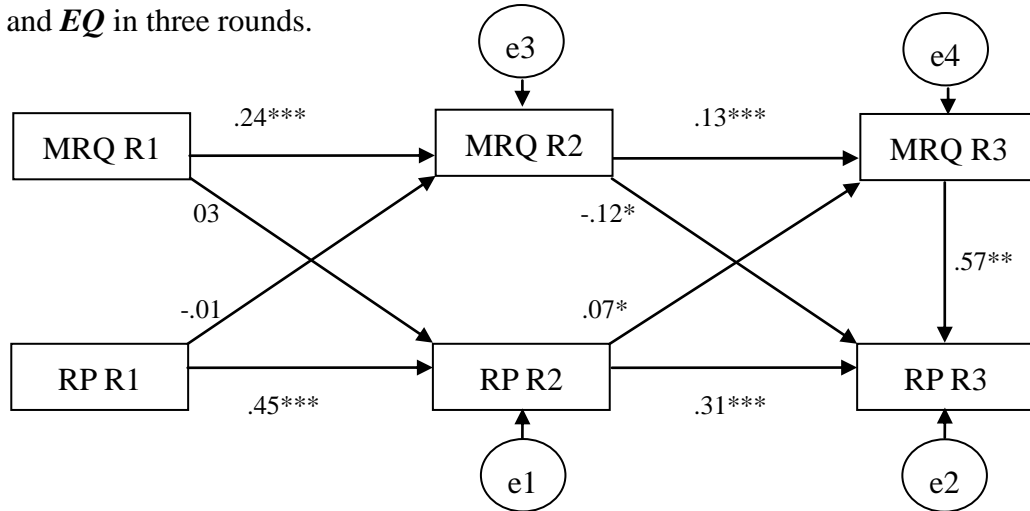
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.3f displayed the interaction model of *help to cope* of MRQ and

emotion quality of relationship with parents. CMIN/DF=.393, RMSEA=.000,

CFI=1.000, the model fit is very good. The regression of relationship with

parents in round one to mentoring relationship in round two and regression of

mentoring relationship in round one to relationship with parents in round two

were significant. The regression of relationship with mentoring relationship in

round two to relationship with parents in round three was significant. Besides,

the regression of relationship with parents to mentoring relationship in round

three was an approaching significant (p=.052).

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Figure 6.3f Model on the interaction among **Help to cope** and **EQ** in three rounds.
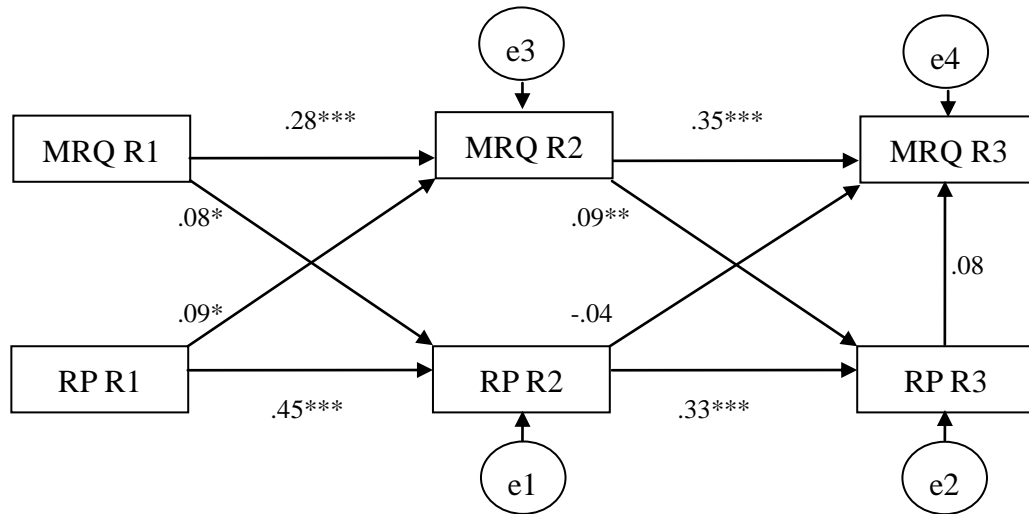
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.3g Model on the interaction among **Empowerment and performance standard** and **EQ** in three rounds.
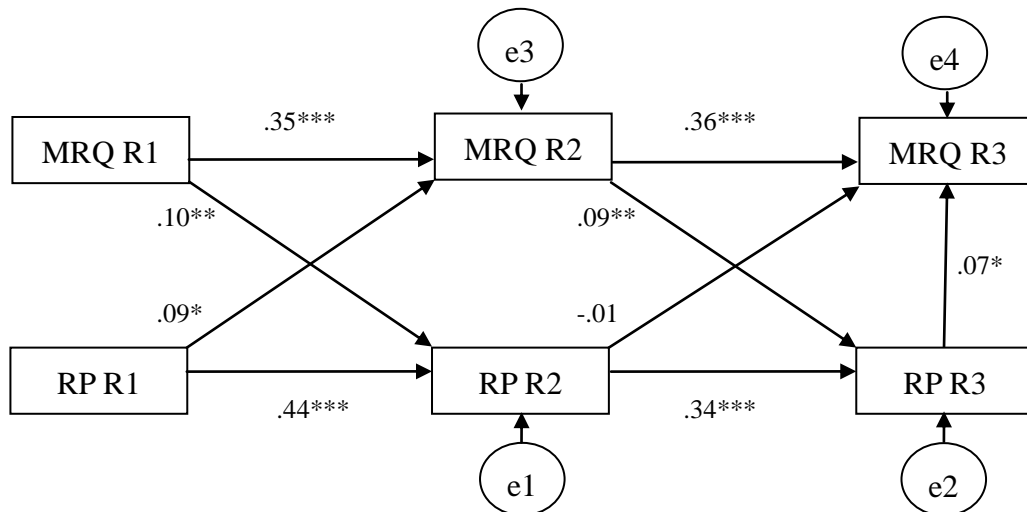
***: Regression is significant at the 0.001 level (2-tailed)
**: Regression is significant at the 0.01 level (2-tailed)
*: Regression is significant at the 0.05 level (2-tailed)

Figure 6.3g displayed the interaction model of *empowerment and*

performance standard of MRQ and *emotion quality* of relationship with parents.

CMIN/DF=.2.846, RMSEA=.051, CFI=.992, the model fit is quite good. The

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regression of relationship with parents in round one to mentoring relationship in round two and regression of mentoring relationship in round one to relationship with parents in round two were significant. The regression of relationship with mentoring relationship in round two to relationship with parents in round three was significant. The regression of relationship with parents to mentoring relationship in round three was significant.

Summary

In the model of "Youth centered relation" and "Relatedness – Psychological proximity seeking", only one path on interaction among relationships is significant which is from "Relatedness – Psychological proximity seeking" at round one to "Youth centered relation" at round two. In the model of "Help to cope", "Empowerment and performance standard" with "Relatedness – Psychological proximity seeking", have the same pattern with "Youth centered relation".

In the model of "Positive emotional engagement" and "Relatedness – Psychological proximity seeking", one significant path was found from "Relatedness – Psychological proximity seeking" to "positive emotional engagement" at round two. And another significant path was from "Relatedness – Psychological proximity seeking" to "positive emotional engagement" at round

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three. "No negative emotional engagement" and "trust" have the same model pattern with "positive emotional engagement"

In the model of "Psychological proximity seeking" of MRQ and "Relatedness – Psychological proximity seeking", "Psychological proximity seeking" of MRQ at round one affect "Relatedness – Psychological proximity seeking" at round two, and one significant path from "Psychological proximity seeking" of MRQ to Relatedness – Psychological proximity seeking" at round three. Specially, two other significant paths indicated that, "Psychological proximity seeking" of MRQ affected "Relatedness – Psychological proximity seeking" at round three, "Relatedness – Psychological proximity seeking" at round one affected "Psychological proximity seeking" of MRQ at round three.

In the model of "Psychological proximity seeking" of MRQ and "Relatedness- Emotional quality", two significant paths linked between round two and round three. One is from "Psychological proximity seeking" of MRQ at round two to "Relatedness- Emotional quality" at round three, the other is from "Relatedness- Emotional quality" at round two to "Psychological proximity seeking" of MRQ at round three. And the last significant path was from "Psychological proximity seeking" of MRQ to "Relatedness- Emotional quality" at round three.

"No negative emotional engagement" of MRQ affected "Relatedness-Emotional quality" according to two significant paths both from relationship with parents to mentoring relationship at next round. One is relationship with parents at round one to mentoring relationship at round two; the other is relationship with parents at round two to mentoring relationship at round three. And mentoring relationship affected relationship with parents at round three.

In the model of "Positive emotional engagement" of MRQ and "Relatedness- Emotional quality", two significant paths both linked from round one to round two. "positive emotional engagement" of MRQ at round affected "Relatedness- Emotional quality" in next round and "Relatedness- Emotional quality" affected "positive emotional engagement" of MRQ at next round too. "Trust" dimension has similar path pattern with "positive emotional engagement", plus one path from "Relatedness- Emotional quality" at round two to "positive emotional engagement" of MRQ at round three.

In the model of "Youth centered relationship" of MRQ and "Relatedness-Emotional quality", two significant paths both linked from round one to round two. "Youth centered relationship" at round affected "Relatedness- Emotional quality" in next round and "Relatedness- Emotional quality" affected "Youth centered relationship" of MRQ at next round too. The third significant path was

from "Youth centered relationship" at round two to "Relatedness- Emotional quality" at round three. "Help to cope" dimension has similar path pattern with "Youth centered relationship". "Empowerment and performance standard" has same path pattern with "Youth centered relationship", but plus one path which is from "Relatedness- Emotional quality" to "Empowerment and performance standard" at round three.

Throughout the mentorship program, mentoring relationship as assessed by the MRQ dimensions was influenced by the prior and current relationship with parents, as shown in the path model of "Relatedness – Psychological proximity seeking" at round one predicting MRQ at round two, and the path model of the two relationships at round three. However, mentoring relationship's influences on current and later relationship with parents were not as strong, though statistically significant, as the effect of MRQ at round two and relationship with parents at round three were not significant in the path models. Nearly all the dimensions of MRQ showed reciprocal interaction with "Relatedness- Emotional quality" in the first two rounds, as emotional quality in relationship is a feeling about the pairs when the two parties in the pairs are staying together which is more direct and sensitive than the other dimensions of relationship.

The reciprocal effects on emotional quality and dimensions of mentoring

relationship were not very obvious. The significant pathways are from emotional

quality in relationship with parents at round one to all the MRQ dimensions

except psychological proximity seeking in the second round. Another group of

significant pathways is from mentoring relationship dimensions to relationship

with parents in the third round. Emotional quality with parents is relatively

steadier than mentoring relationship in the program period in some mentees, but

mentees with higher emotional quality with parents are more readily to develop a

new interpersonal relationship in the given program circumstance, hence in the

last round, relationship with parents can affect their trust and emotional

engagement with mentors.

The reciprocal effects on psychological proximity seeking of relationship

with parents and dimensions of mentoring relationship is clearer than emotional

quality, especially between the first round and the second round. When the

relationship is youth centered, mentees can feel the concern from mentors and

welcome the developmental model of relationship with adult, thus will enhance

their willingness to get closer with their parents, meanwhile, if mentees have the

willingness to get close with adults, they can be more sensitive to the perceived

concern from mentors. When the mentees can feel the emotional engagement of

mentor and establish a trust between mentees and mentors, this kind of

relationship can become a relationship role model which they would like to

develop with their parents. Also, if mentees have this willingness, they will tend

to build mentoring relationship more positively. If mentees can get support and

help from mentors, they will improve their ability to communicate more

effectively with adults thus producing better communication with their parents

more frequently. Forming a closer relationship with their parents will make the

mentees more readily to accept the help from another important adult, the mentor.

Lastly, mentees will tend to be more confident in them and learn from adults on

how to develop interpersonal relationships with others. If mentees feel supported

in developing their potential and are expected to achieve some performance

standards, along with mentors' are sensitive to empowerment and becoming role

modeling , mentees would like to develop closer relationships with mentors.

Thus the reciprocal effect among relationship with parents and the important

MRQ dimensions of developmental mentoring relationship have been supported.

