FILIAL ANXIETY AND PREPARATION FOR CAREGIVING AMONG ONE-CHILD GENERATIONS IN CHINA

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PhD

The Hong Kong Polytechnic University

2022

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Filial Anxiety and Preparation for Caregiving Among One-Child Generations in China

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A thesis submitted in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

August 2021

CERTIFICATE OF ORIGINALITY

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

_____(Signed)

__**Liu Chang**_____(Name of student)

Abstract of thesis entitled

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Submitted by

LIU Chang

for the degree of Doctor of Philosophy

at The Hong Kong Polytechnic University

in February 2022

Socioeconomic transformations over the past decades have created eldercare dilemmas among Chinese families. Previous studies on care provision crisis in China have mostly focused on the perspectives of older adults, whereas few have investigated how adult children anticipate and cope with future eldercare needs.

Drawing on the Stress Process Model, proactive coping theory, Preparation for Future Care Needs (PFCN) model, this study examined how primary stressors (i.e., parent's declining health, adverse psychological health, and lack of eldercare resources), anticipatory stressor (i.e., anticipated parental care needs), and psychosocial resources (i.e., sibling number, value of filial obligation, intergenerational relationship, work stress, family stress, and internal locus of control) influenced the multiple domains of filial anxiety (i.e., Filial Anxiety-Ability, Filial Anxiety-Responsibility, and Filial Anxiety-Welfare) and care preparation (i.e., Awareness-Decision, Avoidance, Information Gathering, and Concrete Planning). By integrating the same theories, this study also explored the mechanism of care preparation steps and its relationships with stressors and filial anxiety.

A face-to-face questionnaire survey was conducted among 530 Chinese adult children aged between 26 and 40 years in Shenzhen. The Filial Anxiety Scale and PFCN Scale were adapted and validated for Chinese adult children. For the Filial Anxiety Scale, a new factor (i.e., Filial Anxiety-Responsibility) emerged beyond the original two-factor structure. For the PFCN Scale, the original five-factor structure was transformed into a four-factor one by merging the Awareness and Decision Making domains.

Survey results demonstrated that Chinese adult children experienced a moderate level of overall filial anxiety and a particularly high level of filial anxiety about parents' welfare. They engaged in a moderate level of care preparation but with a particularly high level of Awareness-Decision and a low level of Concrete Planning. Adult children with higher work and family stress, with fewer siblings, and whose parents lack eldercare resources were more likely to experience high level of filial anxiety. Those who were female, aged 30 years and below and had parents living in Shenzhen were less likely to engage in care preparation. Parents with limited eldercare resources, higher anticipated parental care needs, better intergenerational relationship, and higher internal locus of control were factors that may promote care preparation.

Path analyses results supported successive steps of care preparation. Besides, the engagement in Awareness-Decision may reduce Filial Anxiety-Ability and Filial Anxiety-Responsibility but exacerbate Filial Anxiety-Welfare. Information Gathering may also increase Filial Anxiety-Responsibility. Concrete Planning was consistently related to reduced filial anxiety. In certain path models, the mediation effects of anticipated parental care needs and care preparation, and their serial mediation effects were supported.

This study has implications for understanding Chinese adult children's level of filial anxiety and engagement in care preparation with validated scales; identifying adult children who are particularly anxious about providing filial care and inadequately prepared for future

caregiving; supporting theoretical integration to explore relationships among stressors, proactive coping strategies and stress; and facilitating the development of family-friendly policies and care preparation interventions targeting specific steps to alleviate adult children's potential caregiving burden, and prepare them for future caregiving. (495 words)

PUBLICATIONS ARISING FROM THE THESIS

A. Journal Articles and Book Chapters (*corresponding author)

Liu, C., Zhou, S., & Bai, X. (2021). Ageing in China. In H. Selin (Ed.), *Ageing Across Cultures: Growing Old in the Non-Western World*. Springer International Publishing.

Bai, X., **Liu, C.***, Song, Y. J. & Sorensen, S. (2021). Adaptation and validation of the Preparation for Future Care Needs Scale for Chinese older adults in Hong Kong. *The Gerontologist. Online first.*

Liu, C. & Bai, X., & Knapp, M. (2021). Multidimensional retirement planning behaviors, retirement confidence, and post-retirement health and well-being among Chinese older adults in Hong Kong. *Applied Research in Quality of Life. Online first.*

Liu, C. & Bai, X. (2019). Kin Availability. In D. Gu & M. E. Dupre (Eds.), *Encyclopedia of Gerontology and Population Aging*. Springer International Publishing.

B. Peer-Reviewed Conference Presentations

Liu, C. & Bai, X. (2021, November, oral presentation). *Filial Anxiety of the Post-80s Generation in China: Assessment and Service Implications.* The 15th Global Conference on Ageing Rights Matter, 9-12 November, 2021, Held online from Niagara Falls, Canada.

Liu, C. & Bai, X. (2021, March, oral presentation). *Anticipation and preparation for future elder care.* The 7th Asian Conference on Ageing & Gerontology, 29-31 March, 2021, Held online from Tokyo, Japan.

Liu, C. & Bai, X. (2019, October, oral presentation). *Adaptation and validation of the Preparation for Future Care Needs Scale for Chinese older adults in Hong Kong*. The

11th Asia/Oceania Congress of Gerontology and Geriatrics (Health & Wellbeing in the Silver World: From Bench to Policy), 23-27 October, 2019, Taipei International Convention Center, Taipei, Taiwan.

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to everyone who have supported me during the wonderful PhD journey. This is an amazing, rewarding, and bittersweet experience that I can never imagine before. Pursuing a PhD is the best decision I ever make.

First and foremost, I want to express my utmost gratitude to my chief supervisor Dr Bai Xue. I can't find proper words to express my deep gratitude for her. Without her, I can never have the opportunity to realize my potential as a researcher. She is a role model for all aspects of my life. Her values, attitudes, and behaviors not only inspire me to become an exceptional researcher, but also motivate me to become a responsible, independent and loving person.

Second, my sincere appreciation also goes to Prof. Chen Juan, Prof. Daniel Lai, and Prof. George Leeson, for sharing their expert advice for improving my study; and Dr Xu Ying, for offering generous support for me during my fieldwork. I also want to express my sincere gratitude to Professor Wong Yu-cheung and Dr Vivien Lou for their very insightful and constructive suggestions for my thesis revision.

Third, I also would like to thank my fellow classmates and colleagues for making my PhD journey unforgettable. Special thanks go to my fellow friends Mr. Zhou Qiushi, Mr. Zhou Shuai, Ms. Zhou Jiajia, Ms. Chen Xiaoyan, and Ms. Ding Qifan for their generous support at different stages of my study.

Last but not least, I owe my deepest gratitude to my family and friends for their unconditional love and support. Thank you.

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Chapter 1 Introduction

1.1 Choice of Research Topic

In a widely circulated photograph, Chinese photographer Zhang Shenjun captures a scene of an adult male child sitting between his parents' hospital beds. In this photograph, a weary only child looks at his sick parents, who are lying down and attached to various life-sustaining machines. This photo has sparked extensive discussions about the eldercare dilemma faced by adult children in China. A perfect example of the eldercare challenges Chinese families face, the man in the photo represents the one-child generations who will soon be overwhelmed by the economic and emotional pressures of caring for their ageing parents.

On the online discussion forum Zhihu, a user describes the pressure they feel regarding the eldercare they must provide to their parents: "I can't be poor, I can't be sick, I can't die…because I am the only source of eldercare for my parents." Another adult child talks about his experience of being the main supporter of his family. He and his wife are responsible for the care of their four parents, all aged over 60. Additionally, his parents are still caring for their parents, who are already in their nineties. They will soon become his responsibility too. He also has a toddler to raise. His parents and parents-in-law are still living independently, but with some chronic diseases. Recently, his father had a heart attack and had to have an extended stay in hospital. He had to hire domestic helpers for his father and his grandparents during this time. Every night, he went to sleep calculating how much money was left in his bank account and woke up in the morning with worries about the future.

These eldercare concerns are likely to be even more pronounced among the growing number of Chinese young adults who choose to work in or immigrate to a city away from their hometown. As an only child myself, I am very concerned with the future eldercare of my parents, who are living thousands of miles away from me and are now entering their sixties. Every night, they expect a video chat with me. Every year, I go back home, and they are pleased

but want me to stay longer. Every time I go back home, I notice that they appear a bit different from how they looked last time, with more gray hair and additional minor health problems that they have failed to mention in our daily talks. Each visit, I become increasingly aware of their age and feel the pressure of providing financial support and the emotional and personal care they will need in the future. Although they are still living independently and are seemingly healthy, I can anticipate that one day they will become sick, lying in the hospital, in need of daily living assistance, and I will be there without help from any siblings. I will still need to deal with the work and personal pressures of my own life, simultaneously. I am worried that I will not be able to take good care of them like they did my grandparents.

Many of my friends and people of a similar age are experiencing the same concerns. According to a survey conducted by the Social Investigation Center of *China Youth Daily*, 86.1% of a sample of 1,876 young adults aged between 18 and 35 years expressed concerns about their parents' future care, specifically the financial, emotional, and personal aspects (Du & Jiao, 2019). Despite the widespread eldercare concerns, little research previously conducted regarding this topic. Therefore, I sought to focus my research on the eldercare concerns among Chinese one-child generations.

Older Chinese adults are experiencing concerns and uncertainty regarding the various eldercare options that are available to them. Because of the changing sociocultural contexts, many older adults have modified their attitudes toward filial caregiving (Bai, 2019a, 2019b; Bai, Lai, & Liu, 2020); however, little is known about adult children's attitudes and behaviors toward future caregiving. The extent to which Chinese adult children experience anxiety and stress toward future eldercare is unknown. In addition, the questions as to what factors are related to this stress and what are potential buffers of this stress warrant exploration.

I believe my study will have both theoretical and empirical implications for this topic and that it can facilitate the development of effective interventions, public education programs, and

policies to reduce the caregiving concerns among adult children, prevent their future caregiving burden, and better prepare them for their parents' future care needs.

1.2 Research Background

1.2.1 Eldercare Crisis in China

In the late 1970s, the Chinese government launched the one-child policy owing to concerns about overpopulation and economic development goals (Peng, 1991). This family planning policy limited most families to have only one child, particularly in urban areas (Gui & Koropeckyj-Cox, 2016). In 2015, the Chinese government abolished this policy. Children born during the time of the policy are referred to as the "one-child generations."

The one-child policy prevented more than 400 million births and shifted the family structure of urban families to that of a couple with only one child (Xu & Feng, 2012). It took only one-third of a century for China to become a country with a low fertility rate. However, the one-child policy has also had many unintended outcomes, including fast population ageing, shrinking family sizes, and an oversimplified family structure. In China, people aged 65 years and older has reached 164.5 million by 2019 (United Nations, 2019), which accounted for 11.5% of China's total population. Additionally, the United Nations (2019) has projected that the economic old-age dependency ratio will rise from 18.7 to 30.9 per 100 working-aged adults by 2030.

In Chinese society, older adults mainly rely on family, especially adult children, for eldercare. Before the implementation of the one-child policy, the majority of Chinese families had multiple children who can share caregiving tasks when parents get old (Zhan, 2002). However, the one-child policy has threatened the very basis of such support. The one-child generations may have to provide eldercare for parents with few or no sibling support. The

scarcity and irreplaceability of the only child increase the eldercare risks for these one-child families (Xu & Feng, 2012).

At a similar time to the one-child policy, China began its market-oriented economic reform, which have also influenced traditional caregiving patterns in China. Since the late 1970s, expanding employment opportunities and relaxation of the hukou system have accelerated migration for Chinese people (Gui & Koropeckyj-Cox, 2016). According to the latest data (Statista, 2021), the number of migrant workers in China reached 285.6 million in 2020. Such socioeconomic changes have made coresidence with older parents more complicated than it once was. Future younger cohorts are likely to live farther from their parents, challenging the traditional caregiving pattern.

1.2.2 Eldercare Dilemma Faced by Chinese Adult Children

The traditional family-based eldercare pattern in Chinese society highly emphasizes the value of filial piety, one of the essential virtues in China. It requires children to respect, obey, and support their parents (Legge, 2004). Children internalize this value from an early age and believe respecting and caring for parents to be an obligation (Gui & Koropeckyj-Cox, 2016). Although evidence indicates that cultural values in Chinese society are steadily shifting from collectivism toward individualism, with people encouraged to pursue personal interests and self-fulfillment (Bai, 2019a; Bai, 2019b; Bai et al., 2020; Zhu & Ouyang, 2015), the belief in filial piety, particularly on filial care, has remained strong in Chinese people's lives.

As their parents' primary providers of eldercare, the one-child generations are caught between the deeply rooted cultural values of filial care, close ties with parents and the structural constraints imposed by geographical distance, working and living pressure, and unavailability of other sources of caregiving support (Gui & Koropeckyj-Cox, 2016). The conflict between work and family roles has become a major concern in their lives, and adult children have become less available for eldercare. Moreover, China's basic national condition of "getting old

before getting rich" shows that its long-term care system is still underdeveloped. The availability, affordability, and quality of public eldercare services are of concern. Thus, Chinese families are faced with few alternatives or additional support options. These contradictions created by the structural forces have led to the eldercare dilemmas faced by the one-child generations.

1.2.3 Filial Anxiety and Preparation for Future Caregiving

Adult children anticipating their parents' need for support may face considerable uncertainty and concerns. Studies have reported that the anticipation of caregiving responsibilities for parents in the future is anxiety provoking for young adults (Shrira et al., 2019). As their parents age, adult children may pay more attention to their parents' well-being and become more worried and anxious (Morais et al., 2019). High level of filial anxiety may impair adult children's care ability, which may affect the quantity and quality of support they provide to their parents (Cicirelli, 1989; c.f. Morais et al., 2019).

For the one-child generation in China, future parent care is complicated by factors including their capacity and availability, their parents' needs, availability of public eldercare services, and policies (Gui & Koropeckyj-Cox, 2016). With few alternative sources, adult children are likely to be worried about the extent of help that might be required in the future and whether they would be able to manage this burden, and thus experience stress when they anticipate taking on the caregiver role. However, few studies have explored the phenomenon of filial anxiety among Chinese adult children as well as its contributing factors and potential buffers.

As suggested by the proactive coping theory (Aspinwall & Taylor, 1997), proactive coping strategies can be beneficial for preventing negative effects of anticipated stressors. Care preparation activities can be regarded as a form of proactive coping that has the potential to reduce the stress caused by future eldercare needs. Although scholars have frequently

suggested that Chinese adult children should prepare themselves for future caregiving and participate in care preparation activities that can effectively buffer the caregiving burden that they anxiously anticipate, no empirical studies have been conducted on their level of engagement in care preparation activities or the influences of such activities.

1.3 Significance and Objectives of the Research

1.3.1 Significance of the Research

The oldest members of the one-child generation are already in their forties, and most of their parents are in their sixties. Because the parents of the one-child generations are stepping into their old age, the challenges of eldercare are imminent. Studies have increasingly focused on care provision crisis in China, family structure and living arrangements, desired care arrangements, and values of eldercare among ageing parents (e.g., Feng, 2009a, 2009b). However, little attention has been paid to individuals who will perform the caregiving activities. Determining how such individuals anticipate and cope with the numerous uncertainties involved in caregiving tasks in the future is crucial. The current study contributes to the relevant literature in the knowledge, theoretical and practical aspects by examining attitudes and behaviors of the Chinese one-child generations before the onset of caregiving.

The first aspect pertains to the knowledge contribution of this study; specifically, this study investigated the level and a wide range of influential factors of filial anxiety as well as the extent, characteristics, and possible buffering role of care preparation activities among members of the one-child generation. The second aspect pertains to the theoretical contribution; specifically, this study constructed an integrated model to understand the relationships between multiple stressors, care preparation steps and filial anxiety. This model, tailored to potential adult child caregivers, integrates the Stress Process model, proactive coping theory, and Preparation for Future Care Needs Model. This integrated model also addresses the insufficient

examination of anticipatory stressors in the literature on stress coping. The third aspect concerns practical suggestions for the development of services and policies to support caregiving preparation and enhance formal support for the one-child generations. Although existing studies have acknowledged the importance of sharing the eldercare burden among the government, the community, and families, they have not proposed applicable strategies or examined the effectiveness of relevant strategies at the personal or family level. A detailed understanding of filial anxiety and care preparation experience among adult children can inform the development of targeted services and policies to alleviate attitudinal and behavioral unpreparedness for eldercare and broaden family services to encompass care preparation interventions.

1.3.2 Objectives of the Research

Specific research objectives are outlined as follows:

(1) To investigate the levels and characteristics of filial anxiety among Chinese adult children and their engagement in care preparation activities.

(2) To explore the influences of primary stressors (i.e., parent's declining health, adverse psychological health, lack of retirement pension, lack of medical insurance, and lack of housing ownership), anticipatory stressor (i.e., anticipated parental care needs), and psychosocial resources (i.e., sibling number, value of filial obligation, intergenerational relationship quality, family stress, work stress, and internal locus of control) on filial anxiety and its subdomains and on care preparation steps.

(3) To examine the relationships among primary stressors, anticipatory stressor, step-by-step care preparation activities and filial anxiety by testing an integrated model.

1.4 Thesis Overview

This thesis contains nine chapters. **Chapter 1** introduces the study's rationale, an overview of

the background for the topic, and the significance and objectives of the study. **Chapter 2** and **Chapter 3** provide a critical review of existing theories and empirical studies regarding filial anxiety and care preparation and identifies research gaps. **Chapter 4** presents the theoretical framework, research questions and hypotheses for the current study. **Chapter 5** introduces the research methodology, including the choice of research site, sampling strategies, data collection method, and data analysis procedures. **Chapter 6** presents the results of scale validation. **Chapter 7** shows the descriptive statistics of study variables and the results of linear regressions to identify factors related to filial anxiety and its three subdomains. **Chapter 8** presents the results of linear regressions to identify factors related to the steps of care preparation and path analysis results of the integrated model. **Chapter 9** provides a discussion of the research findings and discusses the implications and directions for future studies.

Chapter 2 Literature Review (I): Filial Anxiety

2.1 Brief Introduction

In this chapter, the literature on filial anxiety among adult children is reviewed to obtain a comprehensive understanding of its theoretical underpinnings, conceptualization, influential factors, and potential consequences. Based on the results of literature review, several key research gaps are identified.

2.2 Literature Review Methods

2.2.1 Guiding Questions of Literature Review

The literature review on filial anxiety was guided by the following research questions: (1) What theories have been adopted to understand adult children's filial anxiety? (2) How have studies conceptualized adult children's filial anxiety? (3) What are the factors related to filial anxiety and what are its possible consequences?

2.2.2 Search Strategy

Databases including EBSCOhost, JSTOR, PsycINFO, ProQuest, Digital Dissertation Consortium, and the Chinese database China National Knowledge Infrastructure (CNKI) were systematically searched. A lexicon of key words was generated after a pilot search of the selected databases. With the exception of CNKI, combinations of the following key words were used to search for studies on filial anxiety in the databases: "adult child*" AND "anticipat*" AND ("elder* care" OR "filial" OR "caregiving") AND ("worr*" OR "concern*" OR "anxiety" OR "stress"). In the database of CNKI, key words of "子女" AND ("养老" OR "孝道") AND ("焦虑" OR "担忧") were used. Relevant studies were searched for from database inception until July 2021. This broad period was chosen because of the lack of systematic reviews on this research topic since its emergence.

2.2.3 Inclusion and Exclusion Criteria

The inclusion criteria for the review were as follows: (1) reports, reviews, book chapters, conference papers, dissertations, and journal articles related to the research topic of adult children's filial anxiety, (2) published in English or Chinese, and (3) published before August 2021. The exclusion criteria were commentaries and other unpublished documents as well as any publication in languages other than English or Chinese. Studies were also identified from the reference lists of previously identified works. Abstracts or summaries of all articles identified were reviewed, and the eligibility of the studies was determined by the researcher based on their relevance to the study topic.

2.3 Theories Related to Filial Anxiety

2.3.1 Filial Crisis and Filial Maturity

Blenkner (1965) first introduced the construct of "filial crisis" to serve as an appropriate theoretical model for middle-aged children facing the major task of caring for their ageing parents. According to Blenkner (1965), most individuals in their forties and fifties experience a transitional stage of "filial crisis," during which they perceive their ageing parents' increasing need for support. In this developmental stage, the provision of assistance is no longer unilateral (i.e., from parents to children), and adult children begin to provide support and assistance to their parents, resulting in a more mature intergenerational relationship (Cicirelli, 1988). In this transitional stage from young adulthood to mature adulthood, middle-aged children must learn to accept and meet their parents' dependency needs.

Blenkner (1965) also introduced the concept of "filial maturity" as a solution to the "filial crisis" of middle age. "Filial maturity" refers to a developmental stage during which the adult child begins to recognize their parent as an individual with a personal history, limitations, needs, and goals outside of their parental role. Filial maturity occurs when children reach an age at which they can relate to their parents as equals (Fingerman, 1996). Studies have identified the

following three dimensions of filial maturity: acceptance that the other party has weaknesses, the perception of the other as a peer (Nydegger, 1991), and engagement in an empathetic, compassionate, and reciprocal parent–child relationship that includes an awareness of parents' needs and limitations (Fredriksen & Scharlach, 1996). The concept of filial maturity characterizes the healthy transition from genital maturity to old age (Blenkner, 1965).

Following Blenkner's introduction of these concepts, scholars have criticized the view that filial maturity is a successful solution to the filial crisis of middle age. Brody (1985) argued against the developmental stage of "filial maturity," because parent care is not linked to a particular age. Moreover, the experiences of middle-aged adults are so diverse that filial crises and their solutions cannot be defined in behavioral terms. Brody (1985) stated that no single developmental stage exists in which the main concern is the clearly formulated task of parent care. Instead of defining filial maturity as a crisis that occurs during middle age and considering it as developmental stage, it can be regarded as the result of a dynamic and gradual process that develops throughout the parent–child relationship (Fredricksen & Sharlach, 1996).

2.3.2 Life-Span Attachment Theory

Another theoretical construct used to explore adult children's concerns toward anticipated eldercare is life-span attachment theory and the concept of "filial anxiety" developed by Cicirelli (1988).

Life-span attachment theory (Bowlby, 1979; Cicirelli, 1983) originated in the study of the infant–mother relationship and proposes that this attachment does not end in childhood or early adolescence but endures throughout life. However, attachment behaviors vary at different life stages. In infancy and early childhood, attachment is inferred from the child's behavior in their desire to maintain proximity and contact with the parent; in adulthood, when the desire for physical closeness and contact become impractical, attachment behaviors are manifested in a stage-appropriate manner through distanced, periodic communication facilitating

psychological closeness and contact as well as through visits to the parent to reestablish physical closeness and contact (Cicirelli, 1983, 1988).

In adulthood, a protective aspect of attachment develops. The child desires to maintain the existence of the attachment figure and avoids losing him or her. This protective behavior is complementary to the attachment behaviour. Because rather than merely restoring proximity, the adult child cares about protecting the attached figure (Cicirelli, 1983, 1988). Caregiving behavior is a form of such protective behavior, demonstrating the adult children's attempts to support the survival of their parents for preserving the emotional bond. Therefore, when an elder parent is perceived as having a decreasing life expectancy and exhibiting signs of health decline, adverse symptoms, or actual illness, the adult child desires to protect the parent from this threat (Cicirelli, 1983, 1988).

According to Cicirelli (1988), the adult child may experience a continuing sense of anxiety about the parent's welfare on account of the inevitability of the parent's death and the failure of the child's protective efforts. The adult child also realizes the difficulty of the caregiving task required to protect the parent from continued decline, compounding the feelings of anxiety in anticipation of failing in this task. Therefore, according to life-span attachment theory, anxiety toward anticipated eldercare is rooted in the adult child's attachment to the elder parent and the child's efforts to preserve the parent's life (Cicirelli, 1983, 1988). Cicirelli (1988) further termed this feeling of anxiousness as "filial anxiety." Under the guidance of this theory, better intergenerational relationship quality is supposed to be related to higher level of filial anxiety.

2.3.3 Multilevel Concept of Ambivalence

The multilevel concept of ambivalence contributes to an understanding of filial anxiety through the linking of sentiments and emotions at an individual level to the opportunities and constraints embedded at a social structural level.

Ambivalence comprises "psychological ambivalence" at an individual level and "structural ambivalence" at a social level. Lorenz-Meyer (2004, p. 247) defined "structural ambivalence" as simultaneously "opposing offerings, directives, or guidelines for action inherent in institutional structures, such as state agencies or social policies." Ambivalence at a structural level is experienced as "psychological ambivalence" at an individual level, with mixed feelings or a coexistence of contradictory sentiments and expectations (Connidis, 2015). Furthermore, Connidis and McMullin (2002) explained "sociological ambivalence" as the contradictions and conflicts that are created through structural forces and which "are made manifest in the social interactions of family life and must be worked out in family members' encounters with one another" (Connidis, 2010, p.140). For instance, sociological ambivalence arises when an individual is faced with a specific situation that simultaneously values opposing courses of action that are rooted within the social structure. As social actors, individuals wish to exercise agency in the negotiation of relationships, and in this process, structural ambivalence induces psychological ambivalence (Connidis, 2015). The concept of sociological ambivalence links contradictory feelings to structured ambivalence (Connidis & Walker, 2009).

Connidis and McMullin (2002) argued that in situations involving a parent's declining health and the consequent need for support, ambivalence is especially visible. In such cases, ambivalence triggers family interaction by evoking the desire for negotiation among social actors searching for solutions. Gui and Koropeckyj-Cox (2016) adopted the framework of "structural ambivalence" and "psychological ambivalence" to explain the concerns about future eldercare among only children from migrant Chinese backgrounds in Canada. Chinese adult children often have strong commitment to and emotional bonds with parents but their

filial care expectations and practice are constrained by many structural barriers. This structural ambivalence can induce feelings of stress and concern in adult children (Gui & Koropeckyj-Cox, 2016). Therefore, as suggested by this perspective, adult children's stronger value of filial obligation, less sibling number which results from the government policy, higher levels of work stress and family stress could be related to higher level of filial anxiety.

2.4 Conceptualizations of Filial Anxiety

Scholars have offered different conceptualizations of filial anxiety. Whitbeck and colleagues investigated it as filial concern which referred to "the degree to which the adult children felt concerned or responsible for their parent's well-being" (Whitbeck et al., 1994, p.S88). This was operationalized as "whether the adult child felt he or she should keep in close touch with parents to be sure nothing was wrong" and "the degree to which [they] felt uneasy about being away from parents for too long now that they were getting older" (Whitbeck et al., 1994, p.S88). Hansson et al. (1990) investigated adult children's general concerns about their parent's privacy and independence. In a Chinese study (Chen et al., 2021), researchers conceptualized eldercare concern as the degree to which adult children worried about supporting their parents.

The majority of relevant studies have adopted the conceptualization introduced by Cicirelli (1988). He conceptualized filial anxiety as a multidimensional concept comprising the worry about the ability to meet anticipated caregiving needs (FAA) and the concern about the anticipated decline and death of an ageing parent (FAB), either prior to or during the provision of care (Cicirelli, 1988). Cicirelli (1988) also developed and validated a scale to measure the two dimensions of this concept. The current study adopted this two-dimensional conceptualization of filial anxiety and referred to these two domains as "Filial Anxiety-Ability" and "Filial Anxiety-Welfare".

2.5 Factors Related to Filial Anxiety

Gender has been widely reported to be associated with filial anxiety (Chongva, 1989; Laditka & Pappas-Rogich, 2001; Morais et al., 2019; Murray et al., 1995). Murray et al. (1995) found that men's scores on FAA typically exhibited greater fluctuations than women's scores, although overall, the average level of FAA anxiety experienced by men and women was essentially the same. Cultural background can affect women's experiences of caregiving, prompting them to be more mindful of the eventuality of this role. Thus, women may experience a more consistent level of anxiety in expectation of parental caregiving demands. Furthermore, women are more likely than men to exhibit guilt and frustration over their parents' dissatisfaction. Scores on FAB also revealed statistically significant differences between men and women; although the configuration of their FAB scores was similar, women consistently recorded significantly higher FAB scores than men (Murray et al., 1995).

In a study with 188 adult children having parents aged over 65 years, Chongva (1989) identified that among participants with high self-esteem, daughters expressed significantly more concern regarding ageing parents' welfare than did sons. Similarly, in a sample of 304 middle-aged men and women, Morais et al. (2019) reported that women had a significantly higher level of filial anxiety concerning parents' welfare than men. Among 221 older participants aged over 60 years recruited through convenience sampling, Laditka and Pappas-Rogich (2001) also identified higher levels of anxiety for women than for men, who were providing care for their families or not during the study period. In her study of 271 participants aged 19 to 55 years, Jackson (1995) revealed that women exhibited significantly higher scores than men in regards to filial anxiety over parents' welfare.

