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**THE INFLUENCE OF EMPLOYEES' PARENTS
ON WORK-FAMILY BALANCE IN TAIWAN:
IMPLICATIONS FOR ORGANISATIONAL BEHAVIOUR
AND WELLBEING**

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for the degree of Doctor of Philosophy

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Abstract

Work-family research in Chinese societies often directly adopts the Western work-family model and rarely attempts to consider cultural differences in the importance of employees' parents. Researchers infrequently address the role of parents in the work-family field. The aim of this thesis was to understand the influence of employees' parents on work-family balance and its related outcomes in a Chinese society, Taiwan. A multi-method approach was employed consisting of three studies. First, the nature of the influence of employees' parents in Taiwan was explored through interviews, followed by an online questionnaire survey with Taiwanese employees to examine the relationships between the influence of employees' parents, work-family balance, organisational behaviour and wellbeing. Third, a secondary data analysis was used to provide triangulations for the findings of the questionnaire survey.

The interview study explored the influence of employees' parents as six types of demand and six types of support. It also found that parent demand had a negative effect on employees' work-family balance, while parent support had a positive effect. In the questionnaire survey, parent demand and parent support measures were developed. Using these measures, the relationships between the influence of employees' parents, work-family balance and outcomes were tested using regression analyses. The results showed that parent demand and parent support were significantly related to work-family balance. In addition, the structural models revealed mechanisms for predicting two types of outcome variables. For organisational behaviour, a full mediation model was identified, showing that the influence of parents had only indirect relationships (through the work-family balance variables) with job satisfaction, organisational commitment, and turnover intention. For wellbeing, a partial mediation model was identified, showing that the

influence of parents had both indirect as well as direct relationships with life satisfaction, anxiety, and depression. Last, the analysis of secondary data also showed that parent demand and parent support had significant impacts on employees' work-family balance, which supports the results of the questionnaire survey. The implications for work-family research were discussed.

Published Work

Chapter 3 to 6 of this thesis have contributed to work-family related conferences across the psychology and management fields.

- Wu, C.-Y., Griffiths, A., & Cox, T. (2012, 27th April). *Parents: A neglected factor in work-life balance research*. Poster presented at the Postgraduate Workshop: Researching the Work/Non-Work Interface, Division of Occupational Psychology Work Life Balance Working Group, British Psychological Society, London, UK. (Chapter 3)
- Wu, C.-Y., Griffiths, A., & Cox, T. (2013, 19th May). *The influence of employees' parents on work-life balance in Taiwan*. Poster presented at the Work, Stress and Health 2013: Protecting and Promoting Total Worker Health, Los Angeles, US. (Chapter 4)
- Wu, C.-Y., Griffiths, A., & Cox, T. (2014, 11th September). *The role of employees' parents in work-family balance: A study with Taiwanese employees*. Paper presented at the 11th Conference of the European Academy of Occupational Health Psychology, London, UK. [Paper published in conference proceedings]. (Chapter 6)
- Wu, C.-Y., Griffiths, A., & Cox, T. (2014, 15th April). *The influence of employees' parents on work-family balance*. Paper presented at the British Academy of Management 2014 Conference, Belfast, UK. [Paper published in conference proceedings]. (Chapter 5)

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To myself, keep it in mind that “I will study and get ready, and perhaps my chance will come.”—Abraham Lincoln.

Dedicated to my dearest grandmother

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Preface

Work-family research has been developed for more than thirty years and the majority of work-family studies were conducted in Western countries. Although researchers have conducted work-family studies in Chinese societies such as China, Hong Kong and Taiwan, the cultural differences in the concept of family have been neglected, especially concerning employees' parents within the family configuration. For Chinese people, employees' parents are important members of the family and have a marked influence on their children. It is worth exploring the unique role of employees' parents in work-family research for expanding the knowledge boundary and identifying cultural diversities. Therefore, this thesis aims to investigate the influence of employees' parents on work-family balance in Chinese societies using Taiwanese employees as an example.

Several different methods were employed to understand how parents affect employees' work-family balance in Taiwan. It is comprised of seven chapters. Chapter 1 introduces the reasons for conducting this research. It highlights that Western perspective has dominated the work-family research. It also describes the importance of parents, and explains the motivation for pursuing this piece of research in Taiwan. At the end of this chapter, the research strategy of this thesis is provided. Chapter 2 focuses on reviewing diverse strands of work-family theories including work-family conflict, work-family enrichment, and work-family balance. A basic framework is provided for developing a work-family balance model that incorporates employees' parents. It concludes by describing some of the issues that researchers need to consider before conducting work-family studies.

The following four chapters consist of a systematic review (Chapter 3), an interview study (Chapter 4), a questionnaire survey (Chapter 5), and a

secondary data analysis (Chapter 6). These chapters are linked together and present the main research flow of this thesis.

Chapter 3 presents a systematic review to locate studies which included employees' parents. It reveals that employees' parents were seldom considered within work-family research and also highlights the specific roles of employees' parents such as care recipients and domestic helpers in previous work-family literature. Findings identified in this systematic review are used to form the main research objectives of this thesis.

Chapter 4 explores the possible influence from employees' parents in Taiwan using interviews. It identifies several types of demands and support from employees' parents. Using findings of the interview study, Chapter 5 develops the measures of parent demand and parent support for questionnaire survey to examine the relationships between the influence of employees' parents, work-family, and outcomes. Moreover, two structural models are established to demonstrate the patterns of impacts from employees' parents. Chapter 6 presents a secondary data analysis to provide supplementary evidence for the findings in the main research findings in the Chapter 5.

Finally, Chapter 7 summarises the main research findings obtained from the interview study, the questionnaire survey, and the secondary data analysis. The implications of the results are evaluated and discussed. At the end of this chapter, a conclusion is drawn from the contribution made by this thesis.

Chapter 1 Introduction

1.1 Chapter Overview

This chapter presents the reasons for exploring the role of employees' parents in work-family research and provides justification for conducting this research in one particular Chinese society, Taiwan. It begins with a brief introduction to work-family research (Section 1.2) and argues that the majority of research has been constrained by Western culture (Section 1.3). Because of cultural differences, family structure is differently conceptualised in Western and Eastern societies (Section 1.4). In Chinese societies, for example, parents are regarded as important family members who have considerable influence over their offspring (Section 1.5). However, there is very little work-family research that investigates the role of these potentially influential individuals in work-family research. This gap in research has given rise to the current project: to explore the role of parents in their children's work-family balance. There are strong cultural and demographic drivers for situating this research in Taiwan (Section 1.6). At the end, the research strategy is also provided (Section 1.7).