Besides, there is another interesting finding on these models on the

interaction between the two relationships. In the predictions between dimensions

of MRQ and "Psychologicaly proximity seeking" of relationship with parents in

the last round, all the significant effects are from relationship with parents to

mentoring relationship, which are "Positive emotional engagement", "No

negative emotional engagement" and "Trust". In the predictions between

dimensions of MRQ and "Emotion quality" of relationship with parents in the

last round, nearly all the significant effects are from mentoring relationship to the

dimensions of "No negative emotional engagement" and "Psychological

proximity seeking" of relationship with parents. The only exception is that

"Emotion quality" can predict "Empowerment and performance standard" with a

small regression coefficient. This could be understood from the strength of effect.

As in the last round, the perception of mentor's emotional engagement and the

motivation to get close with mentor may improve the perception of their

relationship with parents. Meanwhile, if participants have motivation to get

closer with their parents, they may have better perception on the emotional

engagement of mentor and tend to trust the mentor.

CHAPTER 7 – DISCUSSIONS AND CONCLUSIONS

This section discusses the findings according to the three main research questions: the effects of mentorship program, the effects of mentoring relationship toward the development outcomes of adolescents, and the exploration of the interaction between parent relationship and mentoring relationship of adolescents. Furthermore, the limitations of the study, the implications for practice and direction for future research will be covered in detail.

Research on mentoring has been proved to be useful on adolescent development in previous chapters. Plenty of researches have tested the effectiveness of mentorship program, especially in two important meta-analysis papers by DuBois and his colleagues (David L. DuBois et al., 2002; D.L. DuBois et al., 2011). Mentoring relationship is one of the most important key components of successful mentorship program and can bring benefit to adolescents in their development. There are now important theoretical frameworks and empirical research on this issue. The effect of former relationship context of adolescents to the development of mentoring relationship, and the social relational outcomes of mentoring relationship have been discussed given the importance of mentoring relationship in a mentorship program and the

development of adolescents. But very few research studies focused on the

effectiveness, not to mention the value of mentorship programs held in Chinese

society, especially with a large scale mentorship program. Findings from this

study provide a direct and strong evidence for the effectiveness of mentorship

programs in adolescents of a Chinese society and help to fill this research gap in

the mentoring literature.

Mentorship program has been studied plentifully, and the

effectiveness of mentorship program varies according to the different

kinds of mentorship programs. The mentorship program of the Child

Development Fund in Hong Kong was the one with unique components

addressing the development of children from disadvantaged backgrounds.

It is also a mentorship program developed and implemented in a society

of Chinese culture. Thus, the effectiveness of mentorship program, the

effects of mentoring relationship and the reciprocal interaction between

mentoring relationship and relationship with parents should be studied.

The present study has found that a mentorship program with specific

goals echoes specific social problem (poverty alleviation) and

accompanies unique components (target saving and personal relationship)

working together with the mentorship program to address the social

problem can produce successful outcomes in the development of youth

participants. Firstly, such a mentorship program can bring out family

support to the participation of mentees, which can help the sustainability

of mentoring relationship and lead to positive developmental outcomes

in adolescents from disadvantaged background. Secondly, the goal of the

mentorship program makes family more receptive to the mentors and

supports their children to interact with mentors. Discussions between

mentors and mentees on personal development planning create a

favorable context for the building of good mentoring relationship, and

this kind of developmental relationship can produce benefits to

adolescents in multiple aspects, such as improved self-esteem and

resilience. Finally, the mentorship program can introduce reciprocal

influences between mentoring relationship and relationship with their

parents. Parents and mentors all focus on the important developmental

topics about the participants, therefore, the interaction between mentees,

mentors and parents would have the same basis and this would enable

the two important relationships to positively reinforce each other. These

positive reciprocal influences will obviously further contribute to the

benefits of the development of participating youth in the mentorship

program.

Therefore, the effectiveness of mentorship program, effects of

mentoring relationship and the reciprocal interaction between mentoring

relationship and relationship with parents are all positively influenced by

the specific design of the mentorship programs in Hong Kong.

Positive effects of mentorship program in a Chinese society

Mentorship program can produce children and youth benefits on many

aspects of children development. The most recent review by DuBois and his

colleagues (D.L. DuBois et al., 2011) classified benefits of mentorship programs

to adolescents into six aspects: reducing risk behaviors, enhancing social

competence, improving academic achievements and career development,

improving psychological health and reducing negative behaviors.

In the present study, findings on the effectiveness of mentorship program to

adolescents have shown that, mentorship programs have effects in five of these

six aspects. The first aspect is psychological health, including the effect on

self-esteem and general mental health of the participated adolescents.

Adolescents who participate in a mentorship program and build relationship with

mentors will show improved sense of worth about themselves. In a participant's

growing environment, there is an adult who are concern about him or her as a

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whole person instead of focusing on any one aspect of the participant, especially

not the negative aspect from a positive youth development approach. These

adolescents living in poverty will have many failures and limitations in their lives

but a developmental mentorship program allows the possibility for growing and

positive development in them. Better general mental health in adolescents can be

expected with the good relationship and interaction with mentors and

participation in program activities. Opportunities are provided for these

adolescents to experience good and enjoyable moments as well as receiving

support and care from mentors and program staff. The second aspect is social

competence. Participants' relationship with their family, their friends and other

partners outside their family in their social network are improved. The social and

community environment of adolescents living in poverty are relatively

impoverished and their development on social competence would be insufficient.

Their perceptions about the social environment, adults and other people would be

negative and they may either avoid or resist, to even against these potential

resources in their growing and development. Introducing a mentorship program

to these adolescents can provide them a resourceful and safe condition for

developing appropriate understanding about these social aspects of the society

and also for building appropriate social skills through real-life interaction with

mentors and other people in the program. The third aspect is academic

achievements which include the positive influences on their grade of courses,

their attendance of school and their expectation to go into university. Participants'

development, not just academic grades and achievements, are being discussed

and cared by the mentors and also through the training in the program.

Participants' understanding about academic performance and achievements are

placed in a broader context which is youth-centered and sensitive to their stages

of development. They will start to see going to school and working hard at the

school is not for their parents, teachers or the society, but to themselves and in

relationship with others. Their natural motivation to learn could be reignited

through a growth mentoring program. The fourth aspect is career development,

which is the promotion of adolescents to develop the goal and pathways to

achieve their goal. Working together with the benefits on academic performance,

participants are allowed to explore their development and career goals with the

guidance of mentors and support from the program. The mentors may even act as

the mediators for the different expectations on the adolescents' career

development and support them to plan for their goals purposefully and sensitive

to their developmental context. The last aspect is reduced risk behaviors,

including the effect of positively use their leisure time and improved positive

behavior; such as participated in positive activities and voluntary social services which can improve their social connections with the society. Based on the developmental approach of adolescence development, mentorship program promoted positive development in adolescents as reflected in the first four aspects of positive outcomes in this study. The last aspect of outcomes, being a preventive aspect, was also identified in a Chinese mentorship program, suggesting the importance and value of promoting mentorship programs in Chinese societies.

The findings were consistent with the findings from DuBois and colleagues' meta-analysis (D.L. DuBois et al., 2011), and the influential theoretical framework on youth mentoring by Rhodes and colleagues (J. E. Rhodes, Spencer, Keller, Liang, & Noam, 2006). Furthermore, the pathways of the framework were confirmed by findings of this research. Mentorship programs affect youth through three pathways, that is social-emotional, cognitive and identity. Participating adolescents had improved their communication with adults and peers on important issues and improved social-emotional development. The improvements of academic aspects were evidences for the effect on cognitive development of adolescents. Setting life goal and planning future could be the indictors of development of identity of adolescents.

There are important practical and policy implications of these findings in the current Hong Kong contexts, so as to many other Chinese societies undergoing similar rapid social and global changes. Adolescents and families, especially those from disadvantaged background, can benefit from having caring adults to build quality mentoring relationship with them, to provide helps and support to resolve personal and interpersonal issues, and sharing developmental and community assets for better adolescent development.

Thus, the finding of effects of mentorship program can be used to answer the first research question. Mentorship program in Chinese society did display meaningful positive outcomes in the development of adolescents, and these empirical findings confirmed the theoretical framework of youth mentoring.

Role of quality mentoring relationship on the development outcomes of adolescents

The second research question studies the effects of quality mentoring relationship towards the development outcomes in participants. As previously identified, mentoring relationship can influence participating adolescents in many aspects (Figure 7.1). The affected aspects included that participants would improve in their competence and become more positive about. Their sense of self-worth would be increased, so as their psychological health improved. They

would have a better relationship with their parents. Our findings are in line with

the study by Thomson and Zand (Thomson & Zand, 2010).

Figure 7.1 Significant effects of dimensions of MRQ to development outcomes

| Youth centered relationship |
| Positive emotional engagement |
| No negative emotional engagement |
| Trust |
| Psychological proximity seeking |
| Help to cope |
| Empowerment and performance standard |

| Resilience |
| General Health Questionnaire |
| Relationship with parents |
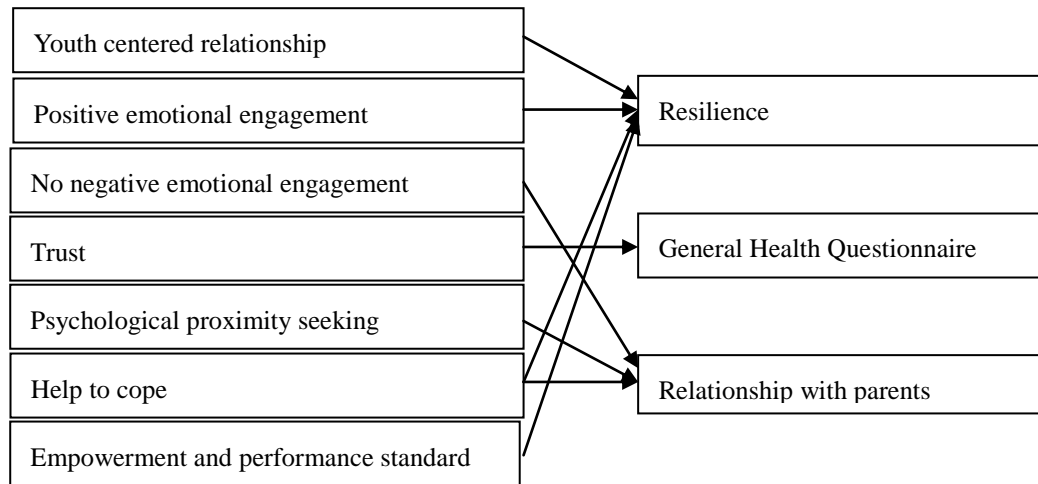
Quality mentoring relationship, as an important factor to effective

mentorship program, has been nurtured within the program so that the positive

effects on development outcomes could be brought out and secured. As reviewed

by DuBois et al. (2002), there were program level factors which directly

promoted and moderated the mentoring relationship quality, including supportive

supervision and monitoring and relationship duration and regularity. It is

important for mentorship program to implement with clear requirements on these

two factors of quality mentoring relationship so that the effectiveness of

mentorship program could be expected.

The different aspects of mentoring relationship appeared to produce

different effects on the development of participating adolescents, as the findings

of this study suggested. All aspects of mentoring relationship are important to the

development of the competence on overcoming difficulties in participating

adolescents. Having good relationship with mentors promoted adolescents' belief

in self, as a competent individual. As compared with a one-way guidance given

by mentors, if participating adolescents feel that their preferences and interests

were mentors' concerns in their mentoring relationship, there would be an

increase in their sense of self-worth and values of themselves. Consistent with

Rhodes' conceptualization (J. E. Rhodes, 2005), adolescents would benefit from

good relationship with mentors as such relationship experience could become a

reference for adolescents to repair and develop current relationships with others,

including parents, as well as seeking similar positive relationship with other

people. Having trust in other people and wanting to get closer to adults who care

for their development are important interpersonal relationship qualities in

adolescents for building good relationship and accumulating developmental

assets. Providing mentoring with these qualities helps to transform the

micro-system of the adolescents' development context

On the whole, the difference dimensions of MRQ promoted the personal, relational and developmental aspects of adolescent development. This would echo Rhodes' model of youth mentoring. Mentoring relationship with mutuality, trust and empathy can positively influence youth development in three pathways. Findings of this research confirmed this theoretical model. Participants would feel more competent on overcoming difficulties and have better psychological health (the personal aspect), and perform better in academic, planning their life goals and pathways to achieve this goals (the developmental aspect). In the youth mentoring model of Rhodes, parental relationship has been specially emphasized for it can bring other positive outcomes in participating adolescents. Once again, our findings confirmed that, mentoring relationship can positively affect the relationship of participants with their parents (the interpersonal aspect). Findings from the following section would also illustrate this last point.