In terms of age, the findings of previous studies have been inconsistent. Morais et al. (2019) discovered that younger age was related to a high level of filial anxiety. However, Jackson (1995) reported that FAB was significantly related to age, but FAA was not. Murray

et al. (1995) stated that the level of filial anxiety fluctuated with age, with people experiencing the highest level of filial anxiety at the age of 51 to 60 years.

In addition to gender and age, Cicirelli (1988) undertook a study of 71 adult children aged between 35 and 64 (mean age of 46.2 years) who had a parent living independently and identified that the adult children's educational level, occupational status, psychological resources (i.e., internal control), and perception of parents having self-destructive health behaviors were significantly correlated with their worries about their caregiving abilities; strength of attachment, perception of the parent's declining health, and parent's mobility were correlated with worries about older parents' well-being; and anxiety about their own mortality, stimulated by the declining health of their parent, was significantly related to both types of filial anxiety (Cicirelli, 1988).

Moreover, being unemployed, mental representation of caregiving factors, and insecure attachment were significant predictors of high levels of filial anxiety (Morais et al., 2019). Specifically, younger age, being unemployed, and the mental representation of caregiving predicted high levels of FAA; the mental representation of caregiving factors and insecure attachment were significant predictors of high levels of FAB. However, the level of care these middle-aged children were providing to their parents was unclear. According to Laditka and Pappas-Rogich (2001), individuals who have served as caregivers have higher levels of anxiety than individuals who have never provided care to family members, and individuals with a favorable health status and greater income have lower levels of anxiety than those with a poorer health status and lower income.

In a longitudinal study conducted with 451 middle-aged adult children couples (Whitbeck et al., 1994), perceived early parental rejection was negatively associated with filial concern, whereas affectual solidarity was positively related to filial concern. Relationship strain was negatively related to filial concern between sons and fathers. Similarly, after controlling

for age and education, relationship quality with the mother (i.e., both conflict with and admiration from the mother) were positively related to filial anxiety, but intimacy with the mother was negatively related to filial anxiety (Cieslinski & Friedlmeier, 2011). Middle-aged daughters who were anxious about relationships (anxious attachment) also exhibited high levels of filial anxiety (Cieslinski & Friedlmeier, 2011). However, in this study, few participant details were reported (e.g., sampling method and whether they were currently caregivers). In addition to contemporary relationship quality, recalled early maternal bonding was also positively and indirectly connected to filial concern about the mother's welfare (FAB) through adult attachment and filial responsibility (Datta et al., 2005). One study conducted in Taiwan (Chuo & Li, 2008) revealed that adult children's value of filial responsibility was positively related to anxiety about older parents' well-being but negatively related to anxiety about their caregiving abilities. The number of siblings did not influence adult children's filial anxiety (Chuo & Li, 2008).

A study of 188 adult children with older parents aged over 65 years revealed that adult children with low self-esteem scores had significantly higher levels of filial anxiety than those with high self-esteem scores (Chongva, 1989). In her examination of the relationship between self-actualization (measured by time competence and inner direction) and filial anxiety, Jackson (1995) reported that inner direction was negatively correlated with FAA and FAB, and time competence was negatively correlated with FAB. However, the correlation between inner direction and FAA and that between inner direction and FAB were only significant for women.

In regards to parent-related factors, Bradley et al. (2008) revealed that a mother's favorable health status was correlated with a low level of anxiety, and parent's health status and parents living alone were negatively and positively related to filial concern, respectively (Whitbeck et al., 1994). Moreover, parent's increased dependence on Basic Activities of Daily Living (BADL) predicted high levels of FAA, but attachment was not a significant predictor

of FAA. Parent's increased dependence on Instrumental Activities on Daily Living was a significant predictor of high levels of FAB, and parent's increased dependence on BADL was a significant predictor of high levels of total filial anxiety. However, the level of care these middle-aged children were providing to their parents was unclear (Morais et al., 2019). Furthermore, parental exposure to the Holocaust and especially parental PTSD were related to higher levels of filial obligation, which was further related to higher levels of filial anxiety (Shrira et al., 2019).

Cicirelli (1989) proposed that filial anxiety may impair adult children's care ability, which may affect the quantity and quality of support they provide to their parents (c.f. Morais et al., 2019). However, empirical studies have identified some positive consequences. Filial concern consistently predicted instrumental and emotional support, including the provision of transportation, health care, and emotional support (Whitbeck et al., 1994). FAB was directly associated with the probability of their approaching a parent to discuss concerns about that parent's health (Fowler & Afifi, 2011; Hay et al., 2008). Fowler and Afifi (2011) also discovered that although FAA negatively influences adult children's information-seeking from their parents regarding their preferences for eldercare, FAB positively influences information-seeking in this regard. Therefore, FAA may reduce coping efficacy, whereas FAB is associated with increased coping efficacy.

2.6 Summary of Research Gaps

The thorough review of relevant studies showed a main focus on adult children in the late middle age and limited attention on younger adult children. In addition, nearly all of relevant studies were carried out in Western societies. Social and cultural factors may shape the manner in which people endorse parental caregiving. Therefore, carrying out relevant studies under the unique sociocultural context in China is necessary. Moreover, when examining filial anxiety

among adult children, most studies were guided by the psychological perspective of life-span attachment theory. As a result, adult children's attachment style, intergenerational relationships, and personality traits were the most frequently examined correlates. A more comprehensive theoretical framework should be adopted to study a broader range of factors related to filial anxiety and its potential buffers.

2.7 Filial Anxiety Through the Lens of Stress Process Model

In view of the abovementioned research gaps, the Stress Process Model can be a useful perspective to guide further studies on filial anxiety. This model was developed by Pearline and his colleagues (Pearlin et al., 1981), and has been widely used to study various personal stresses, especially in family caregiving research to understand caregiver stress (Pearlin et al., 1990). This framework mainly contains four components (Pearlin & Bierman, 2013): 1) sociodemographic characteristics as background factors; 2) stressors, including primary and secondary stressors; 3) psychosocial resources as mediators/moderators; and 4) mental health outcomes. This model has not been used to understand filial anxiety but can be particularly helpful to explore a broader range of related factors and guide the investigation of potential buffers.

One of the features of the Stress Process Model is its emphasis on the influences stemming from the ***background factors*** of caregivers (Pearlin & Bierman, 2013; Pearlin, et al., 1990). Personal socioeconomic status and demographic characteristics as contextual factors are assumed to be entwined with each of the stress components. In the current study, adult children's age, gender, educational level, and income level may relate to filial anxiety. For example, as adult children age, their anxiety over the ability to assume a caregiving role and over their parents' well-being are expected to increase because its necessity becomes more imminent; adult children with high education and income levels may feel less anxious about

the possibility of assuming a caregiving role because they may have more access to informational and instrumental resources to provide eldercare. Moreover, the gender of adult children may also influence their filial anxiety due to different caregiving expectations for women and men. As suggested by previous studies in Western societies, women have historically incurred the responsibilities associated with parental caregiving, and thus may have more acute filial anxiety (Murray et al., 1995). However, under the traditional Chinese cultural expectations, sons are preferred to provide filial care, and thus may also be more mindful of the role of caregiver and experience a higher level of anxiety than daughters as demands for parental caregiving arise (Chuo & Li, 2008).

At the core of the Stress Process Model, ***stressors*** refer to difficult circumstances and experiences, including various disruptive life events that can threaten safety and security and upset or end important relationships (Pearlin & Bierman, 2013). Stressors are further divided into primary and secondary. ***Primary stressors*** mainly refer to difficult conditions to which individuals are initially exposed. In family caregiving, primary stressors mainly refer to problematic situations that stem directly from the needs of care recipients and the nature and magnitude of care required (Pearlin et al., 1990). In the current study, parent's declining health status, adverse psychological health, and lack of eldercare resources such as retirement pension, medical insurance, and housing ownership, may indicate the difficulty and magnitude of future care needs, and thus possibly relate to an increased level of filial anxiety. Especially in a tier-one city like Shenzhen, parent's lack of housing ownership may pose great challenges for future caregiving. Investigation of the role of these factors may have significant practical implications but have not been previously explored.

Secondary stressors may refer to those that emerge from primary stressors. This process, also referred to as stress proliferation, is an important feature of the Stress Process Model that extends the vision beyond the impact of a single stressor at a single point in time and pay

attention to the configuration of multiple stressors that simultaneously or serially affect people's lives (Pearlin & Bierman, 2013). In the current study, the primary stressors that indicate the difficulty of future caregiving may further give rise to adult children's anticipation of the amount of necessary care (i.e., anticipated parental care needs), which has the potential to serve as a secondary stressor and relate to an increased level of filial anxiety. Notably, although scholars of stress and coping research (e.g., Pearlin & Bierman, 2013) call for more attention to ***anticipatory stressors***, a unique form of stressor that has not been frequently examined as a part of the Stress Process Model. For the first time, the current study investigated the role of anticipated parental care needs as an anticipatory stressor influencing filial anxiety and examined the stress proliferation process.

In addition, the Stress Process Model is useful in deepening the investigation on filial anxiety given its emphasis on the role of ***coping strategies*** in buffering the effects of stressors on people's mental health. According to Pearlin and Bierman (2013), coping strategies can function as both mediators and moderators, explaining and modifying the relationship between the stressors and mental health outcomes. However, anticipatory stressors are different in that they are assumed rather than extant. Therefore, they require a different form of coping strategy to buffer their potential effects. According to the proactive coping theory (Aspinwall & Taylor, 1997), ***proactive coping strategies*** can be useful to mitigate or mute the potential negative impacts of anticipatory stressors. Assuming future care needs as potential stressors, care preparation activities have been explored as a form of proactive coping strategy. Thus, in the current study, care preparation activities have the potential to serve as buffers of filial anxiety. The next chapter then reviewed literature on care preparation among adult children.

Chapter 3 Literature Review (II): Care Preparation and Its Role in Filial Anxiety

3.1 Brief Introduction

In this chapter, the proactive coping theory is first introduced to understand the potential buffering role of care preparation in filial anxiety. Next, the literature on care preparation among adult children is reviewed to obtain a comprehensive understanding of its theoretical underpinnings, conceptualizations, influential factors, and possible consequences. Based on the results of the literature review, research gaps are summarized.

3.2 Care Preparation and Filial Anxiety Through the Lens of Proactive Coping Theory

Aspinwall and Taylor (1997) developed the proactive coping theory to explain how people anticipate or recognize potential stressors and act in advance to modify its effects. However, similar to the Stress Process Model, the proactive coping theory has never been used to study filial anxiety. In fact, this theory has considerable potential to guide the investigation of potential buffers of filial anxiety.

As suggested by Aspinwall and Taylor (1997), proactive coping refers to the "efforts undertaken in advance of a potentially stressful event to prevent it or to modify its form before it occurs" (p. 417). Different from coping and anticipatory coping, proactive coping is temporally advanced and deals with anticipated and potential stressors rather than extant or immediate ones. Proactive coping examines people's emotions, thoughts, and behaviors as they anticipate and address potential sources of adversity (Aspinwall, 2011).

Proactive coping theory (Aspinwall, 2011; Aspinwall & Taylor, 1997) involves five interrelated stages in detecting and responding to potential stressors. First, ***resource accumulation*** refers to building a reserve of personal and social resources and skills in advance of any anticipated stressor. Second, ***attention to/recognition of potential stressors*** is carried

out by screening the environment for danger to detect potential stressors. This stage is followed by the ***initial appraisal*** of current and latent status of potential stressors and related assessments. These appraisals further give rise to ***preliminary coping efforts*** to prevent or minimize a recognized stressor. The final step is the ***elicitation and use of feedback*** about the nature and development of a potential stressor and the effects of one's preliminary buffering strategies. The feedbacks are used to revise the initial appraisal and preliminary coping efforts.

With the assumption that future caregiving tasks are stressful events, this theory has been used to study the care preparation among older adults and adult children. Western scholars have investigated the care preparation activities within families as a proactive coping strategy and identified its effectiveness in buffering future eldercare challenges both at individual and at family levels (e.g., Boerner et al., 2013; Sörensen, Webster & Roggman, 2002). Therefore, in accordance with proactive coping theory, care preparation may also buffer the negative influences of primary and secondary stressors in current study and reduce the level of filial anxiety.

3.3 Literature Review Methods

3.3.1 Guiding Questions of Literature Review

The literature review on care preparation was guided by the following research questions: (1) What theories have been adopted to understand adult children's care preparation? (2) How have studies conceptualized adult children's care preparation? (3) What are the factors related to care preparation, and what are its possible effects?

3.3.2 Search Strategy

Databases including EBSCOhost, JSTOR, PsycINFO, ProQuest, Digital Dissertation Consortium, and CNKI were systematically searched. A lexicon of key words was generated after a pilot search of the selected databases. With the exception of CNKI, combinations of the

following key words were used to search for studies on anticipatory care preparation in the databases: “adult child*” AND (“elder* care” OR “filial care” OR “caregiving”) AND (“prepar*” OR “plan*”). For the search in the CNKI database, key words of “子女” AND “养老照顾” AND (“准备” OR “计划”) were used. Relevant studies were searched for in the database from their inception until July 2021. This broad time period was chosen because of the lack of systematic reviews on this research topic since its emergence.

3.3.3 Inclusion and Exclusion Criteria

The inclusion criteria for the review were as follows: (1) reports, reviews, book chapters, conference papers, dissertations, and journal articles related to the research topic of adult children’s care preparation, (2) published in English or Chinese, and (3) published before August 2021. The exclusion criteria were commentaries and other unpublished reports as well as any publication in languages other than English or Chinese. Studies were also identified from the reference lists of previously identified works. Abstracts or summaries of all articles identified were reviewed, and the eligibility of the studies was determined by the researcher based on their relevance to the study topic.

3.4 Theories Related to Care Preparation

3.4.1 Proactive Coping Theory

Proactive coping theory is the most widely used theoretical framework to guide the study of care preparation. As previously introduced, proactive coping involves five interrelated stages to detect and respond to potential stressors, namely, resource accumulation, attention to/recognition of potential stressors, initial appraisal, preliminary coping efforts, and elicitation and use of feedback. In the current study, the recognition of stressors related to future eldercare, such as parent’s declining health, adverse psychological health, lack of eldercare resources, and anticipation of future care needs may initiate the care preparation. Moreover, according to

this theory, individuals' resource accumulation may influence their abilities to adopt proactive coping strategies (Aspinwall & Taylor, 1997). Thus, the current study considered the following indicators: sibling number as a source of informal social support; value of filial obligation as a form of moral capital; intergenerational relationship as a family social capital; and internal locus of control as personal psychological resources that may influence adult children's engagement in care preparation. As such, sibling number, filial obligation, intergenerational relationship and internal locus of control are assumed to be positively related to adult children's level of engagement in care preparation activities. By contrast, as indicators of high-stress environment that may exacerbate the cognitive load and deplete cognitive resources, family and work stress may reduce the opportunities to engage in care preparation (Aspinwall & Taylor, 1997).

3.4.2 Role Theory and Anticipatory Socialization

The concept of "anticipatory socialization" is a theoretical construct that can also be used to explore care preparation. Application of role theory in the familial context emphasizes the roles that individuals occupy within the family entity. "Roles" refer to the enactment of familial activities associated with each familial position (Allen & Henderson, 2017). During family transitions, different roles overlap and interlock, with role strain occurring when the demands of a new role are concurrent with those of a previous role. Some roles, such as caring for elder parents, are particularly demanding and can result in considerable role strain. When adult children work full time and attempt to maintain all the activities they engaged in prior to caregiving, the level of strain can be high. When role strain is at a high level in a system or within relationships, transition into a new role or life course stage is less efficient and more stressful.

Anticipatory socialization is a strategy regarded as useful for families undergoing transitions (Day, 2010). The term "socialization" refers to the process of gradually learning the norms, scripts, attitudes, values, and subtle rules that a person is required to know to be able to function effectively in society. Anticipatory socialization reflects learning that has been undertaken before an individual assumes a role and the application of what they have learned (Merton, 1966). Anticipatory socialization involves the acquisition of new abilities and skills and, in some cases, changes to an individual's reference or social group (Day, 2010). When a person can anticipate a situation and learn from a previous experience (or that of someone else), this increases the probability of smooth and effective subsequent transitions into situations similar to the previous target experience (Day, 2010).

3.5 Conceptualizations of Care Preparation

Researchers have mainly conceptualized and investigated caregiving preparation as a multiphase process, including phases of anticipating and considering, discussing, deciding, and planning. For example, Bromley and Blieszner (1997) designated four key activities (considering, discussing, planning, and deciding) as sequential pre-caregiving steps. Hansson et al. (1990) reported that adult children's consciousness about their parent's needs progresses in an orderly manner over time, from considering the needs, to learning about ageing, and to monitoring their parents in regards to specific areas of concern.

Assuming future caregiving tasks as potential stressors and the care preparation process as a proactive coping strategy, Sörensen (1994) developed a conceptual framework to analyze the preparation process for caregiving in multigeneration families. Based on the same assumption and Sörensen's conceptual framework, Radina (2002) further investigated the process of preparation for parent care among Mexican Americans and identified the three components of caregiver selection and designation, anticipation, and planning. In her more

recent studies, Sörensen and colleagues (2017) have developed a more concise model, namely Preparation for Future Care Needs to Model, together with a validated measurement to study the care preparation process of older adults.

3.5.1 Preparation for Caregiving Model for Multigeneration Families

Based on the life course perspective, role theory, and theories of planning and decision-making from cognitive psychology, Sörensen (1994) developed a conceptual framework for exploring the preparation for caregiving in multigeneration families. Preparation for caregiving is defined as the mental and physical actions related to the four dimensions of anticipation, decision-making, definite planning, and role socialization prior to acting as the caregiver for an older person (Sörensen, 1998). These major dimensions or preparatory behaviors are placed in the context of antecedents that may affect whether and how they are performed and their consequences; that is, the outcomes based on the manner in which families anticipate, plan, or make decisions.

3.5.2 Caregiver Preparation Model

The Caregiver Preparation Model was developed based on Sörensen's (1994) Preparation for Caregiving framework, the theory of proactive coping, and the literature on the traditional values of Mexican American and Hispanic/Latino cultures. Compared with the Preparation for Caregiving Model, which focuses on both the caregiver and care receivers, the Caregiver Preparation Model centers on the care preparation of caregivers and has the two primary components of decision-making and the caregiver socialization/preparation process. The caregiver socialization/preparation process has three secondary components: caregiver selection/designation, anticipation, and planning; as indicated for the Care Preparation Model, the primary component of decision-making influences each of the three secondary components.

Compared with the concept of decision-making in the Preparation for Caregiving Model, which refers to how and in which circumstances individuals decide or assume the role of

caregivers (as well as deciding what type of care to provide, i.e., the decision contents), the decision-making component in the Caregiver Preparation Model indicates the decision-making strategies adopted alongside the socialization/preparation process. This aspect was not addressed in the Preparation for Caregiving Model. Moreover, relative to the Preparation for Caregiving Model, the conceptualization of anticipation in the Caregiving Preparation Model is comprehensive as a result of its inclusion of both consideration and anticipatory socialization. The concept of planning is also expanded in the Caregiving Preparation Model, including the development of plans to manage future caregiving and definite plans for implementation of the plans, with the possibility of an earlier need for these plans. However, it does not have a role socialization concept, which is incorporated into every stage of the socialization/preparation process.

3.5.3 Preparation for Future Care Needs Model

Based on the theories of decision-making, problem-solving, and planning in everyday situations, and the care preparation experiences of older adults, Sörensen and Pinquart (2000a) distinguished four types of preparation activities and developed the Preparation for Future Care Needs Model. First, individuals recognize that they may require care based on awareness of their level of vulnerability. The next activities constitute collecting information, which involves actively seeking out information through other people or the media, and deciding on care preferences (i.e., making decisions after evaluating care requirements and weighing different options). The final step in the planning process prior to plan execution and monitoring is definite planning, which refers to the definite activities that assist in the implementation of plans.

In a further study, Sörensen and Pinquart (2000b) evaluated the model of Preparation for Future Care Needs. By verifying that less definite preparation activities (e.g., recognizing care needs and collecting information) predict more definite ones (e.g., deciding on preferences and

making definite plans), although not always in the expected sequence, they suggested that preparation for future care needs can be conceptualized as a successive process. Nevertheless, some people may disregard certain steps.

To focus specifically on care preparation processes, 29-, 15-, and 5-item Preparation for Future Care Needs measures were developed with multiple items in the following five domains: awareness, collecting information, decision-making, definite planning, and avoidance of care preparation (Sörensen & Pinquanrt, 2001; Sörensen et al., 2017). Drawing from cognitive planning theories and emphasizing basic planning steps, this model has been widely used to measure care preparation behaviors among ageing populations in North America, South America, Europe, Mainland China, and Hong Kong (Allen et al., 2019; Bai et al., 2021; Pinquart, Sörensen & Davey, 2003; Song, Sörensen & Yan, 2018; Sörensen et al., 2017).

3.6 Factors Related to Care Preparation Among Adult Children

Studies on care preparation among adult children have revealed that although many people anticipate future caregiving needs and responsibilities, few make definite plans (Bradley et al., 2008; Sörensen, 1993; Sörensen & Zarit, 1996), with a low frequency of preliminary planning and final decision-making (Broomley & Blieszner, 1997).

Bradley et al. (2008) reported a statistically significant difference between respondents engaging in minimal, partial, or substantial planning behaviors and the age of the parent. However, in that study, anticipatory care preparation was measured using several self-constructed questions rather than a validated questionnaire. Similarly, in a small sample size of 33 families, Sörensen (1998) determined that daughters' discussion of future caregiving with other family members was predicted by their mother's age but not health; additionally, the internal locus of control was found associated with increased preparation for caregiving (Sörensen, 1998). Moreover, in a study of 141 adult children (with a mean age of 48.7;

Sörensen, Pinquart & Duberstein, 2002), securely attached individuals were marginally more likely to make plans than insecurely attached individuals, and the associations with feelings of preparedness were more robust. Further comparative analyses of individuals already providing care and those not yet providing care indicated that secure attachment may be more influential in predicting preparation activities for individuals not currently providing care. Furthermore, Broomley and Blieszner (1997) reported that discussion was negatively influenced by family stressors and positively influenced by personal authority. Bradley et al. (2008) observed no statistically significant differences between respondents' filial anxiety and the extent of adult children's care preparation for their parents. Among those few respondents who engaged in care preparation activities, most were within the moderate anxiety range, and planners were more satisfied with the amount of discussion and planning in their family than nonplanners (Sörensen & Zarit, 1996).

3.7 Summary of Research Gaps

After reviewing the literature, it is noticed that care preparation was mainly conceptualized as a proactive coping process comprising multiple steps, and some researchers investigated it together with the role theory. However, studies on adult children's care preparation are still very limited and mostly conducted in Western countries, largely ignored the planning activities among Chinese adult children who are very likely to be primary caregiver of older parents. Moreover, although Westerns scholars have frequently suggested the potential benefits of care preparation on buffering potential stress of caregiving, few empirical studies have investigated the role of care preparation in reducing the stress caused by anticipating the caregiving role among adult children. Therefore, this study aimed to adopt a more comprehensive framework to systematically investigate the predictors of multi-step care preparation activities among Chinese adult children, and the potential buffering role of care preparation in filial anxiety.

Chapter 4 Theoretical Framework

4.1 Brief Introduction

This chapter first presents the research questions. Then an overview of the theoretical framework and its potential contributions are introduced. Lastly, detailed research hypotheses are presented.

4.2 Research Questions

Drawing on the results of literature review and to address the previously summarized research gaps, the current study aimed to answer the following research questions:

1. What are the levels of filial anxiety among Chinese adult children and their engagement in different steps of care preparation?
2. How do primary stressors, anticipatory stressors, and psychosocial resources influence multiple domains of filial anxiety and different steps of care preparation?
3. In the integrated model, what are the relationships between primary stressors, anticipatory stressor, and filial anxiety? What are the relationships among the steps of care preparation? How do care preparation steps influence filial anxiety and its three subdomains? What are the relationships among primary stressors, anticipatory stressors, care preparation steps, and filial anxiety in the integrated model?

4.3 An Overview of Theoretical Framework

The Stress Process Model, proactive coping theory, the Preparation for Future Care Needs model and the two-dimensional conceptualization of filial anxiety were innovatively integrated to serve as the main theoretical framework in this study. The framework also integrates theories including those of life span attachment theory, role theory, and the multilevel concept of ambivalence to guide hypotheses. This theoretical framework is useful to comprehensively

investigate the relationships between primary stressors, anticipatory stressors, psychosocial resources, care preparation activities and filial anxiety.

The theoretical framework mainly comprises five components: 1) primary stressors (i.e., parent's declining health, adverse psychological health, and their lack of eldercare resources, including retirement pension, medical insurance, and housing ownership); 2) anticipatory stressors (i.e., anticipated parental care needs); 3) psychosocial resources (i.e., sibling number, value of filial obligation, intergenerational relationship quality, work stress, family stress, and internal locus of control); 4) care preparation activities (i.e., Awareness, Information Gathering, Decision Making, Concrete Planning); and 5) filial anxiety (i.e., Filial Anxiety-Ability, Filial Anxiety-Welfare). The background factors (i.e., adult children's age, gender, income level, education level) were treated as control variables.

As shown in Figure 4.1, the primary and anticipatory stressors may directly influence filial anxiety, or the primary stressor may indirectly influence filial anxiety through the anticipatory stressor. Care preparation steps may be initiated by the primary and anticipatory stressors and serve as the buffer to reduce filial anxiety. The earlier steps of care preparation may influence the later steps. Moreover, various forms of psychosocial resources may also influence filial anxiety and the engagement in the steps of care preparation.

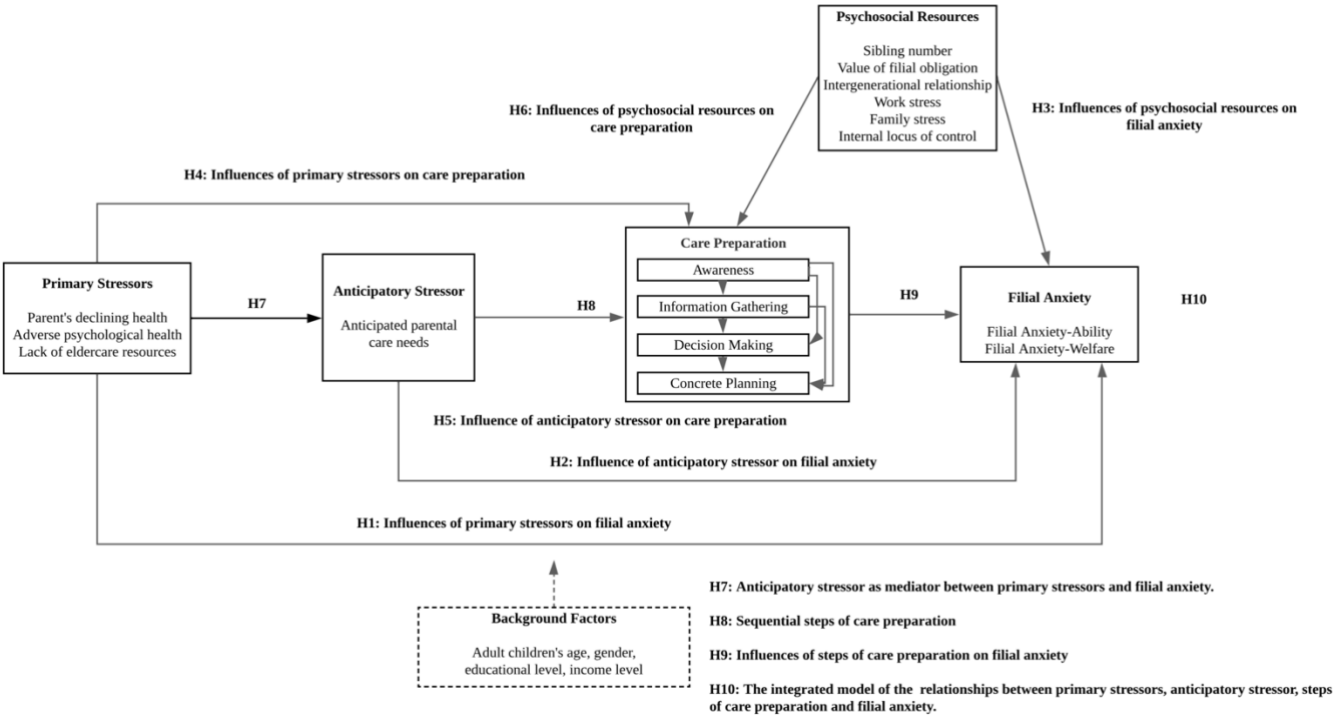

Figure 4.1. Theoretical Framework

4.4 Potential Contributions of the Theoretical Framework

This integrated theoretical framework is tailored to potential adult children caregivers and has several contributions to extant literature. For the first time, this study applied the Stress Process Model to study personal stress before the onset of caregiving, and in response to calls for further examination of anticipatory stressors (Pearlin & Bierman, 2013), the anticipatory stressor was added in the model and examined as a secondary stressor. This addition can contribute to caregiving literature by testing the role of anticipatory stressors in stress proliferation. Rather than simply identifying conditions that may be associated with stress, how these conditions related to each other was also emphasized. This model may help provide the theoretical foundations supporting the advancement of sociological study of anticipatory stressors and stress.