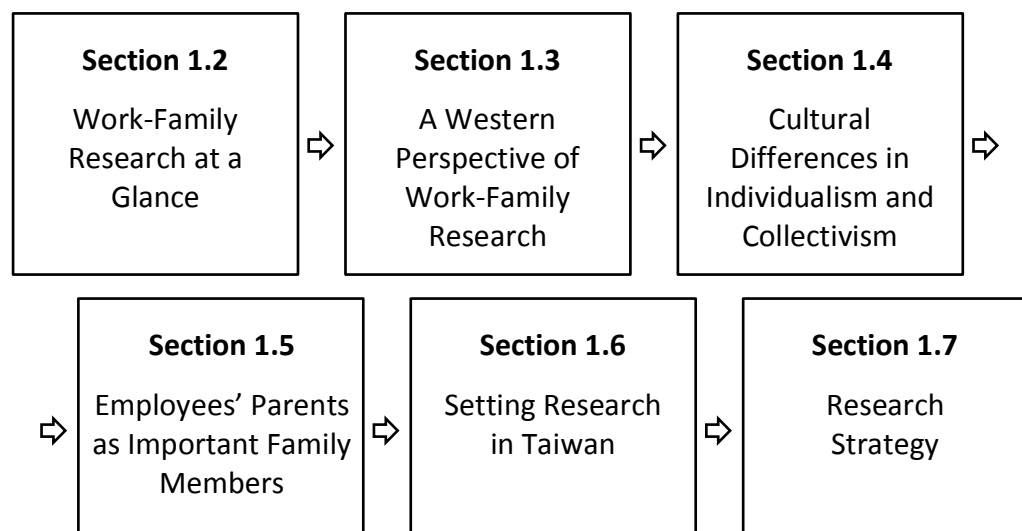


Figure 1. Chapter one structure

1.2 Work-Family Research at a Glance

In recent years, there has been an increasing interest in work-family balance research. This increase in interest is driven by a realisation of the undesirable consequences of work-family conflict or work-family imbalance. Lack of balance between work and family domains can lead to lower job satisfaction and organisational commitment, higher turnover intention (Anderson, Coffey, & Byerly, 2002; Boyar, Maertz, Pearson, & Keough, 2003; Carlson, Grzywacz, & Zivnuska, 2009), and poor health (Frone, 2000; Greenhaus, Allen, & Spector, 2006). To avoid these unfavourable outcomes for companies or organisations, researchers have tried to understand the mechanisms of work-family balance, with a view to improving organisational behaviour and employees' wellbeing.

The past thirty years have seen increasingly rapid advances in the field of work-family balance research (Greenhaus & Allen, 2010; Greenhaus & Powell, 2006; Lu, 2011). Work-family balance research emerged from an interest in inter-role conflict and has developed into a substantial research field that includes the study of work-family conflict, work-family interference, work-family facilitation, work-family enrichment, and work-family balance. The development and diversity of work-family issues has enriched the field. According to review articles, work-family researchers have made substantial interdisciplinary contributions in various branches of knowledge across psychology, management, and family studies (Casper, Eby, Bordeaux, Lockwood, & Lambert, 2007; Chang, McDonald, & Burton, 2010). The research has helped to change policies in the workplace as well as contributing to the development of theory.

1.3 A Western Perspective of Work-Family Research

However, this rapid growth in work-family research is largely confined to Western cultures (Lewis, Gambles, & Rapoport, 2007; Yang, Chen, Choi, & Zou,

2000). For example, in a systematic review of the empirical work-family balance literature, more than half (58.3%) of studies were North American (Chang et al., 2010), and approximately a third (30%) of studies were European. Little attention has been paid to non-Western countries especially Asian countries (4.6%). Moreover, further evidence about the diversity of work-family research outside of the United States showed that from a total of 219 articles only 24 were conducted in Chinese communities (Shaffer, Joplin, & Hsu, 2011).

Most work-family publications from North America and Europe (Grzywacz et al., 2007; Spector et al., 2004) were set in the context of the nuclear family (Beauregard, Özbilgin, & Bell, 2009). This is fundamentally because North American and European countries share similarities in family structures and cultural backgrounds (Spector et al., 2004). Under these circumstances, most work-family research simply interprets the concept of 'family' as including only spouse and children.

For this reason, the scope of work-family research has been restricted largely to the definitions and assumptions of traditional Western family structures that exclude the different type of family concepts in many Asian countries (Beauregard et al., 2009; Özbilgin, Beauregard, Tatli, & Bell, 2011).

1.4 Cultural Differences in Individualism and Collectivism

National culture has a significant influence on peoples' attitudes, values and behaviour (Triandis, 1989). It may also shape family structures. Anglo-Saxon and Western European countries are traditionally more individualistic while Asian societies are more collectivistic (Triandis, 2001; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). There is a radical difference between Western and Eastern societies' scores on measures of individualism (Hofstede, Hofstede, & Minkov, 2010). Expectedly, people from Western countries like

the United Kingdom (scored 89) and the United States (scored 91) achieve very high individualism scores but those from Far Eastern countries, such as China (scored 20), Hong Kong (scored 25), South Korea (scored 18), and Taiwan (scored 17) scored relatively low. This means people living in these 'low-score' countries are collectivist, and feel high commitment and strong responsibility within their group. The meaning of 'family' may vary with the level of individualism. For collectivistic societies, the concept of family contains more members, such as parents and extended relatives, than it does with individualistic communities.

A few researchers have explored work-family issues outside of Western countries and have drawn distinctions between collectivistic and individualistic cultures. For example, Aryee, Fields, and Luk (1999) applied a work-family interface model to married employees in Hong Kong to generalise the model and revealed cultural differences. Although the results showed some similarities between collectivism and individualism, researchers found that work-family conflict affected life satisfaction differently to the way it did in America according to a previous study (i.e., Frone, Russell, & Cooper, 1992a). In addition, Lu et al. (2010) contrasted Taiwanese workers with British workers to investigate work-family conflict issues in a cross-cultural context. Again, the results showed both similarities and differences in work-family conflict research. As such, national culture plays a prominent role in manipulating work and family interactions. In spite of these emerging Asian studies, many publications in the work-family field still apply North American and European perspectives to Asian countries. There has been relatively little attention given to different family members, perhaps on the assumption that an employee's spouse and children have a substantial impact but other relatives do not. This situation may result from a scarcity of qualitative studies investigating the nature of work, and family within different cultural contexts (Shaffer et al., 2011). That is to say, there has been little investigation of Chinese or collectivist culture in work-family research (Zhang & Liu, 2011).

Although researchers have already drawn attention to the differences between individualism and collectivism, there has been little discussion about the varied concepts of family in work-family research. More research is needed to reveal work and family life related issues in a collectivist culture and with extended families.

1.5 Employees' Parents as Important Family Members

In Asia, especially in Confucian Asia, including Taiwan, Singapore, Hong Kong, South Korea, China, and Japan (Gupta, Hanges, & Dorfman, 2002), the majority of the population are of Chinese origin. Confucian philosophy is rooted in Chinese people in their early life, and provides a set of guidelines for living attitudes and values (Hofstede & Bond, 1988). 'Xiao' (filial piety in English), an important element in Confucianism, is "the attitude of obedience, devotion, and care toward one's parents and elder family members that is the basis of individual moral conduct and social harmony" (Encyclopædia Britannica, 2014b). In Confucian philosophy, individuals are highly connected to their family and keep in harmony with them. Therefore, the concept of family for Chinese people is radically different from the Western concept. In addition, Confucianism emphasises caring for elderly people (Zhang, 2003) and parents, who are highly valued members of the family and of society in general. Arising out of this, the influence and psychological importance of the family is considerably greater in Chinese cultures than in Western cultures (Lai, 1995).

In Taiwan, for example, these Confucian concepts are deep-rooted and illustrated in family structures and traditional customs such as ancestor worship (Lee & Sun, 1995). In addition to Confucianism, the concept of filial piety guides people to respect and show devotion to their parents as a supreme virtue (Hofstede, 1984). These beliefs lead people to have strong parent-child relationships in Taiwan. Children should please, respect and

serve their parents (Zhang, 2003). Moreover, no matter whether children live with their parents or not, the responsibilities and obligations of taking care of their parents remain (Tu, Freedman, & Wolf, 1993). The importance of parents in Chinese societies is higher than in Western Societies, but there has not been enough research to date to examine the impact of those important family members on work-family balance (Zhang & Liu, 2011). Therefore, this thesis aims to reveal the unique ways in which connections between employees and their parents in Chinese societies affect the work-family framework.

1.6 Setting Research in Taiwan

The two most well known Chinese societies are Taiwan and China. This research will focus on Taiwan for several reasons. First, according to aforementioned individualism scores, Taiwan's score (17) is lower than China's (20) (Hofstede et al., 2010). This means residents of Taiwan are slightly more collectivistic than residents of China. Group commitments and extended family members are slightly more important to Taiwanese people. Although these two areas shared the same original roots in Chinese culture, they have preserved filial piety slightly differently. Chinese government policies have disturbed traditional Confucianism to some extent since embracing communism, while Taiwan's government attempted to follow traditional Chinese culture in general (Yeh, Yi, Tsao, & Wan, 2013). Consequently, Taiwan's inhabitants have preserved more of traditional Chinese values in family relationships than China's inhabitants have done (Yuan & Shen, 1998).