In addition, mentoring relationship is an official relationship in a mentorship program between a highly motivated adult volunteer and an adolescent. This kind of relationship can develop very quickly when the mentoring relationship of the dyad possesses some favorable factors, such as youth centeredness and positive emotion involvement. Thus, the quality of mentoring relationship would reach a good level and remain relatively steady. Having this positive and supportive

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relationship is crucial for the development of adolescents. Once the mentorship

program starts and the match has begun sharp good relationship, mentees can get

benefits from such important relationship gradually throughout the mentorship

program.

The pattern of the effects of mentoring relationship has special meaning

towards families in poverty in the Chinese context. Parents have high expectation

on their children but their resources are very limited. This may result in higher

levels of tension between parents and adolescents not otherwise experienced in

middle class families. The relationship between parents and adolescents may be

improved when participants can feel the emotional engagement with mentors,

and receive help on how to deal with their daily difficulties and confusions.

Meanwhile, the resilience of participants will be hightened if participants can feel

being respected by mentor and perceived the emotional engagement with adults

outside their families.

Reciprocal interaction between mentoring relationship and relationship with

parents

Research question three studied the patterns of interaction between

mentoring relationships and relationships with parents during the mentorship

program period, whether the former relationship with parents affect mentoring

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relationship and whether the mentoring relationship affect relationship with

parents.

In the theoretical model of Rhodes (2005), mentoring relationship can

improve youth's relationship with parents, and former relational history of

participants can affect mentoring relationship. Findings of this research

confirmed these two theoretical prepositions.

As confirmed in this study, former relationship with parents can predict

mentoring relationships. Adolescents who are positive to get closer with their

parents would have better mentoring relationship in the program (Figure 7.2).

These findings are consistent with former researches on the relational outcomes

of relationship with parent (Deković & Meeus, 1997; Field et al., 2002; Lynch &

Cicchetti, 1997; Matza et al., 2001). Relationship with parents affects youth

social skills and competence , thus can influence the relationship with other

people (Engels et al., 2001). They have tested the relational outcomes of

relationship with parents, but these researches mainly focus on relationship with

peers.

The regression findings showed that, if mentees are more likely to get closer

with their parents, they will be easier to perceive and build positive relationships

with mentors. It is easier for them to think the mentors are caring and concern

about their development, can be trusted and receive the help and support from

mentors. If adolescents are expecting closer relationship with parents, i.e., they

want to be closer with their parents, adolescents may tend to be more involved in

the mentoring relationship, i.e., Youth Engagement (Nakkula & Harris, 2005). As

a result, the mentoring relationship tends to be more positive.

Second, mentoring relationship can affect relationship with parents.

Findings of regression analysis on these two relationships displayed that

relationship with parents can be predicted by mentoring relationship MRQ of

adolescents (Figure 7.3). These findings also confirmed the theoretical

framework of Rhodes (2005) on youth mentoring. Quality mentoring relationship

in a formal relational context of mentorship program can affect relationship with

parents of participating adolescents. Mentees hope to get closer with their

mentors and it may be due to the similar reason for the hoping to get closer

towards parents in the relationships. When adolescents expect psychological

proximity, they will tend to pay their attention to their immediate relationship

context. In the context of mentorship program, they can improve their

psychological proximity need from building good mentoring relationship, and

hence improve on their relationship with parents. four aspects of mentoring

relationship can predict the feeling about accompany with parents of participants,

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as shown in Figure 7.3, which may be due to adolescents having better mentoring

relationship quality and this can improve their perception and skills in

interpersonal relationship, thus improve their emotional quality with their

parents.

Third, this research found a reciprocal influence between relationship with

parents and mentoring relationship interaction along the time frame of the

mentorship program, which means that relationship with parents at round one

survey showed an effect on mentoring relationship at round two survey;

mentoring relationship at round two survey then in turn influenced relationship

with parents at round three. Similarly, mentoring relationship at round one survey

affected relationship with parents at round two surveys, and in turn affected

mentoring relationship at round three. The two relationships in the context of

mentorship program showed reciprocal influence in a dynamic and systematic

way.

This kind of interaction have been discussed by the bio-ecological

perspective of Bronfenbrenner (1999). The interaction of immediate relationship

is a key component of the microsystem of human development. As the system

framework approach by Keller (2005) suggested, parents, mentors, mentees, and

social workers are in a system. Relationships among these four factors in a

mentoring system can interact reciprocally in direct and indirect ways (Figures

7.2 and 7.3). Providing mentors to adolescents and building quality mentoring

relationship through implementing formal mentorship programs is a promising

force to bring up positive changes in the developmental contexts of adolescents.

Apart from the direct positive influences on the development outcomes in

adolescents, mentorship program can alter relational context and microsystem

interaction experienced by participating adolescents and the positive effect is

extended from an individual level to a system level.

These interactions between mentoring relationship and relationship with

parents may be especially useful to the families from disadvantaged background

in a Chinese context. Parents have high expectation on the achievements of their

children, but the pressure for making a living and absent of resource and

knowledge would produce difficulties on communication with their children.

Mentors can promote relationship with parents by provide help and support,

emotional engagement and trust, thus making the participants and their parents to

get closer and improve their social skills. As a result, it can improve the

parent-child relationship. On the other hand, trust and building relationship with

a stranger is not easy in a Chinese context; even this stranger is coming from a

mentorship program. Participants with better emotional quality with their

respective parents may be easier to build new relationships with other adults, and

they may have higher incentive in building new relationship with mentors if they

have the motivation to be psychologically close with parents.

Figure 7.2 Effects of Relationship with parents to MRQ
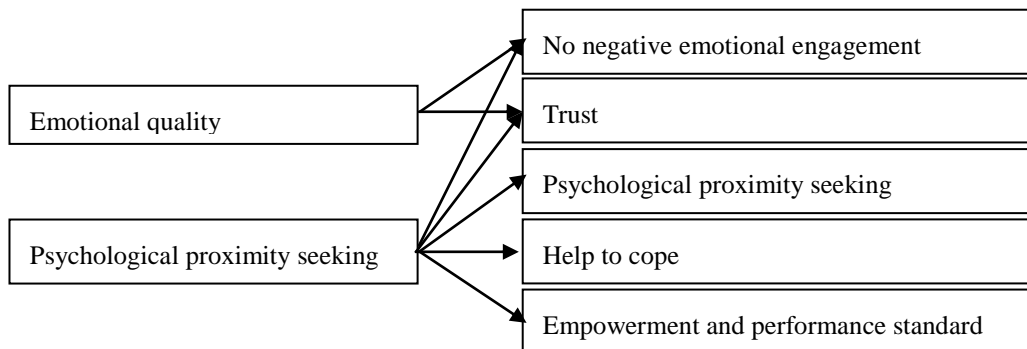
Figure 7.3 Effects of MRQ to Relationship with parents
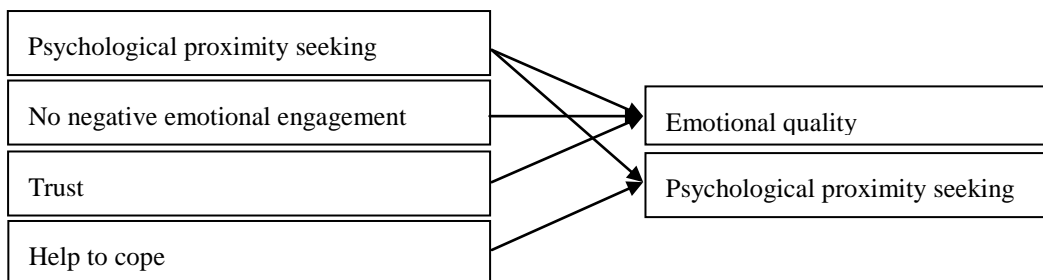
Limitations of the study

There are four limitations in this study.

The first limitation is that, there is no qualitative data and findings of

response to the three research questions. Qualitative data can provide additional

understanding towards the mechanism of mentorship program, and provided

triangulation support for the quantitative findings. The present study did not

involve this research strategy due to the shortage of time.

The second limitation is that, the present study has not included program

level variables and mentor characteristics, such as the characteristics of

mentorship program in seven different operating non-government organizations,

characteristics of mentors and so on. These are important aspects which may

influence the outcomes of mentorship program and mentoring relationship, and

the interaction between mentoring relationship and relationship with parents.

The third limitation is that, development outcomes were only tested before

the mentorship program, in the process of program operation and at the end of

the program. A follow-up investigation on the long term impact of mentorship

program and the effects of mentoring relationship to the development outcomes

may be needed

The fourth limitation is the single resource of data. In the analysis of this

study, all data utilized in the study come from self-reports of adolescents. The

rating of relationship with parents and mentoring relationship by adolescents may

not be the same as the rating of relationship with parents by parents and

mentoring relationship by mentor.

There is one more limitation of the present study. Missing data is a common

occurrence and can have a significant effect on the conclusions drawn from the

data. This bias will mislead readers that, the analysis result can be inferred to all

the population, but in fact, there may exist huge difference between respondents

and non-respondents. Self-selection is one kind of missing data, and all the items

of group of participants have missed. Self-selection bias is the problem that very

often results another problem when survey respondents are allowed to decide

entirely for themselves whether or not they want to participate in a survey. In

statistics, self-selection bias arises in any situation in which individuals select

themselves into a group, causing a biased sample with nonprobability sampling.

It is commonly used to describe situations where the characteristics of the people

which cause them to select themselves in the group create abnormal or

undesirable conditions in the group.

In the present study, three rounds of data were collected from all the

participants, but not all the participants answered the questionnaires. Participants

who had lower tendency to respond to the questionnaires showed lower

participation in the program activities. The present study can only produce

findings covering participants with normal and higher tendency to respond to the

questionnaire and the findings, at least, are applicable to these participants.

Different statistical techniques are developed to minimize the missing data

problem. By knowing how the data is missing and the pattern of missing, an appropriate choice of statistical technique could be made to deal with the problem (Howell, 2007). In the present study, the fact that participants did not respond to the questionnaires is not only a statistical issue but also an issue of the participation process in the program.

Data-values in a data set are missing completely at random (MCAR) if the events that lead to any particular data-item being missing are independent both of observable variables and of unobservable parameters of interest, and occur entirely at random. The analyses performed on the data are unbiased, and case deletion can be utilized to deal with missing value problem. Otherwise, imputation is one of the useful ways to resolve missing data problem. Single imputation and multiple imputations are two frequently used imputations to deal with missing value.

In the present study, the miss value of non-response participants cannot be dealt with imputation since it is hard to assume that participation of non-responding participants are equal to responding participants. Participants who responded had satisfied attendance in activities held by operating organizations. On the contrary, non-responding participants had poor attendance on these activities. In fact the reason why the study did not obtain their responses

is mainly because of their non-attendance in activities, which is one of the main opportunities for researchers and operators to collect data. In this case, imputation cannot be used to improve the generalizability of the findings from the existed data.

Furthermore, these non-attending participants in the mentorship program may not be suitable for the evaluation and analyses of this program as they cannot obtain the benefits from this program through participation. This may imply a more detailed and in-depth study on the characteristic of these participants and develop and provide other services for them instead of referring them into mentorship programs.

The questionnaire survey procedure has limitation too. The address of the participating families may not be valid because poor families move more frequently or they moved to public housing. They need to be contacted by phone but some of them are busy and could not answer the phone at work or come back home late in the evening. The activities organized by the operating NGOs may not match well with the survey schedule, and participants who did not respond also did not attending these activities. These factors have influenced the response rate and the resources input in to data collection. The findings of this study also cannot be applied to other groups of participants who did not come from

disadvantaged background.