Second, this framework innovatively integrated the proactive coping theory with the Stress Process Model to explore the potential buffering role of proactive coping strategies in

the stress process. To buffer the potential effects of anticipatory stressors, "coping strategies" informed by the current Stress Process Model may be less helpful because they mainly deal with existent stressors. By integrating the proactive coping theory, the proposed framework suggested proactive coping strategies as potential buffers for this special type of stressor and extends their conceptualization in stress and coping literature. This study is of significance because proactive coping strategies that aim to address anticipatory stressors encompass different activities and processes, thereby meriting a conceptual and empirical focus that is distinct from existing work on stress and coping.

Third, this framework also incorporates Preparation for Future Care Needs model that has been mainly used to measure the care preparation of older adults. The model was modified in current study and its use is extended to examine the steps of care preparation among adult children. Moreover, this theoretical framework also integrated the life span attachment theory, role theory, and the multilevel concept of ambivalence to generate psychosocial factors that may influence filial anxiety, which therefore enables a more comprehensive understanding of the phenomenon.

4.5 Research Hypotheses

According to the Stress Process Model, primary stressors (i.e., parent's declining health, adverse psychological health, lack of eldercare resources) and anticipatory stressor (i.e., anticipated parental care needs) may directly influence the different domains of filial anxiety (i.e., Filial Anxiety-Ability, Filial Anxiety-Welfare). As suggested by Stress Process Model and proactive coping theory, adult children faced with primary stressors may appraise the situation and anticipate their parent's future care needs (i.e., anticipatory stressor), then initiate care preparation activities as a proactive coping strategy to buffer the potential influences of stressors on filial anxiety. In accordance with the Preparation for Future Care Needs model, the

early steps of care preparation may influence the latter ones, and the middle parts may be skipped. Moreover, psychosocial resources (i.e., adult children's sibling number, value of filial obligation, intergenerational relationship quality, work stress, family stress, and internal locus of control) may also influence the level of filial anxiety. Meanwhile, according to proactive coping theory, the primary stressors, anticipatory stressors, and adult children's psychosocial resources may be related to their engagement in care preparation activities. Adult children's sociodemographic characteristics, including age, gender, income level, educational level, and migration status were treated as the control variables. Based on the theoretical framework and empirical evidence, 10 sets of hypotheses were put forward:

H1: Primary stressors (i.e., parent's declining health, adverse psychological health, lack of retirement pension, lack of medical insurance, lack of housing ownership) are positively related to filial anxiety (i.e., Filial Anxiety-Ability, Filial Anxiety-Welfare).

H2: Anticipatory stressor (i.e., anticipated parental care needs) is positively related to filial anxiety (i.e., Filial Anxiety-Ability, Filial Anxiety-Welfare).

H3: Adult children's fewer siblings, higher filial obligation, better intergenerational relationship, and higher work stress and family stress are positively related to filial anxiety (i.e., Filial Anxiety-Ability, Filial Anxiety-Welfare).

H4: Primary stressors (i.e., parent's declining health, adverse psychological health, lack of retirement pension, lack of medical insurance, lack of housing ownership) are positively related to care preparation steps (i.e., Awareness, Avoidance (reverse coded), Information Gathering, Decision Making, Concrete Planning).

H5: Anticipatory stressor (i.e., anticipated parental care needs) is positively related to care preparation (i.e., Awareness, Avoidance (reverse coded), Information Gathering, Decision Making, Concrete Planning).

H6: Adult children's more siblings, higher filial obligation, better intergenerational relationship, higher internal locus of control, and lower work stress and family stress are positively related to care preparation (i.e., Awareness, Avoidance (reverse coded), Information Gathering, Decision Making, Concrete Planning).

H7. Anticipatory stressor (i.e., anticipated parental care needs) can mediate the relationship between primary stressors (i.e., parent's declining health, adverse psychological health, lack of retirement pension, lack of medical insurance, lack of housing ownership) and filial anxiety (i.e., Filial Anxiety-Ability, Filial Anxiety-Welfare).

H8. Adult children's engagement in earlier steps of care preparation are positively related to engagement in latter steps.

H9. Adult children's engagement in care preparation steps (i.e., Awareness, Information Gathering, Decision Making, and Concrete Planning) are negatively related to filial anxiety (i.e., Filial Anxiety-Ability, Filial Anxiety-Welfare).

H10. Primary stressors (i.e., parent's declining health, adverse psychological health, lack of retirement pension, lack of medical insurance, lack of housing ownership) can indirectly influence filial anxiety (i.e., Filial Anxiety-Ability, Filial Anxiety-Welfare) through anticipatory stressor (i.e., anticipated parental care needs), and care preparation steps (i.e., Awareness, Information Gathering, Decision Making, Concrete Planning); and anticipatory stressor can indirectly influence filial anxiety through care preparation steps.

Chapter 5 Research Methodology

5.1 Brief Introduction

This chapter introduces the rationale of using a quantitative research methodology, the choice of research site, sampling strategy, data collection method, measurements used to assess variables, and data analysis procedures.

5.2 Rationale for the Quantitative Research

This study adopted the post-positivism paradigm. The ontology of post-positivism is critical realism, which differs from positivism. Positivism is a research paradigm associated with natural science that holds that positive knowledge is based on natural phenomena, their properties, and relations as verified by science (Savin-Baden & Major, 2013). The premise of positivism is that an "external" world can be construed as separate from and incommensurable with those who study it (Burawoy, 1998). Thus, knowledge is something to be discovered, rather than something produced by humans, and researchers gain knowledge by identifying facts. It has a realist approach to knowledge and involves the view that reality exists quite independently of our thoughts and beliefs. The purpose of science is to uncover and explain reality (Seale, 2018). Constituting the observer as an outsider requires an effort of estrangement facilitated by procedural objectivity.

Retaining the perspective of realism, some scholars have challenged the very structure of positivism and hold that the social phenomenon is changing, and researchers cannot completely understand and determine the essence of the social phenomenon (Savin-Baden & Major, 2013). Critical realism holds that although social researchers cannot discover the true essence of the social phenomenon, it does not mean that such essence and truth do not exist. Social reality exists objectively regardless of how we interpret it. Therefore, post-positivism retains some

positivist perspectives, such as the view that reality exists and maybe discovered (though imperfectly known) through logical processes.

It believes that social science knowledge is different from scientific laws, but they are still real, stable, and objective. The aim of conducting social research is to approach the reality as much as we can, but not to completely know them. Therefore, the epistemology embodied in post-positivism is modified objectivity. Although researchers cannot reach the truth of social reality, it is still necessary to use a scientific approach and take an objective, neutral stance to investigate the social phenomenon. Only in this way can be obtain the result closest to the truth.

The methodology is concerned with the reciprocal relationship between empirical fieldwork data and theory (Burawoy, 1991). As for the methodology of post-positivism, although researchers cannot reach the truth of social reality, it is still necessary to use the scientific approach, and take an objective, neutral stance to research social phenomena. Meanwhile, the truth cannot be verified or proved directly, and researchers can only verify the truth indirectly through falsification. By using scientific logic, the potential influential factors can be found, the causality established, and social phenomenon and social behaviors predicted and controlled.

Guided by the methodology of the scientific approach, the survey method will be applied to produce objective knowledge free from the contaminating bias of personal opinions or values. The results will be value-neutral, objective, and true accounts of the social world. The researcher should keep distance from research subjects and avoid the influence of personal value and bias on research results. The integrity of ontology, epistemology, and methodology of the theoretical model can help to ensure the quality of this research and make its outcome more convincing.

5.3 Research Site

Shenzhen is chosen as the research site to conduct the current study. Shenzhen is a city that has experienced rapid economic development during the past decades and will become an economic powerhouse for China. It is an early and pilot implementation area under the country's reform, opening-up, and modernization program. Advanced economic development has long given Shenzhen the advantage of maintaining a net inflow of population during past years. With more than 12 million residents (Macrotrends, 2019), Shenzhen is the top city in terms of population absorption in China (DBS, 2019). Moreover, Shenzhen has the youngest population with an average age of 31.95 years among the Mainland's tier-one cities (Shenzhen Government, 2019). These characteristics indicate that the young population in Shenzhen come from diverse backgrounds and will face the caregiving tasks in the near future. Therefore, Shenzhen is a suitable case to address the research questions of the current study and the findings will have implications for the development of eldercare policies and services both in Shenzhen and in other big cities.

5.4 Sampling Strategy

The target population of the current study was individuals who (1) have been working in Shenzhen for at least half a year, (2) are physically living in Shenzhen, (3) aged 26-40 years old, (4) have at least one living parent, and (5) are currently not providing regular care to parents. A multistage quota sampling strategy combined with a purposive sampling strategy was adopted to recruit participants. Quota sampling is sometimes criticized because it relies on the researcher's judgment in choosing the right subgroups and giving them the right weights. Thus, the researcher's bias can skew the sample and make it non-representative of the entire population, unlike a random sample. In the current study, because selecting a random sample of the target population would be unrealistic, quota sampling together with purposive sampling, is adopted.

First, the nine districts in Shenzhen were classified into three tiers based on their key industries, housing prices, and GDP per capita. Secondly, one district was randomly selected from each tier. Then, residents were selected from each district. In this process, purposive sampling strategy was adopted and the sample sizes equaled the population sizes of the three districts. The researcher purposefully recruited participants of different ages, sexes and socioeconomic statuses to ensure sample diversity. For instance, participants of different companies, housing estates, and social organizations were approached to ensure that adult children of different socioeconomic groups can be recruited. Moreover, researchers tried to balance the number of male and female participants. The total sample size was set at 500, which is conventional and acceptable sample size when researching at the region level (Yongxi Statistics Consulting, 2018). Finally, a total of 566 participants were approached. Among them, 36 did not complete the questionnaire due to personal reasons. The response rate was 93.6%.

5.5 Data Collection

To adapt existing scales, 20 pilot questionnaire interviews were conducted before the large-scale data collection. Each pilot interview took around one hour. Participants' views on the questionnaire were collected and revisions were made to make the questionnaire more applicable. The unclear instructions, inappropriate items, and the deficiencies of the questionnaire were further revised to avoid any misunderstanding. The length of the questions and amount of time was tested and controlled to avoid overloading the participants and maximize the response rates. The finalized questionnaire was used for the large-scale questionnaire survey.

Large-scale data collection was conducted during September and December 2020. Two master's students majoring in social work helped with data collection. Trainings were provided for student helpers before collecting data and on-site supervision was provided to ensure the

quality of data collection. Considering that the participants are young or middle-aged adults, an offline self-administered questionnaire survey was adopted. The researcher and student helpers provided on-site support for the participants. Explanations were offered when participants were unclear about any item. Each questionnaire took around 20 to 30 minutes. Participants' responses were checked for missing data. Participants received RMB$40 to compensate for their time and effort. Participants all signed a consent form before answering the questionnaire. Before conducting the survey, ethics approval was obtained from the Human Subjects Ethics Sub-Committee of The Hong Kong Polytechnic University (Appendix I).

5.6 Measurements

5.6.1 Background Factors

Adult children's sociodemographic characteristics, including age, gender, educational level, income level, self-perceived socioeconomic status, and migration status were measured. The educational level was rated from 1 ("no formal education") to 10 ("master's degree or above") and was recoded into two categories (i.e., below bachelor's degree and bachelor's degree and above). Participants rated their self-perceived socioeconomic status from 1 (lower class) to 5 (upper class). Participants were asked whether their parents were currently living in Shenzhen to indicate their migration status. Participants were asked to choose one of their parents (if both parents are alive) randomly using the Early Birthday Method to answer questions related to parents. Parent's age and physical health were measured. Parent's physical health was measured by a single question asking about their general health status. A five-point scale, ranging from 1 ("very bad") to 5 ("very good") was used.

5.6.2 Primary and Anticipatory Stressors

Primary stressors, including parent's declining health, psychological health status, and ownership of three forms of eldercare resources were measured. Parent's declining health was

assessed by the number of a parent's symptoms of ageing that the adult child is aware of, using an adapted checklist of eight common symptoms of older adults (Brody & Kleban, 1981). The eight symptoms included "difficulty in sleeping", "tiredness", "forgetfulness", "leg cramps or unsteady on feet", "urinary problems or constipation", "pain or discomfort when active", "vision loss", and "dental problems". The total score ranged from 0 to 8, with a higher score indicating a more severe health decline. Parent's psychological health was measured by a single question asking about the general psychological health status of the parent. A five-point scale, ranging from 1 ("very bad") to 5 ("very good") was used. The scores were reverse coded to indicate "parent's adverse psychological health". The total scores ranged from 1 to 5, with a higher score indicating a more adverse psychological health status. Parent's eldercare resources were measured by asking adult children whether (no = 1, yes = 0) their parents had retirement pension and social medical insurance and whether their parents owned any housing. Anticipatory stressor was indicated by anticipated parental care needs, which was measured by a single question on the extent that adult children think their parent will need them to provide care in the future. A five-point scale ranging from 1 ("hardly any") to 5 ("a large amount of care") was used. The total score ranged from 1 to 5, with a higher score indicating a higher level of anticipated parental care needs.

5.6.3 Psychosocial Resources

Psychosocial resources, which include the number of siblings, value of filial obligation, intergenerational relationship quality, internal locus of control, family stress, and work stress, were measured. The number of siblings was measured by one question asking how many siblings the participants had. Value of filial obligation was measured by an adapted version of the Filial Obligation and Expectation Scale used in a study in Taiwan (Chuo & Li, 2008) that consisted of eight items and reflected the adult children's value of filial obligation and expectation in living arrangements, financial care, emotional care, and personal care domains.

Participants rated from 1 (“strongly disagree”) to 5 (“strongly agree”). The total scores ranged from 8 to 40, with a higher score indicating a higher level of filial obligation. The internal consistency, calculated by Cronbach’s alpha, was 0.828 in the current sample. Intergenerational relationship quality was measured by the 13-item Intergenerational Relationship Quality Scale (Bai, 2018). This scale captured four domains of the parent–adult-children relationships: (a) structural–associational solidarity (e.g., “How often have you had face-to-face contact in the past 12 months?”), (b) affectual closeness (e.g., “What are your general feelings of closeness to him/her?”), (c) consensual–normative solidarity (e.g., “Overall, how similar are your opinions?”) and (d) intergenerational conflict (e.g., “How often do you have tense and strained feelings toward him/her?”). Participants rated all items using a five−point scale, with a higher score indicating more favorable intergenerational relationship quality. The total score ranged from 13 to 65. The internal consistency, calculated by Cronbach’s alpha, was 0.725 in the current sample. Adult children’s internal locus of control was measured by the subscale of Yang’s (1997) translation of Levenson’s Internality, Powerful others, and Chance (IPC) scales. This subscale consists of eight items. A five-point scale (1 = “strongly disagree” to 5 = “strongly agree”) was used. The total score ranges from 8 to 40. Higher scores represent a higher level of internal locus of control. The internal consistency, calculated by Cronbach’s alpha, was 0.715 in the current sample. Family stress was measured by three items extracted from the Family Stressor Index (McCubbin, 1987). Family stress were assessed by asking, for example, whether a child was born during the past year. The total score ranged from 0 to 3, with a higher score indicating a higher level of family stress. Work stress will be measured by the single item “On a scale from 1 to 10, indicate the amount of stress on your job.” (Stanton et al., 2001). A higher score indicated a higher level of work stress.

5.6.4 Care Preparation

Care preparation was measured by the adapted Chinese version of the 15-item Preparation for Future Care Needs scale for adult children. The original scale was developed by Sörensen et al. (2017) and comprised five sub-scales to measure older adults' preparation process for their future care. The adapted scale measured the similar five domains for adult children: 1) Awareness, which measured becoming aware of parent's future needs for eldercare; 2) Avoidance, which measured adult children's tendency to avoid considering parent's potential needs of care; 3) Information Gathering, which measured gathering information related to eldercare; 4) Decision Making, which measured making decisions on the care arrangements for parents in the future; and 5) Concrete Planning, which measured making concrete plans for future caregiving. Participants rated on a five-point scale from 1 ("not at all true") to 5 ("completely true"). The five subscales all contain 3 items. A total score ranges from 15 to 75, with a higher score indicating a higher level of care preparation. Scores in the Avoidance domain were reverse coded, with higher scores indicating lower levels of avoidance of future eldercare preparation.

5.6.5 Filial Anxiety

Filial anxiety was measured by the adapted Chinese version of the 13-item Filial Anxiety Scale. The scale was developed by Cicirelli (1988) and comprised two subscales: 1) Filial Anxiety-Ability, which measured the adult child's anxiety over his or her abilities to provide care for a parent in the future; and 2) Filial Anxiety-Welfare, which measured the adult child's anxiety over his or her ageing parent's welfare. The two subscales contain 7 and 6 items, respectively. A five-point scale (1 = "strongly disagree" to 5 = "strongly agree") was used. The total score of the scale ranges from 13 to 65, with a higher score indicating a higher level of filial anxiety. The internal consistency, which was calculated using the Cronbach's alpha, was 0.808 in the current sample.

5.7 Data Analysis

SPSS 26.0 and Amos 24.0 were used to analyze the survey data. Exploratory factor analysis and confirmatory factor analysis were used to validate the Chinese version of the Filial Anxiety Scale and Preparation for Future Care Needs scale for adult children. Known-groups validity was also examined for the two scales. For the Filial Anxiety Scale, known-groups validity was examined by comparing, through independent-samples *t*-tests, the scores of participants from the following known groups: individuals whose parents had good physical health versus individual whose parents had bad physical health, and individuals with higher versus lower socioeconomic status. For the Preparation for Future Care Needs Scale, known-groups validity was examined by comparing the scores of participants from the following known groups: individuals with parents older than 65 years versus 65 years and younger, and individuals with higher versus lower socioeconomic status. The internal consistency of the scales was calculated by Cronbach's alpha.

Descriptive analyses, including mean scores, standard deviations, and the ranges were conducted to understand sample characteristics. Hierarchical linear regressions were conducted to examine the influences of the primary stressors, anticipatory stressor, and psychosocial resources on filial anxiety total score and its three subdomains, and on care preparation total score and its four components, with background factors being treated as control variables.

Path analyses were conducted to examine hypothesized associations among primary stressors, anticipatory stressors, care preparation steps, and filial anxiety. To determine model fit for the models in path analyses and confirmatory factor analyses, relative Chi-square value (CMIN/df), *p*-value, goodness of fit index (GFI), comparative fit index (CFI), and a root-mean-square error of approximation value (RMSEA) were considered. The CMIN/df should be less than 5 (Schumacker & Lomax, 2004), *p*-value should be higher than 0.05, GFI should be higher than 0.90 (Byrne, 1994), CFI should be higher than 0.93 (Byrne, 1994), and RMSEA should

be lower than 0.08 (Browne & Cudeck, 1993) to specify an acceptable model. The indirect effects and bootstrap-based confidence intervals (CIs) were calculated using 2,000 bootstrap samples. Significant mediating effects are indicated by 95% CIs that did not contain a zero (Mallinckrod et al., 2006).

Chapter 6 Results (I): Adaptation and Validation of Scales

6.1 Brief Introduction

Although concerns about parents' future care is prevalent among Chinese adult children, few validated scales have been developed for the rigorous measurement of this concept. Studies have indicated the possible role of care preparation in buffering the potential stress of caregiving and reducing anxiety toward future caregiving, but few studies have examined the care preparation behaviors of Chinese adult children, possibly due to a lack of validated assessment tools. The adapted and validated Filial Anxiety Scale and the Preparation for Future Care Needs Scale for adult children may address these limitations. This chapter presents the process through which the Chinese version of the Filial Anxiety Scale was revised and validated, and the procedure of adapting and validating the Preparation for Future Care Needs Scale for Chinese adult children. The factorial validity of the two scales were examined through factor analysis, specifically exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Their known-groups validity and internal consistency reliability were also tested.

6.2 Adaptation and Validation of the Filial Anxiety Scale

A Chinese version of the Filial Anxiety Scale was adopted in a study conducted in Taiwan (Chuo & Li, 2008), but it was not validated. In the current study, this scale was used to conduct pilot interviews with 20 Chinese adult children aged between 26 and 40 years with the purpose of testing the cultural appropriateness of the questions and examining whether the items could be easily understood and answered. Some revisions were made according to the respondents' feedback. The finalized scale was implemented in a survey of 530 adult children. After data collection, the sample was subjected to CFA to determine whether the factor structure was consistent with the theoretical construct. CFA yielded a poor model fit for the scale. Thus, EFA was performed with the 13 items on a random half sample to identify the factor structure of the

scale. Next, CFA was conducted with the other random half of the sample to determine whether the identified factor structure could be supported. After the factorial validity of the revised scale was confirmed, the known-groups validity and internal consistency reliability of the scale were examined.

6.2.1 Pilot Interviews and Revision of the Filial Anxiety Scale

According to the pilot interviews, some revisions were made to make questions more understandable and appropriate for Chinese adult children. For instance, item 5 ("I'm afraid that helping my parent will take all my resources") was revised to "I'm afraid that helping my parent will take all my resources (e.g., time, money, and energy)" because several participants were confused about what "resources" referred to. Subsequently, when the revised scale was used to conduct other pilot interviews, no further revisions were made because all the respondents agreed that the questions were understandable and meaningful. No new items were added because respondents did not mention new aspects of concerns during the pilot interviews. It seemed that the existing questions in the scale can reflect Chinese adult children's worries about future parental care.

6.2.2 Factorial Structure of the Adapted Filial Anxiety Scale

The revised Filial Anxiety Scale was implemented on a sample of 530 adult children. In total, 521 respondents had no missing data. Given that only a very small number of respondents had missing data, those responses were simply excluded from further analysis. Thus, data analysis was conducted on 521 responses.

The factorial structure of the revised Filial Anxiety Scale was tested using CFA to determine whether it was consistent with the two-factor theoretical model proposed by Cicirelli (1988). Unfortunately, a two-factor model yield a poor model fit (CMIN/df = 7.497, GFI = .858, CFI = .846, RMSEA = .112). Even with modifications made on the basis of modification indexes, the model fit remained unsatisfactory.

To explore the factor structure of the scale with the current sample, EFA was performed with a random half of the sample (N = 260). Maximum likelihood extraction with direct Oblimin rotation was performed to obtain the latent factors of the scale. The value of Kaiser–Meyer–Olkin (KMO) was .826, and Bartlett's test of sphericity yielded statistical significance (p < .001), demonstrating that the correlations among the items met the criteria for factor analysis (Hair et al., 2010). Three factors with eigenvalues larger than 1.0 emerged, accounting for 63.2% of the total cumulative variance.

As shown in Table 6.1, the communalities of the 13 items were all above 0.3. The range was 0.329 to 0.842 and the mean was 0.526, indicating that the items were adequately accounted for by this factor solution (Child, 2006). The factor loadings of all items were higher than 0.5. The rotated factor loadings ranged from 0.503 to 0.975. The three factors were labeled as follows: (1) Filial Anxiety-Ability, reflecting adult children's anxiety over their ability to carry out caregiving tasks; (2) Filial Anxiety-Responsibility, indicating adult children's anxiety over undertaking caregiving responsibilities; and (3) Filial Anxiety-Welfare, measuring adult children's anxiety over ageing parents' welfare. Specifically, Filial Anxiety-Ability corresponds to items 1–4 and explained 27.9% of the total variance, Filial Anxiety-Responsibility corresponds to items 5–7 and explained 5.9% of the total variance, and Filial Anxiety-Welfare corresponds to items 8–13 and explained 18.9% of the total variance.

Table 6.1 Communalities and Rotated Factor Pattern Matrix of Filial Anxiety Scale

	Maximum Likelihood-Loadings			
	Communalities	**Component Matrix**		
		FAA	**FAW**	**FAR**
1. I don't know how I'll be able to manage if my parent needs a great deal of help.	0.483	0.691		
2. I want to help my parent but I worry about what will happen to my own life.	0.626	0.721		
3. I'm afraid that my parent will need more help than I can give.	0.842	0.975		
4. I worry that I'll break down if I have to give may parent a great deal of care.	0.615	0.556		
5. I'm afraid that helping my parent will take all my resources.	0.590			0.523
6. I worry that a time will come when I'll have to help my parent.	0.483			0.629
7. I don't know what I'll do if my parent asks for help.	0.463			0.673
8. I feel uneasy about being away from my parent for too long now that he/she is getting older.	0.466		0.683	
9. I worry about what will happen to my parent in the future.	0.545		0.725	
10. I feel I should keep in close touch with my parent to be sure noting is wrong.	0.547		0.631	
11. It would upset me to see my parent in need of anything in his/her old age.	0.329		0.547	
12. I always feel a nagging sense of concern about my parent.	0.497		0.694	
13. I just can't face the thought of my parent being sick for a long time.	0.357		0.503	

Notes: Kaiser–Meyer–Olkin Measure of Sampling Adequacy = 0.826; p value of Bartlett's Test of Sphericity < .001; Total Variance Explained = 63.2%; FAA=Filial Anxiety-Ability, FAW=Filial Anxiety-Welfare, FAR=Filial Anxiety-Responsibility.

To determine whether the factor structure identified by EFA was supported by the sample data, CFA was then conducted with the 13 items on the other random half of the sample (N = 261), yielding considerably better results (CMIN/df = 3.760, GFI = .868, CFI = .876, RMSEA = .103) compared with those of the two-factor model. According to the modification indexes and the examination of the theoretical meaning of each item, one covariance was added between items 1 (“I don’t know how I’ll be able to manage if my parent needs a great deal of help”) and 2 (“I want to help my parent but I worry about what will happen to my own life”) under factor Filial Anxiety-Ability. One covariance was also added between items 6 (“I worry that a time will come when I’ll have to help my parent”) and 7 “I don’t know what I’ll do if my parent asks for help”) under factor Filial Anxiety-Responsibility. Furthermore, one covariance was added between items 11 (“It would upset me to see my parent in need of anything in his/her old age”) and 13 (“I just can’t face the thought of my parent being sick for a long time”) under factor Filial Anxiety-Welfare. Overall, CFA for the modified three-factor model yielded satisfactory results (CMIN/df = 2.418, CFI = .939, GFI = .920, RMSEA = .074), supporting the structural validity of the scale. Figure 6.1 presents the factor structure and factor loadings of the 13 scale items.

Figure 6.1. Results of Confirmatory Factor Analysis of Filial Anxiety Scale (N = 260)

Note. ***indicates significance at the $p \leq .001$ (** $p \leq .01$, * $p \leq .05$) level of confidence.

Scores for items corresponding to factors Filial Anxiety-Ability, Filial Anxiety-Responsibility, and Filial Anxiety-Welfare ranged from 4 to 20, 3 to 15, and 6 to 30, respectively. The total score of the scale was calculated by summing the scores for each item.

6.2.3 Known-Groups Validity of the Adapted Filial Anxiety Scale

Known-groups validity was tested by comparing the total scale scores of adult children with different levels of resources and parents' future care needs (i.e., adult children's self-perceived socioeconomic status and parents' physical health statuses), as indicated by Cicirelli (1988).

Independent samples *t* tests were used to compare the mean scores of different groups. As shown in Table 6.2, anxiety scores were significantly higher for participants with lower socioeconomic status as well as for those whose parents were in poorer physical health status.

Table 6.2 Known-Groups Validity of Filial Anxiety Scale

	Mean scores
Parents' Physical health	
Very bad and bad	45.118
Neutral and above	42.438
t value	3.425
p value	$p < 0.01$
Adult Children's Self-perceived SES	
Lower class or lower-middle class	43.724
Middle class or higher	41.381
t value	3.721
p value	$p < 0.001$

Note: t values and p values were calculated with independent sample t-tests.