Second, major changes, including delayed marriage and delayed childbearing, have reshaped families in the twenty-first century in Taiwan. The evidence has showed that the Taiwanese delay entering into married life and postpone childbearing. The median age at first marriage for Taiwanese men increased

from 29.2 years to 31.4 years between 2000 and 2011, and from 25.7 to 29.0 for women. Moreover, the overall percentage of Taiwanese adults who were married decreased from 56.9% to 51.9%. In terms of delayed childbearing, there was a significant increase in the median age of mothers at first birth from 26.7 years to 30.1 years over the past decade in Taiwan (The Executive Yuan of the Republic of China, 2012b). Taiwan's total fertility rate (i.e., the average number of children women have during their childbearing years) reached the lowest in the world with only 0.9 children per woman in 2010, down from 1.7 in 2000 (The Executive Yuan of the Republic of China, 2011). These phenomena alone would probably lead Taiwanese adults to spend more time with their parents. Another government population and housing census in 2010 showed 54.2% of people aged 65 and over lived with their children (The Executive Yuan of the Republic of China, 2012a), which means many Taiwanese employees would live with their parents within their career period.

Last, there is little attention paid to employees' work-related psychological health in Taiwan, although the government introduced the Institute of Occupational Safety and Health (IOSH) in the early 1990s. A large number of IOSH studies underlined the importance of physical hazards, for instance mechanical safety, construction safety, and occupational hygiene and diseases in working areas. Only a small fraction of research focused on employees' psychological health. However, as traditional labour-intensive manufacturing has given way to knowledge-intensive business, Taiwanese employees need more knowledge or skills at work, and are facing more stress in the workplace (Lu et al., 2010). Hence, the government and researchers should devote more attention to occupational psychological health in Taiwan.

In the absence of sufficient work-family research conducted in East Asia and with the family concepts of Chinese societies having been neglected in previous studies, this research project aims to explore the unique role of

employees' parents in Chinese countries. Furthermore, in view of a deeper commitment to their families and a higher likelihood of living with their parents, Taiwanese employees have a strong and close connection with their parents. Additionally, the lack of investment in occupational health psychology research and greater risk of stress in the workplace both highlight the need for understanding psychological issues among Taiwanese employees in more detail. Therefore, this project will focus on the role of employee's parents in Taiwan.

Because of the limited research undertaken to date, this research project will make effort to investigate the influences of parents on employees' work and family life in Taiwan, to expand the knowledge boundary of work-family research, and identify its cultural diversities. It is hoped that the results will help organisations to have a more comprehensive awareness of their employees' needs. With a better understanding of the influence of employees' parents, managers could provide more adequate family-friendly policies in Chinese organisations to balance employees' work and family life and enhance their wellbeing.

1.7 Research Strategy

In accordance with the discussion above, the aim of this thesis is to explore how the influence of parents affects employees' work-family balance in Taiwan. At the moment, the preliminary research question seems to be relatively general but it gives the current project a feasible research direction in the early stages. More precise objectives and hypotheses will be framed in later chapters while developing this thesis. A variety of methods will be employed to solve the research question (see Figure 2). First, a general literature review (Chapter 2) will furnish fundamental knowledge of work-family balance following a systematic review (Chapter 3) to identify the possible roles of employees' parents in the previous work-family studies. Then,

an interview study (Chapter 4) will be carried out with Taiwanese employees to explore the possible influence of employees' parents. Next, the results of the interview study will contribute to a questionnaire survey for organisation-based Taiwanese employees (Chapter 5). Finally, a community-based secondary data set (Chapter 6) will be analysed to compare with the results of the organisation-based survey. Detailed methods will be described in subsequent chapters.

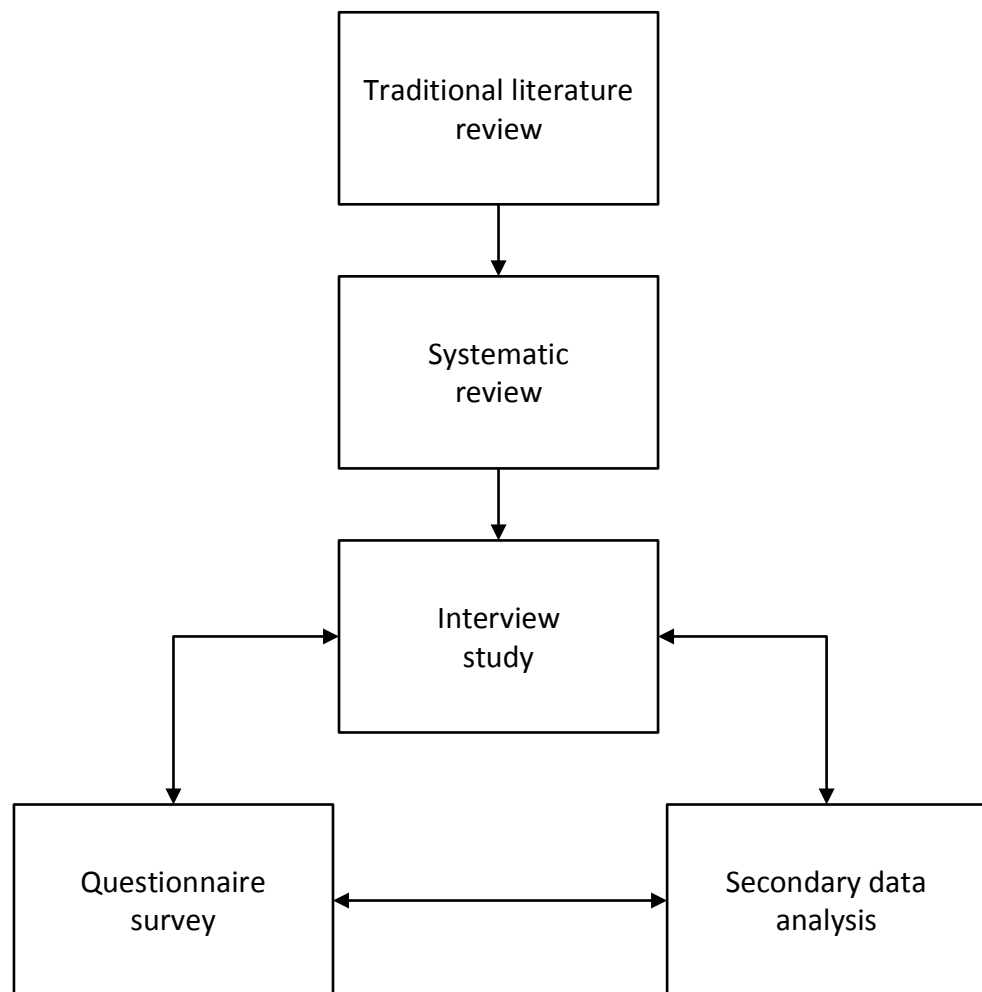


Figure 2. Multi-method research strategy

1.8 Chapter Summary

This chapter described the research context and showed gaps in existing work-family research. It also illustrated the appropriateness of doing this research in Taiwan, with particular focus on the influence of employees' parents. The research interest was driven by contributions to work-family balance research in a Chinese context. Also, a multi-method research strategy has been proposed for subsequence studies. Accordingly, the next chapter will review the literature on work-family balance.

Chapter 2 Work-Family Theories

2.1 Chapter Overview

This chapter is comprised of two main sections (see Figure 3). The first section outlines a theoretical framework for this thesis, introducing work-family research and relevant empirical evidence (Section 2.2). The second section discusses contemporary issues which constrain that research (Section 2.3).