Implications for practice

There are three implications for practice based on the finding of this research, which are related to mentorship program, mentoring relationship and relationship with parents.

Mentorship program

The effectiveness of mentorship program has been studied for a long time and the multiple positive outcomes of mentorship program have been verified adequately. But almost all the conducted studies focus on mentorship programs in western societies. Findings of this study verified that, mentorship program has impact on the developmental outcomes of adolescents from disadvantaged background in Chinese society. Mentorship program have been developed for more than one hundred years, and more than 5000 mentorship programs were carried out in the United States, serving more than three million youths (D.L. DuBois et al., 2011). Governments, private sectors and non-government organizations have cooperated to provide mentoring service to disadvantaged youth. Millions of disadvantaged children and youth need such kind of service because there are tremendous social changes in the Chinese societies, especially in the Chinese mainland. So mentorship program should be promoted both in

Hong Kong, the mainland and other Chinese societies, given the effectiveness

have been confirmed in this and many other research and evaluation studies,

more recently in Singapore, as noted before.

Mentoring relationship

Mentorship programs can have effects on multiple aspects of the

development of adolescents and mentoring relationship is one important factor

for the success of mentorship program. Good mentoring relationship can promote

positive developmental outcomes of mentees (J. E. Rhodes, 2005). However, the

mentoring relationship in this research in the three rounds of survey is relatively

steady, yet the scores of the MRQ dimensions "Youth centered relationship" and

"Help to cope" were lower than the other dimensions. It might suggest that

adolescents would relatively have more difficulties in perceiving a mentoring

relationship with the mentors putting them as the center of the relationship and

also providing developmentally sensitive help and support, as compared to the

other mentoring relationship dimensions. Person-centered or client-centered

approach in counseling from the humanistic school of thoughts could be used as

a basis for training mentors to achieve youth-centered mentoring relationship.

More mentoring activities with relational goals should be encouraged in order to

improve adolescents' perception about developmentally sensitive help and

support provided by mentors.

It is concluded that this has to do with programming level qualities.

Operating organization and program managers should pay more attention to the

development of mentoring relationship, provide more training to mentors on how

to develop youth centered relationship with mentees and offer more opportunities

to both mentors and mentees to develop their relationship, such as collaborative

activities, collective leisure activities and so on.

Mentoring relationship and relationship with parents

The interaction between mentoring relationship and relationship with

parents indicates that, mentorship program should emphasize the involvement of

family, for family relationship in adolescents can affect not only other

developmental outcomes of adolescents, but also the development of mentoring

relationship, which is key component of mentorship program.

Attaching importance to relationship with parents may start before the

beginning of mentorship program. Social workers should try to understand the

relationship with parents of potential participants. The understanding towards

this relationship could be utilized by mentors and case manager to develop

mentoring relationship more effectively.

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Another step to attach importance of relationship with parents in mentorship

program could be that, organizer and mentors monitor the development of

relationship with parents during the process of mentorship program, and try to

influence it in a positive way.

Mentorship program can be promoted as a form of parent education. The

parents of participants may improve their skills in communication with their

children thus build better parent-child relationship which was the goal of all

forms of parent education programs.

Direction for future research

Need for follow-up studies

The effects of mentorship program and mentoring relationship have been

tested in this research. However, the long-term effects of mentorship program on

adolescent developmental outcomes have to be confirmed.

Qualitative research

Qualitative data and analysis can improve the validity of research findings

and improve the understanding of the quantitative data analysis. Case study on

both mentees and mentors having highest and lowest scores in the mentoring

relationship, and mentees having highest and lowest scores in relationship with

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parents, can demonstrates how the relationship can bring changes to both

relational and other outcomes.

A more complex strategy on research of relationship

Data on mentoring relationship and relationship with parents are generated

from surveys on participants of the mentorship program. However, both the

relationships with mentors and with parents have dyadic property. Having two

sides of a relationship to provide information about the relationship and each

other would allow studies use dyadic approach to understand the mentoring

relationship, relationship with parents, their interactions and the effects on

developmental outcomes of participants. Future research can consider further

studying mentoring relationship by using ratings of adolescents and mentors, and

also relationship with parents using ratings by both adolescents and parents using

dyadic analysis approach.

Conclusion

The purpose of this study is to identify the effectiveness of mentorship

program and mentoring relationship to adolescents and explore the interaction

between mentoring relationship and relationship with parents. The main findings

of this study include the positive effects brought on by mentorship program to

participating adolescents, on their self-esteem and general mental health,

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relationship with parents, peers and other significant adults outside the

immediate family, mentorship program also brought them higher academic

performances, expectations to academic performances, career development,

development of life goals and long-term planning. Also, mentorship can reduce

risk behaviors and improved positive behaviors. Good mentoring relationship can

positively influence participating adolescents on many aspects, including

resilience, general mental health, self-esteem, future planning, goal setting, and

family relatedness. In the interaction between mentoring relationship and

relationship with parents, good relationship with parents can predict good

mentoring relationship, and good mentoring relationship can predict good

relationship with parents too. These two kinds of relationships show a reciprocal

interaction along with time.

Given the positive findings from this study and many other studies from the

west, mentorship program should be promoted in Chinese societies, including

Hong Kong and the Chinese mainland. The operation of non-government

organizations and program managers should pay more attention to the

development of mentoring relationship with consideration of the influence from

the relationship with parents of participating adolescents. Mentorship program

should also emphasize the involvement of family more.

Evaluation Study on Child Development Fund Pioneer Projects
Questionnaire for Participating Children

Part 1: Background Information

A1   **Your Chinese or English name:** (<u>as shown on ID card</u>) [xxxxx]

A2   **Your gender:** [xoooo]

1 ☐ Male   2 ☐ Female

A3   **Your year and month of birth:** [xoooo]

Year | 1 | 9 | | | Month | | |

A4   **The current school you are studying in:** [xxxxx]

A5   **The current education level you are in is:** [xoxxx]

1 ☐ primary 3   5 ☐ secondary 1   9 ☐ secondary 5
2 ☐ primary 4   6 ☐ secondary 2   10 ☐ secondary 6
3 ☐ primary 5   7 ☐ secondary 3
4 ☐ primary 6   8 ☐ secondary 4

A6   **You are living in:** [xoxxx]

Hong Kong Island: 01 ☐ Mid-Western District   02 ☐ Eastern District
                    03 ☐ Southern District   04 ☐ Wan Chai District

Kowloon: 05 ☐ Kowloon City District 06 ☐ Yau Tsim Mong District   07 ☐
Sham Shui Po District   08 ☐ Wong Tai Sin District
                    09 ☐ Kwun Tong District

New Territories: 10 ☐ Tsuen Wan District   11 ☐ Kwai Tsing District   12 ☐
Northern District   13 ☐ Sai Kung District
                    14 ☐ Tuen Mun District   15 ☐ Tai Po District

16 ☐ Sha Tin District   17 ☐ Tin Shui Wai District
18 ☐ Tung Chung District
19 ☐ Yuen Long District (excluding Tin Shui Wai)
20 ☐ Islands (excluding Tung Chung)
21 ☐ Other :_____

A7 **Are you a Hong Kong permanent resident?** [xoooo]

1 ☐ No   2 ☐ Yes

A8 **Which year did you settle in Hong Kong?** [xoooo]

A ☐ Since birth   B ☐ Year _____

A9 **Your place of birth is:** [xoooo]

1 ☐ Hong Kong   2 ☐ Macau   3 ☐ Guangdong
4 ☐ Other Provinces or cities in China, please specify:_____
5 ☐ Nepal   6 ☐ India   7 ☐ Pakistan   8 ☐ Africa
9 ☐ Other countries, please specify:_____

Part 2: Personal Resilience [xoxxx]

From your experience last month, choose the most suitable answer for the following fifthteen questions.

	Absolutely disagree	very disagree	Disagree	Neutral	Agree	Very agree	Absolutely agree
B1: I have self-discipline.	☐	☐	☐	☐	☐	☐	☐
B2: When I make plans I follow through with them.	☐	☐	☐	☐	☐	☐	☐
B3: I am determined.	☐	☐	☐	☐	☐	☐	☐
B4: I feel that I can handle many things at a time.	☐	☐	☐	☐	☐	☐	☐
B5: My belief in myself gets me through hard times.	☐	☐	☐	☐	☐	☐	☐
B6: I usually take things in my stride.	☐	☐	☐	☐	☐	☐	☐
B7: When I am in a difficult situation, I can usually find my way out of it.	☐	☐	☐	☐	☐	☐	☐
B8: I have enough energy to do what I have to do.	☐	☐	☐	☐	☐	☐	☐
B9: I feel proud that I have accomplished things in my life.	☐	☐	☐	☐	☐	☐	☐
B10: I keep interested in things.	☐	☐	☐	☐	☐	☐	☐
B11: I am friends with myself.	☐	☐	☐	☐	☐	☐	☐
B12: My life has meaning.	☐	☐	☐	☐	☐	☐	☐
B13: I can usually find something to laugh about.	☐	☐	☐	☐	☐	☐	☐
B14: I usually manage one way or another.	☐	☐	☐	☐	☐	☐	☐
B15: I can usually look at a situation in a number of ways.	☐	☐	☐	☐	☐	☐	☐

C1 **In the past six months, how often did you have dinner with your parent (or guardian)?**

1 ☐ Every night   4 ☐ 2 to 3 times a month
2 ☐ 2 to 6 times a week   5 ☐ Once a month or less
3 ☐ Once a week   6 ☐ Never

C2 **In the past six months, how often did you communicate with your parent (or guardian)?**

1 ☐ Every day   4 ☐ 2 to 3 times a month
2 ☐ 2 to 6 times a week   5 ☐ Once a month or less
3 ☐ Once a week   6 ☐ Never

C3 **In the past six months, in general, how close were you with your parent (or guardian)?**

1 ☐ Not close at all
2 ☐ Quite close
3 ☐ Very close

C4 **In the past six months, how similar was your view compared with your parent's (or guardian's)?**

1 ☐ Very different
2 ☐ Quite different
3 ☐ Quite similar
4 ☐ Very similar

C5 **In the past six months, did you voluntarily provide any help to your parents, your friends and neighbourhoods? (e.g. shopping, taking care of others, repairing things)?**

1 ☐ Often   2 ☐ Sometimes   3 ☐ Seldom   4 ☐ Never

C6 **In the past six months, did you get any help voluntarily from your parents, your friends and neighbourhoods? (e.g. shopping, taking care of others, repairing things)?**

1 ☐ Often   2 ☐ Sometimes   3 ☐ Seldom   4 ☐ Never

According to your usual situation, please choose the most suitable answer for the following questions. [xxxxx]

	Strongly disagreed	Disagreed	Agreed	Strongly agreed
C7a: I wish my parent (guardian) would pay more attention on me.	☐	☐	☐	☐
C7b: I wish my parent (guardian) would spend more time with me.	☐	☐	☐	☐
C7c: I wish my parent (guardian) would know me better.	☐	☐	☐	☐
C8: I enjoy the time I spend with my parent (guardian).	☐	☐	☐	☐
C9: I wish I would be closer to my parent (guardian).	☐	☐	☐	☐
C10: I wish I could talk more with my parent (guardian).	☐	☐	☐	☐
C11a: When I am with my parent (guardian), I feel happy.	☐	☐	☐	☐
C11b: When I am with my parent (guardian), I feel relaxed.	☐	☐	☐	☐
C11c: When I am with my parent (guardian), I feel ignored.	☐	☐	☐	☐
C11d: When I am with my parent (guardian), I feel mad.	☐	☐	☐	☐
C11e: When I am with my parent (guardian), I feel bored.	☐	☐	☐	☐
C11f: When I am with my parent (guardian), I feel unhappy.	☐	☐	☐	☐
C11g: When I am with my parent (guardian), I feel safe.	☐	☐	☐	☐
C12a: When I am with my parent (guardian), I feel important.	☐	☐	☐	☐
C12b: When I am with my parent (guardian), I feel scared.	☐	☐	☐	☐
C12c: When I am with my parent (guardian), I feel loved.	☐	☐	☐	☐

Part 4: Academic [xoxxx]

D1 **In the last semester, what is your rank among the whole class?**

Rank number: _____
☐ There is no ranking in our school
☐ I don't know / I don't remember