6.2.4 Reliability of the Adapted Filial Anxiety Scale

Internal consistency validity was tested using Cronbach's alpha. Table 6.3 presents the means, standard deviations (SDs), internal consistency reliabilities, and corrected item–total correlations of the three subscales. The mean (SD) score on the Filial Anxiety Scale was 42.908 (6.906), with possible scores ranging from 13 to 65. The mean scores on the three subscales were 13.186 out of 20, 21.923 out of 30, and 7.787 out of 15, respectively. The internal consistency reliability for the scale measured by Cronbach's alpha was .808. The Cronbach's alphas for the three subscales were .866, .772, and .751, respectively. The results indicated a satisfactory level of internal consistency.

Table 6.3. Analysis of the 13-item Filial Anxiety Scale

	Mean	SD	Corrected item-total correlation
Factor 1: Filial Anxiety-Ability (Range [4–20]; Cronbach's Alpha: 0.866)	**13.186**	**3.268**	
1. I don't know how I'll be able to manage if my parent needs a great deal of help.	3.55	0.869	0.512
2. I want to help my parent but I worry about what will happen to my own life.	3.25	0.946	0.581
3. I'm afraid that my parent will need more help than I can give.	3.45	1.018	0.600
4. I worry that I'll break down if I have to give may parent a great deal of care.	2.94	1.028	0.613
Factor 2: Filial Anxiety-Welfare (Range [6–30]; Cronbach's Alpha: 0.772)	**21.923**	**3.792**	
8. I feel uneasy about being away from my parent for too long now that he/she is getting older.	3.56	0.969	0.278
9. I worry about what will happen to my parent in the future.	3.68	0.916	0.444
10. I feel I should keep in close touch with my parent to be sure noting is wrong.	4.12	0.715	0.161
11. It would upset me to see my parent in need of anything in his/her old age.	3.58	0.999	0.416
12. I always feel a nagging sense of concern about my parent.	3.52	0.875	0.194
13. I just can't face the thought of my parent being sick for a long time.	3.46	1.039	0.454
Factor 3: Filial Anxiety-Responsibility (Range [3-15]; Cronbach's Alpha: 0.751)	**7.787**	**2.558**	
5. I'm afraid that helping my parent will take all my resources.	2.71	1.091	0.557
6. I worry that a time will come when I'll have to help my parent.	2.62	1.053	0.506
7. I don't know what I'll do if my parent asks for help.	2.46	0.984	0.381
Total (Range [13, 65]) Cronbach's Alpha: 0.808	**42.908**	**6.906**	

Note: SD=Standard Deviation

6.3 Adaptation and Validation of the Preparation for Future Care Needs Scale

Pilot interviews were first conducted to revise the Chinese version of the scale, which was originally developed to assess older adults' care preparation behaviors (Sörensen et al., 2017). The original scale was adapted to measure care preparation activities from the adult children's perspective. The appropriateness of wording in the revised scale was also examined during the pilot interviews. Item analysis was performed with the 15 items on the basis of a sample of 530 participants. After one item was deleted for the results of item analysis and after examining its content, EFA was performed with the remaining 14 items on a random half sample to identify the factor structure of the scale. Subsequently, CFA was conducted with the other random half of the sample to determine whether the identified factor structure could be supported. After the factor structure of the revised scale was confirmed, the known-groups validity and internal consistency reliability of the scale were examined.

6.3.1 Pilot Interviews and Revision of the Preparation for Future Care Needs Scale

During pilot interviews, the original scale was adapted to reflect care preparation activities from the perspective of adult children. For example, the original item 3 ("Talking to other people has made me think about whether I might need help or care in the future"), used to measure an older adult's awareness about future care needs, was revised to "Talking to other people has made me think about whether I might need to care for my parent in the future." Based on pilot interviews, all the original 15 items were revised to relevant care preparation activities in which adult children can participate. Moreover, item 14 ("I have written down my preferences for providing care for my parents") was revised to "I have recorded my preferences for providing care for my parents" because many participants noted that they may not engage in writing down caregiving preferences because it was an overly specific action. Specifically, the revision to "recorded" connotes a more general action that may include taking notes on one's mobile phone or through other means. Then, more pilot interviews were conducted with

adult children to determine whether the revised scale was understandable to the targeted participants and whether more items need to be involved. Further revisions were made to make some questions clearer and more comprehensible. For example, item 7 ("I have compared different options for providing help or care in the future") was revised to "I have compared different options for providing help or care in the future (e.g., providing care by myself, hiring domestic workers, purchasing eldercare services, and sending older parents to nursing homes)." According to the pilot interviews, revised questions in the scale can generally capture the main steps of care preparation among adult children.

6.3.2 Factorial Structure of the Preparation for Future Care Needs Scale

The adapted scale was implemented with 530 adult children participants. In total, 523 respondents had no missing data. Given that only a very small number of respondents had missing data, those responses were simply excluded from further analysis. Thus, further analysis was conducted on 523 responses.

Item analysis was first conducted on the 15 items to identify any inappropriate items. The normality of the items was confirmed by satisfactory levels of skewness and kurtosis; the results indicated no severe deviations from the normal distribution for any of the items. Next, interitem and corrected item–total correlations were examined. Item 10 yielded the lowest corrected item–total correlation of .141 among all the items. The item analysis results indicated that the Cronbach's alpha would increase from .805 to .814 if this item were deleted. After further checking the content of item 10, this item did make some respondents felt confused during the questionnaire survey. In view of this, it was excluded from further analysis.

Considering that the original scale was originally developed for older adults and that this was the first time it was applied to the adult children population, EFA was conducted with a randomly generated half sample (N = 261) to explore the factor structure of the scale. The KMO value was .818, and Bartlett's test of sphericity yielded statistical significance ($p < .001$),

demonstrating that the correlations among the items met the criteria for factor analysis (Hair et al., 2010). Principal component analysis with varimax rotation was employed to extract the main factors of the scale. Finally, four factors with eigenvalues larger than 1.0 emerged, accounting for 66.4% of the total cumulative variance.

As shown in Table 6.4, the communalities of the 14 items were all higher than 0.5; they ranged from 0.510 to 0.825, indicating that the items were adequately accounted for by this factor solution (Hair et al., 2010). The factor loadings of all items were higher than 0.5. The rotated factor loadings ranged from .591 to .870. The four factors were labeled as Concrete Planning, Information Gathering, Avoidance, and Awareness-Decision. Specifically, the factor of Concrete Planning corresponds to items 13–15, measuring adult children's concrete planning activities and explaining 32.0% of the total variance; the factor of Information Gathering corresponds to items 2 and 7–9, measuring adult children's information gathering activities and explaining 15.7% of the total variance; the factor of Avoidance corresponds to items 4–6, measuring adult children's avoidance of care preparation and explaining 11.5% of the total variance; and the factor of Awareness-Decision corresponds to items 1, 3, 11, and 12, measuring adult children's awareness and decision-making and explaining 7.2% of the total variance.

Table 6.4 Communalities and Rotated Component Matrix of Preparation for Future Care Needs Scale

	PCA-Loadings				
	Communalities	**Component Matrix**			
		CP	**IG**	**AV**	**AD**
1. I pay close attention to how my parent's physical and mental capabilities are changing to assess whether I may soon need to provide care for him/her.	0.510				0.624
2. I pay attention to information in the media on providing care for older adults.	0.512		0.591		
3. Talking to other people has made me think about whether I might need to provide care for my parent in the future.	0.543				0.650
4. I try not to think about things like my parent's future loss of independence.	0.706			0.823	
5. I don't like to think about the possibility of providing care for my parent in the future.	0.767			0.864	
6. I avoid negative topics like my parent's future dependence.	0.748			0.842	
7. I have compared different options for providing care in the future.	0.621		0.750		
8. I have gathered information about options for elder care by talking to friends and/or relatives.	0.705		0.786		
9. I have gathered information about options for elder care by talking to health care professionals (doctors, nurses, home health care agencies).	0.700		0.777		
11. I know my general preferences for providing care for my parent in the future even though I am not sure how I will get what I want.	0.523				0.684
12. If I ever need to provide care for my parent, I can choose between several options that I have considered in some depth.	0.577				0.677
13. I have talked to my parent about how I want to provide care for them.	0.791	0.870			
14. I have taken record of my preferences for providing elder care.	0.825	0.863			
15. I have identified how I want to provide care for my parents and taken concrete steps to ensure that option is available.	0.764	0.815			

Note: PCA=Principal Component Analysis; Kaiser–Meyer–Olkin Measure of Sampling Adequacy = 0.818; p value of Bartlett's Test of Sphericity < 0.001; Total Variance Explained = 66.4%; CP = Concrete Planning, IG = Information Gathering, AV = Avoidance, AD = Awareness-Decision.

To determine whether the factor structure identified by EFA could be supported by the sample data, CFA was further conducted with the 14 items on the other random half of the sample (N = 261). The CFA results indicated satisfactory model fit for the four-factor model (CMIN/df = 2.329, CFI = .928, GFI = .919, RMSEA = .071), supporting the structural validity of the scale. Scores for the factors of "Awareness-Decision" and "Information Gathering" factors ranged from 4 to 20, and those for the other two factors ranged from 3 to 15. Figure 6.2 displays the factor structure and factor loadings of the 14 items.

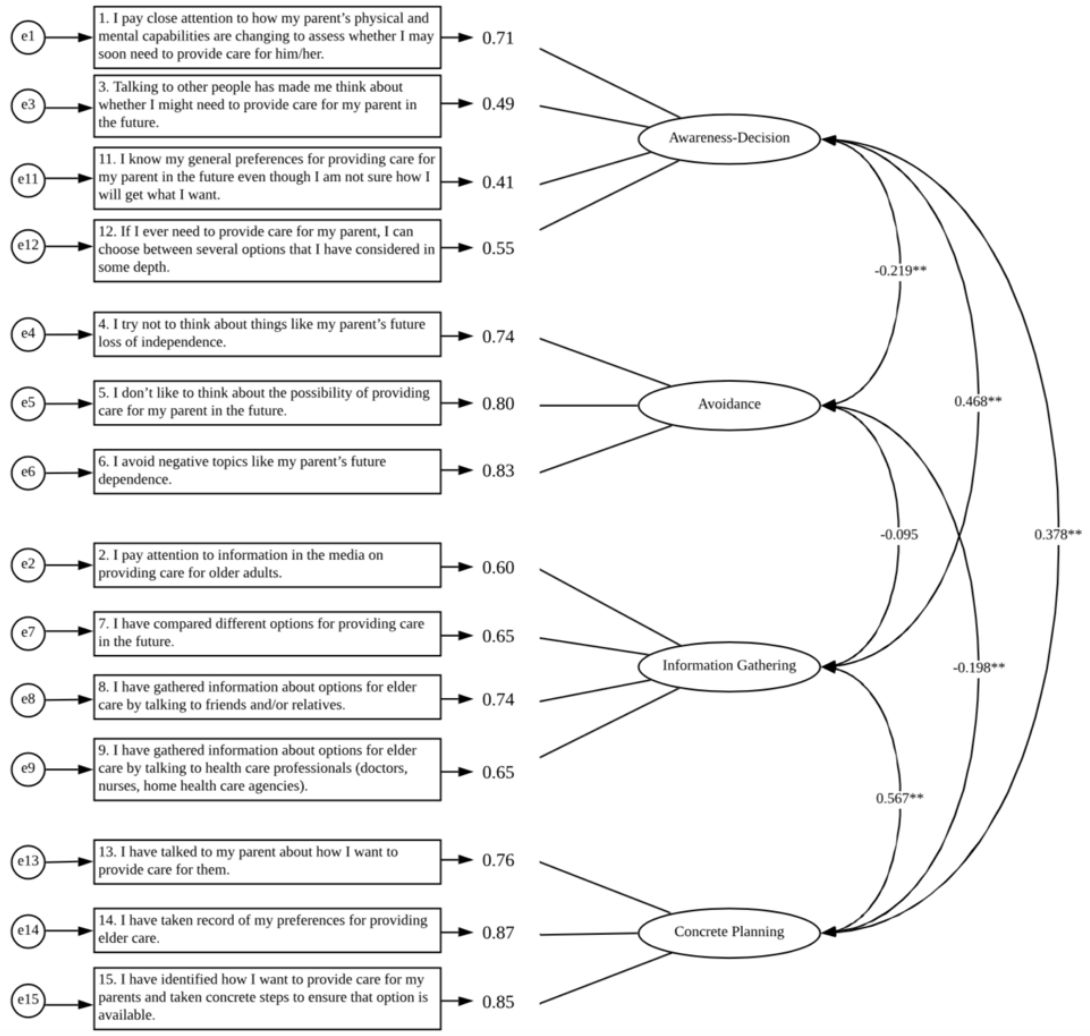

Figure 6.2. Results of Confirmatory Factor Analysis of Preparation for Future Care Needs Scale (N = 262)

Note. ***indicates significance at the $p \leq .001$ (**$p \leq .01$, * $p \leq .05$) level of confidence.

6.3.3 Known-Groups Validity of the Preparation for Future Care Needs Scale

Known-groups validity was tested by comparing the care preparation scores of participants with different socioeconomic statuses and with parents in different age groups through the independent samples *t* test. The criteria were selected on the basis of the finding that people with higher socioeconomic statuses and those faced with more urgent care needs were more likely to conduct care preparation (Sörensen & Pinquart, 2000a, 2001). As shown in Table 6.5, the scores were significantly higher for the adult children whose parents were older in age and for the participants with a higher socioeconomic status.

Table 6.5. Known-Groups Validity of Preparation for Future Care Needs Scale

	Mean scores
Parent's age	
Below 65	43.998
65 and above	46.254
t value	-2.954
p value	$p < 0.01$
Adult children's self-perceived SES	
Lower class or lower-middle class	43.690
Middle class or higher	46.011
t value	-3.519
p value	$p < 0.001$

Note: t values and p values were calculated with independent sample t-tests.

6.3.4 Reliability of the Preparation for Future Care Needs Scale

Internal consistency validity was tested using Cronbach's alpha. Table 6.6 presents the means, SDs, internal consistency reliabilities, and corrected item–total correlations of the four subscales. The mean (SD) score on the scale was 44.501 (7.240), with the score range of 14 to 70. The mean scores on the four subscales were 6.985 out of 15, 9.643 out of 20, 9.912 out of 15, and 14.640 out of 20, respectively. The corrected item–total correlations were satisfactory, ranging from 0.235 to 0.599. The internal consistency reliability of the scale, as indicated by the Cronbach's alpha, was 0.814. The Cronbach's alphas of the four subscales were 0.872,

0.774, 0.813 and 0.644, respectively. The results indicated a satisfactory level of internal consistency.

Table 6.6 Analysis of the 14-item Preparation for Future Care Needs Scale

	Mean	SD	Corrected item-total correlation
Factor 1: Concrete Planning (Range [3–15]; Cronbach's Alpha: 0.872)	**6.985**	**2.643**	
13. I have talked to my parent about how I want to provide care for them.	2.73	1.047	0.542
14. I have taken record of my preferences for providing elder care.	2.56	0.942	0.583
15. I have identified how I want to provide care for my parents and taken concrete steps to ensure that option is available.	2.61	0.970	0.599
Factor 2: Information Gathering (Range [4–20]; Cronbach's Alpha: 0.774)	**9.643**	**3.105**	
2. I pay attention to information in the media on providing care for older adults.	3.13	0.957	0.526
7. I have compared different options for providing care in the future.	3.00	1.069	0.474
8. I have gathered information about options for elder care by talking to friends and/or relatives.	3.16	1.001	0.528
9. I have gathered information about options for elder care by talking to health care professionals (doctors, nurses, home health care agencies).	2.77	0.991	0.527
Factor 3: Avoidance (Range [3-15]; Cronbach's Alpha: 0.813)	**9.912**	**2.504**	
4. I try not to think about things like my parent's future loss of independence.	3.08	0.993	0.240
5. I don't like to think about the possibility of providing care for my parent in the future.	3.42	0.954	0.259
6. I avoid negative topics like my parent's future dependence.	3.42	0.988	0.235
Factor 4: Awareness-Decision (Range [4–20]; Cronbach's Alpha: 0.644)	**14.640**	**2.395**	
1. I pay close attention to how my parent's physical and mental capabilities are changing to assess whether I may soon need to provide care for him/her.	3.57	0.875	0.514
3. Talking to other people has made me think about whether I might need to provide care for my parent in the future.	3.74	0.894	0.403
11. I know my general preferences for providing care for my parent in the future	3.76	0.811	0.246

even though I am not sure how I will get what I want.			
12. If I ever need to provide care for my parent, I can choose between several options that I have considered in some depth.	3.57	0.863	0.466
Total (Range [14, 70])	**44.501**	**7.240**	
Cronbach's Alpha: 0.814			

Note: SD=Standard Deviation

6.4 Summary

In this chapter, the procedures of adapting and validating two scales are introduced. For the revised version of Filial Anxiety Scale, factor analysis yielded a three-factor structure that was unique to the sample of Chinese adult children. The three factors were Filial Anxiety-Ability, reflecting adult children's anxiety over their ability to care for their ageing parents; Filial Anxiety-Welfare, measuring adult children's anxiety over their ageing parents' well-being; and Filial Anxiety-Responsibility, measuring adult children's anxiety over undertaking caregiving responsibilities. For the revised version of Preparation for Future Care Needs Scale, one item was deleted after item analysis; thus, the revised scale comprises 14 items. Factor analysis supported a four-factor structure, where the four factors are "Awareness-Decision", "Avoidance", "Information Gathering", and "Concrete Planning". The known-groups validity and internal consistency reliability of the two scales were satisfactory.

Chapter 7 Results (II): Influences of Stressors and Psychosocial Resources on Filial Anxiety

7.1 Brief Introduction

This chapter first presents the process of preparation for data analysis and the descriptive analysis results of the participants' sociodemographic characteristics, primary and anticipatory stressors, psychosocial resources, care preparation and its four steps, and filial anxiety and its three subdomains. Next, the results of hierarchical linear regression on total and subdomain scores for filial anxiety are presented.

7.2 Preparation for Data Analysis

7.2.1 Missing Data Identification and Remedy

A preliminary data check revealed that all the missing data were due to nonresponse and that the percentages of missing data for each variable were low, ranging from 0.1% to 2.5%. Thus, no imputation was required to replace the missing data (Hair et al., 2010). Only observations with complete data were subjected to data analysis.

7.2.2 Outlier Detection and Management

After dealing with missing data, outliers were detected and handled. Univariate, bivariate, and multivariate methods were employed to identify a consistent pattern across perspectives and thereby recognize outliers.

Regarding single-construct techniques, histograms and box plots were first generated for each variable to examine the distributions. Next, the metric variables were subjected to standard deviation analysis to identify potential outliers. Specifically, observations with *z* scores above or below 4.0 on each of the variables were noted.

Regarding multiple-construct techniques, the leverage value, Cook's distance, and the Mahalanobis distance were calculated for outlier detection. Because the sample contained 530

observations, the cutoff for the leverage was set as $2(k+1)/n$, where k was the number of predictors and n was the sample size (Cohen et al., 2003). The cutoff for the Cook's distance was set as $4/n$, where n was the sample size. The cutoffs for leverage, Cook's distance, and the Mahalanobis distance were 0.075, 0.008, and $p < .001$, respectively.

Only nine and five observations were identified as outliers at the univariate and multivariate levels, respectively. However, none of these 14 observations demonstrated outlier characteristics requiring elimination because no observations were extreme on a sufficient number of variables to be considered unrepresentative of the population (Hair et al., 2010). As a result, data on all 530 participants were included in further analysis.

7.2.3 Testing Multivariate Analysis Assumptions

Skewness, kurtosis, histogram, and P−P plots were used to test the normality of each metric variable. The skewness of all metric variables ranged from −1.226 to 1.276, whereas kurtosis ranged from −1.197 to 2.428, indicating that the variables were normally distributed.

A scatter plot matrix containing the scatter plots of metric variables was generated to examine linearity. Examination of scatter plots did not identify any clear nonlinear patterns. Thus, data transformations were not performed.

7.3 Descriptive Statistics

7.3.1 Demographic Characteristics of Participants

After data preparation, study variables were subjected to descriptive analysis. Table 7.1 displays the demographic profiles of the 530 adult children participants. Nearly half (50.9%) of the participants were aged older than 30 years. The mean age of the participants was 31.96 years (SD = 4.693), and 57.0% of the participants were female. The majority (64.9%) of the participants had a bachelor's degree or higher. The mean monthly income level was 7.02 (SD = 2.730). Regarding the demographic characteristics of the participants' ageing parents, the

mean age of the parents was 59.09 years (SD = 6.674). Overall, 51.5% of the parents were mothers and 48.5% were fathers. The majority (74.5%) of the parents were currently not living in Shenzhen.

Table 7.1. Demographic Characteristics of Participants (N = 530)

Demographics	Category	N (%) / Mean (SD)
Adult child's age		31.96 (4.693)
	26-30	260 (49.1%)
	Above 30	270 (50.9%)
Adult child's gender	Male	228 (43.0%)
	Female	302 (57.0%)
Adult child's educational level	Below bachelor's degree	186 (35.1%)
	Bachelor's degree and above	344 (64.9%)
Adult child's income level		7.02 (2.730)
Missing = 13	Below $1,000	8 (1.5%)
	$1,000 - $1,999	7 (1.3%)
	$2,000 - $3,999	17 (3.2%)
	$4,000 - $5,999	58 (10.9%)
	$6,000 - $7,999	82 (15.5%)
	$8,000 - $9,999	76 (14.3%)
	$10,000 - $12,499	78 (14.7%)
	$12,500 - $14,999	46 (8.7%)
	$15,000 - $17,499	38 (7.2%)
	$17,500 - $19,999	25 (4.7%)
	$20,000 - $24,999	32 (6.0%)
	$25,000 and above	50 (9.4%)
Parent's age		59.09 (6.674)
Missing = 5		
Parent's gender	Male	251 (47.4%)
Missing = 6	Female	273 (51.5%)
Whether parent currently living in Shenzhen	Yes	135 (25.5%)
	No	395 (74.5%)

7.3.2 Primary and Anticipatory Stressors

Table 7.2 presents the descriptive analysis results of the primary and anticipatory stressors. For the primary stressors, 32.1% of the parents had no retirement pension, 12.3% of them had no medical insurance, and 19.1% of the parents did not own any housing. The mean score of symptoms of declining parental health was 1.998 (SD = 1.467). The mean score of psychological health was 3.55 (SD = 0.800) out of 5, indicating that psychological health status was generally favorable. As for the anticipatory stressor, the mean score for anticipated parental

care needs was 3.28 (SD = 0.768) out of 5, indicating participants generally anticipated a moderate level of parent's future care needs.

Table 7.2. Descriptive Statistics of Primary and Anticipatory Stressors (N = 530)

Stressors	Category	N (%) / Mean (SD)
Parent's retirement pension	No	170 (32.1%)
Missing = 2	Yes	358 (67.6%)
Parent's medical insurance	No	65 (12.3%)
Missing = 1	Yes	464 (87.5%)
Parent's housing ownership	No housing	101 (19.1%)
Missing = 4	One or more housing	425 (80.2%)
Parent's declining health	All	1.998 (1.467)
Missing = 1	No symptom	72 (13.6%)
	One symptom	144 (27.2%)
	Two symptoms	149 (28.1%)
	Three or more symptoms	164 (31%)
Parent's psychological health		3.55 (0.800)
Anticipated care needs		3.28 (0.768)
Missing = 1		

7.3.3 Psychosocial Resources

Table 7.3 presents the descriptive statistics of psychosocial resources of the participants. The mean score for work stress was 6.25 out of 10, corresponding to a moderate level of stress. Overall, 25.7% of the participants reported having one or more sources of family stress. The mean score of family stress was 0.299 (SD = 0.541). The mean scores for filial obligation and intergenerational relationship quality were 33.567 out of 40 and 41.538 out of 65, respectively, indicating that the participants had a high level of filial obligation and close intergenerational relationships with their parents. The mean score for internal locus of control was 27.342 out of 40 (SD = 4.004). Concerning sibling number, 21.0% of the participants were only children. The mean sibling number was 1.880 (SD = 1.446).

Table 7.3. Descriptive Statistics of Psychosocial Resources (N=530)

Resources	Category	N (%) / Mean (SD)
Work stress		6.250 (1.800)
Missing = 7		
Family stress		0.299 (0.541)
Missing = 1	No stress	393 (74.2%)

	One or more sources of stress	136 (25.7%)
Filial obligation		33.567 (4.163)
Missing = 1		
Intergenerational relationship		41.538 (5.966)
Missing = 17		
Internal locus of control		27.342 (4.004)
Adult child's sibling number		1.880 (1.446)
Missing = 1	0	111 (21.0%)
	One or more	418 (78.9%)

7.3.4 Care Preparation

Table 7.4 displays the levels of future eldercare preparation among participants in different domains. Their mean (SD) score of care preparation was moderate, at 42.650 (6.748) out of 70. As for the four planning steps, the mean (SDs) scores for the Awareness-Decision, Avoidance (reversed), Information Gathering, and Concrete Planning were 14.652 (2.391) out of 20, 9.906 (2.508) out of 15, 12.038 (3.112) out of 20, and 7.898 (2.641) out of 15, respectively. The preparation levels of the Awareness-Decision, Avoidance, and Information Gathering were moderate or higher than moderate, whereas that of Concrete Planning was lower than moderate.

Table 7.4. Descriptive Statistics of Steps of Care Preparation (N=530)

Variables	No. of items	Range	Mean	SD
Care Preparation Total	14	14-70	42.650	6.748
Missing = 5				
Awareness-Decision	4	4-20	14.652	2.391
Missing = 2				
Avoidance (reversed)	3	3-15	9.906	2.508
Missing = 1				
Information Gathering	4	4-20	12.038	3.112
Concrete Planning	3	3-15	7.898	2.641
Missing = 2				

7.3.5 Filial Anxiety

Table 7.5 presents the mean scores of filial anxiety and its three subdomains among the participants. The mean (SD) score for filial anxiety was 42.908 (6.906) out of 65, corresponding to a higher than moderate level of anxiety about parents' future eldercare. As

for the three subdomains of filial anxiety, namely Filial Anxiety-Ability, Filial Anxiety-Responsibility and the Filial Anxiety-Welfare, the mean (SDs) the scores were 13.144 (3.284) out of 20, 7.777 (2.563) out of 15, and 21.918 (3.785) out of 30, respectively. The mean scores for the Filial Anxiety-Ability and the Filial Anxiety-Welfare domains corresponded to a level slightly higher than moderate, whereas the mean score of the Filial Anxiety-Responsibility domain corresponded to a level slightly lower than moderate.

Table 7.5. Descriptive Statistics of Subdomains of Filial Anxiety (N = 530)

Variables	No. of items	Range	Mean	SD
Filial Anxiety Total	13	13-65	42.908	6.906
Missing = 9				
Filial Anxiety-Ability	4	4-20	13.144	3.284
Missing = 3				
Filial Anxiety-Responsibility	3	3-15	7.777	2.563
Missing = 2				
Filial Anxiety-Welfare	6	6-30	21.918	3.785
Missing = 5				

7.4 Factors Related to Filial Anxiety

To identify the relationships between background factors, primary stressors, anticipatory stressor, psychosocial resources and filial anxiety, hierarchical linear regression analyses were separately conducted on filial anxiety total score and on its three subdomains.

7.4.1 Factors Related to Filial Anxiety Total

Table 7.6 presents the standardized coefficients for the factors influencing Filial Anxiety Total. Model 1 entered only background factors to predict filial anxiety; these explained 1.2% of the total variance. Among all the background factors, the participants' income ($\beta = -0.102$, $p < .05$) was the only one significantly correlated with reduced levels of Filial Anxiety Total.

Primary stressors were entered in model 2. Income level had no significant influence on Filial Anxiety Total. However, parent's declining health ($\beta = 0.144$, $p < .01$) was positively correlated with Filial Anxiety Total. Parent lacking a retirement pension ($\beta = 0.086$, $p = .071$)

and parent lacking medical insurance (β = 0.076, p = .094) were marginally positively correlated with Filial Anxiety Total. This model explained 5.0% of the variance in this variable.

The anticipatory stressor was entered in model 3. Parent's declining health (β = 0.134, p < .01) continued to exert a significantly positive influence on Filial Anxiety Total. Income level (β = −0.085, p = .082), parents lacking a retirement pension (β = 0.084, p = .076), parents lacking medical insurance (β = 0.078, p = .087), and anticipated parental care needs (β = 0.086, p = .062) were marginally positively correlated with Filial Anxiety Total, explaining 5.7% of the total variance.