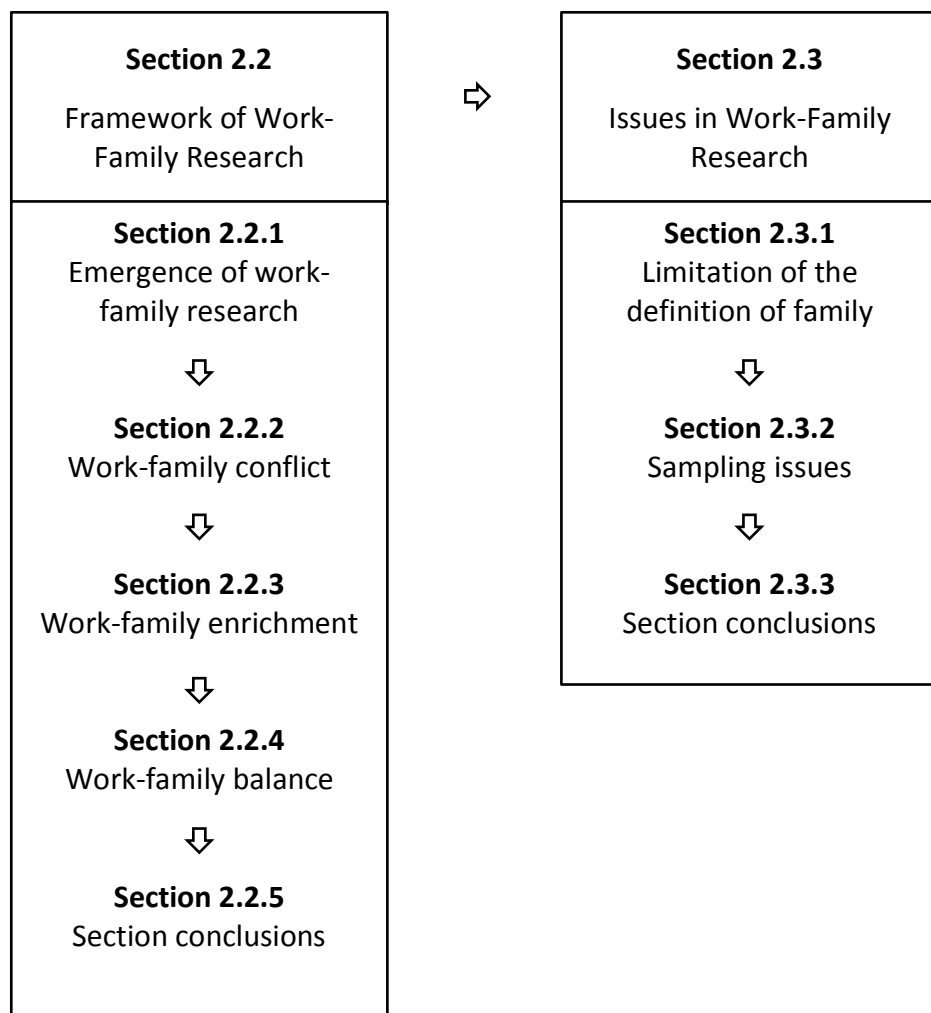


Figure 3. Chapter two structure

2.2 Framework of Work-Family Research

There are several strands of work-family theory that have been established in the last three decades. This section considers why the work-family studies have emerged to provide a fundamental knowledge of work-family research (Section 2.2.1). All related theories, such as work-family conflict (Section 2.2.2), work-family enrichment (Section 2.2.3), and work-family balance (Section 2.2.4) are discussed, particularly regarding how they have been developed and investigated, and what are their potential antecedents and consequences. These theories have strong connections with each other and are essential to this project. Since there are some divergent views within work-family theories, it also provides justification for adopting specific concepts of work-family theories for the subsequent studies in this thesis. At the end of this section, a work-family balance framework is provided (Section 2.2.5).

In order to give a basic knowledge as well as a theoretical framework of work-family literature, a traditional literature review has been conducted in this chapter. A literature review consists of identifying articles, summarising them, and providing some interpretation of published literature. The usage of traditional literature reviews can give a wide understanding of a specific topic and can identify what has been accomplished previously preventing duplication and recognising possible research gaps (Grant & Booth, 2009). As there is no prescribed methodology needed in traditional literature reviews (Jesson, Matheson, & Lacey, 2011), it can cover a wide range of materials. In addition, the way to conduct a traditional literature review is based on the researchers' subjective selection of previous literature (Jesson et al., 2011; Petticrew & Roberts, 2006). Traditional literature reviews are flexible and thus each review could be widely divergent in its format and style. Researchers could make summaries and interpretations in a chronological, conceptual or thematic structure (Grant & Booth, 2009). With this flexibility, this section

outlines the background and development of work-family theories regarding its development stages.

2.2.1 Emergence of work-family research

Work and family research emerged due to the increased presence of women in the workforce, dual-career couples, and single-parent families in the labour market (Aryee, Luk, Leung, & Lo, 1999; Greenhaus & Allen, 2010; Greenhaus & Beutell, 1985). Traditionally only breadwinners, especially males, faced a dilemma between work and family, but in recent decades a greater number of women became involved in the workplace. This change has exacerbated the level of difficult situations between work requirements and family responsibilities in dual-earner families. Additionally, single parents must confront the conflicts between work and family alone. Researchers have paid attention to these phenomena and endeavoured to unveil the impact of conflict between work and family on organisational behaviour and individual health and wellbeing.

The workplace and home are the two primary venues to consider for employees. Every working day they move between these two places and arrange their limited resources (e.g., time and energy) in order to play proper roles on the stages of work and home. They have to perform the job requirements of being a qualified employee during working hours as well as fulfilling the responsibilities of being a family member outside of this time. Therefore, how to minimise the undesirable outcomes of the unbalanced allocation of resources between work and family domains becomes a key issue for workers.

Beginning with a brief review of role conflict as a cornerstone, work-family research was established and developed from role conflict theory proposed by Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964). They suggested that

people experience psychological conflict while receiving incompatible role expectations concurrently. Four distinct types of role conflict were introduced in their research: intra-sender conflict, inter-sender conflict, inter-role conflict, and person-role conflict (see Kahn et al., 1964). As regards work-family research, inter-role conflict was considered as a suitable type to describe the nature of work and family conflict. Kahn et al. (1964) stated that inter-role conflict occurs when “role pressures associated with membership in one organization are in conflict with pressures stemming from membership in other groups” (p. 20). In other words, when an employee faces a demand for extra working hours in the workplace, this may bring conflict to their role as a spouse or parent and can impact his/her responsibility for household chores or childcare at home. In the early 1980s, role conflict studies extensively documented how role conflict could lead to several unfavourable organisational outcomes, such as higher job-related tension and intention to leave, and lower job satisfaction and organisational commitment (e.g., Bedeian & Armenakis, 1981; Kopelman, Greenhaus, & Connolly, 1983).

Moreover, reviewing the early studies, researchers examined wide-ranging variables with role conflict between work and outside work domains. Pleck, Staines, and Lang (1980) used the 1977 Quality of Employment Survey to understand how work interferes with family life; likewise, Staines and O'Connor (1980) discussed the conflict between work and leisure activities using the same survey data. Although their research discovered many associations between demographic factors (e.g., gender and parental status), job characteristics (e.g., working hours, work demands) and satisfactions (e.g., family satisfaction, general life satisfaction, and job satisfaction), it still lacked a structural framework for role conflict studies.

Due to the fact that the relations between work and nonwork had been extensively investigated, Near, Rice, and Hunt (1980) attempted to establish a system which classified earlier research factors into objective (job type, family

size, etc.) and subjective variables (job satisfaction, satisfaction with life, etc.) based on their previous work (i.e., Rice, Near, & Hunt, 1979). Thus, they established a preliminary model of the relationships between work and nonwork areas (see Figure 4). Furthermore, a conclusion was made to devote attention to two specific interactions (dotted lines in Figure 2.2) between work and nonwork: which are the relationships of objective extra-work variables to work-related behaviours and of work variables to extra-work-related behaviours (Near et al., 1980). This formulated the foundation of work and family conflict.