D2 **In the last semester, what is your rank among the whole form?**

Rank number: _____
☐ There is no ranking in our school
☐ Don't know / don't remember

D3 **In this semester, what is your school attendance rate in approximate?**
_____ %

D4   **You wish you can:**

1 ☐ Stop going to school, if possible
2 ☐ Finish primary school
3 ☐ Finish junior secondary school
4 ☐ Finish senior secondary school
5 ☐ Finish university

D5   **What is the highest level of qualification you think you can achieve?**

1 ☐ Don't know   4 ☐ Diploma or certificate level
2 ☐ Primary school level   5 ☐ University degree level
3 ☐ Junior secondary school level   6 ☐ Master or doctoral degree level
3 ☐ Senior secondary school level

D6   **What do you think about going to school?**

1 ☐ Not important at all
2 ☐ Unimportant
3 ☐ Quite important
4 ☐ Very important
5 ☐ Don't know

D7   **How meaningful is "going to school" to you?**

1 ☐ Not meaningful at all
2 ☐ Not meaningful
3 ☐ Quite meaningful
4 ☐ Very meaningful
5 ☐ Don't know

D8   **What is the expectation of your parent (guardian) on your educational attainment?**

1 ☐ Don't know   4 ☐ Diploma or certificate level
2 ☐ Primary school level   5 ☐ University degree level
3 ☐ Junior secondary school level   6 ☐ Master or doctoral degree level
3 ☐ Senior secondary school level

D9   **Do you think you can meet the expectation of your parent (guardian) on your educational attainment?**

1 ☐ Don't know
2 ☐ Lower than expected
3 ☐ Just meet
4 ☐ Higher than expected

D10   **What do you think about the chance of getting into university?**

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1 ☐ Don't know
2 ☐ No chance at all
3 ☐ Very little
4 ☐ Moderate
5 ☐ Very high
6 ☐ Certainly

Part 5: Personal Planning and Career

E1   **Do you have any plan after graduation?** [xoxxx]

1 ☐ No   2 ☐ Yes

E1a   **Does participating in the Projects facilitate the development of your personal development goals?** [oooox]

1 ☐ No   2 ☐ Yes

E1b   **Does participating in the Projects facilitate the development of your career development goals?** [oooox]

1 ☐ No   2 ☐ Yes

E2   **In the past six month, when you want to talk about your plan after graduation, who will you talk to? Please indicate from the list of people you know those you will talk to and their numbers?** (Can choose more than one answer) [xxxxx]

1 ☐ Father
2 ☐ Mother
3 ☐ Sisters or brothers, there are _____ of them
4 ☐ Teachers, there are _____ of them
5 ☐ Classmates, there are _____ of them
6 ☐ Friends, there are _____ of them
7 ☐ School social workers, there are _____ of them
8 ☐ Centre social workers, there are _____ of them
9 ☐ Mentors, there are _____ of them
10 ☐ Others, please specify the relationship_____, there are ____ of them

E3   **You expect your future work can give you:** (can choose at most three options) [xoxxx]

01 ☐ Provide stable income	06 ☐ Improve life	11 ☐ Help others
02 ☐ Command others	07 ☐ Cooperate with others	12 ☐ Know others
03 ☐ Earn high income	08 ☐ Promote status	13 ☐ Actualise potentials
04 ☐ Realise your dream	09 ☐ Self challenge	14 ☐ Others: _____
05 ☐ Learn more things	10 ☐ Fulfill interest	15 ☐ Don't know

E4   **Do your parents (guardian) know your expectation on work and future development?**

[xoxxx]

1 ☐ No   2 ☐ Yes

E5   **Have you regularly planned your future study or work?** [xoxxx]

1 ☐ No   2 ☐ Yes

E6   **If you have to plan your future study or work, how would you do that?** (Can choose more than one answer) [xoxxx]

1 ☐ Don't know
2 ☐ Plan myself
3 ☐ Plan with peers
4 ☐ Plan with seniors
5 ☐ Plan with mentors
6 ☐ Others, please specify: _____

E7   **Do you have any long term life goal?** [xoxxx]

1 ☐ No
2 ☐ Yes, it is: _____

E8   **If you want to achieve your life goal, how would you do?** (Can choose three options at most) [xoxxx]

1 ☐ Don't know
2 ☐ Work together with someone sharing the same goal
3 ☐ Seek help from others
4 ☐ Set schedule
5 ☐ Step by step, patiently
6 ☐ Search for different ways and resources
7 ☐ Others, please specify: _____

Please choose the most suitable option for the following 5 statements. [xoxxx]

	Not suitable at all	A little bit suitable	Quite suitable	Very suitable
E9: I like to make plan for the future.	☐	☐	☐	☐
E10: I find it helpful to set goals for the near future.	☐	☐	☐	☐
E11: I live one day at a time.	☐	☐	☐	☐
E12: I have too many things to think about today and no time to think about tomorrow.	☐	☐	☐	☐
E13: I believe there is no sense planning to far ahead because so many things can change.	☐	☐	☐	☐

According to the confidence on your own abilities, please choose the most suitable option for the following

I am confident that I am able to:	Extremely not confident	Not confident	A little bit not confident	A little bit confident	Confident	Extremely confident
E14: Set my career or study goals according to my interest.	☐	☐	☐	☐	☐	☐
E15: Understand my abilities so as to help myself choose a career or study goals.	☐	☐	☐	☐	☐	☐
E16: Assess and modify my career or study goals according to the change in external situation.	☐	☐	☐	☐	☐	☐
E17: Solve the problems I encounter in the process of achieving my career or study goals.	☐	☐	☐	☐	☐	☐
E18: Master the strategies to achieve my career or study goals.	☐	☐	☐	☐	☐	☐
E19: Constantly improve my study and career plan to work towards my career or study goals.	☐	☐	☐	☐	☐	☐
E20: I think that there currently more possilities for me to plan my future.	☐	☐	☐	☐	☐	☐

Part 6: Savings [XXXXX]

F1 **What is your monthly income on average from pocket money or part-time job?**

1 ☐ None   5 ☐ $200 – $499
2 ☐ $1 – $49   6 ☐ $500 – $99
3 ☐ $50 – $99   7 ☐ $1000 or above
4 ☐ $100 – $199   8 ☐ Don't know

F2 **Do you have any saving habit?**

1 ☐ None   5 ☐ $100 – $199
2 ☐ $1 – $9   6 ☐ $200 – $499
3 ☐ $10 – $29   7 ☐ $500 or above
4 ☐ $30 – $99   8 ☐ Don't know

F3 **When do you make a saving in a month?**

1 ☐ No saving habit
2 ☐ Beginning of a month
3 ☐ Middle of a month
4 ☐ End of a month
5 ☐ No regular time

F4 **Your savings are:** (Can choose more than one answer)

1 ☐ No saving habit
2 ☐ Kept by friends or relatives
3 ☐ Deposit into bank
4 ☐ Kept by myself
5 ☐ Others, please specify:_____

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F5 **What will you do with your savings?** (Can choose more than one answer)

    1 ☐ No saving habit
    2 ☐ Buy things I like
    3 ☐ Buy gifts for parents or friends
    4 ☐ For traveling
    5 ☐ For entertainment
    6 ☐ Supporting family expenses
    7 ☐ For interest classes
    8 ☐ For future education
    9 ☐ Others, please specify: _____

F6 **In the past six month, when you want to talk about your saving plan, who will you seek to talk to? Please indicate from the following list of people you know those you will talk to and their numbers?** (Can choose more than one answer)

    1 ☐ Father
    2 ☐ Mother
    3 ☐ Sisters or brothers, there are _____ of them
    4 ☐ Teachers, there are _____ of them
    5 ☐ Classmates, there are _____ of them
    6 ☐ Friends, there are _____ of them
    7 ☐ School social workers, there are _____ of them
    8 ☐ Centre social workers, there are _____ of them
    9 ☐ Mentors, there are _____ of them
    10 ☐ Others, please specify the relationship_____, there are ____ of them

F7 **Does participating in the Projects facilitate the development of regular saving habit for your personal development?**

    1 ☐ No   2 ☐ Yes

F8 **In your opinion, the most appropriate time to start using targeted savings for personal development goals is the Projects':**

    1 ☐ First half of the first year   5 ☐ First half of the third year
    2 ☐ Second half of the first year   6 ☐ Second half of the third year
    3 ☐ First half of the second year
    4 ☐ Second half of the second year

Part 7: Extra-curricular activities and behaviours (outside the Projects) [xxxxx]

G1 **Currently, apart from the Projects, are you participating in any extra-curricular activities or tutorial classes?**
    1 ☐ No   → (please go to question G12)
    2 ☐ Yes

If yes, how much time on average do you spend on the following activities each month:

	Not at all	3 hours or below	4 to 10 hours	11-20 hours	21-30 hours	31-40 hours	41 hours or above
G2:Financial planning and personal asset development	☐	☐	☐	☐	☐	☐	☐
G3:Personal development planning and interpersonal communication development activities	☐	☐	☐	☐	☐	☐	☐
G4:Career planning / extra-curricular learning activities	☐	☐	☐	☐	☐	☐	☐
G5:Voluntary services	☐	☐	☐	☐	☐	☐	☐
G6:Regular and tutor-led sports activities	☐	☐	☐	☐	☐	☐	☐
G7:Regular and tutor-led cultural art activities	☐	☐	☐	☐	☐	☐	☐
G8:Regular and tutor-led uniform group activities	☐	☐	☐	☐	☐	☐	☐
G9:Regular religious activities	☐	☐	☐	☐	☐	☐	☐
G10:Private tuition	☐	☐	☐	☐	☐	☐	☐
G11:Others, please specify: _____	☐	☐	☐	☐	☐	☐	☐

G12 **On average, how long were you alone at home doing nothing every day last week?**
_____hours

G13 **On average, how long were you alone on the street every day last week?**
_____hours

G14 **On average, how long did you wander on the street with friends every day last week?**
_____hours

G15 **Did you receive any demerits or have to see teachers, social workers or disciplinary officer because of delay in submitting homework and misconduct this term?**

1 ☐ Never
2 ☐ Once
3 ☐ Two to three times
4 ☐ Four to ten times
5 ☐ More than ten times

G16 **Did you speak foul language, sabotage, involve in stealing or assault this term?**

1 ☐ Never
2 ☐ Once
3 ☐ Two to three times
4 ☐ Four to ten times
5 ☐ More than ten times

G17 **Did you ever smoke (even one puff)?**

1 ☐ No   2 ☐ Yes

G18 **In the past 30 days (one month), how many days did you smoke?**

1 ☐ 0 day   5 ☐ 10-19 days
2 ☐ 1-2 days   6 ☐ 20-29 days
3 ☐ 3-5 days   7 ☐ 30 days
4 ☐ 6-9 days

G19 **In the past 30 days (one month), have you ever taken any drugs which would affect your mental state (such as cannabis, ecstasy, ketamine, but excluding those prescribed by your doctor)?**

1 ☐ No   2 ☐ Yes

G20 **In the past 30 days (one month), have you ever drunk any alcohol (including beer)?**

1 ☐ No   2 ☐ Yes

Part 8: Self and Interpersonal Relationship

H1 **When you want to talk about your emotions and interpersonal relationships, to whom you would approach in the past six months? Please indicate who you would talk to and their numbers from the below list of people you know.** (Can choose more than one answer) [xxxxx]

1 ☐ Father

2 ☐ Mother

3 ☐ Siblings, there are _____ of them

4 ☐ Teachers, there are _____ of them

5 ☐ Classmates, there are _____ of them

6 ☐ Friends, there are _____ of them

7 ☐ School social workers, there are _____ of them

8 ☐ Centre social workers, there are _____ of them

9 ☐ Mentors, there are _____ of them

10 ☐ Others, please specify the relationship: _____, there are _____ of them

According to your experience in past one month, please choose the most suitable answer for the following questions. [xoxxx]