In model 4, psychosocial resources were entered. They explained 11.2% of the total variance in the Filial Anxiety Total. Parent's declining health (β = 0.112, p < .05), work stress (β = 0.120, p < .01), and family stress (β = 0.152, p = .001) were positively correlated with Filial Anxiety Total. Parent lacking retirement pension (β = 0.095, p < .05), parent lacking medical insurance (β = 0.089, p < .05) were positively correlated with Filial Anxiety Total, whereas having more siblings (β = −0.100, p < .05) were negatively correlated with Filial Anxiety Total.

Table 7.6. Hierarchical Linear Regression Analysis of Filial Anxiety Total (N=530)

	Model 1	**Model 2**	**Model 3**	**Model 4**
Background factors				
AC's gender (female)	-0.011	-0.002	-0.011	-0.024
AC's age (30 and below)	0.04	0.029	0.025	0.053
AC's educational level (below bachelor)	-0.012	-0.002	0.005	-0.022
AC's income level	-0.102*	-0.074	-0.085^	-0.072
Primary stressors				
OP's declining health		0.144**	0.134**	0.112*
OP's adverse psychological health		-0.015	-0.018	-0.043
OP lacking retirement pension		0.086^	0.084^	0.095*
OP lacking medical insurance		0.076^	0.078^	0.089*
OP lacking housing ownership		0.051	0.044	0.046
Anticipatory stressor				
Anticipated care needs			0.086^	0.064
Psychosocial resources				
Work stress				0.120**
Family stress				0.152***
Filial obligation				0.068
Intergenerational relationship				-0.065
Sibling number				-0.100*

R^2	0.012	0.050	0.057	0.112

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence. AC = Adult child; OP = Older parent.

7.4.2 Factors Related to Filial Anxiety-Ability

Table 7.7 presents the standardized coefficients for the factors influencing the Filial Anxiety-Ability subdomain. All background factors were entered in model 1. Income level ($\beta = -0.081$, $p = .089$) was marginally negatively correlated with Filial Anxiety-Ability. Primary stressors were entered in model 2. Parent's declining health ($\beta = 0.156$, $p = .001$) and parents lacking retirement pension ($\beta = 0.096$, $p < .05$) were significantly positively correlated with Filial Anxiety-Ability. This model explained 5.3% of the variance in this variable.

The anticipatory stressor was entered in model 3. Parent's declining health ($\beta = 0.155$, $p = .001$) and parent lacking retirement pension ($\beta = 0.096$, $p < .05$) remained significantly correlated with increased Filial Anxiety-Ability, explaining 5.3% of its total variance.

Psychological resources were entered in model 4. The factors explained 13.7% of the total variance in Filial Anxiety-Ability. Parent's declining health ($\beta = 0.120$, $p = .01$), lacking retirement pension ($\beta = 0.107$, $p < .05$), work stress ($\beta = 0.179$, $p < .001$), and family stress ($\beta = 0.148$, $p = .001$) were significantly positively correlated with Filial Anxiety-Ability. Higher intergenerational relationship quality ($\beta = -0.112$, $p < .05$), and having more siblings ($\beta = -0.099$, $p < .05$) were negatively correlated with Filial Anxiety-Ability.

Table 7.7. Hierarchical Linear Regression Analysis of Filial Anxiety-Ability (N = 530)

	Model 1	Model 2	Model 3	Model 4
Background factors				
AC's gender (female)	-0.020	-0.009	-0.009	-0.040
AC's age (30 and below)	-0.042	-0.053	-0.053	-0.017
AC's educational level (below bachelor)	0.006	0.028	0.029	-0.007
AC's income level	-0.081^	-0.062	-0.062	-0.043
Primary stressors				
OP's declining health		0.156***	0.155***	0.120**
OP's adverse psychological health		0.038	0.038	-0.026
OP lacking retirement pension		0.096*	0.096*	0.107*
OP lacking medical insurance		-0.028	-0.028	-0.023
OP lacking housing ownership		0.013	0.013	0.016

Anticipatory stressor				
Anticipated care needs			0.002	0.009
Psychosocial resources				
Work stress				0.179***
Family stress				0.148***
Filial obligation				-0.027
Intergenerational relationship				-0.112*
Sibling number				-0.099*
R^2	**0.01**	**0.053**	**0.053**	**0.137**

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; AC = Adult child; OP = Older parent.

7.4.3 Factors Related to Filial Anxiety-Responsibility

Table 7.8 presents the standardized coefficients of the factors influencing the Filial Anxiety-Responsibility domain. Model 1 included background factors to predict this variable, which explained 1.2% of the total variance. Income level ($\beta = -0.103$, $p < .05$) was significantly correlated with reduced levels of Filial Anxiety-Responsibility.

Primary stressors were entered in model 2. Parent lacking retirement pension ($\beta = 0.089$, $p = .06$) and parent lacking housing ownership ($\beta = 0.085$, $p = .076$) were marginally positively correlated with Filial Anxiety-Responsibility. This model explained 4.6% of the variance in this variable.

The anticipatory stressor was entered in model 3. Parent lacking retirement pension ($\beta = 0.090$, $p = .056$), lacking housing ownership ($\beta = 0.092$, $p = .057$), and parent's declining health ($\beta = 0.080$, $p = .094$) was marginally positively correlated with Filial Anxiety-Responsibility. Anticipated care needs ($\beta = -0.076$, $p = .098$) were marginally negatively correlated to Filial Anxiety-Responsibility. They explained 5.1% of the total variance in this variable.

In model 4, psychosocial resources were entered. The factors explained 14.7% of the total variance of Filial Anxiety-Responsibility. Parent lacking retirement pension ($\beta = 0.107$, $p < .05$), lacking housing ownership ($\beta = 0.091$, $p < .05$), adult children's work stress ($\beta = 0.098$, $p < .05$), family stress ($\beta = 0.126$, $p < .01$) were positively correlated with Filial Anxiety-Responsibility. Filial obligation ($\beta = -0.136$, $p < .01$), intergenerational relationship quality (β

= −0.166, p = .001), and having more siblings (β = −0.095, p < .05) were significantly negatively correlated with Filial Anxiety-Responsibility.

Table 7.8. Hierarchical Linear Regression Analysis of Filial Anxiety-Responsibility (N=530)

	Model 1	**Model 2**	**Model 3**	**Model 4**
Background factors				
AC's gender (female)	0.016	0.014	0.021	-0.006
AC's age (30 and below)	0.032	0.021	0.024	0.054
AC's educational level (below bachelor)	-0.024	-0.003	-0.009	-0.042
AC's income level	-0.103*	-0.068	-0.058	-0.035
Primary stressors				
OP's declining health		0.071	0.080^	0.050
OP's adverse psychological health		0.064	0.067	-0.033
OP lacking retirement pension		0.089^	0.090^	0.107*
OP lacking medical insurance		-0.016	-0.017	-0.027
OP lacking housing ownership		0.085^	0.092^	0.091*
Anticipatory stressor				
Anticipated care needs			-0.076^	-0.028
Psychosocial resources				
Work stress				0.098*
Family stress				0.126**
Filial obligation				-0.136**
Intergenerational relationship				-0.166***
Sibling number				-0.095*
R^2	**0.012**	**0.046**	**0.051**	**0.147**

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; AC = Adult child; OP = Older parent.

7.4.4 Factors Related to Filial Anxiety-Welfare

Table 7.9 presents the standardized coefficients of the factors influencing Filial Anxiety-Welfare. Model 1 added background factors to predict Filial Anxiety-Welfare. None were significantly correlated with Filial Anxiety-Welfare.

Primary stressors were entered in model 2. Parent lacking medical insurance (β = 0.160, p < .001) was significantly positively correlated with Filial Anxiety-Welfare, whereas parent's adverse psychological health (β = -0.098, p < .05) was negatively correlated with it. This model explained 4.3% of the total variance in Filial Anxiety-Welfare.

The anticipatory stressor was entered in model 3. Parent lacking medical insurance (β = 0.164, p < .001) and anticipated care needs (β = 0.209, p < .001) were significantly positively correlated with Filial Anxiety-Welfare whereas parent's adverse psychological health (β =

0.106, $p < .05$) was significantly negatively correlated with it. Income level ($\beta = -0.085$, $p = .078$) was marginally correlated with reduced levels of Filial Anxiety-Welfare. In total, these factors explained 8.4% of the variance in Filial Anxiety-Welfare.

In model 4, psychosocial resources were entered. The factors explained 16.4% of the total variance in Filial Anxiety-Welfare. Parent lacking medical insurance ($\beta = 0.192$, $p < .001$), anticipated parental care needs ($\beta = 0.124$, $p < .01$) and filial obligation ($\beta = 0.260$, $p < .001$) were significantly positively correlated with Filial Anxiety-Welfare. Income level ($\beta = -0.088$, $p = .061$) was marginally negatively correlated with Filial Anxiety-Welfare, whereas intergenerational relationship quality ($\beta = 0.083$, $p = .098$) was marginally positively correlated with it.

Table 7.9. Hierarchical Linear Regression Analysis of Filial Anxiety-Welfare (N=530)

	Model 1	**Model 2**	**Model 3**	**Model 4**
Background factors				
AC's gender (female)	-0.020	-0.012	-0.034	-0.013
AC's age (30 and below)	0.076	0.073	0.065	0.064
AC's educational level (below bachelor)	-0.006	-0.018	-0.003	-0.006
AC's income level	-0.068	-0.058	-0.085^	-0.088^
Primary stressors				
OP's declining health		0.073	0.048	0.055
OP's adverse psychological health		-0.098*	-0.106*	-0.028
OP lacking retirement pension		0.021	0.016	0.012
OP lacking medical insurance		0.160***	0.164***	0.192***
OP lacking housing ownership		0.021	0.003	0.004
Anticipatory stressor				
Anticipated care needs			0.209***	0.124**
Psychosocial resources				
Work stress				0.026
Family stress				0.069
Filial obligation				0.26***
Intergenerational relationship				0.083^
Sibling number				-0.025
R^2	**0.010**	**0.043**	**0.084**	**0.164**

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; AC = Adult child; OP = Older parent.

7.5 Summary

In this chapter, descriptive analysis results of participants' sociodemographic characteristics, primary and anticipatory stressors, psychosocial resources, care preparation steps, and filial

anxiety are presented, together with the results of hierarchical linear regression on overall filial anxiety its three subdomains.

Chapter 8 Results (III): Care Preparation and Its Relationships with Stressors and Filial Anxiety

8.1 Brief Introduction

This chapter presents how background characteristics, primary and anticipatory stressors, and psychosocial resources influenced care preparation steps. Next, path analysis results of the integrated model of the relationships between primary stressors, anticipatory stressor, care preparation steps and filial anxiety are introduced.

8.2 Factors Related to Care Preparation

To identify factors that may influence the participants' care preparation behaviors, hierarchical linear regression analyses were conducted with Care Preparation Total and its four subdomains, namely, Awareness-Decision, Avoidance, Information Gathering, and Concrete Planning, respectively.

8.2.1 Factors Related to Care Preparation Total

Table 8.1 presents the standardized coefficients of the factors influencing the Care Preparation Total. Model 1 entered only background factors, which explained 4.5% of the total variance. Among all the background factors, age, gender, and education level were significantly related to care preparation. Being older than 30 years (β = 0.138, p < .01) and being male (β = 0.102, p < .05) were significantly positively correlated with Care Preparation Total. Meanwhile, having a bachelor's degree or higher degree was significantly negatively correlated with Care Preparation Total (β = −0.091, p = .05).

Primary stressors were entered in model 2. Being older than 30 years (β = 0.132, p < .01) and being male (β = 0.111, p < .05) remained significantly positively correlated with on Care Preparation Total. Education level (β = −0.090, p = .053) was marginally negatively correlated with Care Preparation Total. Parent lacking housing ownership (β = 0.091, p =.057) was

marginally positively correlated with Care Preparation Total. This model explained 5.8% of the variance.

The anticipatory stressor was entered in model 3. Being older than 30 years (β = 0.126, p < .01) and being male (β = 0.096, p < .05) were significantly and positively correlated with Care Preparation Total. Furthermore, anticipated care needs (β = 0.155, p = .001) was significantly positively correlated with Care Preparation Total. Parent lacking housing ownership (β = 0.079, p = .096) was marginally positively correlated with Care Preparation Total. Education level (β = −0.079, p = .086) and were marginally negatively correlated with Care Preparation Total. In total, they explained 8.1% of the variance.

In model 4, psychosocial resources were entered, explaining 16.0% of the total variance in Care Preparation Total. Age (β = 0.118, p < .01), being male (β = 0.106, p < .05), parent lacking medical insurance (β = 0.097, p < .05) and lacking housing ownership (β = 0.099, p < .05), anticipated care needs (β = 0.092, p < .05), intergenerational relationship quality (β = 0.113, p < .05), and internal locus of control (β = 0.217, p < .001) were significantly positively correlated with Care Preparation Total. Parents currently living in Shenzhen (β = −0.124, p < .01) was significantly negatively correlated with Care Preparation Total. Meanwhile, filial obligation (β = 0.095, p = .053) and family stress (β = 0.079, p = .067) were marginally positively correlated with Care Preparation Total, whereas education level (β = −0.088, p = .051) was marginally negatively correlated with Care Preparation Total.

Table 8.1. Hierarchical Linear Regression Analysis of Care Preparation Total (N = 530)

	Model 1	**Model 2**	**Model 3**	**Model 4**
Background factors				
AC's gender (female)	0.102*	0.111*	0.096*	0.106*
AC's age (30 and below)	0.138**	0.132**	0.126**	0.118**
AC's educational level (below bachelor)	-0.091*	-0.090^	-0.079^	-0.088^
AC's income level	0.055	0.076	0.056	0.031
Parent living in Shenzhen	-0.057	-0.071	-0.070	-0.124**
Primary stressors				
OP's declining health		0.059	0.039	0.048
OP's adverse psychological health		-0.042	-0.048	0.016
OP lacking retirement pension		-0.043	-0.045	-0.064

OP lacking medical insurance		0.050	0.054	0.097*
OP lacking housing ownership		0.091^	0.079^	0.099*
Anticipatory stressors				
Anticipated care needs			0.155***	0.092*
Psychosocial resources				
Work stress				0.014
Family stress				0.079^
Filial obligation				0.095^
Intergenerational relation				0.113*
Sibling number				-0.027
Internal locus of control				0.217***
R^2	**0.045**	**0.058**	**0.081**	**0.160**

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; AC=Adult child; OP=Older parent.

8.2.2 Factors Related to Awareness-Decision

Table 8.2 presents the standardized coefficients for the factors influencing the Awareness-Decision domain of care preparation. Model 1 entered only background factors to predict Awareness-Decision. They explained 3.1% of the total variance. Among all the background factors, being older than 30 years (β = 0.103, p < .05) and higher income level (β = 0.104, p < .05) were significantly positively correlated with scores of Awareness-Decision.

Primary stressors were entered in model 2. Being older than 30 years (β = 0.102, p < .05) and income level (β = 0.110, p < .05) remained positively correlated with Awareness-Decision level. Moreover, Parent's declining health (β = 0.102, p < .05) was positively correlated with Awareness-Decision. This model explained 4.4% of the variance in the Awareness-Decision domain.

The anticipatory stressor was entered in model 3. Being older than 30 years (β = 0.090, p < .05) was significantly positively correlated with Awareness-Decision, as was anticipated care needs (β = 0.275, p < .001). Parent's adverse psychological health (β = -0.084, p = .067) was marginally negatively correlated with Awareness-Decision. These factors explained 11.5% of the variance in total.

In model 4, psychosocial resources were entered. The factors explained 25.0% of the total variance in Awareness-Decision. Parent's declining health (β = 0.086, p < .05),

anticipated care needs (β = 0.175, p < .001), filial obligation (β = 0.211, p < .001), intergenerational relationship quality (β = 0.168, p = .001), and internal locus of control (β = 0.204, p < .001) were significantly positively correlated with Awareness-Decision. Only the background factor of parents currently living in Shenzhen (β = -0.142, p < .01) was significantly negatively correlated with Awareness-Decision. Being older than 30 years (β = 0.078, p = .065) was marginally positively correlated with it.

Table 8.2. Hierarchical Linear Regression Analysis of Awareness-Decision (N=530)

	Model 1	**Model 2**	**Model 3**	**Model 4**
Background factors				
AC's gender (female)	0.046	0.061	0.034	0.052
AC's age (30 and below)	0.103*	0.102*	0.090*	0.078^
AC's educational level (below bachelor)	-0.048	-0.040	-0.021	-0.021
AC's income level	0.104*	0.110*	0.073	0.042
Parent living in Shenzhen	-0.064	-0.070	-0.067	-0.142**
Primary stressors				
OP's declining health		0.102*	0.067	0.086*
OP's adverse psychological health		-0.074	-0.084^	0.024
OP lacking retirement pension		0.010	0.005	-0.022
OP lacking medical insurance		-0.011	-0.006	0.047
OP lacking housing ownership		0.025	0.002	0.022
Anticipatory stressors				
Anticipated care needs			0.275***	0.175***
Psychosocial resources				
Work stress				0.022
Family stress				0.036
Filial obligation				0.211***
Intergenerational relation				0.168***
Sibling number				-0.016
Internal locus of control				0.204***
R^2	**0.031**	**0.044**	**0.115**	**0.250**

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; AC=Adult child; OP=Older parent.

8.2.3 Factors Related to Avoidance

Scores in the Avoidance domain were reverse coded, with higher scores indicating lower levels of avoidance of future eldercare preparation. Table 8.3 presents the standardized coefficients of the factors influencing the Avoidance domain. Model 1 entered only background factors to predict this variable; they explained 2.6% of the total variance. Among all the background factors, income level (β = 0.124, p < .01) was significantly and positively correlated with high

levels of Avoidance. Furthermore, being male (β = −0.075, p = .098) was marginally and negatively correlated with Avoidance.

Primary stressors were entered in model 2. Income level (β = 0.114, p < .05) remained significantly positively correlated with Avoidance, and being male (β = −0.076, p = .098) remained marginally and negatively correlated with Avoidance. The factors explained 3.1% of total variance in the Avoidance domain.

The anticipatory stressor was entered in model 3. Being male (β = −0.090, p < .05) was significantly negatively correlated with Avoidance. Anticipated care needs (β = 0.147, p = .001) was significantly positively correlated with it. Income level (β = 0.095, p = .053) was marginally positively correlated with Avoidance. These factors explained 5.1% of the total variance.

In model 4, psychosocial resources were entered, explaining 9.7% of the total variance in the Avoidance domain. Anticipated care needs (β = 0.134, p < .01), intergenerational relationship quality (β = 0.142, p < .05), and number of siblings (β = 0.144, p < .01) were significantly positively correlated with Avoidance. Parents currently living in Shenzhen (β = −0.110, p < .05) was significantly negatively correlated with Avoidance. Income level (β = 0.085, p = .085) was marginally positively correlated with Avoidance. Being male (β = -0.079, p = .075) was marginally negatively correlated with Avoidance.

Table 8.3. Hierarchical linear regression analysis of Avoidance (N=530)

	Model 1	**Model 2**	**Model 3**	**Model 4**
Background factors				
AC's gender (female)	-0.075^	-0.076^	-0.09*	-0.079^
AC's age (30 and below)	0.037	0.042	0.035	0.013
AC's educational level (below bachelor)	0.010	0.012	0.022	0.054
AC's income level	0.124**	0.114*	0.095^	0.085^
Parent living in Shenzhen	-0.072	-0.067	-0.065	-0.110*
Primary stressors				
OP's declining health		-0.006	-0.025	-0.012
OP's adverse psychological health		-0.037	-0.043	0.013
OP lacking retirement pension		0.056	0.054	0.025
OP lacking medical insurance		-0.019	-0.015	-0.007
OP lacking housing ownership		-0.037	-0.049	-0.050

Anticipatory stressors				
Anticipated care needs			0.147***	0.134**
Psychosocial resources				
Work stress				-0.059
Family stress				-0.057
Filial obligation				0.002
Intergenerational relation				0.142*
Sibling number				0.144**
Internal locus of control				-0.005
R^2	**0.026**	**0.031**	**0.051**	**0.097**

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; AC=Adult child; OP=Older parent.

8.2.4 Factors Related to Information Gathering

Table 8.4 presents the standardized coefficients of the factors influencing the Information Gathering domain of care preparation. Model 1 entered background factors to predict this variable; they explained 5.2% of the total variance. Among all the background factors, being older than 30 years (β = 0.173, p < .001) was significantly positively correlated with high levels of Information Gathering. Income level (β = 0.090, p = .054) was marginally and positively correlated with Information Gathering, whereas having a bachelor's degree or higher (β = −0.080, p = .081) was marginally and negatively correlated with it.

Primary stressors were entered in model 2. Being older than 30 years (β = 0.166, p < .001) and higher income level (β = 0.115, p < .05) remained significantly positively correlated with higher levels of Information Gathering. Parent's lack of housing ownership (β = 0.097, p < .05) was also significantly positively correlated with it. Education level (β = −0.084, p = .069), and parents currently living in Shenzhen (β = −0.079, p = .077) were marginally negatively correlated with Information Gathering. Parent lacking medical insurance (β = 0.086, p = .055) was marginally positively correlated with it. This model explained 6.9% of the variance in the Information Gathering domain.

The anticipatory stressor was entered in model 3. Higher income level (β = 0.099, p < .05) was significantly positively correlated with Information Gathering, as were parent lacking medical insurance (β = 0.089, p < .05) and anticipated care needs (β = 0.124, p < .01). Parent

lacking housing ownership (β = 0.087, p = .066) was marginally positively correlated with Information Gathering, and parents currently living in Shenzhen (β = −0.078, p = .082) were marginally negatively correlated with Information Gathering. These factors explained 8.4% of the total variance.

In model 4, psychosocial resources were entered, explaining 13.0% of the total variance in Information Gathering. Being older than 30 years (β = 0.151, p = .001), parents lacking medical insurance (β = 0.120, p < .01), lacking housing ownership (β = 0.098, p < .05) were significantly positively correlated with Information Gathering. By contrast, parents currently living in Shenzhen (β = −0.115, p < .05) were significantly negatively correlated with Information Gathering. Education level (β = −0.080, p = .078) was marginally negatively correlated with Information Gathering, whereas income level (β = 0.084, p = .083), anticipated care needs (β = 0.087, p = .06), and family stress (β = 0.076, p = .082) were marginally positively correlated with it.

Table 8.4. Hierarchical Linear Regression Analysis of Information Gathering (N=530)

	Model 1	**Model 2**	**Model 3**	**Model 4**
Background factors				
AC's gender (female)	0.031	0.039	0.027	0.028
AC's age (30 and below)	0.173***	0.166***	0.161	0.151***
AC's educational level (below bachelor)	-0.080^	-0.084^	-0.075	-0.080^
AC's income level	0.090^	0.115*	0.099*	0.084^
Parent living in Shenzhen	-0.063	-0.079^	-0.078^	-0.115*
Primary stressors				
OP's declining health		0.054	0.038	0.036
OP's adverse psychological health		-0.035	-0.040	-0.001
OP lacking retirement pension		-0.051	-0.053	-0.074
OP lacking medical insurance		0.086^	0.089*	0.120**
OP lacking housing ownership		0.097*	0.087^	0.098*
Anticipatory stressors				
Anticipated care needs			0.124**	0.087^
Psychosocial resources				
Work stress				0.024
Family stress				0.076^
Filial obligation				0.021
Intergenerational relation				0.082
Sibling number				0.024
Internal locus of control				0.187***
R^2	**0.052**	**0.069**	**0.084**	**0.130**

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; AC=Adult child; OP=Older parent.

8.2.5 Factors Related to Concrete Planning

Table 8.5 presents the standardized coefficients of the factors influencing the Concrete Planning domain of care preparation. Model 1 added only background factors to predict this variable; they explained 4.0% of the total variance. Among the background factors, being male ($\beta = 0.115$, $p = .01$) and being older than 30 years ($\beta = 0.095$, $p < .05$) were significantly positively correlated with high levels of Concrete Planning. Education level ($\beta = -0.088$, $p = .059$) was marginally negatively correlated with Concrete Planning.

Primary stressors were entered in model 2. Being male ($\beta = 0.114$, $p < .05$) and being older than 30 years ($\beta = 0.096$, $p < .05$) remained significantly positively correlated with Concrete Planning. Education level ($\beta = -0.087$, $p = .064$) was marginally negatively correlated with Concrete Planning, whereas income level ($\beta = 0.083$, $p = .088$) was marginally positively correlated with it. These factors explained 4.4% of the total variance in the Concrete Planning domain.

The anticipatory stressor was entered in model 3. Being male ($\beta = 0.101$, $p < .05$), being older than 30 years ($\beta = 0.090$, $p < .05$) and anticipated care needs ($\beta = 0.137$, $p < .01$) were significantly positively correlated with Concrete Planning. Educational level ($\beta = -0.077$, $p = .097$) was marginally negatively correlated with Concrete Planning. These factors explained 6.1% of the total variance in this domain.

In model 4, psychosocial resources were entered, explaining 11.8% of the total variance in Concrete Planning. Being male ($\beta = 0.118$, $p < .01$), anticipated care needs ($\beta = 0.098$, $p < .05$), intergenerational relationship quality ($\beta = 0.166$, $p < .01$), and internal locus of control ($\beta = 0.148$, $p = .001$) were significantly positively correlated with Concrete Planning, whereas parents currently living in Shenzhen ($\beta = -0.133$, $p < .01$) was negatively correlated with Concrete Planning.

Table 8.5. Hierarchical Linear Regression Analysis of Concrete Planning (N=530)

	Model 1	**Model 2**	**Model 3**	**Model 4**
Background factors				
AC's gender (female)	0.115**	0.114*	0.101*	0.118**
AC's age (30 and below)	0.095*	0.096*	0.090*	0.071
AC's educational level (below bachelor)	-0.088^	-0.087^	-0.077^	-0.064
AC's income level	0.074	0.083^	0.065	0.039
Parent living in Shenzhen	-0.068	-0.071	-0.069	-0.133**
Primary stressors				
OP's declining health		-0.016	-0.033	-0.016
OP's adverse psychological health		-0.028	-0.033	0.038
OP lacking retirement pension		-0.004	-0.006	-0.028
OP lacking medical insurance		-0.001	0.003	0.033
OP lacking housing ownership		0.050	0.038	0.051
Anticipatory stressors				
Anticipated care needs			0.137**	0.098*
Psychosocial resources				
Work stress				-0.067
Family stress				0.009
Filial obligation				0.019
Intergenerational relation				0.166**
Sibling number				0.049
Internal locus of control				0.148***
R^2	**0.040**	**0.044**	**0.061**	**0.118**

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; AC=Adult child; OP=Older parent.

8.3 Test of the Integrated Model

To examine the integrated model, path analysis was conducted to examine the relationships among primary stressors (i.e., Parent's declining health, adverse psychological health, parent lacking retirement pension, medical insurance, and housing ownership), the anticipatory stressor (i.e., anticipated parental care needs), step-by-step care preparation (i.e., Awareness-Decision, Information Gathering, and Concrete Planning), and filial anxiety (i.e., Filial Anxiety Total, Filial Anxiety-Ability, Filial Anxiety-Responsibility, and Filial Anxiety-Welfare). Background factors, including adult children's age, gender, income level, and education level were controlled for in path analyses.

For care preparation, the Avoidance domain was not included in the path analysis. According to the founders of the Preparation for Future Care Needs model (Sörensen et al., 2017), Avoidance is a distinct domain that represents a negative attitude toward considering

future eldercare needs, a non-rational and defensive aspect of care preparation. Therefore, although it was a separate factor identified in scale validation, it was not included in the integrated model which aims to examine the sequence of care preparation steps. This is also consistent with the analytic strategy adopted in the previous study (Sörensen & Pinquart, 2000b).

Five sets of path models were tested by treating five variables as the primary stressors. After examination, parent's declining health and lack of house ownership as the primary stressors, were found to successfully establish paths with the anticipatory stressor, care preparation and filial anxiety. Therefore, only the path models of these two primary stressors are discussed as follows.

For parent's declining health, the integrated model yielded a satisfactory model fit ($p > .05$, CMIN/df = 1.496, CFI = .997, GFI = .998, RMSEA = .031). It explained 4.5%, 7.2%, 9.4%, and 15.6% of the total variance in Filial Anxiety Total, Filial Anxiety-Ability, Filial Anxiety-Responsibility, and Filial Anxiety-Welfare, respectively.

In the path model, parent's declining health ($\beta = 0.160$, $p < .001$) was significantly positively correlated with anticipated parental care needs, anticipated parental care needs ($\beta = 0.265$, $p < .001$) was significantly positively correlated with Awareness-Decision, Awareness-Decision ($\beta = 0.464$, $p < .001$) was significantly positively correlated with Information Gathering and both Awareness-Decision ($\beta = 0.117$, $p < .01$) and Information Gathering ($\beta = 0.462$, $p < .001$) were significantly positively correlated with Concrete Planning.