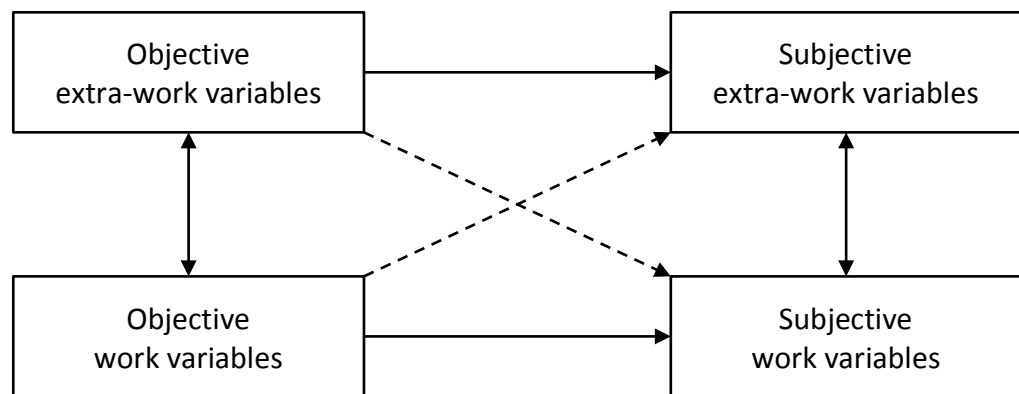


Figure 4. Interrelationships between work and nonwork domain

In spite of delimitation of the variables between work and life, the domain of life or nonwork still embraces a wide range of activities. Unquestionably, the definition of work domain is clear and manageable; however, the boundaries of nonwork are broad and complicated with numerous dimensions including family life, social activities, community commitments, and leisure interests. Their model missed a main point of work-nonwork research, and thus later researchers have focused on the effect of role conflict issues within a particular nonwork area.

2.2.2 *Work-family conflict*

In order to delineate a clearer research boundary, Greenhaus and Beutell (1985) reviewed the literature systematically and extracted family issues from extensive nonwork domain. They defined work-family conflict as “a form of inter-role conflict in which the role pressures from the work and family domains are mutually incompatible in some respect” (p. 77). This statement has become the primary definition of work-family conflict and has been quoted in many studies and book chapters (e.g., Aryee, Srinivas, & Tan, 2005; Boyar, Carr, Mosley, & Carson, 2007; Frone, 2003; Greenhaus & Allen, 2010; Hill, Yang, Hawkins, & Ferris, 2004).

Greenhaus and Beutell (1985) focused on the nature of work and family conflict and suggested there are three type of work-family conflict. Time-based conflict occurs when people experience time pressure to play the role at work or home; strain-based conflict happens when people suffer pressure at work that makes it difficult to fulfil their demand at home or vice versa; and behaviour-based conflict arises when people have difficulties satisfying expected behaviour at work or home. These categories contribute to forming the framework of sources that associate with work-family conflict as well as providing helpful guidelines for the following work-family studies.

2.2.2.1 *Bi-direction of work-family conflicts*

As work-family conflict became a crucial issue in the workplace in the 1980s, it still needed further theoretical development and improvement. In order to gain a more comprehensive knowledge of work-family conflict, researchers aimed to examine possible predictors of work-family conflict with a wide range of variables and made effort to understand outcome variables of work-family conflict. However, the majority of these studies only discussed how work demands affect employees’ family life. Crouter (1984) argued that the

bulk of studies focused on the impact of work on family and neglected to understand the effect from the family domain on the work domain. This highlighted the issue of lacking knowledge about the family to work spillover.

While most researchers drew attention to the effect of work on family, a few recognised the possible impact of family on work. Pleck (1977) found that the permeability of work-family boundaries was asymmetric in terms of gender differences. According to their report, women were more likely to allow the demands of family to intrude on the demands of work than vice versa, while men's work needs had higher priorities than family tasks. Based on this evidence, work-family conflicts could be composed of two directions, work interfering with family and family interfering with work, instead of a single direction of work-family conflict.

Following the pioneering studies (e.g., Hall & Richter, 1989; Wiley, 1987) of permeability of work-family boundaries, Frone, Russell, and Cooper (1992b) constructed a quantitative study to examine the asymmetrically permeable boundaries. Although their study failed to support Pleck's (1977) suggestion about gender variations in permeability between work and family, the results were consistent with Hall, Richter and Wiley's findings that the family boundary was more penetrable than the work boundary.

Meanwhile, in another article, Frone et al. (1992a) established a bidirectional work-family conflict model comprised of work interfering with family and family interfering with work, and found that each type of conflict was related to its specific antecedents and outcomes. Many following studies termed these two types of conflict as work-to-family conflict (WFC) and family-to-work conflict (FWC). Several researchers (e.g., Ford, Heinen, & Langkamer, 2007; Netemeyer, Boles, & McMurrian, 1996) have demonstrated the distinguishable differences between WFC and FWC, and this provided the

evidence of appropriateness in considering the bi-direction of interference between work and family in the work-family research.

Accordingly, WFC and FWC are two distinct components of work-family conflict. This thesis has adopted two-dimensional work-family conflict for conducting subsequent studies. The following sections summarise the antecedents and outcomes of these two types of work-family conflict.

2.2.2.2 Antecedents of work-family conflict

After decades extensively examining the antecedents of work-family conflict, researchers have explored that role stressors, time involvement, role involvement, and social support substantially contribute to work-family conflict.

In terms of role stressors, predictors such as work role conflict, work role ambiguity, family role conflict, and family role ambiguity were highly associated with work-family conflict (e.g., Boyar et al., 2003; Grandey & Cropanzano, 1999). In a meta-analytic review of 142 work-family conflict studies by Michel, Kotrba, Mitchelson, Clark, and Baltes (2011), work role conflict had a moderate correlation of .41 with WFC and a small correlation of .25 with FWC, and work role ambiguity had small correlations of .20 with WFC and .16 with FWC. On the other hand, family role conflict, family role ambiguity and family demand were positively related to the level of FWC (e.g., Grandey & Cropanzano, 1999). Michel, Kotrba, et al. (2011) reported that family role conflict had moderate relationships with WFC (.30) and FWC (.36), and family role ambiguity had small relationships with WFC (.19) and FWC (.28).

As regards time involvement, if employees spend more time at work, it would rule out the time for family and vice versa. Past research has found that the number of working hours per week has a significant positive relationship with WFC while the number of family hours per week has significantly positive association with FWC (e.g., Ford et al., 2007; Frone, Yardley, & Markel, 1997). Moreover, Michel, Kotrba, et al. (2011) indicated that work time demands had a significantly positive correlation with WFC (.30) but not FWC (.06) while family time demands had a significantly positive correlation with FWC (.15) but not WFC (.07). Considering role involvement, studies showed that job involvement positively related to WFC, whereas family involvement positively associated with FWC (e.g., Adams, King, & King, 1996).

In addition, social support in the workplace and at home affects work-family conflict. Having supportive supervisors or colleague at work could reduce employees' levels of WFC while receiving spouse support at home could avoid employees experiencing FWC (e.g., Grzywacz & Marks, 2000). A meta-analysis (Michel, Kotrba, et al., 2011) showed that supervisor support and co-worker support had higher correlations with WFC (-.22 and -.25 respectively) than FWC (-.11 and -.14 respectively) but spouse support had a higher correlation with FWC (-.16) than WFC (-.10).