	Totally disagree	disagree	agree	Totally agree
H2: I feel that I'm a person of worth, at least on an equal plane with others.	☐	☐	☐	☐
H3: I feel that I have a number of good qualities.	☐	☐	☐	☐
H4: All in all, I am inclined to feel that I always do the wrong things.	☐	☐	☐	☐
H5: I am able to do things as good as most other people.	☐	☐	☐	☐
H6: I feel I do not have much to be proud of.	☐	☐	☐	☐
H7: I take a positive attitude toward myself.	☐	☐	☐	☐
H8: On the whole, I am satisfied with myself.	☐	☐	☐	☐
H9: I wish I could have more respect for myself.	☐	☐	☐	☐
H10: I certainly feel useless at times.	☐	☐	☐	☐
H11: At times, I think I only have a few things that are good.	☐	☐	☐	☐

According to your experience in the past 3 to 4 weeks, please choose the most suitable answer for the following 12 questions. [xoxxx]

	Much less than usual	Same as usual	More than usual	Much more than usual
H12: In the past few weeks, I have been able to concentrate on what I'm doing	☐	☐	☐	☐
H13: In the past few weeks, I lost much sleep over worry	☐	☐	☐	☐
H14: In the past few weeks, I felt I was playing a useful part in things	☐	☐	☐	☐
H15: In the past few weeks, I felt I was capable of making decisions about things	☐	☐	☐	☐
H16: In the past few weeks, I felt constantly under strain	☐	☐	☐	☐
H17: In the past few weeks, I felt I couldn't overcome my difficulties	☐	☐	☐	☐
H18: In the past few weeks, I have been able to enjoy my normal day-to-day activities	☐	☐	☐	☐
H19: In the past few weeks, I have been able to face up to my problems	☐	☐	☐	☐
H20: In the past few weeks, I have been feeling unhappy and depressed	☐	☐	☐	☐
H21: In the past few weeks, I have been losing confidence in myself	☐	☐	☐	☐
H22: In the past few weeks, I have been thinking of myself as a worthless person	☐	☐	☐	☐
H23: In the past few weeks, I have been feeling reasonably happy, all things considered	☐	☐	☐	☐

Part 9: Mentorship programme of the Projects

J1 **What attract you to participate (continuously) in the Projects?** (<u>Can choose more than one option</u>) [xoxxx]

1 ☐ Targeted savings
2 ☐ Mentorship programme
3 ☐ Personal development plan
4 ☐ Others, please specify: _____

J2 **Why do you participate in the Projects?** (<u>Can choose more than one option</u>) [xoxxx]

1 ☐ Develop personal saving habit
2 ☐ Personal development
3 ☐ Meet other people
4 ☐ Plan personal growth
5 ☐ Achieve personal saving target
6 ☐ Learn to face up to adversity
7 ☐ Complete short-term goals of personal development
8 ☐ Receive matched savings and special financial incentive
9 ☐ Expand social network
10 ☐ Widen horizon
11 ☐ Others, please specify: _____

J3 **What are your expectations on the Projects?** [xoxxx]

J4 **Have you ever participated in any other mentorship programme?** [xoooo]

1 ☐ No   2 ☐ Yes

J5 **Are you currently being followed up by any mentor from other mentorship programme?** [xoooo]

1 ☐ No   2 ☐ Yes

J6 **What are your expectations on mentorship programme of the Projects?** [xoxxx]

J7 **Do you know the name of your mentor?** [oxxxx]

1 ☐ No   2 ☐ Yes, name: _____

J8 **Does your mentor know your name?** [oxxxx]

1 ☐ No   2 ☐ Yes

Part 10: Mentoring relationship [oxxxx]

According to your experience with your mentor in the past three months, choose the most suitable option for the following seventeen questions.

	Not true at all	Not very true	Sort of true	Very true
K1: My mentor always asks me about what I think.	☐	☐	☐	☐
K2: My mentor and I like to do a lot of the same things.	☐	☐	☐	☐
K3: My mentor thinks of fun and interesting things to do.	☐	☐	☐	☐
K4: My mentor and I do things I really want to do.	☐	☐	☐	☐
K5a: When I'm with my mentor, I feel special.	☐	☐	☐	☐
K5b: When I'm with my mentor, I feel excited.	☐	☐	☐	☐
K5c: When I'm with my mentor, I feel important.	☐	☐	☐	☐
K5d: When I'm with my mentor, I feel happy.	☐	☐	☐	☐
K5e: When I'm with my mentor, I feel bored.	☐	☐	☐	☐
K5f: When I'm with my mentor, I feel mad.	☐	☐	☐	☐
K5g: When I'm with my mentor, I feel disappointed.	☐	☐	☐	☐
K5h: When I'm with my mentor, I feel unhappy.	☐	☐	☐	☐
K5i: When I'm with my mentor, I feel ignored.	☐	☐	☐	☐
K6: My mentor is always interested in what I want to do.	☐	☐	☐	☐
K7: I am okay with the ways my mentor makes fun of me.	☐	☐	☐	☐
K8: I wish my mentor was different.	☐	☐	☐	☐
K9: Sometimes my mentor promises we will do something; then we don't do it.	☐	☐	☐	☐
K10: When my mentor gives me advice, it makes me feel stupid.	☐	☐	☐	☐
K11: I feel I can't trust my mentor with secrets—my mentor would tell my parent/guardian.	☐	☐	☐	☐
K12: I wish my mentor asked me more about what I think.	☐	☐	☐	☐
K13: I wish my mentor knew me better.	☐	☐	☐	☐
K14: I wish my mentor spent more time with me.	☐	☐	☐	☐
K15: When something is bugging me, my mentor listens while I get it off my chest.	☐	☐	☐	☐
K16: My mentor has lots of good ideas about how to solve a problem.	☐	☐	☐	☐
K17: My mentor helps me take my mind off things by doing something with me.	☐	☐	☐	☐

According to your relationship with your mentor in the past three months, choose the most suitable answer for following 14 questions. [oxxxx]

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	Never	Seldom	Sometimes	Often	Always
K18: My mentor tries hard to understand my developmental goals (academic, personal, or whatever is relevant).	☐	☐	☐	☐	☐
K19: I think I know my direction better because of my mentor.	☐	☐	☐	☐	☐
K20: I understand different kinds of social values from my mentor.	☐	☐	☐	☐	☐
K21: My relationship with my mentor inspires me to seek other relationships like this one.	☐	☐	☐	☐	☐
K22: My mentor provides opportunity for me to build healthy relationship with other adults.	☐	☐	☐	☐	☐
K23: My mentor shares stories about his/her own experiences with me in a way that enhances my ability to plan ahead my personal development.	☐	☐	☐	☐	☐
K24: My mentor gives me advice about my personal development and personal life.	☐	☐	☐	☐	☐
K25: My mentor pushes me to do a good job.	☐	☐	☐	☐	☐
K26: My mentor gives me constructive criticism.	☐	☐	☐	☐	☐
K27: My mentor pushes me to do things on my own.	☐	☐	☐	☐	☐
K28: We talk together and shared ideas about personal development.	☐	☐	☐	☐	☐
K29: I learn how to do things by watching this person doing them.	☐	☐	☐	☐	☐
K30: I acquire knowledge, information, or skills about personal development from my mentor.	☐	☐	☐	☐	☐
K31: My mentor introduces me to new ideas, interests, and experiences, enable me to have personal development planning.	☐	☐	☐	☐	☐

K32 **Has your mentor provided guidance for your personal development in the Projects?**

1 ☐ No   2 ☐ Yes

~ End ~

Evaluation Study on Child Development Fund Pioneer Projects

Questionnaire for Control Group

Part 1: Background Information

A1   **Your Chinese or English name:** (<u>as shown on ID card</u>)[xxxxx]

A2   **Your gender:** [xoooo]

1 ☐ Male   2 ☐ Female

A3   **Your year and month of birth:** [xoooo]

Year | 1 | 9 | | | Month | |

A4   **The current school you are studying in:** [xxxxx]

A5   **The current education level you are in is:** [xoxxx]

1 ☐ primary 3   5 ☐ secondary 1   9 ☐ secondary 5
2 ☐ primary 4   6 ☐ secondary 2   10 ☐ secondary 6
3 ☐ primary 5   7 ☐ secondary 3
4 ☐ primary 6   8 ☐ secondary 4

A6   **You are living in:** [xoxxx]

Hong Kong Island: 01 ☐ Mid-Western District 02 ☐ Eastern District
    03 ☐ Southern District   04 ☐ Wan Chai District

Kowloon: 05 ☐ Kowloon City District 06 ☐ Yau Tsim Mong District   07 ☐
Sham Shui Po District   08 ☐ Wong Tai Sin District
    09 ☐ Kwun Tong District

New Territories: 10 ☐ Tsuen Wan District   11 ☐ Kwai Tsing District   12 ☐
Northern District   13 ☐ Sai Kung District

14 ☐ Tuen Mun District   15 ☐ Tai Po District
16 ☐ Sha Tin District   17 ☐ Tin Shui Wai District
18 ☐ Tung Chung District
19 ☐ Yuen Long District (excluding Tin Shui Wai)
20 ☐ Islands (excluding Tung Chung)
21 ☐ Other :_____

A7   **Are you a Hong Kong permanent resident?**   [xoooo]

1 ☐ No   2 ☐ Yes

A8   **Which year did you settle in Hong Kong?** [xoooo]

A ☐ Since birth   B ☐ Year _____

A9   **Your place of birth is:** [xoooo]

1 ☐ Hong Kong   2 ☐ Macau   3 ☐ Guangdong

4 ☐ Other Provinces or cities in China, please specify:_____

5 ☐ Nepal   6 ☐ India   7 ☐ Pakistan   8 ☐ Africa

9 ☐ Other countries, please specify:_____

Part 2: Personal Resilience [xoxxx]

From your experience last month, choose the most suitable answer for the following fifthteen questions.

	Absolutely disagree	very disagree	Disagree	Neutral	Agree	Very agree	Absolutely agree
B1: I have self-discipline.	☐	☐	☐	☐	☐	☐	☐
B2: When I make plans I follow through with them.	☐	☐	☐	☐	☐	☐	☐
B3: I am determined.	☐	☐	☐	☐	☐	☐	☐
B4: I feel that I can handle many things at a time.	☐	☐	☐	☐	☐	☐	☐
B5: My belief in myself gets me through hard times.	☐	☐	☐	☐	☐	☐	☐
B6: I usually take things in my stride.	☐	☐	☐	☐	☐	☐	☐
B7: When I am in a difficult situation, I can usually find my way out of it.	☐	☐	☐	☐	☐	☐	☐
B8: I have enough energy to do what I have to do.	☐	☐	☐	☐	☐	☐	☐
B9: I feel proud that I have accomplished things in my life.	☐	☐	☐	☐	☐	☐	☐
B10: I keep interested in things.	☐	☐	☐	☐	☐	☐	☐
B11: I am friends with myself.	☐	☐	☐	☐	☐	☐	☐
B12: My life has meaning.	☐	☐	☐	☐	☐	☐	☐
B13: I can usually find something to laugh about.	☐	☐	☐	☐	☐	☐	☐
B14: I usually manage one way or another.	☐	☐	☐	☐	☐	☐	☐
B15: I can usually look at a situation in a number of	☐	☐	☐	☐	☐	☐	☐

| ways. | | | | | | | | |

C1   **In the past six months, how often did you have dinner with your parent (or guardian)?**

1 ☐ Every night   4 ☐ 2 to 3 times a month
2 ☐ 2 to 6 times a week   5 ☐ Once a month or less
3 ☐ Once a week   6 ☐ Never

C2   **In the past six months, how often did you communicate with your parent (or guardian)?**

1 ☐ Every day   4 ☐ 2 to 3 times a month
2 ☐ 2 to 6 times a week   5 ☐ Once a month or less
3 ☐ Once a week   6 ☐ Never

C3   **In the past six months, in general, how close were you with your parent (or guardian)?**

1 ☐ Not close at all
2 ☐ Quite close
3 ☐ Very close

C4   **In the past six months, how similar was your view compared with your parent's (or guardian's)?**

1 ☐ Very different
2 ☐ Quite different
3 ☐ Quite similar
4 ☐ Very similar

C5   **In the past six months, did you voluntarily provide any help to your parents, your friends and neighbourhoods? (e.g. shopping, taking care of others, repairing things)?**