The path analysis of model 1 (Figure 8.1), where the Filial Anxiety-Total as the outcome variable, revealed that Information Gathering ($\beta = 0.114$, $p < .05$) was significantly positively correlated with Filial Anxiety Total, and Concrete Planning ($\beta = -0.099$, $p = .052$) was marginally correlated with reduced Filial Anxiety Total. Moreover, parent's declining health ($\beta = 0.120$, $p < .01$) was significantly positively correlated with Filial Anxiety Total.

Concerning the influences of control variables, being female (β = 0.100, p < .05) was significantly positively correlated with greater awareness of parent's declining health, whereas being male (β = 0.093, p < .05) was correlated with higher levels of anticipated parental care needs. Being older than 30 years was correlated with higher levels of Awareness-Decision (β = 0.102, p < .05), and Information Gathering (β = 0.127, p = .001). Being male (β = 0.100, p < .01) was positively correlated with Concrete Planning whereas higher education level (β = −0.096, p < .05) was negatively correlated with it. Furthermore, income level (β = −0.103, p < .05) was negatively correlated with Filial Anxiety Total.

In this model, the mediation effects of anticipated care needs and care preparation activities, and their serial mediation effects were all not significant.

The path analysis of model 2 (Figure 8.2), where the Filial Anxiety-Ability domain as the outcome variable, revealed that Concrete Planning (β = −0.176, p < .001) and Awareness-Decision (β = −0.102, p < .05) were significantly correlated with reduced Filial Anxiety-Ability. Parent's declining health (β = 0.159, p < .001) was significantly positively correlated with Filial Anxiety-Ability.

After deleting the non-significant path between anticipated care needs and Filial Anxiety-Ability, the mediation effects of anticipated care needs and care preparation activities were examined. It was found that parent's declining health had significant indirect effect (β = -0.006, 95% CI [-0.014, -0.001]) on Filial Anxiety-Ability, reflecting the significant serial mediation effect of anticipatory stressor and care preparation. Moreover, anticipated care needs also displayed significant indirect effect (β = -0.036, 95% CI [-0.070, -0.008]) on Filial Anxiety-Ability, reflecting the significant mediation effect of care preparation. However, the mediation effect of anticipated care needs on the relationship between declining health and Filial Anxiety-Ability was not significant.

The path analysis of model 3 (Figure 8.3), where Filial Anxiety-Responsibility is the outcome variable, revealed that Concrete Planning (β = −0.091, p = .069) was marginally negatively correlated with Filial Anxiety-Responsibility. Awareness-Decision (β = −0.265, p < .001) was significantly correlated with reduced Filial Anxiety-Responsibility, whereas Information Gathering (β = 0.159, p < .01) and parent's declining health (β = 0.127, p < .01) were significantly positively correlated with Filial Anxiety-Responsibility.

After deleting the non-significant path between anticipated care needs and Filial Anxiety-Responsibility, the mediation effects of anticipated care needs and care preparation activities were examined. It was found that parent's declining health had significant indirect effect (β = -0.009, 95% CI [-0.020, -0.003]) on Filial Anxiety-Responsibility, reflecting the significant serial mediation effect of anticipatory stressor and care preparation steps. Moreover, anticipated care needs displayed significant indirect effect (β = -0.059, 95% CI [-0.099, -0.028]) on Filial Anxiety- Responsibility, reflecting the significant mediation effect of care preparation steps. However, the mediation effect of anticipated care needs on the relationship between declining health and Filial Anxiety-Responsibility was not significant.

The path analysis of model 4 (Figure 8.4), where Filial Anxiety-Welfare is the outcome variable, revealed that Awareness-Decision (β = 0.332, p < .001) and anticipated care needs (β = 0.097, p < .05) were significantly correlated with increased Filial Anxiety-Welfare. Income level (β = −0.103, p < .05) was significantly negatively correlated with Filial Anxiety-Welfare.

In this model, parent's declining health had significant indirect effect (β = 0.031, 95% CI [0.012, 0.063]) on Filial Anxiety-Welfare, reflecting the serial mediation effect of anticipatory stressor and care preparation steps. Moreover, anticipated care needs also had significant indirect effect (β = 0.094, 95% CI [0.057, 0.139]) on Filial Anxiety-Welfare, reflecting the mediation effect of care preparation. Moreover, in this model, the mediation

effect of anticipated parental care needs on the relationship between declining health and Filial Anxiety-Welfare was also significant (β = 0.040, p < 0.05), reflecting the stress proliferation effect.

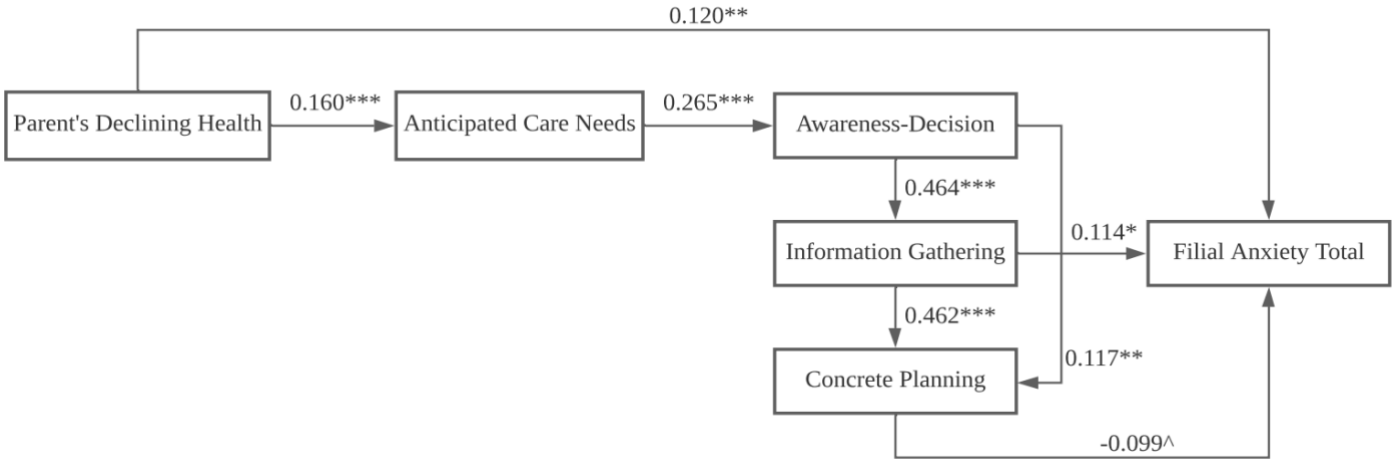

Figure 8.1. Path Model 1 for Filial Anxiety Total (N=530)

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; Only significant paths were shown.

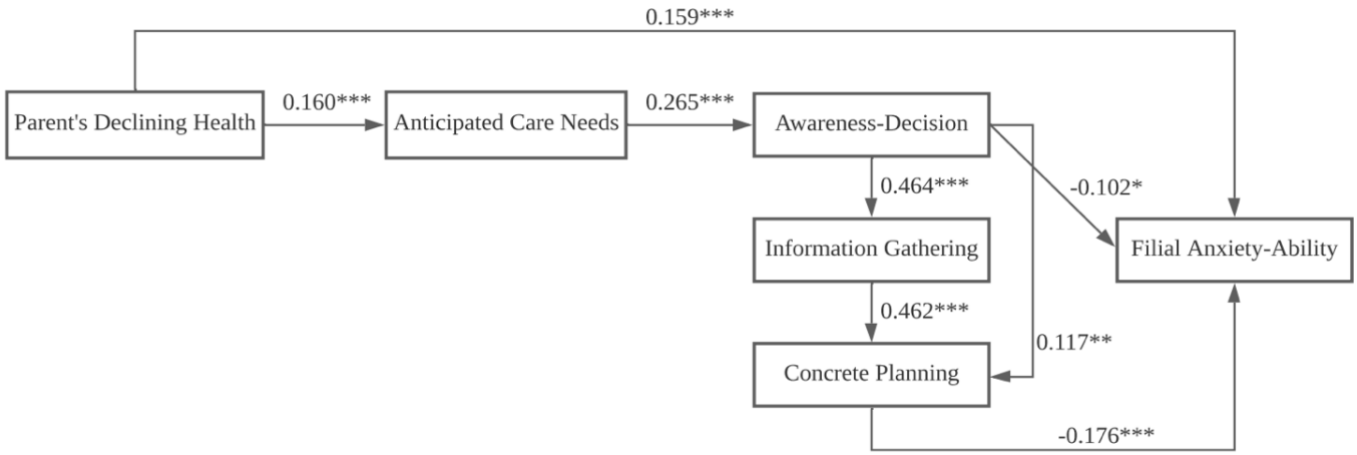

Figure 8.2. Path Model 2 for Filial Anxiety-Ability (N=530)

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; Only significant paths were shown.

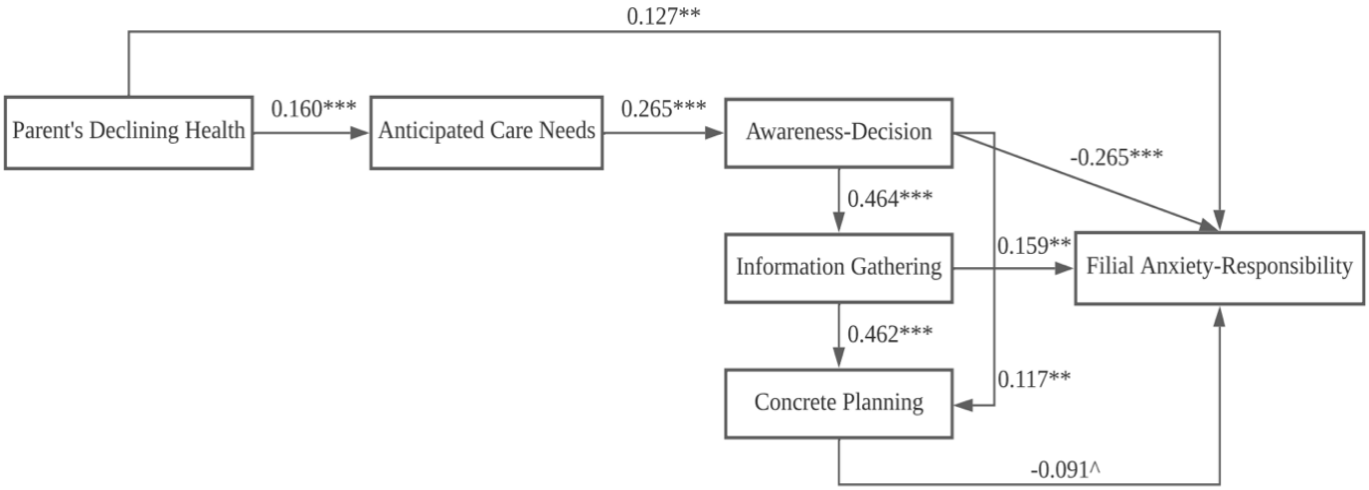

Figure 8.3. Path Model 3 for Filial Anxiety-Responsibility (N=530)

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; Only significant paths were shown.

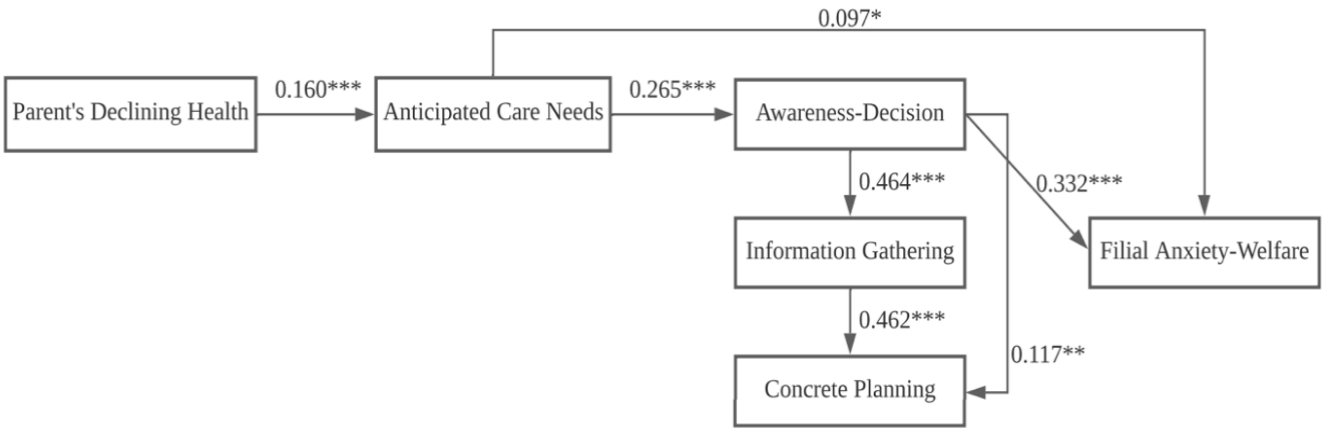

Figure 8.4. Path Model 4 for Filial Anxiety-Welfare (N=530)

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; Only significant paths were shown.

With parent lacking housing ownership serving as the primary stressor, the integrated model yielded satisfactory model fit ($p > .05$, CMIN/df = 1.037, CFI = 1.000, GFI = .999, RMSEA = .008). It explained 3.5%, 5.0%, 8.4%, and 15.6% of the total variance in Filial

Anxiety Total, Filial Anxiety-Ability, Filial Anxiety-Responsibility, and Filial Anxiety-Welfare, respectively.

In the path model, parent lacking housing ownership ($\beta = 0.088$, $p < .05$) was significantly positively correlated with anticipated parental care needs, anticipated parental care needs ($\beta = 0.265$, $p < .001$) was significantly positively correlated with the Awareness-Decision, Awareness-Decision ($\beta = 0.464$, $p < .001$) was significantly positively correlated with Information Gathering, and both Awareness-Decision ($\beta = 0.117$, $p < .01$) and Information Gathering ($\beta = 0.462$, $p < .001$) were significantly positively correlated with Concrete Planning.

The path analysis of Model 5 (Figure 8.5), where Filial Anxiety-Total as the outcome variable, showed that Information Gathering ($\beta = 0.115$, $p < .05$) was significantly positively correlated with Filial Anxiety Total, and Concrete Planning ($\beta = -0.109$, $p = .052$) was marginally correlated with reduced Filial Anxiety Total. Moreover, anticipated parental care needs ($\beta = 0.076$, $p = .088$) was marginally positively correlated with Filial Anxiety Total.

Concerning the influences of control variables, educational level ($\beta = 0.141$, $p < .01$) and income level ($\beta = 0.199$, $p < .001$) were significantly positively correlated with parent's housing ownership. Being older than 30 years old was positively related to Awareness-Decision about future eldercare ($\beta = 0.102$, $p < .05$), and Information Gathering ($\beta = 0.127$, $p = .001$). Being male ($\beta = 0.100$, $p < .01$) was positively related to Concrete Planning whereas higher educational level ($\beta = -0.096$, $p < .05$) was negatively correlated with it. Furthermore, income level ($\beta = -0.102$, $p < 0.05$) was negatively correlated with Filial Anxiety Total.

In this model, the mediation effects of anticipated care needs and care preparation were all not significant.

The path analysis of Model 6 (Figure 8.6), where Filial Anxiety-Ability domain as the outcome variable, showed that Concrete Planning ($\beta = -0.189$, $p < .001$) was significantly

correlated with reduced Filial Anxiety-Ability. Awareness-Decision (β = -0.091, p = .070) was marginally correlated with reduced Filial Anxiety-Ability.

After deleting the non-significant paths between parent's lacking housing ownership and Filial Anxiety-Ability and between anticipated care needs and Filial Anxiety-Ability, the mediation effects of anticipated care needs and care preparation activities were examined. It was found that parent's lacking housing ownership only had marginally significant indirect effect (β = 0.003, 95% CI [0.000, 0.009]) on Filial Anxiety-Ability, reflecting only marginally significant serial mediation effect of anticipatory stressor and care preparation. Meanwhile, anticipated care needs had significant indirect effect (β = -0.032, 95% CI [-0.065, -0.004]) on Filial Anxiety-Ability, reflecting the significant mediation effect of care preparation. The mediation effect of anticipated care needs on the relationship between parent's lacking housing ownership and Filial Anxiety-Ability was not significant.

The path analysis of Model 7 (Figure 8.7), where Filial Anxiety-Responsibility domain as the outcome variable, revealed that Concrete Planning (β = -0.101, p < .05) and Awareness-Decision (β = -0.253, p < .001) were significantly negatively correlated with Filial Anxiety-Responsibility. Parent lacking housing ownership (β = 0.093, p < .05) was significantly positively related to Filial Anxiety-Responsibility. Information Gathering (β = 0.158, p < .01) was significantly positively correlated with Filial Anxiety-Responsibility.

After deleting the non-significant path between anticipated care needs and Filial Anxiety-Responsibility, the mediation effects of anticipated care needs and care preparation activities were examined. It was found that parent's lacking housing ownership only had marginally significant indirect effect (β = 0.005, 95% CI [0.000, 0.013]) on Filial Anxiety-Responsibility, indicating the marginally significant serial mediation effect of anticipatory stressor and care preparation. Moreover, anticipated care needs had significant indirect effect (β = -0.057, 95% CI [-0.097, -0.027]) on Filial Anxiety-Responsibility, indicating the significant mediating

effect of care preparation. The mediation effect of anticipated care needs on the relationship between declining health and Filial Anxiety-Responsibility was not significant.

The path analysis of Model 8 (Figure 8.8), where Filial Anxiety-Welfare is the outcome variable, showed that Awareness-Decision (β = 0.331, p < .001) and anticipated care needs (β = 0.096, p < .05) were significantly correlated with increased Filial Anxiety-Welfare. Income level (β = -0.103, p < 0.05) was significantly negatively correlated with Filial Anxiety-Welfare.

After deleting the non-significant path between parent's lacking housing ownership and Filial Anxiety-Welfare, the mediation effects of anticipated care needs and care preparation activities were examined. It was found that parent's lacking housing ownership only had marginally significant indirect effect (β = -0.017, 95% CI [-0.038, 0.000]) on Filial Anxiety-Welfare, indicating marginally significant serial mediation effect of anticipatory stressor and care preparation. Moreover, anticipated care needs had significant indirect effect (β = 0.094, 95% CI [0.057, 0.138]) on Filial Anxiety-Welfare, indicating the significant mediation effect of care preparation steps. The mediation effect of anticipated care needs on the relationship between declining health and Filial Anxiety-Ability was not significant.

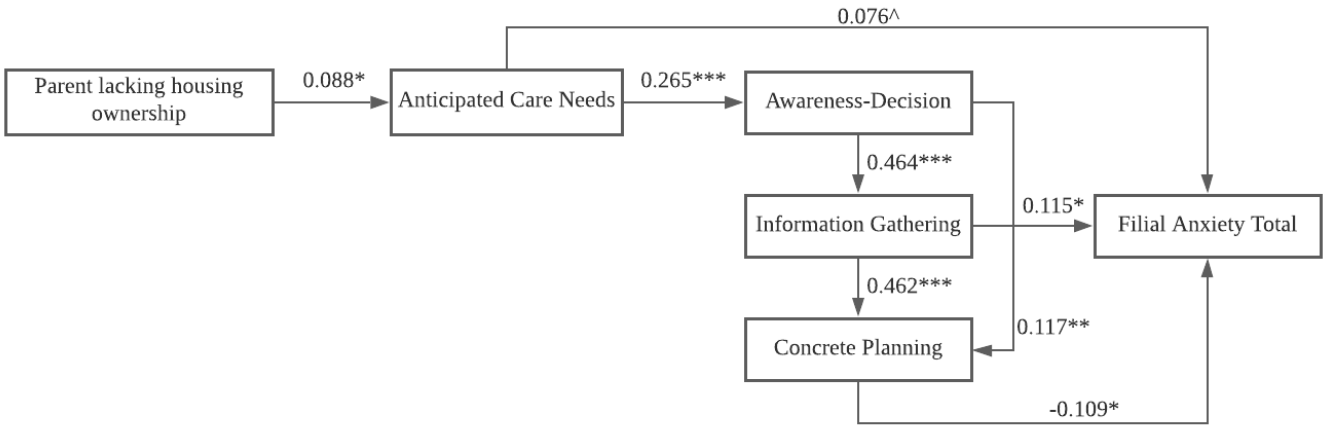

Figure 8.5. Path Model 5 for Filial Anxiety Total (N=530)

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; Only significant paths were shown.

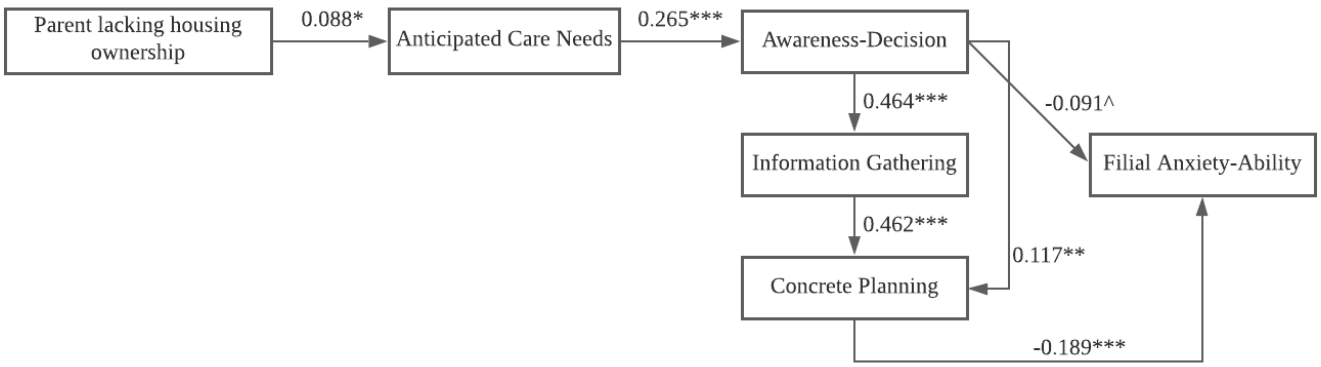

Figure 8.6. Path Model 6 for Filial Anxiety-Ability (N=530)

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; Only significant paths were shown.

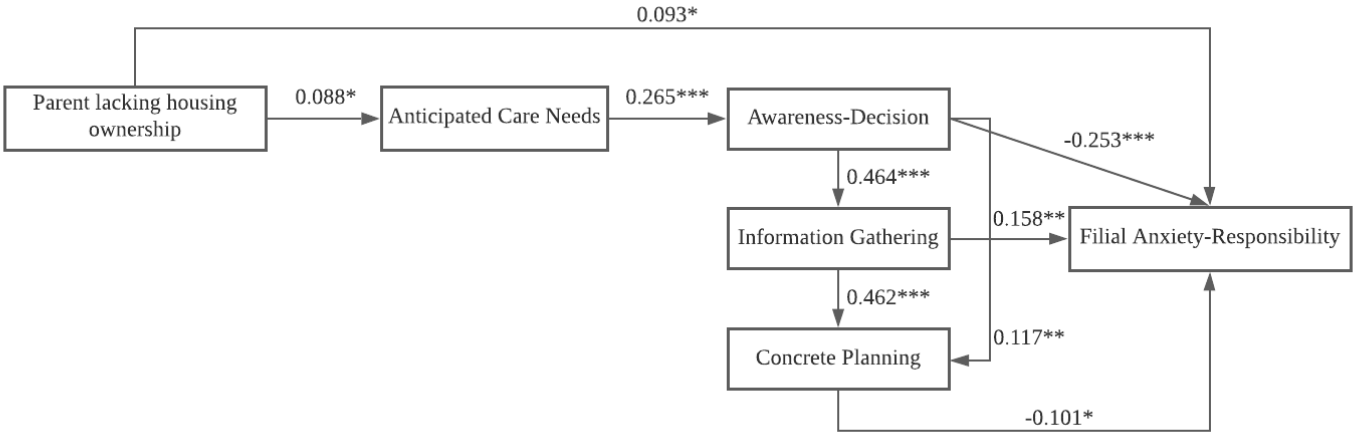

Figure 8.7. Path Model 7 for Filial Anxiety-Responsibility (N=530)

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; Only significant paths were shown.

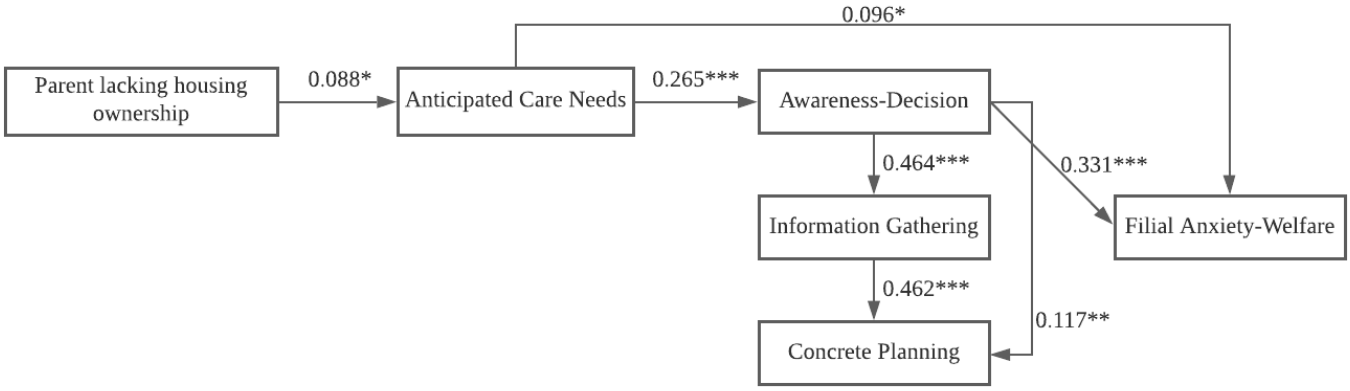

Figure 8.8. Path Model 8 for Filial Anxiety-Welfare (N=530)

Note. ***indicates significance at the $p \leq 0.001$ (** $p \leq 0.01$, * $p \leq 0.05$) level of confidence; Only significant paths were shown.

8.4 Summary

This chapter presents the results of how background factors, primary stressors, anticipatory stressor, and psychosocial resources are related to care preparation steps. Then the results of

path analysis is presented to illustrate the relationships among the multiple stressors, care preparation steps and filial anxiety.

Chapter 9 Discussion and Implications

9.1 Brief introduction

This chapter discusses the findings pertaining to the validation of the Chinese versions of the Filial Anxiety Scale and Preparation for Future Care Needs Scale for adult children, and the influences of background factors, primary stressors, anticipatory stressor, and psychosocial resources on multiple subdomains of filial anxiety and the multiple steps of care preparation. An integrated model of the relationships among primary stressors, anticipatory stressor, step-by-step care preparation, and filial anxiety is also discussed. In the end, the implications and limitations of current study are discussed and directions for future studies are pointed out.

9.2 Revised Version of the Filial Anxiety Scale in the Chinese Cultural Context

The Filial Anxiety Scale is a 13-item instrument developed by Cicirelli (1988). The scale comprises two subscales, namely Filial Anxiety A, which comprises seven items that measure an adult child's anxiety regarding their ability to take on an anticipated caregiving role, and Filial Anxiety B, which comprises six items that measure an adult child's anxiety over their parents' welfare (Cicirelli, 1988). The scale has mainly been applied in Western countries and has yielded satisfactory reliability and validity for middle-aged adult children (e.g., Morais et al., 2019; Murray et al., 1996; Myers & Cavanaugh, 1995). However, the reliability levels of the two subscales have always been unsatisfactory when applied to younger adult children (e.g., Datta et al., 2005; Myers & Cavanaugh, 1995), and the applicability of the scales to Chinese adult children has not yet been verified. The present study is the first to adapt and validate the 13-item Filial Anxiety Scale for Chinese younger adult children aged between 26 and 40 years, with the aim of assessing their concerns regarding their anticipated care of parents. This is crucial because few studies have examined the filial anxiety of Chinese adult children even though they tend to experience it.