These predictors could be classified into work domain and family domain. In his review, Frone (2003) identified two within-domain associations, which were that work-related predictors associate with WFC whereas family-related predictors associate with FWC. However, later studies have found that these predictors could potentially establish connections with both WFC and FWC. A recent meta-analytic review by Michel, Kotrba, et al. (2011) on work-family conflict studies proposed a clear structure of antecedents of work-family conflict. Their results provided a revised model and indicated that work-related variables predict both WFC and FWC, as do family-related variables.

2.2.2.3 *Consequences of work-family conflict*

Several work-family conflict outcome variables have been discussed in the previous studies, such as job satisfaction, organisational commitment, turnover intention, life satisfaction, work-related stress, depression, anxiety, and general wellbeing. Following researchers' (Allen, Herst, Bruck, & Sutton, 2000; McNall, Nicklin, & Masuda, 2010) suggestions, these outcomes of work-family conflict could be categorised into work-related outcomes, nonwork-related outcomes and health-related outcomes.

In terms of work-related outcomes, work-family conflict has been negatively associated with job satisfaction and organisational commitment and positively associated with turnover intention (e.g., Allen et al., 2000; Boyar et al., 2003; Hill, 2005; Hill et al., 2004; Noor, 2004). According to a meta-analysis by Kossek and Ozeki (1998), they found that both WFC and FWC had a negative relationship with job satisfaction within 32 quantitative studies and reported that WFC (-.23) had a higher correlation with job satisfaction than FWC (-.14). Later, Kossek and Ozeki (1999) further reported that turnover intention had a higher correlation with WFC (.32) than FWC (.17) and organisational commitment had a higher correlation with FWC (-.17) than WFC (-.05). Another meta-analysis of 67 empirical studies focused on WFC by Allen et al. (2000) indicated that WFC had a negative correlation with organisational commitment (-.23) and a positive correlation with turnover intention (.29). Lu, Kao, Chang, Wu, and Cooper (2008) reported that WFC had a negative relationship with job satisfaction and FWC had a negative relationship with organisational commitment in Taiwan.

From an individual aspect, life satisfaction has negative relationships with work-family conflict (e.g., Allen et al., 2000; Bedeian, Burke, & Moffett, 1988; Carlson, Kacmar, & Williams, 2000; Hill, 2005). For example, Allen et al. (2000) reported a weighted mean correlation of -.28 between WFC and life

satisfaction. Kossek and Ozeki (1998) conducted a meta-analysis with 18 studies of relationship between work-family conflict and life satisfaction. Their results showed that WFC had a higher negative correlation (-.31) with life satisfaction than FWC (-.20). Similarly, Amstad, Meier, Fasel, Elfering, and Semmer (2011) conducted a meta-analytic review of 98 studies and reported that life satisfaction had a correlation of -.31 with WFC and -.22 with FWC.

Regarding health-related consequences, higher levels of work-family conflict lead to poor health, such as having anxiety and depression (e.g., Allen et al., 2000; Grzywacz & Bass, 2003). According to Allen and her colleagues' (2000) report, the weighted mean correlation observed between WFC and depression was .34 and between WFC and work-related stress was .41.

Some researchers proposed that WFC and FWC had their own unique outcomes. Frone (2003) identified cross-domain relations, which were that WFC predicted nonwork-related outcome variables, while FWC predicted work-related outcome variables. However, several studies explored the inconsistent relationships between work-family conflict and its outcomes. For example, Hill (2005) found that WFC not only had a significant impact on life satisfaction, but also affected job satisfaction and organisational commitment. In terms of FWC, it showed no significant relationship with job satisfaction. In addition, Amstad et al. (2011) demonstrated that WFC had significant relationships with both work-related outcomes and family-related outcomes. The research evidence suggests that there is no unique pattern of relationships between bi-directional work-family conflict and its outcomes.

2.2.3 *Work-family enrichment*

Since the majority of work-family studies had only focused on the negative interactions between work and family roles in the 1980s and 1990s, a small number of researchers concentrated on the positive synergies between work

and family. Unlike work-family conflict, there is no single construct or dominant definition of the positive interactions in the work-family research field. Several similar concepts of positive work-family interferences had been carried out by work-family researchers, such as positive spillover (Grzywacz & Marks, 2000; Hanson & Hammer, 2006), enrichment (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Greenhaus & Powell, 2006), and facilitation (Frone, 2003; Grzywacz & Bass, 2003; Wayne, Grzywacz, Carlson, & Kacmar, 2007; Wayne, Musisca, & Fleeson, 2004). The concepts are similar, but nonetheless slightly different.

The concept of positive spillover could be found in very early studies and it occurs when employees apply the useful skills and attitudes learned from one place and transfer them to another (Crouter, 1984). Four types of work spillover (i.e., work mood to family mood, work value to family value, work skill to family skill, and work behaviour to family behaviour) have been identified by Edwards and Rothbard (2000). Based on this evidence Hanson and Hammer (2006) further defined work-family positive spillover as “the transfer of positively valenced affect, skills, behaviors, and values from the originating domain to the receiving domain, thus having beneficial effects on the receiving domain” (p. 251).

Grzywacz and Marks (2000) incorporated positive and negative work-family spillover into a wider conceptualisation of the work-family interface, Frone (2003) renamed the positive work-family spillover as work-family facilitation. He proposed that work-family facilitation is “the extent to which participation at work (or home) is made easier by virtue of the experiences, skills, and opportunities gained or developed at home (or work)” (p. 145).

The facilitation between work and family domains is also named work-family enrichment in other studies. In a review article, Greenhaus and Powell (2006) suggested that having positive experience in one role can bring benefits to

another role based on the role accumulate theory (Sieber, 1974). They labelled positive relationships between work and family as work-family enrichment and defined it as “the extent to which experiences in one role improve the quality of life in the other role” (p. 73). This definition is similar to the definition of work-family facilitation which was proposed by Frone (2003) because they describe the transferring of positive experiences between work and family domain with the same contention.

Recently, Wayne et al. (2007) argued that positive spillover and work-family enrichment intently focused on individual views of work-family issues, traditionally investigating how a positive affect from the work domain can benefit the individual’s own performance and satisfaction in the family domain or vice versa. They provided a new definition of work-family facilitation: “the extent to which an individual's engagement in one life domain (i.e., work/family) provides gains (i.e., developmental, affective, capital, or efficiency) which contribute to enhanced functioning of another life domain (i.e., family/work)” (p. 64). It emphasized the positive influences on work or family at system level. For example, it shed light on how an individual’s engagement in the family domain can affect supervisor-employee functioning in the work domain or how an involvement in the work domain can facilitate a better functioning of parent-child relations at home.

Despite Wayne et al. (2007) proposing a different perspective of work-family facilitation, researchers have interchangeably used positive spillover, work-family enrichment and work-family facilitation for investigating individual level studies in work-family literature (Carlson et al., 2006; McNall et al., 2010). In order to avoid divergent views of facilitation, this thesis will adopt Greenhaus and Allen’s (2010) suggestion and used work-family enrichment to describe the positive effects of work and family from this point.

2.2.3.1 Bi-direction of work-family enrichment

Researchers (Aryee et al., 2005; Grzywacz & Marks, 2000) have revealed that work-family interactions are comprised by bi-directional work-family conflict and bi-directional work-family enrichment as a four-factorial structure. This implied that work-family enrichment, in the same manner as work-family conflict, has two directional influences, work-to-family enrichment (WFE) and family-to-work enrichment (FWE) (Frone, 2003; Greenhaus & Allen, 2010). Like work-family conflict, two-dimensional work-family enrichment is adopted in this thesis. Several key antecedents and outcomes are presented in following sections.