1 ☐ Often   2 ☐ Sometimes   3 ☐ Seldom   4 ☐ Never

C6   **In the past six months, did you get any help voluntarily from your parents, your friends and neighbourhoods? (e.g. shopping, taking care of others, repairing things)?**

1 ☐ Often   2 ☐ Sometimes   3 ☐ Seldom   4 ☐ Never

According to your usual situation, please choose the most suitable answer for the following questions. [xxxxx]

	Strongly disagreed	Disagreed	Agreed	Strongly agreed
C7a: I wish my parent (guardian) would pay more attention on me.	☐	☐	☐	☐
C7b: I wish my parent (guardian) would spend more time with me.	☐	☐	☐	☐
C7c: I wish my parent (guardian) would know me better.	☐	☐	☐	☐
C8: I enjoy the time I spend with my parent (guardian).	☐	☐	☐	☐
C9: I wish I would be closer to my parent (guardian).	☐	☐	☐	☐
C10: I wish I could talk more with my parent (guardian).	☐	☐	☐	☐
C11a: When I am with my parent (guardian), I feel happy.	☐	☐	☐	☐
C11b: When I am with my parent (guardian), I feel relaxed.	☐	☐	☐	☐
C11c: When I am with my parent (guardian), I feel ignored.	☐	☐	☐	☐
C11d: When I am with my parent (guardian), I feel mad.	☐	☐	☐	☐
C11e: When I am with my parent (guardian), I feel bored.	☐	☐	☐	☐
C11f: When I am with my parent (guardian), I feel unhappy.	☐	☐	☐	☐
C11g: When I am with my parent (guardian), I feel safe.	☐	☐	☐	☐
C12a: When I am with my parent (guardian), I feel important.	☐	☐	☐	☐
C12b: When I am with my parent (guardian), I feel scared.	☐	☐	☐	☐
C12c: When I am with my parent (guardian), I feel loved.	☐	☐	☐	☐

Part 4: Academic [xoxxx]

D1 **In the last semester, what is your rank among the whole class?**

Rank number: _____
☐ There is no ranking in our school
☐ I don't know / I don't remember

D2 **In the last semester, what is your rank among the whole form?**

Rank number: _____
☐ There is no ranking in our school
☐ Don't know / don't remember

D3 **In this semester, what is your school attendance rate in approximate?**
_____ %

D4 **You wish you can:**

1 ☐ Stop going to school, if possible
2 ☐ Finish primary school
3 ☐ Finish junior secondary school
4 ☐ Finish senior secondary school
5 ☐ Finish university

D5 **What is the highest level of qualification you think you can achieve?**

1 ☐ Don't know
2 ☐ Primary school level
3 ☐ Junior secondary school level
3 ☐ Senior secondary school level

4 ☐ Diploma or certificate level
5 ☐ University degree level
6 ☐ Master or doctoral degree level

D6 **What do you think about going to school?**

1 ☐ Not important at all
2 ☐ Unimportant
3 ☐ Quite important
4 ☐ Very important
5 ☐ Don't know

D7 **How meaningful is "going to school" to you?**

1 ☐ Not meaningful at all
2 ☐ Not meaningful
3 ☐ Quite meaningful
4 ☐ Very meaningful
5 ☐ Don't know

D8 **What is the expectation of your parent (guardian) on your educational attainment?**

1 ☐ Don't know
2 ☐ Primary school level
3 ☐ Junior secondary school level
3 ☐ Senior secondary school level

4 ☐ Diploma or certificate level
5 ☐ University degree level
6 ☐ Master or doctoral degree level

D9 **Do you think you can meet the expectation of your parent (guardian) on your educational attainment?**

1 ☐ Don't know
2 ☐ Lower than expected
3 ☐ Just meet
4 ☐ Higher than expected

D10   **What do you think about the chance of getting into university?**

1 ☐ Don't know
2 ☐ No chance at all
3 ☐ Very little
4 ☐ Moderate
5 ☐ Very high
6 ☐ Certainly

Part 5: Personal Planning and Career

E1   **Do you have any plan after graduation?** [xoxxx]

1 ☐ No   2 ☐ Yes

E2   **In the past six month, when you want to talk about your plan after graduation, who will you talk to? Please indicate from the list of people you know those you will talk to and their numbers?** (Can choose more than one answer) [xxxxx]

1 ☐ Father

2 ☐ Mother

3 ☐ Sisters or brothers, there are _____ of them

4 ☐ Teachers, there are _____ of them

5 ☐ Classmates, there are _____ of them

6 ☐ Friends, there are _____ of them

7 ☐ School social workers, there are _____ of them

8 ☐ Centre social workers, there are _____ of them

9 ☐ Mentors, there are _____ of them

10 ☐ Others, please specify the relationship_____, there are _____ of them

E3   **You expect your future work can give you:** (can choose at most three options) [xoxxx]

01 ☐ Provide stable income	06 ☐ Improve life	11 ☐ Help others
02 ☐ Command others	07 ☐ Cooperate with others	12 ☐ Know others
03 ☐ Earn high income	08 ☐ Promote status	13 ☐ Actualise potentials
04 ☐ Realise your dream	09 ☐ Self challenge	14 ☐ Others: _____
05 ☐ Learn more things	10 ☐ Fulfill interest	15 ☐ Don't know

E4   **Do your parents (guardian) know your expectation on work and future development?** [xoxxx]

1 ☐ No   2 ☐ Yes

E5   **Have you regularly planned your future study or work?** [xoxxx]

1 ☐ No   2 ☐ Yes

E6   **If you have to plan your future study or work, how would you do that?** (Can choose more than one answer) [xoxxx]

1 ☐ Don't know
2 ☐ Plan myself
3 ☐ Plan with peers
4 ☐ Plan with seniors
5 ☐ Plan with mentors
6 ☐ Others, please specify: _____

E7   **Do you have any long term life goal?** [xoxxx]

1 ☐ No
2 ☐ Yes, it is: _____

E8   **If you want to achieve your life goal, how would you do?** (Can choose three options at most) [xoxxx]

1 ☐ Don't know
2 ☐ Work together with someone sharing the same goal
3 ☐ Seek help from others
4 ☐ Set schedule
5 ☐ Step by step, patiently
6 ☐ Search for different ways and resources
7 ☐ Others, please specify: _____

Please choose the most suitable option for the following 5 statements. [xoxxx]

	Not suitable at all	A little bit suitable	Quite suitable	Very suitable
E9: I like to make plan for the future.	☐	☐	☐	☐
E10: I find it helpful to set goals for the near future.	☐	☐	☐	☐
E11: I live one day at a time.	☐	☐	☐	☐
E12: I have too many things to think about today and no time to think about tomorrow.	☐	☐	☐	☐
E13: I believe there is no sense planning to far ahead because so many things can change.	☐	☐	☐	☐

According to the confidence on your own abilities, please choose the most suitable option for the following questions. [xoxxx]

I am confident that I am able to:	Extremely not confident	Not confident	A little bit not confident	A little bit confident	Confident	Extremely confident
E14: Set my career or study goals according to my interest.	☐	☐	☐	☐	☐	☐
E15: Understand my abilities so as to help myself choose a career or study goals.	☐	☐	☐	☐	☐	☐
E16: Assess and modify my career or study goals according to the change in external situation.	☐	☐	☐	☐	☐	☐
E17: Solve the problems I encounter in the process of achieving my career or study goals.	☐	☐	☐	☐	☐	☐
E18: Master the strategies to achieve my career or study goals.	☐	☐	☐	☐	☐	☐
E19: Constantly improve my study and career plan to work towards my career or study goals.	☐	☐	☐	☐	☐	☐
E20: I think that there currently more possilities for me to plan my future.	☐	☐	☐	☐	☐	☐

Part 6: Savings [xxxxx]

F1   **What is your monthly income on average from pocket money or part-time job?**

1 ☐ None   5 ☐ $200 – $499
2 ☐ $1 – $49   6 ☐ $500 – $99
3 ☐ $50 – $99   7 ☐ $1000 or above
4 ☐ $100 – $199   8 ☐ Don't know

F2   **Do you have any saving habit?**

1 ☐ None   5 ☐ $100 – $199
2 ☐ $1 – $9   6 ☐ $200 – $499
3 ☐ $10 – $29   7 ☐ $500 or above
4 ☐ $30 – $99   8 ☐ Don't know

F3   **When do you make a saving in a month?**

1 ☐ No saving habit
2 ☐ Beginning of a month
3 ☐ Middle of a month
4 ☐ End of a month
5 ☐ No regular time

F4   **Your savings are:** (Can choose more than one answer)

1 ☐ No saving habit
2 ☐ Kept by friends or relatives

3 ☐ Deposit into bank

4 ☐ Kept by myself

5 ☐ Others, please specify:_____

F5 **What will you do with your savings?** (Can choose more than one answer)

1 ☐ No saving habit

2 ☐ Buy things I like

3 ☐ Buy gifts for parents or friends

4 ☐ For traveling

5 ☐ For entertainment

6 ☐ Supporting family expenses

7 ☐ For interest classes

8 ☐ For future education

9 ☐ Others, please specify: _____

F6 **In the past six month, when you want to talk about your saving plan, who will you seek to talk to? Please indicate from the following list of people you know those you will talk to and their numbers?** (Can choose more than one answer)

1 ☐ Father

2 ☐ Mother

3 ☐ Sisters or brothers, there are _____ of them

4 ☐ Teachers, there are _____ of them

5 ☐ Classmates, there are _____ of them

6 ☐ Friends, there are _____ of them

7 ☐ School social workers, there are _____ of them

8 ☐ Centre social workers, there are _____ of them

9 ☐ Mentors, there are _____ of them

10 ☐ Others, please specify the relationship_____, there are _____ of them

Part 7: Extra-curricular activities and behaviours [xxxxx]

G1 **Currently, are you participating in any extra-curricular activities or tutorial classes?**

1 ☐ No   → (please go to question G12)

2 ☐ Yes

If yes, how much time on average do you spend on the following activities each month:

	Not at all	3 hours or below	4 to 10 hours	11-20 hours	21-30 hours	31-40 hours	41 hours or above
G2:Financial planning and personal asset development	☐	☐	☐	☐	☐	☐	☐
G3:Personal development planning and interpersonal communication development activities	☐	☐	☐	☐	☐	☐	☐
G4:Career planning / extra-curricular learning activities	☐	☐	☐	☐	☐	☐	☐
G5:Voluntary services	☐	☐	☐	☐	☐	☐	☐
G6:Regular and tutor-led sports activities	☐	☐	☐	☐	☐	☐	☐
G7:Regular and tutor-led cultural art activities	☐	☐	☐	☐	☐	☐	☐
G8:Regular and tutor-led uniform group activities	☐	☐	☐	☐	☐	☐	☐
G9:Regular religious activities	☐	☐	☐	☐	☐	☐	☐
G10:Private tuition	☐	☐	☐	☐	☐	☐	☐
G11:Others, please specify: _____	☐	☐	☐	☐	☐	☐	☐

G12 **On average, how long were you alone at home doing nothing every day last week?**
_____hours

G13 **On average, how long were you alone on the street every day last week?**
_____hours

G14 **On average, how long did you wander on the street with friends every day last week?**
_____hours

G15 **Did you receive any demerits or have to see teachers, social workers or disciplinary officer because of delay in submitting homework and misconduct this term?**

1 ☐ Never
2 ☐ Once
3 ☐ Two to three times
4 ☐ Four to ten times
5 ☐ More than ten times

G16 **Did you speak foul language, sabotage, involve in stealing or assault this term?**

1 ☐ Never
2 ☐ Once
3 ☐ Two to three times
4 ☐ Four to ten times
5 ☐ More than ten times

G17 **Did you ever smoke (even one puff)?**

1 ☐ No   2 ☐ Yes

G18 **In the past 30 days (one month), how many days did you smoke?**

1 ☐ 0 day   5 ☐ 10-19 days
2 ☐ 1-2 days   6 ☐ 20-29 days
3 ☐ 3-5 days   7 ☐ 30 days
4 ☐ 6-9 days

G19 **In the past 30 days (one month), have you ever taken any drugs which would affect your mental state (such as cannabis, ecstasy, ketamine, but excluding those prescribed by your doctor)?**

1 ☐ No   2 ☐ Yes

G20 **In the past 30 days (one month), have you ever drunk any alcohol (including beer)?**