9.2.1 Filial Anxiety-Responsibility: A New Factor Emerged

The Chinese version of the Filial Anxiety Scale yielded a three-factor solution. The three factors were Filial Anxiety-Ability, Filial Anxiety-Responsibility, and Filial Anxiety-Welfare. This factor pattern differed from that of the original two-factor model (Cicirelli, 1988). In the original scale, seven items were designed to measure the Filial Anxiety-Ability domain. However, in the present study, three of the seven items (i.e., item 5 "I'm afraid that helping my parent will take all my resources," item 6 "I worry that a time will come when I'll have to help my parent," and item 7 "I don't know what I'll do if my parent asks for help") were loaded onto a separate factor to form a three-factor structure. According to the content of the three items, they seemed to suggest a consistent theme of anxiety regarding the assumption of the filial responsibility to care for ageing parents. Thus, this factor was named "Filial Anxiety-Responsibility." The typical items of this domain were different from those of the "Filial Anxiety-Ability", since these items were indicating more passive attitudes toward taking on the caregiver role, and more concerns about the negative impacts of caregiving for themselves. The motivations behind these items seem different from the concerns about parent's wellbeing. Therefore, the new factor structure not only captured the key components of filial anxiety as suggested by the original model, but identified a new domain that is particularly meaningful in the Chinese cultural context.

The Confucian virtue of filial piety is a cornerstone of Chinese family values. It obliges children to respect, obey, and care for their parents (Legge, 2004). From an early age, Chinese children internalize the idea that providing care for their ageing parents will be their obligations one day (Gui & Koropeckyi-Cox, 2016). Therefore, in addition to the anxiety that Chinese adult children experience with respect to their parents' well-being and their own ability to ensure their parents' survival stemming from their bonds of attachment (Cicirelli, 1988), Chinese adult children's socialization as caregivers and their identification of their parents as

caregivers may create a unique type of anxiety, namely anxiety over the specter of failing to meet parental and societal expectations if they foresee their inability to provide adequate care to their needy parents. The domain of Filial Anxiety-Responsibility accurately reflects the unique characteristics of the filial anxiety experienced by Chinese adult children.

Another reason for the aforementioned conceptual difference is that the sample of the present study was much younger than those of previous studies that yielded a two-factor structure. This line of reasoning is supported by another study that investigated undergraduate adult children and yielded a three-factor model; however, the questions loaded onto each factor were different relative to the present study (Myers & Cavanaugh, 1995). This indicated that a different factor structure may be more appropriate for samples consisting of younger adult children. The responses of middle-aged and younger adult children may differ because the former group may have already developed filial maturity whereas the latter group is still in the process of developing or is only beginning to develop filial maturity (Myers & Cavanaugh, 1995). Younger adult children tend to be experiencing the transitional stage of "filial crisis," during which they are just gaining awareness of their parents' increasing care needs and attempting to switch from a role of care recipient to caregiver. Thus, their concerns about taking on caregiving responsibilities are more pronounced relative to their older counterparts. Further studies are required to investigate why the aforementioned factor structures were formed differently and to determine whether the differences are attributable to generational or cultural differences.

9.2.2 Chinese Adult Children's Levels of Filial Anxiety in Three Domains

Compared with the filial anxiety scores of a U.S. sample (N = 71, mean age = 46.20) in Cicirelli's (1988) study, the Chinese adult children sample in current study (N = 521, mean age = 31.96) obtained a similar mean score for the Filial Anxiety-Welfare domain (20.0 vs 21.9). After the scores for the Filial Anxiety-Ability and Filial Anxiety-Responsibility subdomains

were combined, the current sample yielded a higher mean score than the U.S. sample for the "Filial Anxiety A" subdomain (20.9 vs. 16.8). A similar trend was observed when comparing the present study's results with those obtained from another larger U.S. sample (N = 527, mean age = 39.95), whose mean scores for the Filial Anxiety-Ability and Filial Anxiety Welfare subdomains were 16.9 and 19.3, respectively (Murray et al., 1996). This difference may be due to sociocultural reasons. On the one hand, the caregiver role is culturally assigned to Chinese adult children, and thus, they are more likely to anticipate their assumption of the role and feel worried about their ability to become caregivers relative to Western adult children. Moreover, the influence of the cultural value of filial piety has led to Chinese adult children internalizing societal expectations that family members should be caregivers. Therefore, Chinese adult children may become anxious about their ability to meet the parental and societal expectations of a "filial child." By contrast, in Western societies, self-care is culturally valued and adult children typically only provide help after their parents lose the desire to be independent (Wakui & Cheng, 2017). Adult children's anxiety about their caregiving ability is mainly related to their concerns about resource sufficiency, and thus, they may exhibit a lower level of anxiety in the Ability domain relative to the other subdomains. On the other hand, the different social welfare systems in China and Western countries may also account for adult children's differences in filial anxiety levels. Western countries have more developed social security, medical care, and long-term care systems, and Western older parents can resort to formal care sources for eldercare needs. By contrast, the formal care resources are far from meeting the needs of Chinese older adults, and Chinese families still mainly rely on adult children for eldercare. Thus, when faced with increasing structural constraints on their caregiving practice, Chinese adult children are likely to experience higher level of filial anxiety.

The Chinese adult children examined in the present study yielded a high mean score in the Filial Anxiety-Welfare domain and moderate mean scores for the other two subdomains.

These findings are consistent with those of a previous study, reflecting to some degree the prevalent uncertainty, discomfort, and ambivalence adult children feel about caring for their ageing parents in the future (Bradley et al., 2008). Moreover, the structural contradictions created by the unique cultural value of filial care and the constraints imposed by multiple factors (e.g., geographical distance, substantial work and life pressure, limited resources, and lack of formal and informal care support) create specific challenges relating to Chinese adult children's fulfilment of their caregiving responsibilities, and this may lead to particularly high levels of filial anxiety among Chinese adult children.

A further examination of the mean item scores across the three subdomains revealed that Chinese adult children exhibited the highest anxiety level for the Filial Anxiety-Welfare domain, followed by the Filial Anxiety-Ability and Filial Anxiety-Responsibility subdomains. These findings are consistent with those of previous studies, which reported that adult children always exhibited a higher level of anxiety about their parents' welfare relative to other aspects of future caregiving (e.g., Chuo & Li, 2008; Morais et al., 2019; Murray et al., 1996; Myers & Cavanaugh, 1995). This indicated that as much as these adult children felt anxious about their ability to be caregivers, they might be more anxious about the inevitability of their parents' health decline and eventual death. Moreover, among the seven items used to measure Filial Anxiety-Welfare, item 10 "I feel I should keep in close touch with my parent to be sure nothing is wrong" yielded the highest score. This could be because most of the adult children examined in the present study were not living in the same cities as their parents.

The three subdomains of filial anxiety were also revealed to be positively and significantly correlated with each other. Filial Anxiety-Ability and Filial Anxiety-Responsibility had a low correlation with Filial Anxiety-Welfare, and Filial Anxiety-Ability and Filial Anxiety-Responsibility shared a moderate correlation with each other. These findings also indicated that the three factors represent related but different aspects of filial

anxiety. Moreover, the internal consistency reliability of the overall scale and three subscales was satisfactory, indicating that the Chinese version of the Filial Anxiety Scale was a reliable measurement tool for assessing multiple subdomains of filial anxiety in Chinese adult children.

9.2.3 Application of the Revised Version of the Filial Anxiety Scale

In summary, the Chinese version of the Filial Anxiety Scale is a valid and culturally appropriate measurement tool for assessing Chinese adult children's concerns about their future roles as caregivers. This scale can be used to identify adult children who are highly anxious about providing filial care, to determine the aspects of filial care about which an adult child is most anxious, and to inform the development of targeted interventions to relieve the anxiety of adult child caregivers as well as to promote their mental well-being and better prepare them for their future caregiving roles. Moreover, the results of the current study indicated that the factorial structure of the original scale may vary depending on the cultural background and age group of adult children. The current version of the scale can be applied to younger adult children and adult children with Chinese cultural background. Future studies can further investigate the applicability of the scale for other groups of adult children.

9.3 Revised Version of the Preparation for Future Care Needs Scale in the Chinese Cultural Context

The current study adapted the original 15-item Preparation for Future Care Needs scale (Sörensen et al., 2017) and validated it by using a sample of Chinese adult children to assess their care preparation. After deleting one item (i.e., item 10 "I know what options for care I do not want to provide for my parents" with reference to results of the item analysis), the Chinese version of the scale yielded a four-factor solution with 14 items, comprising the factors of Awareness-Decision, Avoidance, Information Gathering and Concrete Planning. This new factor structure captured the key components of the care preparation process as suggested by

the original model and identified the unique pattern of care preparation activities among young adult children under Chinese cultural context.

9.3.1 Combination of Awareness and Decision Making Domains

After deleting an item from the Decision-making domain, the two items from the Awareness domain (i.e., item 1 "I pay close attention to how my parent's physical and mental capabilities are changing to assess whether I may soon need to provide care for him/her" and item 3 "Talking to other people has made me think about whether I might need to provide care for my parent in the future") and the two remaining items from the Decision Making domain (i.e., item 11 "I know my general preferences for providing care for my parent in the future even though I am not sure how I will get what I want" and item 12 "If I ever need to provide care for my parent, I can choose between several options that I have considered in some depth") loaded on the same factor, forming the "Awareness-Decision" domain.

This result indicated that for Chinese adult children, the awareness of the parents' future care needs and making decisions on the proper way to provide care for parents are intertwined components in the process of care preparation. On the one hand, Chinese adult children have long been regarded as the default caregivers and formal care services are generally not favored by Chinese families (Gui & Koropeckyj-Cox, 2016). Consequently, as soon as adult children become aware of the parents' future care needs, filial care is an instant decision based on cultural expectations. Even without collecting information and comparing different care options, Chinese adult children are aware of their desirable care arrangement for parents. This can be supported by a recent study on Chinese adult children's attitude toward future care service (Chen et al., 2021), which found that although Chinese adult children did not perceive institutional care as an unfilial care option, only a small proportion of the participants would like to resort to institutional care for their own parents (Chen et al., 2021). Chinese adult children may have already internalized the filial care expectation as they grow up. Thus, their

awareness of their parents' future care needs is closely linked with the decision about care provision.

On the other hand, this factor pattern possibly reflected the implicit decision-making strategy in terms of deciding the parents' future care arrangements in Chinese families. As suggested by Radina et al. (2009), families whose members are interdependent may rely on implicitly negotiations to deal with a parent's need for care. The implicit decision-making strategies may involve the use of silent agreements that evolve over time based on the history of family members' relationships (Radina et al., 2009). In Chinese families, both adult children and parents may assume that eldercare needs will be met within the family, rather than using formal care services even without explicitly discussing it. For families with multiple siblings, the decision-making process could also be made informally or there could be an implied expectation for how parental care should be handled. Family members may rely on existing expectations or family roles in guiding how the caregiving tasks will be assigned to different children (Radina et al., 2009).

It is interesting to find that the item "I pay attention to information in the media on providing care for older adults" was loaded on the Information Gathering domain rather than the Awareness domain. This is possibly because adult children spend most of their time using social media, rather than traditional media. Obtaining information from traditional media is often a passive process, while learning information from social media is more likely to be a result of an intentional information search. Therefore, instead of reflecting an awareness of future eldercare, this item is related to a purposive and active process of information gathering. This factor structure is out of the expectation; however, it did reflect the characteristic of care preparation among young adult children.

9.3.2 Chinese Adult Children's Engagement in Different Steps of Care Preparation

Chinese adult children displayed a comparatively high level of engagement in Awareness-Decision, moderate level of Avoidance and Information Gathering, and comparatively low level of Concrete Planning when compared with different domains. The high score in the Awareness-Decision domain is consistent with previous studies that frequently found that adult children were likely to anticipate their parents' future care needs before the onset of caregiving (e.g., Bromley & Blieszner, 1997; Hansson et al., 1990; Sörensen & Zarit, 1996). This finding is easy to understand due to the aforementioned cultural expectations and socialization of filial care in Chinese societies. Furthermore, the item "I know my general preferences for providing care for my parent in the future even though I am not sure how I will get what I want" yielded the highest score. This result accurately reflected the strong willingness to provide filial care among Chinese adult children and the eldercare dilemmas they are faced with.

The moderate avoidant tendency may be because adult children are likely to feel uncomfortable thinking about the subject of their parents' physical decline and need for care (Sörensen & Zarit, 1996). Meanwhile, as suggested by Hummert and Morga (2002), adult children may avoid thinking about their parent's care needs because this topic is connected to their parents' mortality. Moreover, this avoidance tendency is possibly because Chinese adult children felt that it is difficult to provide desirable care for their parents due to the geographical distance, huge working and living pressure, and limited resources. Thus, limited alternative care options and the anticipation of being unable to provide desirable care for parents may prompt negative emotional arousal that hinder them from responding to their parents' future care needs. Moreover, this avoidance tendency may be due to a lack of information, planning skills, and resources that are essential during the care preparation process (Bai et al., 2021).

Chinese adult children displayed a moderate level of Information Gathering. In this domain, the item "I have gathered information about options for eldercare by talking to friends and/or relatives" yielded the highest score, while the item "I have gathered information about

options for eldercare by talking to health care professionals (doctors, nurses, home health care agencies)" yielded the lowest score. These findings revealed that Chinese adult children are more likely to seek for information from informal rather than formal channels in terms of seeking information about future eldercare. It is possible that eldercare is a family responsibility. Thus, Chinese adult children may not actively seek information from health professionals. Furthermore, as revealed by previous studies, a reluctance to use formal care institutions (Chen et al., 2021) and a lack of awareness about using formal care services may also result in adult children's moderate levels of engagement in information gathering. Moreover, constrained by the limited availability of public eldercare services and the low affordability of high-quality eldercare services, the service options to gather information about them could be limited.

Among the four domains, Chinese adult children had the lowest score in the Concrete Planning domain. This result is consistent with those of previous studies (e.g., Sörensen & Zarit, 1996; Bromley & Blieszner, 1997), which found that concrete planning is always less prevalent than anticipating caregiving. It seems common that adult children who had considered their parents' future care needs were unlikely to actually discuss future eldercare needs with parents (Fowler & Fisher, 2009). On the one hand, although adult children acknowledge the importance of such discussion, it is possible that they are simply unsure about how to have such a conversation about a parent's possible frailty. On the other hand, they may perceive explicit discussions as unnecessary because adult children may believe they know what parents want and family members may instinctively know the proper care arrangements (Pecchioni, 2001). Not talking about parental future care arrangements may also be considered a sign of closeness among family members (Finch & Mason, 1993). For adult children who do not share a close relationship with parents may be afraid of prompting family conflicts and may avoid open negotiations (Fowler & Afifi, 2011). Furthermore, from the perspective of adult children, it is

possible that their parents' health and circumstances may not seem to merit immediate or concrete preparation (Bromley & Blieszner, 1997; Fowler & Afifi, 2011; Hansson et al., 1990).

Lastly, it was also found that except for the Avoidance domain, the other domains of the care preparation process were all positively related to each other at moderate levels. The Avoidance domain was negatively and significantly related to the Awareness-Decision domain and the Concrete Planning domain. This is different from Sörensen et al.'s (2017) study which found that the Avoidance domain was weakly but positively related to the Awareness domain among U.S. older adults, but consistent with the findings of a study conducted among Chinese older adults (Bai et al., 2021). This result further reflected that the avoidance tendency of care preparation not only had more severe negative influences on proactive coping behaviors among Chinese older adults, but among Chinese adult children. In view of this, more public education programs can be developed for adult children or the whole family to better accept and face parent's aging and decline, and to become more aware of the benefits of care preparation for the family's wellbeing. Besides, more care preparation trainings and services can be provided to improve adult children's care planning skills and to make eldercare information more accessible.

9.3.3 Application of the Revised Version of the Preparation for Future Care Needs Scale

The Chinese version of the Preparation for Future Care Needs Scale is a valid measurement to assess the care preparation process among adult children in China. This scale can be used to identify adult children who are unprepared for future caregiving and facilitate the development of services or programs to help adult children with their preparation in targeted domains. The current version of the scale is suggested to be used for adult children living under Chinese cultural backgrounds. Future studies may further investigate the applicability of the scale for other groups of adult children.

9.4 Roles of Background Factors, Stressors, and Psychosocial Resources in Filial Anxiety

9.4.1 Roles of Background Factors in Filial Anxiety

In the present study, it was found that age and gender were not significantly related to the total score for filial anxiety or any of its subdomains; this is inconsistent with previous findings that anxiety level changes with age (Morais et al., 2019; Murray et al., 1995) and that women are more likely to experience higher levels of filial anxiety, particularly with respect to the Filial Anxiety-Welfare domain (e.g, Chuo & Li, 2008; Laditka & Pappas-Rogich, 2001; Morais et al., 2019; Murray et al., 1995).

The two aforementioned findings can be explained by the unique cultural background of adult children in China; regardless of age or gender, these adult children have internalized the value of providing parental caregiving such that they are more mindful of the eventuality of their caregiving role and exhibit similar levels of filial anxiety. This finding may also indicate that parental care is not a strictly age-related normative life task; to an extent, the finding also supports Brody's (1985) argument that the development of filial crisis or filial maturity is not associated with a particular age range. Moreover, although women historically undertook the responsibilities associated with parental caregiving (Murray et al., 1995) and a disproportionate share of family caregiving duties, the findings indicate that Chinese adult daughters did not exhibit a higher level of filial anxiety relative to Chinese adult sons. This could be because sons in China are also expected to provide filial care. A previous study in Hong Kong also found that being the son of the care recipient was related to a higher level of caregiving burden (Bai et al., 2018). Thus, both men and women of varying ages experience a relatively consistent level of anxiety about their parental caregiving responsibilities. Adult children of both genders are concerned about the declining health and well-being of their parents.

Educational and income levels were also not significantly related to filial anxiety. Although income level had a significant influence on the filial anxiety total score and the Filial

Anxiety-Ability domain, this influence was not apparent after the introduction of primary stressors. This is inconsistent with the findings of previous studies (e.g., Cicirelli, 1988; Laditka & Pappas-Rogich, 2001), but this may be because previous studies seldom examined the influence of income and parent's characteristics together (i.e., primary stressors in the present study) and overlooked the more crucial role played by these stressors in influencing filial anxiety. Similarly, the nonsignificant influence of educational level may be attributable to the dilution of its influences by income level and other stressors. Previous studies (e.g., Chen et al., 2021) that reported the significant negative influence of educational level did not conduct regression analysis for income level and other stressors.

9.4.2 Roles of Primary and Anticipatory Stressors in Filial Anxiety

The results for the influences of primary stressors were partially consistent with the hypothesis, insofar as parent's declining health was significantly and positively correlated with the filial anxiety total score and Filial Anxiety-Ability domain; however, declining health did not significantly influence the Filial Anxiety-Responsibility and Filial Anxiety-Welfare subdomains. This finding corresponds to those of previous studies that reported that worse perceived parental health is positively correlated with Filial Anxiety-Ability among middle-aged daughters (Myers & Cavanaugh, 1995) and positively correlated with the filial anxiety total score (Bradley et al., 2008). This phenomenon is expected because parents' signs of ageing indicate their increasing caregiving needs, which may trigger filial anxiety in their adult children (Cicirelli, 1988). However, Chuo and Li (2008) reported that parent's health status has no influence on any domain of adult children's filial anxiety; this could be because more than 85% of the adult children in their study perceived their parents to be in normal or good health. For similar reasons, in the present study, parent's adverse psychological health had no influence on the filial anxiety total score or its subdomains, which was inconsistent with previous

findings (e.g., Bradley et al., 2008; Cicirelli, 1988) and could be attributable to the general perceptions of adult children that their parents had good mental health.

The present study is the first to examine the influences of parent's eldercare resources on adult children's filial anxiety. As suggested by the Stress Process Model, parent's lack of eldercare resources may serve as a primary stressor that influences adult children's concerns about their future eldercare role. Consistent with the hypotheses, parent's retirement pension, medical insurance, and housing ownership all had significant influences on adult children's filial anxiety level. Specifically, parent lacking retirement pension was significantly and positively correlated with the filial anxiety total score and Filial Anxiety-Ability and Filial Anxiety-Responsibility subdomains but had a nonsignificant influence on the Filial Anxiety-Welfare domain. By contrast, parent lacking medical insurance was significantly and positively correlated with the filial anxiety total score and significantly influenced the Filial Anxiety-Welfare domain but had a nonsignificant influence on the Filial Anxiety-Ability and Filial Anxiety-Responsibility subdomains. Parent lacking housing ownership was not significantly correlated with the filial anxiety total score but had a significant positive influence on the Filial Anxiety-Responsibility domain.

The preceding findings are consistent with findings of a Taiwan-based study (Chuo & Li, 2008), which reported that the higher economic status of parents was correlated with a reduction in Filial Anxiety-Ability level but did not significantly influence the Filial Anxiety-Welfare domain. These findings are reasonable in the sense that these three factors indicate that parent's resource level is highly correlated with the difficulty of future caregiving. Parents with more resources may require less support from their adult children and may even be able to support these children. Accordingly, these children perceive their parents to be capable of self-care and experience less filial anxiety. Moreover, parent's lack of retirement pension is more closely related to the need for instrumental care and, consequently, the Filial Anxiety-

Ability and Filial Anxiety-Responsibility subdomains. Parent's lack of housing ownership may also lead to the need for future intergenerational cohabitation, which increases the pressure on adult children to assume caregiving responsibilities even if it does not necessarily deplete their resources. Thus, this stressor only had an influence on the Filial Anxiety-Responsibility domain. Moreover, parent's lack of medical insurance is more closely related to their health risk and survival and may, thus, increase their adult children's concerns about their welfare. These findings also indicated that access to eldercare resources, such as pension and health care, is crucial not only to the well-being of the older parents, but also to their adult children. The government may improve eldercare policies to facilitate access to pension, health care, and long-term care.

Anticipated parental eldercare needs was examined as an anticipatory stressor of filial anxiety. The result was partially consistent with the hypothesis insofar as anticipated care needs had a significant positive influence on filial anxiety but only with respect to the Filial Anxiety-Welfare domain. Further studies are required to clarify the mechanisms through which anticipated care needs influence filial anxiety.

9.4.3 Roles of Psychosocial Resources in Filial Anxiety

For the influences of psychosocial resources, the results were mostly consistent with the hypothesis; the number of siblings the adult children had was significantly and negatively corelated with the filial anxiety total score and Filial Anxiety-Ability and Filial Anxiety-Responsibility subdomains. This is a meaningful finding because number of siblings is a crucial indicator of informal social support and is expected to play a key role in reducing the psychological burden experienced by adult children with respect to their parent's future caregiving needs. Parental caregiving is a physically and psychologically demanding task, and siblings can share caregiving tasks and responsibilities and support each other. The present

study is the first to identify the role of number of siblings within the unique socioeconomic context of China. This finding has practical implications for the development of support services for one-child families in China and for other countries that are experiencing demographic transitions.

Adult children's work and family stress were significantly and positively correlated with the filial anxiety total score and Filial Anxiety-Ability and Filial Anxiety-Responsibility subdomains. This is possibly because that work and family stress may reduce adult children's caregiving ability in the future, thus increasing the level of filial anxiety. This finding supports the theory of role conflict in family caregiving and for the first time reveals that role conflict not only imposes a burden on current caregivers but also increases the psychological stress experienced by potential caregivers who anticipate future eldercare needs. Therefore, policymakers and service providers should develop more family-friendly policies to help reduce the work and family burden of potential and existing family caregivers and improve their work–life balance. This can benefit many aspects of their life.

Notably, family stress, work stress, and number of siblings were all significantly correlated with the Filial Anxiety total score and Filial Anxiety-Ability and Filial Anxiety-Responsibility subdomains but not with the Filial Anxiety-Welfare subdomain. This may be because the adult children's concerns about the first two subdomains were more closely related to practical and instrumental eldercare support, whereas their concerns regarding the third domain were more closely related to the issue of attachment, namely their concerns for the well-being and possible loss of an attachment figure (Morais et al., 2019); therefore, the adult children were not influenced by the availability of personal resources and social support.

Adult children's filial obligation had no significant influences on the filial anxiety total score, which was inconsistent with the hypothesis. This could be explained by the conflicting influences of filial obligation on the Filial Anxiety-Responsibility and Filial Anxiety-Welfare

subdomains. Filial obligation was revealed to be correlated with a reduced level of Filial Anxiety-Responsibility but increased level of Filial Anxiety-Welfare. These conflicting influences were also reported in previous studies that reported that filial responsibility was positively correlated with Filial Anxiety-Welfare and negatively correlated with Filial Anxiety-Ability (Chuo & Li, 2008; Datta et al., 2005; Myers & Cavanaugh, 1995). Notably, this finding is consistent with the finding of a Taiwan-based study (Chuo & Li, 2008), which specifically highlighted that filial obligation influenced the Filial Anxiety-Responsibility subdomain rather than the Filial Anxiety-Ability subdomain.

The negative relationship between filial obligation and Filial Anxiety-Ability can be explained by the reasoning that a higher level of filial obligation represents a greater willingness to provide care to one's parents; thus, adult children may have more confidence in their ability to be caregivers and feel less anxiety as a result (Chuo & Li, 2008). By contrast, adult children with a low level of filial obligation may be less committed to providing filial care (Cicirelli, 1983); thus, they may experience more uncertainty and anxiety about their ability to provide care. The positive relationship between filial obligation and Filial Anxiety-Welfare could be because adult children who adopted the norms of filial obligation to a greater degree perceived their parents to be worthy of support and were, therefore, more concerned about their parents' well-being (Morais et al., 2019). Although filial obligation is shaped by cultural norms, a high level of filial obligation may also reflect the strong affection and closeness between parents and their adult children; this could also explain why a stronger filial obligation increases adult children's anxiety about their parents' welfare.

Intergenerational relationship also had a significant influence on the filial anxiety total score; however, it had a negative correlation with Filial Anxiety-Ability and Filial Anxiety-Responsibility and a marginally positive correlation with Filial Anxiety-Welfare. Previous studies have also reported a negative relationship between intergenerational relationship

quality and Filial Anxiety-Ability among daughters attending university (Myers & Cavanaugh, 1995). Cieslinski and Friedlmeier (2011) reported that intergenerational intimacy was negatively correlated with filial anxiety whereas intergenerational conflict was positively correlated with filial anxiety. These findings are expected because in a tense intergenerational relationship, the practice of filial care is not autonomous or self-motivated but rather imposed by social norms. In such situations, adult children may face substantial challenges in caring for their parents or understanding their parents' needs, which, in turn, triggers stress. Morais et al. (2019) suggested that individuals who are not altruistically motivated find it more difficult to achieve selflessness and focus on others' concerns and discomfort, causing them to become more anxious about the task of providing care (Morais et al., 2019). However, individuals who maintain better intergenerational relationships are less threatened and concerned about their parents' decline and the need to care for them. Future studies can further invesigate whether this form of anxiety influences actual caregiving (e.g., the extent of care provided by adult children and the making of institutionalization-related decisions).

9.5 Roles of Background Factors, Stressors, and Psychosocial Resources in Care Preparation

9.5.1 Roles of Background Factors in Care Preparation

Age was significantly and positively related to the total score of care preparation, particularly with the Information Gathering domain, but had no influence on Awareness-Decision, Avoidance and Concrete Planning. Sörensen and Zarit (1996) also found that anticipation of future caregiving and concrete planning were not related to age. In Bromley and Blieszner's (1997) study, the adult children's age was unrelated to any step of care preparation. This result is inconsistent with the assumption that younger adult children may be more absorbed in their own personal pursuits of careers or family and may be less likely to engage in all steps of care

preparation. This is possibly because the age range of the current sample is narrow and lacks variation. However, the significantly higher level of Information Gathering did reflect that older adult children may be more attentive to parental care issues and are more likely to take concrete actions to prepare.

The current study found that sons and daughters had equal levels of engagement in most steps of care preparation, but sons were more likely to engage in Concrete Planning activities. The former finding is possibly because of higher levels of education and financial independence as a result of the one-child policy among daughters (Chen et al., 2021; Song, 2016), and thus both sons and daughters bear equal filial care responsibilities and they were not motivated differently to prepare for future eldercare. Meanwhile, for families with multiple children, sons may be expected to shoulder more responsibilities for parental material wellbeing and cohabitation, while daughters were expected to shoulder the responsibilities of caregiving in daily life for ageing family members. Thus, sons and daughters displayed no significant differences in most domains of care preparation. Moreover, the high level of engagement in concrete planning among sons may reflect that gendered expectations about filial responsibility may still play a significant role in one-child generations (Chen et al., 2021). Therefore, sons may be more decisive about the future care arrangements. This could be a unique finding among Chinese adult children and the reasons behind this result worth further investigation.

Surprisingly, the adult children's educational level and income level were insignificantly related to care preparation in any domain. Although the income level displayed a significant positive influence on the Awareness-Decision and Avoidance (reverse coded) domains, the influences disappeared after introducing the anticipatory stressor and psychosocial resources. Similarly, the non-effect of educational level is because its influences may be diluted by the income level and other stressors. However, the marginally negative influences of educational

level on the care preparation total score and Information Gathering were noticeable. This is possibly because a higher educational level may be linked to a higher level of respect for a parent's self-autonomy; thus, adult children may have less inclination to gather information on their parent's behalf or engage in caregiving discussion with them (Fowler & Fisher, 2009).