2.2.3.2 Antecedents of work-family enrichment

In comparison with work-family conflict, the investigations into antecedents of work-family enrichment are insufficient. Based on available evidence, several variables have been highlighted as influential predictors of work-family enrichment. In the same way as work-family conflict, these predictors can be grouped according to their originating domain. Looking at work-related predictors, it has been found that work demand and work involvement negatively associated with work-family enrichment, while social support from supervisors had a positive relation with work-family enrichment (e.g., Grzywacz & Marks, 2000; Hill, 2005; Wayne, Randel, & Stevens, 2006; Zimmerman & Hammer, 2010). For family-related predictors, a higher level of family demand or family involvement was related to a lower level of work-family enrichment, whereas a higher level of family support or spouse support was related to a higher level of work-family enrichment (e.g., Aryee et al., 2005; Grzywacz & Marks, 2000; Hill, 2005; Lu, Siu, Spector, & Shi, 2009; Wayne et al., 2006). In terms of studies conducted in Taiwan, Lu (2011) revealed that supervisor support was positively related to WFE whereas family support was positively associated with FWE.

2.2.3.3 Consequences of work-family enrichment

As with work-family conflict, the outcomes of work-family enrichment could be classified into three groups, work-related outcomes, nonwork-related outcomes and health-related outcomes (McNall et al., 2010). Previous evidence showed that work-family enrichment was positively related to job satisfaction, organisational commitment, and life satisfaction, whereas it was negatively related to turnover intention and mental health (Aryee et al., 2005; Boyar et al., 2007; Greenhaus & Allen, 2010; Hill, 2005; Kacmar, Crawford, Carlson, Ferguson, & Whitten, 2014; Karatepe & Bekteshi, 2008; Lu et al., 2009). In a meta-analytic review of the outcomes of work-family enrichment, McNall et al. (2010) reported that WFE had a higher positive correlation (.34) with job satisfaction than FWE (.20) and a higher positive correlation (.35) with organisational commitment than FWE (.24). Recently, Lu (2011) also recognised the positive effect of WFE on job satisfaction within a sample of Taiwanese employees. In terms of turnover intention, there was no significant relationship for both WFE and FWE. Their report also indicated that only WFE had a positive correlation of .32 with life satisfaction, whereas both WFE (.21) and FWE (.21) had a positive correlation with physical and mental health. Shockley and Singla (2011) obtained similar results regarding job satisfaction and reported that the correlation (.37) between WFE and job satisfaction was higher than the correlation (.22) between FWE and job satisfaction.

2.2.4 Work-family balance

Apart from the thriving development of work and family conflict and enrichment, a few researchers have highlighted another strand of work-family research called work-family balance. Although the concept of work-family balance has been explored over a decade, the term of work-family balance is still ill-defined (Carlson et al., 2009; Greenhaus & Allen, 2010; Grzywacz &

Carlson, 2007; Kalliath & Brough, 2008), because it is difficult to elucidate what is ‘balance’.

Several interpretations of balance have been given in the work-family literature. Similar to the evolution of work-family issues, Clark (2000) initially suggested achieving balance by minimising conflict between work and family and thus gave a definition of balance as “satisfaction and good functioning at work and at home, with a minimum of role conflict” (p. 751). This might be due to the absence of work-family enrichment in the early stages of the work-family research.

		Type of effect	
		Conflict	Enrichment
Direction of influence	Work-to-family	WFC	WFE
	Family-to-work	FWC	FWE

Figure 5. Dimensions of work-family balance

Note. The terms of ‘enrichment’ in this figure should be ‘facilitation’ in the original model. This alteration is due to consistency with the term for positive work-family interferences (see Section 2.6).

Following exploring and investigating the positive side of work-family interactions, Frone (2003) proposed that the components of work-family balance were comprised of work-family conflict and work-family enrichment and suggested that work-family balance occurred when employees faced low levels of work-family conflict and high levels of work-family enrichment. Also,

he proposed a model of work-family balance which was a fourfold taxonomy containing WFC, FWC, WFE, and FWE (see Figure 5).

Alternatively, Greenhaus, Collins, and Shaw (2003) had a discussion about several definitions of balance and gave the meaning of work-family balance as “the extent to which an individual is equally engaged in, and equally satisfied with, his or her work role and family role” (p. 513), based on role balance theory (Marks & MacDermid, 1996). The word ‘equally’ in this definition has been criticised by other researchers because there was no strong evidence showing that employees invested equal time or paid equal attention to work and family lives in previous work-family literature.

For this reason, Grzywacz and Carlson (2007) further drew on varied work-family definitions in the literature and defined work-family balance as “accomplishment of role-related expectations that are negotiated and shared between an individual and his or her role-related partners in the work and family domains” (p. 458). As regards to this definition, Carlson et al. (2009) discussed whether using measures of work-family conflict and work-family enrichment to evaluate work-family balance had different results to using a general work-family balance measure.

Carlson and her colleagues (2009) thus conducted a study with full-time employees and demonstrated that work-family balance is distinct from work-family conflict and work-family enrichment. Their analysis showed work-family balance has provided additional interpretation for job satisfaction, organisational commitment, and family satisfaction. On account of this, work-family balance is not only a combination of work-family conflict and work-family enrichment, but also an independent concept itself.

Recently, work-family balance has been treated as a distinct variable in several studies (e.g., Allen & Kiburz, 2012; Greenhaus, Ziegert, & Allen, 2012; Odle-Dusseau, Britt, & Bobko, 2012). However, the concept of work-family balance is underdeveloped and the measure of work-family balance needs to be repeatedly and constantly examined to establish its validity. To date, most studies have adopted Frone's (2003) work-family model using both work-family conflict and work-family enrichment to capture work-family balance (e.g., Aryee et al., 2005; Carlson, Kacmar, Grzywacz, Tepper, & Whitten, 2013; Lu et al., 2009). Moreover, González-Morales, Tetrick, and Ginter (2012) reviewed measures in work-family research and showed that omnibus work-family measures involved both work-family conflict and work-family enrichment. These measures have been used to capture work-family balance (e.g., Aryee et al., 2005). Additionally, the multidimensional work-family balance could yield a comprehensive understanding of the bi-directional work-family conflict and work-family enrichment. Thus, Frone's (2003) fourfold taxonomy work-family balance model will be applied for the subsequent studies in this thesis.

2.2.4.1 Broader work-family balance

Clearly, the previous work-family research has turned the spotlight on the conflict, enrichment, and balance between work domain and limited family domain. Recently some researchers paid attention to a more inclusive research field named work-life balance. It was introduced in the early 2000s with an interest in a more general area outside the work place. A review examining many work-family and work-life empirical studies before 2006 identified that the first study of work-life research was published in 2003 and reported that the majority of studies narrowly focused on work-family area, with only 9% of the studies drawing on the concept of work-life (Chang et al., 2010). These work-life studies addressed many issues that included

employees' extended family members, personal social activities, community involvement and leisure.

Previously, Sturges and Guest (2004) proposed a wider domain of nonwork that included personal interests and meeting with friends, instead of family related activities. Similarly, Hamilton, Gordon, and Whelan-Berry (2006) conducted a study to examine the conflict of unmarried female workers and their roles as family members (e.g., daughters) and even other roles in nonwork life (e.g. volunteer). Therefore, work-life balance is not restricted to influences from the family domain and specific participants (typically married people with children). It has embraced employees' kinships (Kossek & Ozeki, 1998), friendships, leisure, and hobbies (Hughes & Bozionelos, 2007).

In a review article, Kalliath and Brough (2008) discussed definition of work-life balance from several perspectives and suggested that work-life balance is "the individual perception that work and nonwork activities are compatible and promote growth in accordance with an individual's current life priorities" (p. 326). This definition brings focus to a broader life scope for employees, no longer limiting just to the family boundary, and considers employees' preference for contributing more time to work or nonwork activities.