1 ☐ No   2 ☐ Yes

Part 8: Self and Interpersonal Relationship

H1 **When you want to talk about your emotions and interpersonal relationships, to whom you would approach in the past six months? Please indicate who you would talk to and their numbers from the below list of people you know.** (Can choose more than one answer) [xxxxx]

1 ☐ Father
2 ☐ Mother
3 ☐ Siblings, there are _____ of them
4 ☐ Teachers, there are _____ of them
5 ☐ Classmates, there are _____ of them
6 ☐ Friends, there are _____ of them
7 ☐ School social workers, there are _____ of them
8 ☐ Centre social workers, there are _____ of them
9 ☐ Mentors, there are _____ of them
10 ☐ Others, please specify the relationship: _____, there are _____ of them

According to your experience in past one month, please choose the most suitable answer for the following questions. [xoxxx]

	Totally disagree	disagree	agree	Totally agree
H2: I feel that I'm a person of worth, at least on an equal plane with others.	☐	☐	☐	☐
H3: I feel that I have a number of good qualities.	☐	☐	☐	☐
H4: All in all, I am inclined to feel that I always do the wrong things.	☐	☐	☐	☐
H5: I am able to do things as good as most other people.	☐	☐	☐	☐
H6: I feel I do not have much to be proud of.	☐	☐	☐	☐
H7: I take a positive attitude toward myself.	☐	☐	☐	☐
H8: On the whole, I am satisfied with myself.	☐	☐	☐	☐
H9: I wish I could have more respect for myself.	☐	☐	☐	☐
H10: I certainly feel useless at times.	☐	☐	☐	☐
H11: At times, I think I only have a few things that are good.	☐	☐	☐	☐

According to your experience in the past 3 to 4 weeks, please choose the most suitable answer for the following 12 questions. [xoxxx]

	Much less than usual	Same as usual	More than usual	Much more than usual
H12: In the past few weeks, I have been able to concentrate on what I'm doing	☐	☐	☐	☐
H13: In the past few weeks, I lost much sleep over worry	☐	☐	☐	☐
H14: In the past few weeks, I felt I was playing a useful part in things	☐	☐	☐	☐
H15: In the past few weeks, I felt I was capable of making decisions about things	☐	☐	☐	☐
H16: In the past few weeks, I felt constantly under strain	☐	☐	☐	☐
H17: In the past few weeks, I felt I couldn't overcome my difficulties	☐	☐	☐	☐
H18: In the past few weeks, I have been able to enjoy my normal day-to-day activities	☐	☐	☐	☐
H19: In the past few weeks, I have been able to face up to my problems	☐	☐	☐	☐
H20: In the past few weeks, I have been feeling unhappy and depressed	☐	☐	☐	☐
H21: In the past few weeks, I have been losing confidence in myself	☐	☐	☐	☐
H22: In the past few weeks, I have been thinking of myself as a worthless person	☐	☐	☐	☐
H23: In the past few weeks, I have been feeling reasonably happy, all things considered	☐	☐	☐	☐

Part 9: Mentorship programme

J1   **Have you ever participated in any mentorship programme?** [xoooo]

    1 ☐ No   2 ☐ Yes

J2   **Are you currently being followed up by any mentor?** [xoooo]

    1 ☐ No   2 ☐ Yes

J3   **Please state information of the mentorship programme which you have participated in before: (skip this question if not applicable)** [xoooo]

Programme Name: _____
Organisation: _____
Start date: _____
End date: _____
Nature: 1 ☐ School-based
           2 ☐ Community-based
           3 ☐ Religion-based
           4 ☐ Others:
             _____

Mode: 1 ☐ One mentor paired one mentee
          2 ☐ One mentor paired some mentees
          3 ☐ Multi-mentors paired multi-mentees
          4 ☐ Variable mentor numbers
          5 ☐ Others: _____

Part 10: Family Backgrounds

- **Please seek assistance from parents/guardians if necessary**
- **If you are being looked after by a guardian, please go to question K13**

K1   **Education level of your father:** (the highest education level obtained) [xoooo]

    1 ☐ No formal schooling / Kindergarten   5 ☐ Matriculation (F.6 – F.7)
    2 ☐ Primary   6 ☐ Tertiary (non-degree)
    3 ☐ Junior secondary (F.1 – F.3)   7 ☐ Tertiary (degree) or above
    4 ☐ Senior secondary (F.4 – F.5)

K2   **Is your father a Hong Kong permanent resident?** [xoooo]

    1 ☐No   2 ☐ Yes

K3   **How long has your father lived in Hong Kong?** [xoooo]

    1 ☐ Since birth
    2 ☐ _____ years

K4 **Where was your father born?** [xoooo]

    1 ☐ Hong Kong   2 ☐ Macau   3 ☐ Guangdong

    4 ☐ Other provinces or cities in China, please specify:_____

    5 ☐ Nepal   6 ☐ India   7 ☐ Pakistan   8 ☐ Africa

    9 ☐ Other countries, please specify:_____

K5 **The employment status of your father:** [xxxxx]

    1 ☐ Employed   → (Please go to question K6)

    2 ☐ Student
    3 ☐ Homemaker
    4 ☐ Retired   → (Please go to question K7)
    5 ☐ Unemployed
    6 ☐ Chronically ill
    7 ☐ Part-time

(For respondents who chose "employed" only)

K6 **The current occupation of your father** [xoxxx]:

    1 ☐ Managers and administrators   6 ☐ Craft and related workers

    2 ☐ Professionals   7 ☐ Plant & machine operators & assemblers

    3 ☐ Associate professionals   8 ☐ Skilled agricultural / fishery workers

    4 ☐ Clerks   9 ☐ Elementary occupations

    5 ☐ Service or shop sales workers   10 ☐ Others:

K7 **Education level of your mother:** (the highest education level obtained) [xoooo]

    1 ☐ No formal schooling / Kindergarten   5 ☐ Matriculation (F.6 – F.7)

    2 ☐ Primary   6 ☐ Tertiary (non-degree)

    3 ☐ Junior secondary (F.1 – F.3)   7 ☐ Tertiary (degree) or above

    4 ☐ Senior secondary (F.4 – F.5)

K8 **Is your mother a Hong Kong permanent resident?** [xoooo]

    1 ☐No   2 ☐ Yes

K9 **How long has your mother lived in Hong Kong?** [xoooo]

    1 ☐ Since birth   2 ☐ _____ years

K10 **Where was your mother born?** [xoooo]

1 ☐ Hong Kong   2 ☐ Macau   3 ☐ Guangdong
4 ☐ Other provinces or cities in China, please specify:_____
5 ☐ Nepal   6 ☐ India   7 ☐ Pakistan   8 ☐ Africa
9 ☐ Other countries, please specify:_____

K11   **The employment status of your mother:** [xoxxx]

1 ☐ Employed → (Please go to question K12)

2 ☐ Student
3 ☐ Homemaker
4 ☐ Retired → (Please go to question K19)
5 ☐ Unemployed
6 ☐ Chronically ill
7 ☐ Part-time

(For respondents who chose "employed" only)

K12   **The current occupation of your mother:** [xoxxx]

1 ☐ Managers and administrators   6 ☐ Craft and related workers
2 ☐ Professionals   7 ☐ Plant & machine operators & assemblers
3 ☐ Associate professionals   8 ☐ Skilled agricultural / fishery workers
4 ☐ Clerks   9 ☐ Elementary occupations
5 ☐ Service or shop sales workers   10 ☐ Others:

_____

(Please go to question K19 after completing question K12)

K13   **Education level of your guardian:** (the highest education level obtained) [xoooo]

1 ☐ No formal schooling / Kindergarten   5 ☐ Matriculation (F.6 – F.7)
2 ☐ Primary   6 ☐ Tertiary (non-degree)
3 ☐ Junior secondary (F.1 – F.3)   7 ☐ Tertiary (degree) or above
4 ☐ Senior secondary (F.4 – F.5)

K14   **Is your guardian a Hong Kong permanent resident?** [xoooo]

1 ☐No   2 ☐ Yes

K15   **How long has your guardian lived in Hong Kong?** [xoooo]

1 ☐ Since birth   2 ☐ _____ years

K16   **Where was your guardian born?** [xoooo]

1 ☐ Hong Kong   2 ☐ Macau   3 ☐ Guangdong
4 ☐ Other provinces or cities in China, please specify:_____
5 ☐ Nepal   6 ☐ India   7 ☐ Pakistan   8 ☐ Africa
9 ☐ Other countries, please specify:_____

K17   **The employment status of your guardian:** [xoxxx

> 1 ☐ Employed   ⟶   (Please go to question K18)
>
> 2 ☐ Student
> 3 ☐ Homemaker
> 4 ☐ Retired   ⟶   (Please go to question K19)
> 5 ☐ Unemployed
> 6 ☐ Chronically ill
> 7 ☐ Part-time

(<u>For respondents who chose "employed" only</u>)

K18   **The current occupation of your guardian:** [xoxxx]

1 ☐ Managers and administrators   6 ☐ Craft and related workers

2 ☐ Professionals   7 ☐ Plant & machine operators & assemblers

3 ☐ Associate professionals   8 ☐ Skilled agricultural / fishery workers

4 ☐ Clerks   9 ☐ Elementary occupations

5 ☐ Service or shop sales workers   10 ☐ Others: _____

K19   **Is your family currently receiving any form of financial assistance from the Social Welfare Department?** [xoxxx]

1 ☐No

2 ☐Yes (<u>Please list out each financial assistance item and its amount if possible</u>)

⟶ Assistance item 1: _____, amount: HK$_____

Assistance item 2: _____, amount: HK$_____

Assistance item 3: _____, amount: HK$_____

Assistance item 4: _____, amount: HK$_____

Assistance item 5: _____, amount: HK$_____

K20   **Are you currently receiving Student Financial Assistance from the Student Financial Assistance Agency?** [xoxxx]

1 ☐No   2 ☐Half grant   3 ☐Full grant

K21   **What is your average monthly household income?** (<u>including CSSA, Old Age Allowance, Disability Allowance and Student Financial Assistance Agency's Student Financial Assistance</u>) [xoxxx]

1 ☐ None   6 ☐ $11,000 – $12,999

2 ☐ $1 – $4,999   7 ☐ $13,000 – $14,999

3 ☐ $5,000 – $6,999   8 ☐ $15,000or above

4 ☐ $7,000 – $8,999   9 ☐ Don't know

5 ☐ $9,000 – $10,999

K22 **Is your family currently in debt?** [xoxxx]
1 ☐ No   5 ☐ $20,000 – $49,999
2 ☐ $1 – $4,999   6 ☐ $50,000 or above
3 ☐ $5,000 – $9,999   7 ☐ Don't know
4 ☐ $10,000 – $19,999

K23 **Have your family encountered any situation which leads to financial difficulties?** (can choose more than one option) [xoxxx]
1 ☐ No   5 ☐ Accident
2 ☐ Unemployed   6 ☐ Death
3 ☐ Old age   7 ☐ Pregnancy
4 ☐ Illness   8 ☐ Others, please specify: _____

K24 **How much does the situation(s) specified impact on the financial condition of your family?** [xoxxx]

1 ☐ None   2 ☐ A little bit   3 ☐ Quite large   4 ☐ Very large

K25 **Number of family member living with you:** (Not including you)[xoxxx]

Total: _____ person(s)

K26 **Family members who are living with you:** (Can choose more than one option) [xoxxx]

1 ☐ Father
2 ☐ Mother
3 ☐ Siblings, there are _____ of them
4 ☐ Grandparents, there are _____ of them
5 ☐ Other relatives, there are _____ of them
6 ☐ Other people who are not relatives, there are _____ of them

K27 **Which type of housing are you living in?** [xoxxx]
1 ☐ Public housing   5 ☐ Self-owned flat
2 ☐ Home Ownership Scheme flat 6 ☐ Temporary housing
3 ☐ Private rental flat   7 ☐ Other, please specify: _____
4 ☐ Private rental room

K28 **How much is your monthly expense on housing?** (including rent/mortgage, rates, government rents, and management fee) [xoxxx]

Total: HK$_____

K29 **How big is your home?** [xoxxx]

Total: _____ (square feet)

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