Moreover, it was found that whether parents currently living in Shenzhen significantly influenced adult children's engagement in care preparation. Adult children who were currently living in different cities with parents were more likely to engage in all steps of care preparation. This study for the first time identified the relationship between adult children's migration status and care preparation behaviors. The findings are understandable because if adult children and parents live near each other, they may be more predisposed to expect family assistance than family members who live in proximity, and may not necessarily believe that a need to make plans in advance do exist, and adult children can easily provide help for parents (Sörensen & Zarit, 1996). By contrast, adult children who were not living in the same city with parents may have stronger feelings about the difficulties in providing care for parents, and thus feel urgent or pressing to make plans in advance.

9.5.2 Roles of Primary and Anticipatory Stressors in Care Preparation

Concerning the roles played by primary stressors, the parent's declining health was significantly and positively related to the Awareness-Decision domain, but it displayed no relationship with the other domains, which is consistent with previous studies that also found that perceived parental health problems were related to anticipation of caregiving (Hasson et al., 1990). This is understandable and is expected because the parents' ageing signs indicated the salience of future care needs and may trigger the adult children's awareness of future eldercare needs and decision-making of possible care arrangement among adult children. Declining health may also indicate that the parent's future is limited and may prompt the adult children's consideration of future care needs and plans about caregiving (Fowler & Fisher,

2009). However, the parent's psychological health had no influence on the care preparation total score nor its subdomains in the current study. This result may be because that adult children in the current sample generally perceived their parents as having a good mental health status. It is also possible that the psychological health status of the parents may not be noticeable for children and did not display its influences.

This study for the first time examined the relationships between the parent's eldercare resources and adult children's engagement in care preparation. Consistent with the Stress Process Model and the proactive coping theory, parent's lack of medical insurance and housing ownership served as the primary stressors to display significant and positive relationships with the adult children's care preparation level. Specifically, the parent's lack of medical insurance and housing ownership were positively related to the care preparation total score and the Information Gathering subdomain but had no influence on the other domains. These findings provided support for the hypotheses wherein the parent's less eldercare resources are related to increased care preparation efforts among adult children. This is reasonable because parents with more resources may require less support from adult children, and even be able to provide support for children. This could make children believe that parents are capable of self-care, thus reducing their efforts in care preparation. Moreover, it is possible that the stressor of the parent's medical insurance and housing ownership is related to the need for health care and cohabitation that would more likely to motivate actions of information gathering.

Anticipated parental eldercare needs as the anticipatory stressor was also for the time examined its relationship with care preparation. Mostly consistent with the hypothesis, anticipated care needs displayed a significantly positive influence on care preparation total score and all steps except Information Gathering. These findings provided empirical support for the proactive coping theory, wherein the recognition and initial appraisal of a potential stressor can drive the following steps of initial coping (Aspinwall & Taylor, 1997).

9.5.3 Roles of Psychosocial Resources in Care Preparation

In terms of the relationships between psychosocial resources and care preparation, the adult children's sibling number was unrelated to most of the care preparation steps and only positively related to the Avoidance (reverse coded) domain, which is partially consistent with the hypothesis, indicating that adult children with less siblings may tend to avoid thinking about the topic of parents' future care. This is understandable because sibling numbers, as crucial indicators of the availability of informal social support, are supposed to play a significant role in reducing adult children's caregiving burden. Multiple siblings can share caregiving tasks and responsibilities and provide support for each other. The lack of this form of social support could make adult children feel threatened by the enormity and difficulty of future caregiving tasks and give rise to negative arousal and thus avoid thinking about the eldercare issues. The current study was the first to identify the role of sibling numbers in care preparation under the unique socioeconomic background in China. This finding has particular practical implications for developing support services for one-child families in China and also has implications for other countries that are experiencing demographic transitions.

Out of expectation, the adult children's work stress and family stress were not significantly related to the care preparation total score nor its subdomains. According to the proactive coping theory (Aspinwall & Taylor, 1997), proactive coping is difficult in chronically stressful environments. High levels of family stress and work stress may indicate a high stress environment that may exacerbate cognitive load, reduce perceptions of personal control, and reduce the opportunity to engage in proactive coping. The results of current study were inconsistent with this hypothesis and inconsistent with previous findings wherein family stressors were negatively related to the adult children's care preparation (Bromley & Blieszner, 1997). This is possibly because the influences of work stress and family stress on care

preparation was mediated by the factor of internal locus of control. Future studies are suggested to further explore the dynamics behind these factors.

Adult child's filial obligation had no influence on care preparation total score but displayed a significant and positive relationship with the Awareness-Decision domain. Some previous studies have identified a positive relationship between the beliefs in filial obligation and willingness to provide help for older parents. Such willingness may give rise to a higher level of awareness about filial care. Moreover, family care may be a default expectation and instant decision for adult children who had higher levels of filial obligation, and results in the positive correlation between filial obligation and Awareness-Decision. This can be supported by a previous study which found that the preference for family-reliance care option was related to a higher level of decision-making (Song, 2016). The insignificant role of filial obligation in other planning domains is possibly because adult children with low level of filial obligation may have a low awareness of the parent's future care needs or unwilling to provide care for parents and thus they are unlikely to make plans; adult children with a high level of filial obligation may have implicit assumptions about how care will be provided for parents, which does not necessitate much planning. As a result, filial obligation did not display any significant relationship with other domains of care preparation.

Intergenerational relationship seemed to play a more crucial role than filial obligation in predicting adult children's care preparation behaviors. It was found to be positively related to the care preparation total score and almost all steps, excluding the Information Gathering. Previous studies revealed that the frequency of parent-child interaction was positively related to discussion of care arrangement (Fowler, 2006; c.f. Fowler & Afifi, 2011). These findings are understandable because in a tensed intergenerational relationship, the practice of filial care will not be autonomous but imposed by social norms. Under such situation, adult children may not take active actions to prepare for future caregiving. By contrast, individuals who have better

intergenerational relationships were more likely to be committed to helping (Cicirelli, 1983) and will be actively engaged in care preparation. Noticeably, worse intergenerational relationship quality was found related to increased level of Avoidance, indicating that strained relationships could make adult children feel uncomfortable thinking about parental future care needs. As suggested by Sörensen (1998), parents and adult children with strained relationships may find it particularly difficult or threatening to discuss future care needs because of high emotional management demands.

Lastly, the adult children's internal locus of control was a crucial factor influencing their care preparation activities. It was positively related to every step of care preparation, except Avoidance. This is related to the previous findings that personal authority was positively related to discussing future long-term care with parents (Bromley & Blieszner, 1997). The current study further provided evidence for its important role in predicting care preparation with a Chinese adult children sample.

9.6 Integrated Model and Theoretical Integration

An integrated model of the relationship between primary stressors (i.e., parent's declining health, parent lacking housing ownership), anticipatory stressor (i.e., anticipated parental care needs), step-by-step care preparation (i.e., Awareness-Decision, Information Gathering, and Concrete Planning) and filial anxiety (i.e., Filial Anxiety Total, Filial Anxiety-Ability, Filial Anxiety-Responsibility, and Filial Anxiety-Welfare) was examined. Background factors including the adult children's age, gender, income level and educational level were treated as control variables in model testing. The parent's declining health and lacking housing ownership, as primary stressors, each established four path models with Filial Anxiety Total and its three subdomains being treated as the ultimate outcome variable. In this section, relationships between the concepts in these integrated models were discussed.

9.6.1 Relationships between Background Factors and Stressors

The adult children's age, gender, educational level and income level were controlled in the path analysis. Aside from the associations of these factors with the four steps of care preparation and with the three domains of filial anxiety that have been discussed in previous sections, the results of the path analysis also identified their associations with the primary stressors and anticipatory stressor.

Specifically, in the path model where the parent's declining health was added as the primary stressor, the perception of the parent's declining health was revealed to be related to the female gender, while anticipating parental care needs was found to be related to the male gender. This is possibly because adult daughters were more attentive to the parent's ageing symptoms, while adult sons may be more sensitive or more likely to think about the care needs which is related to the filial care responsibility that they are expected to shoulder. In the path model where parent's lack of housing ownership was added as the primary stressor, it was found that adult children's educational level and income level were significantly related to parent's housing ownership, indicating that parent's socioeconomic status was related to adult children's socioeconomic status.

9.6.2 Stress Proliferation: Relationships between Primary and Anticipatory Stressors

Stress proliferation was regarded as a pivotal aspect of the stress process (Pearlin & & Bierman, 2013). It refers to "new or 'secondary' stressors that emerge from 'primary stressors', those to which people are initially exposed" (Pearlin & & Bierman, 2013, p. 328) and emphasizes on the configuration of multiple stressors that may simultaneously or serially exert influences on people's lives (Pearlin & & Bierman, 2013; Pearlin et al., 1990). The results of current study supported the hypothesis of stress proliferation in the model that parent's declining health served as the primary stressor and Filial Anxiety-Welfare served as the outcome. This is because anticipated care needs did not have significant influence on other domains of filial

anxiety. However, this finding still to some extent reflected that the anticipatory stressor has the potential to serve as a secondary stressor to mediate the relationship between primary stressor and the stress outcome. In future studies, other types of anticipatory stressors are suggested to be explored.

9.6.3 Mechanism of Step-by-Step Care Preparation

Consistent with previous studies (Bromley & Blieszner, 1997; Fowler & Fisher, 2009), the path analysis results suggested that the adult children's care preparation process did progress from abstract to concrete activities. The results of present study also provided empirical support for the Preparation for Future Care Needs model beyond its application to older adults. Moreover, although some participants my follow the steps from Awareness-Decision to Information Gathering and then to Concrete Planning, the direct path from Awareness-Decision to Concrete Planning suggests that some participants may skip the step of Information Gathering and directly make concrete plans after the Awareness-Decision step, which is consistent with the results among older adults (Song, 2016). Skipping the step of Information Gathering was understandable under the traditional Chinese culture, which valued family care (Bai et al., 2021; Song, 2016). Although Chinese adult children did not regard formal care services as unacceptable or unfilial care options, they still expected to provide eldercare for parents by themselves (Chen et al., 2021). As a result, some adult children may perceive information gathering as unnecessary and may skip this step. Moreover, as mentioned in previous section, this behavior pattern may also result from a lack of public care services or the awareness of using them.

9.6.4 Complex Relationships between Care Preparation Steps and Filial Anxiety

The results of the path analysis further reflected that the different steps of care preparation displayed complex relationships with the filial anxiety total score and its subdomains. Partially consistent with hypotheses, the Awareness-Decision was significantly related to the reduced

Filial Anxiety-Ability and Filial Anxiety-Responsibility but related to the increased Filial Anxiety-Welfare. Surprisingly, Information Gathering was significantly related to increased Filial Anxiety Total and Filial Anxiety-Responsibility. As expected, Concrete Planning was significantly related to the reduced Filial Anxiety-Ability, and marginally related to the reduced Filial Anxiety Total and Filial Anxiety-Responsibility.

It seemed that Awareness-Decision played a buffering role in reducing filial anxiety in the Ability and Responsibility domains. This is possibly because having an awareness of the parent's future care needs and making decisions about future care arrangements can increase a sense of security and control toward the future, which may further reduce their filial anxiety. This is similar to the previous findings, wherein care preparation was related to less insecurity about future among older adults (Sörensen & Pinquart, 2000a). However, the higher level of Awareness-Decision was also related to an increased filial anxiety about the parent's welfare. This is possibly because high levels of awareness and decision making indicated a better relationship with parents and attention to parent's care and health-related issues, and this may give rise to a higher level of anxiety about the parent's welfare.

Rather than buffering the filial anxiety, higher engagement level in Information Gathering may exacerbate the anxiety toward taking on caregiving responsibility. This is possibly because after learning more information about eldercare and comparing different options of caregiving, adult children may become anxious about the enormity and difficulty of future caregiving tasks and may feel worried about the possible failure to meet familial and social expectations of providing desirable care for parents.

Consistent with the hypothesis, adult children's engagement in Concrete Planning activities was significantly related to reduced level of filial anxiety in the Ability domain. However, it had no relationship with anxiety in the Welfare domain. This is possibly because concrete preparation activities may only help adult children feel prepared in a practical sense

but cannot change the fact that their parent's health is declining, which keeps threatening their existence and make adult children feel anxious.

These results showed that care preparation activities, as a proactive coping strategy, did have the potential to serve as the buffer of filial anxiety. Moreover, the findings also identified that certain preparation steps may also exacerbate some domains of filial anxiety. These findings have significant implications for the development of care preparation services and interventions.

9.6.5 Theoretical Integration: Relationships among Multiple Stressors, Proactive Coping Strategy, and Stress

Consistent with hypotheses, the study findings supported that care preparation steps can mediate the relationship between anticipatory stressor and multiple domains of filial anxiety. Although it can only serve as a buffer to reduce the negative influences of anticipatory stressor on Filial Anxiety-Ability and Filial Anxiety-Responsibility, but to increase its influences on Filial Anxiety-Welfare, the findings still to a large extent supported the potential buffering role of care preparation.

Moreover, anticipated parental care needs and care preparation can together serve as serial mediators on the relationship between primary stressor (i.e., declining health) and filial anxiety domains, indicating that care preparation steps may be initiated by the primary and anticipatory stressors and then serve as a buffer to reduce Filial Anxiety-Ability and Filial Anxiety-Responsibility.

The current study innovatively integrated the Stress Process Model, proactive coping theory and the Preparation for Future Care Needs model to understand the relationships among the primary stressor, anticipatory stressor, step-by-step care preparation, and filial anxiety. The results of the model testing provided empirical support for the hypotheses of theory integration and contributed to the understanding of the dynamics of how multiple stressors give rise to the

filial anxiety and simultaneously initiate the proactive coping process which may further serve as a buffer for the filial anxiety. These findings laid the foundation for future development of care preparation interventions and services to promote adult children's preparation for parents' future care needs and to reduce some aspects of their concerns about future care provision.

9.7 Implications

The findings of this study mainly have implications at the measurement, theoretical, and practical levels.

9.7.1 Measurement Implications

This study is the first to adapt and validate the Chinese version of the Filial Anxiety Scale for younger Chinese adult children to assess their concerns about anticipated care of elder parents. The new factor structure of the scale was identified, and this factor pattern was helpful in understanding the characteristics of the filial anxiety experienced by adult children in the Chinese culture. This validated scale, which contained three subdomains, may also be applied to adult children in other similar cultures. This scale was useful in identifying adult children who are particularly anxious about providing filial care, determining which aspect an adult child is most anxious about, and informing the development of targeted interventions to relieve their anxiety, promote their mental well-being, alleviate their potential caregiving burden.

Similarly, a unique factor pattern of the Preparation for Future Care Needs Scale was also identified among Chinese adult children, and the scale was valid and culturally appropriate to assess adult children's engagement in the multiple steps of the care preparation process in the Chinese cultural context. This scale can be used to identify adult children who are in lack of preparation for future caregiving and inform the development of services or programs to help adult children with their preparation in targeted steps. Similar to Filial Anxiety Scale, the

adapted Preparation for Future Care Needs scale is also applicable to adult children living in similar cultural contexts.

9.7.2 Theoretical Implications

This study has several theoretical implications. First, it pioneered the application of the Stress Process Model to investigate filial anxiety and guide the identification of its multiple stressors and possible coping strategies. This research also extended the use of the Stress Process Model to the study of stress related to caregiver before the onset of caregiving.

Second, it is the first to incorporate anticipatory stressor into the Stress Process Model that served as a secondary stressor. This theoretical innovation responded to the call for further attention to the influences of anticipatory stressors, rather than those of operant stressors, in personal stress research (Pearlin & Bierman, 2013) and provided support for the stress proliferation process in the Stress Process Model. The improved model can help advance the understanding of the mechanism behind personal stress formation, considering a broad range of stressors.

Third, proactive coping theory was, for the first time, integrated with the Stress Process Model and expanded the mediators in the original model to encompass proactive coping strategies. Lastly, this study extended the use of the Preparation for Future Care Needs model to understand the care preparation behaviors of adult children and provided support for their step-by-step care preparation.

The Stress Process Model, proactive coping theory, and the Preparation for Future Care Needs model were successfully integrated into a new model to unveil the mechanism behind filial anxiety formation, care preparation process, and the influences of proactive coping strategies when buffering anticipatory stressors.

9.7.3 Practical Implications

The findings also have significant practical implications. As indicated by the findings of current study, Chinese adult children were quite anxious when anticipating future eldercare needs and were still insufficiently prepared for future caregiving. Limited alternative care options and the anticipation of providing undesirable care may frustrate adult children's effort in responding to parents' future care needs and exacerbate their stressful feeling when they anticipate taking on the caregiving role. The government should improve the eldercare system and develop public services to provide additional substitute eldercare options for adult children who are faced with the imminent challenges of parental caregiving. Importantly, among all the forms of eldercare services, family-based services should be emphasized, considering the strong value of family care held by Chinese adult children and parents.

In addition, the insufficient care preparation may be due to the lack of information, planning skills and resources that are essential during the care preparation process. Care preparation training programs and services should be developed to improve adult children's planning abilities. Moreover, in view of the findings that unfinished care preparation, which only stops at Information Gathering, cannot alleviate but exacerbate adult children's filial anxiety, services and programs must be developed to encourage adult children to complete the whole care preparation process to well prepare themselves for future caregiving. Special emphasis should be placed on the engagement in the concrete planning step.

The study also identified that adult children who had less siblings were likely to suffer heightened filial anxiety levels and avoid thinking about future parental care needs. Identifying the role of sibling numbers in filial anxiety and care preparation under the unique socioeconomic background in China was of significance. Meanwhile, the avoidant tendency about parental care needs may hinder the preparation efforts in other steps and considering the lack of informal eldercare support, special planning services and eldercare support should be provided for these groups of adult children. This finding not only has particular practical

implications for promoting eldercare support for Chinese families but also has implications for other countries that are experiencing demographic transitions.

Moreover, adult children whose parents lacked eldercare resources and those who were faced with high-level family stress were also more likely to experience high-level filial anxiety. Notably, this study is the first to unveil that role conflict not only creates burden for caregivers who are providing eldercare but also leads to heightened psychological stress for potential caregivers when anticipating future eldercare needs. In view of this finding, developing additional public services is of importance for policymakers and service providers to help potential and existing family caregivers reduce the burden in the workplace and within the family and to well balance work and family roles. Meanwhile, targeted support and services should be provided for financially disadvantaged families to alleviate adult children's mental stress and reduce their potential caregiving burden.

Adult children with low-level filial obligation and strained intergenerational relationship quality were also more likely to display high-level filial anxiety, had a strong tendency to avoid thinking about parental future care needs, and were less likely to make concrete plans for future eldercare. In these families, care preparation and family caregiving can be particularly challenging. Developing targeted training programs for these families is needed to promote intergenerational communication and discussion about future eldercare issues and avoid potential family conflicts during care preparation.

Last but not least, care preparation trainings should also be targeted at adult children who are currently not living in the same city as their parents. Future demographic trends will keep increasing the demands for eldercare support among this kind of families. Policies should be developed to facilitate the family reunion of these migrant adult children, and the eldercare system should be improved to make it possible for these families to provide filial care. At the same time, public educational programs should be promoted to raise the awareness and

concrete planning toward the future eldercare for adult children who are living in the same city with their parents.

9.8 Limitations and Directions for Future Studies

Several limitations of this study need to be acknowledged, and directions for future research are suggested on the basis of these limitations. First, during the scale validation process, adaptations were made on the basis of a moderate number (N = 20) of pilot interviews and largely remained the original content of the scales. With the guidance of the current research findings, future studies may add items to specifically measure certain domains, such as Filial Anxiety–Responsibility, to make the content of the scales further comprehensive and localized. Adapting and validating the Filial Anxiety Scale for rural and urban adult children are also worth doing because the content of their filial anxiety may have some differences. Moreover, the two validated scales in the present study may only be applicable in the Chinese cultural context or other similar cultures. Future studies may validate Filial Anxiety Scale and the Preparation for Future Care Needs scale under other cultural backgrounds.

Second, this work only adopted the cross-sectional research design and nonrepresentative sample due to limited time and resources. Therefore, causalities among variables cannot be established, and the generalizability of the findings are limited. Caution is needed to generalize the research findings to the wider population in China. In view of these issues, future studies are suggested to adopt longitudinal research designs to unveil the complex relationship between the multiple stressors, care preparation process and filial anxiety. Moreover, future research may use random sampling strategies in recruiting participants to make the research findings generalizable to larger populations.

Third, this study only adopted the quantitative research design to explore filial anxiety and care preparation process among adult children. Using this design may fail to provide a full

understanding of their daily experiences of caregiving anticipation and preparation. Qualitative studies can be conducted in the future to unveil adult children's experiences before the onset of caregiving and to well explain the dynamics of filial anxiety formation and care preparation process.

Last, although this study addressed the research gap by investigating adult children's attitudes and behaviors toward future eldercare needs, care preparation is ultimately a teamwork that requires the effort of multiple generations in a family. Therefore, future research can involve intergenerational perspectives to investigate family care preparation and facilitate the understanding of how adult children and parents collaborate to prepare for future eldercare needs.

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Appendix

Appendix I. Ethics approval

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

To	Bai Xue (Department of Applied Social Sciences)		
From	Lo Hay Ming, Delegate, Departmental Research Committee		
Email	herman.lo@	Date	21-Aug-2020

Application for Ethical Review for Teaching/Research Involving Human Subjects

I write to inform you that approval has been given to your application for human subjects ethics review of the following project for a period from 01-Sep-2020 to 31-Dec-2020:

Project Title:	Caregiving anticipation and preparation among one-child generations in urban China
Department:	Department of Applied Social Sciences
Principal Investigator:	Bai Xue
Project Start Date:	01-Sep-2020
Reference Number:	HSEARS20200820002

You will be held responsible for the ethical approval granted for the project and the ethical conduct of the personnel involved in the project. In case the Co-PI, if any, has also obtained ethical approval for the project, the Co-PI will also assume the responsibility in respect of the ethical approval (in relation to the areas of expertise of respective Co-PI in accordance with the stipulations given by the approving authority).

You are responsible for informing the Human Subjects Ethics Sub-committee in advance of any changes in the proposal or procedures which may affect the validity of this ethical approval.

Lo Hay Ming

Delegate

Departmental Research Committee (on behalf of Human Subjects Ethics Sub-Committee)

Appendix II. Consent Form

English version

CONSENT TO PARTICIPATE IN RESEARCH

Caregiving anticipation and preparation among one-child generations in urban China

I _____ hereby consent to participate in the captioned research conducted by Ms. LIU Chang, a PhD candidate from The Hong Kong Polytechnic University.

I understand that information obtained from this research may be used in future research and published. However, my right to privacy will be retained, i.e. my personal details will not be revealed.

The procedure as set out in the attached information sheet has been fully explained. I understand the benefit and risks involved. My participation in the project is voluntary.

I acknowledge that I have the right to question any part of the procedure and can withdraw at any time without penalty of any kind.

Name of participant _____

Signature of participant _____

Name of researcher _____

Signature of researcher _____

Date _____

Hung Hom Kowloon Hong Kong 香港 九龍 紅磡
Tel 電話 (852) 2766 5111 Fax 傳真 (852) 2784 3374
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Chinese version

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

参与研究同意书
“中国成年子女未来照顾预期及照顾准备”研究

问卷编号： ☐☐☐

本人同意参与由香港理工大学应用社会科学系博士生刘畅（电话:1880 ；微信: changl ；邮箱: 1807 @ ）开展的上述研究。

本人知悉此研究旨在了解中国内地成年子女对父母未来养老照顾的预期及准备情况，以期对相关政策和服务发展提供依据和建议。此研究所得资料可能会被用作日后的研究及发表，但本人的隐私权利将得以保留，即本人的个人资料不会被公开。

研究人员已向本人清楚解释此研究的程序，本人明了当中涉及的利益及风险；本人自愿参与此研究项目。

本人知悉本人有权就研究程序的任何部分提出疑问，并有权随时退出而不受任何惩处。

参与者姓名_____ 研究人员姓名_____

参与者签名_____ 研究人员签名_____

日期：2020 年_____月_____日

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Appendix III. Filial Anxiety Scale

English version

1. I don’t know how I’ll be able to manage if my parent needs a great deal of help.
2. I want to help my parent but I worry about what will happen to my own life.
3. I’m afraid that my parent will need more help than I can give.
4. I worry that I’ll break down if I have to give may parent a great deal of care.
5. I’m afraid that helping my parent will take all my resources.
6. I worry that a time will come when I’ll have to help my parent.
7. I don’t know what I’ll do if my parent asks for help.
8. I feel uneasy about being away from my parent for too long now that he/she is getting older.
9. I worry about what will happen to my parent in the future.
10. I feel I should keep in close touch with my parent to be sure noting is wrong.
11. It would upset me to see my parent in need of anything in his/her old age.
12. I always feel a nagging sense of concern about my parent.
13. I just can’t face the thought of my parent being sick for a long time.

Chinese version

1. 如果父母需要大量照顾，我不知道自己是否应付得来。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
2. 我想为我的父母提供照顾，但又担心会影响自己的生活。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
3. 我害怕父母所需要的照顾超过我的能力。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
4. 如果我必须给我父母提供大量的照顾，我担心自己会崩溃。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
5. 我害怕照顾我的父母会用尽我拥有的资源（比如金钱、精力等）。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
6. 我担心总有一天我必须负担起照顾父母的责任。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
7. 如果我的父母要求我的照顾，我不知道我会怎么做。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
8. 离开年老的父母太远或太久都会让我不安心。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
9. 我担心父母未来的状况。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
10. 我觉得应该和父母保持密切联系，以确定他们一切安好。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
11. 看到父母因年老而事事需要照顾，会令我很难过。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
12. 我常常感到自己在时时刻刻地挂念着父母。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)
13. 我无法面对父母久病在床的想法。 ☐非常不同意 (1)　☐不太同意 (2)　☐中立 (3)　☐比较同意 (4)　☐非常同意 (5)

Appendix IV. Preparation for Future Care Needs Scale for Adult Children

English version

1. I pay close attention to how my parent's physical and mental capabilities are changing to assess whether I may soon need to provide care for him/her.
2. I pay attention to information in the media on providing care for older adults.
3. Talking to other people has made me think about whether I might need to provide care for my parent in the future.
4. I try not to think about things like my parent's future loss of independence.
5. I don't like to think about the possibility of providing care for my parent in the future.
6. I avoid negative topics like my parent's future dependence.
7. I have compared different options for providing care in the future.
8. I have gathered information about options for elder care by talking to friends and/or relatives.
9. I have gathered information about options for elder care by talking to health care professionals (doctors, nurses, home health care agencies).
11. I know my general preferences for providing care for my parent in the future even though I am not sure how I will get what I want.
12. If I ever need to provide care for my parent, I can choose between several options that I have considered in some depth.
13. I have talked to my parent about how I want to provide care for them.
14. I have taken record of my preferences for providing elder care.
15. I have identified how I want to provide care for my parents and taken concrete steps to ensure that option is available.

Chinese version

1.我密切留意父母身体和精神状况的变化，藉此评估他们是否很快便需要我提供照顾。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
2.我有留意媒体上有关为老年人提供照顾的资讯。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
3.与别人闲谈时曾令我意识到自己未来可能需要为父母提供照顾。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
4.我尽量不去想父母未来会生活无法自理等状况。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
5.我不喜欢去想自己未来有可能需要为父母提供照顾。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
6.我避免谈及父母未来生活无法自理等负面话题。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
7.我曾经比较过不同的养老照顾方式（比如由自己亲自照顾、为父母请保姆、购买养老服务、送父母去养老院等）。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
8.我曾经在和朋友或亲戚交谈时得到关于父母未来养老照顾的资讯。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
9.我曾经在和医生等医疗保健专业人士交谈时，得到关于父母未来养老照顾的资讯。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
10.我知道自己不希望为父母安排的照顾（例如：不希望送父母去养老院）。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
11.我知道自己希望为父母提供的照顾方式，即使我不确定自己能否做到。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
12.当父母需要照顾时，我可以从已经深入考虑过的照顾方式中进行选择。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
13.我已经和父母讨论过我希望为他们提供的照顾安排。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
14.我已经记录下我希望为父母提供的照顾安排。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)
15.我已经确定如何为父母提供照顾，并且已采取行动确保期望的照顾安排是可行的。 ☐非常不符合(1) ☐不太符合(2) ☐中立(3) ☐比较符合(4) ☐非常符合(5)