2.2.4.2 Work-family or work-life balance

However, although the scope of work-family and work-life research are distinguishable, to date, published studies have interchangeably used the terms of work-family and work-life to refer to the interactions between work and personal life (Hamilton et al., 2006). A critical review of work-life studies by Özbilgin et al. (2011) demonstrated that although a few researchers had considered employees' life beyond employees' spouse and children, the majority of the studies were constrained to traditional nuclear families. This

might be due to the term work-life being treated as a comprehensive concept that can cover work-family under the umbrella of 'work-life'.

From the Western perspective of family, employees' parents are not included in the typical family configuration, which only considers employees' spouse and children. They have been treated as part of the extended family. Employees' family roles were mainly restricted to husbands/wives or parents in work-family research. Researchers rarely discussed employees' family roles as sons or daughters to their parents. Although these family roles have been excluded from work-family research, they have been considered in work-life research (i.e., Hamilton et al., 2006). Following this rationale, this thesis should be located in work-life research since a broader domain could include the life between employees and their parents, instead of with spouse and children only.

However, the Chinese family is fundamentally different from that in the West. The configuration of a Chinese family does not only consist of spouse and children, but also includes parents. By considering this differentiation of family structures, this thesis modifies the traditional concept of family (i.e., nuclear family) to a compatible concept of family (considering employees' parents) in Chinese societies. Therefore, using work-family balance to discuss Taiwanese employees' parents is more appropriate than work-life balance in this thesis.

2.2.5 Section conclusions

Together, these sections outline a framework of work-family balance (see Figure 6) which provides a preliminary model for this thesis. As this thesis considers work-family balance as a four-dimensional variable, bi-directional work-family conflict and bi-directional enrichment are presented in the framework. Work-family balance can be predicted by both work-related and

family-related variables and can have effects on work-related, nonwork-related and health-related outcome variables.

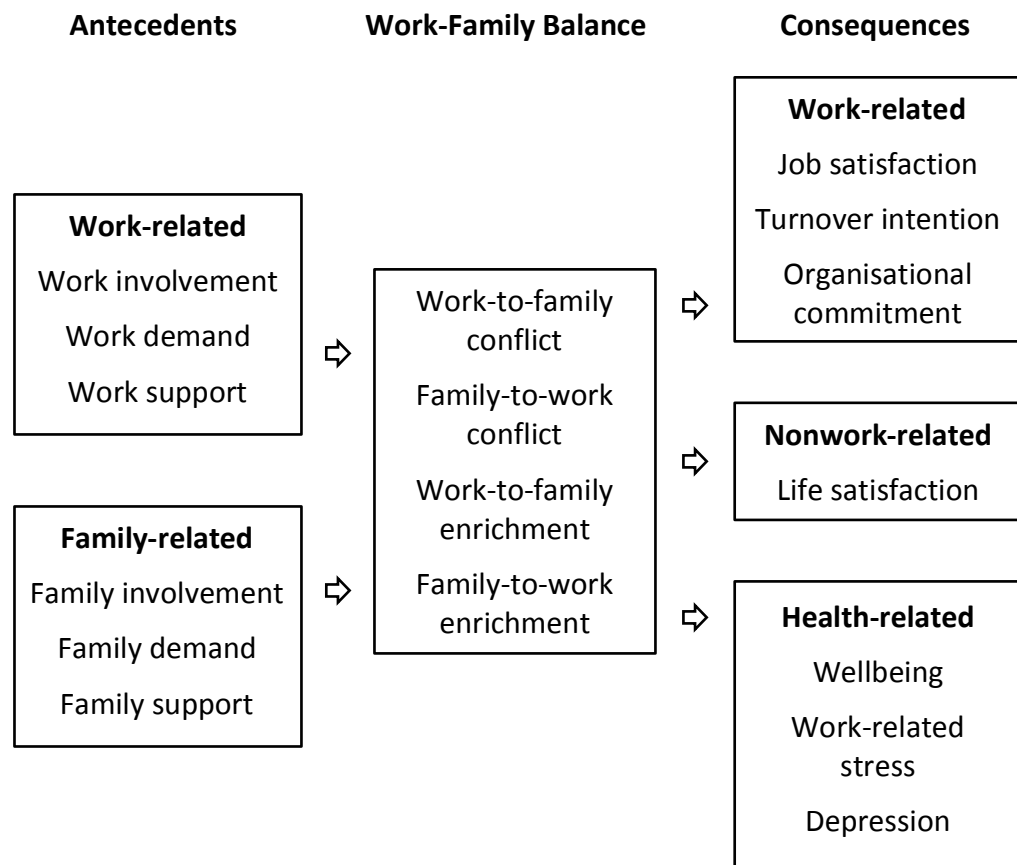


Figure 6. Framework of work-family balance

2.3 Issues in Work-Family Research

Although a considerable variety of work-family research has been extensively investigated, a few controversial issues have arisen while reviewing work-family literature which seem worthy of consideration. The first issue is with the definition of family (Section 2.3.1) and the second one is with sampling issues (Section 2.3.2). This section generates reasoned discussions of these shortcomings. At the end of this section, a structure of Taiwanese family and a feasible sampling strategy are given (Section 2.3.3).

2.3.1 *Limitation of the definition of family*

A fundamental issue that has been identified in the literature review is with the conventional definition and formation of family in work-family research. The definition of family can be varied and complicated and may be influenced by local cultures, religions, and customs. Previous researchers have used the term 'family' to express its definition from their own knowledge or indigenous culture. To a certain extent, this may exert a limitation of family types in work-family research.

From the emergence of work-family studies between the late 1970s and early 1980s in the United States, researchers assumed the family configuration consisted of a married couple and their children. For example, Pleck's (1977) statement that the work-family role system was formulated by married males and females. From the view of Greenhaus and Beutell (1985), as another example, their demonstration of the source of role pressure from family solely considered employees' spouses and children. Moreover, it is difficult to find studies that articulate clear definitions of family. A review providing evidence for this phenomenon by Rothausen (1999) pointed out that there was no clear definition of family presented and it was tacitly assumed as "a monogamous patriarchal family headed by a man permanently married to his wife and living with her and their children" (p. 818). These preconceptions precisely match the definition of family in Oxford Dictionary of English (2010): "A group consisting of two parents and their children living together as a unit".

This assumed definition could lead to some problems since the perceived definition of family for participants could be varied in different cultural backgrounds. Apart from the nuclear family, there are different family definitions existing. For example, Encyclopædia Britannica (2014a) defined family as "A group of persons united by the ties of marriage, blood, or adoption, constituting a single household and interacting with each other in

their respective social positions, usually those of spouses, parents, children, and siblings". This definition embraces a wide range of family members and shows the diversity of family configuration. It may be more suitable for collectivism societies. However, this definition has received little research attention in the mainstream literature.

For example, with the aim of examining the generalisability of the work-family interface model, researchers (Aryee, Fields, et al., 1999) directly adopted the Western perspective to evaluate married employees' work-family conflict in Hong Kong. Although they noticed the potential differences between Chinese and American employees, it lacked considerations of the fundamental definition or structure of family. In terms of family conflict, Chinese employees may consider their parents as sources of conflict. To rate their family satisfaction, Chinese employees may also take the relationships with their parents into account. However, married employees in the West are less likely to consider their parents within the structure of family. This highlighted that the same work-family measures could have slightly different meanings regarding the concept of family.

Under these circumstances, it is possible to misuse this typical 'family' concept within other cultures and societies which have different definitions and configurations of family. Drawing meaningful comparisons across different studies should be critically examined regarding the cultural differences. To a greater extent, the results of cross-cultural work-family research could be misinterpreted, simply because the essential characteristics of family are not universal in consistency.

2.3.2 Sampling issues

On the presumption that researchers defined family as a typical nuclear family, it is reasonable that work-family studies deliberately select their research

participants as married people and/or people with children, since never-married participants are unable to provide their family experience (e.g., family involvement, spouse support, and childcare). Traditionally, researchers excluded people who were not involved in family activities. For example, Frone and Rice (1987) eliminated single employees without children in their study because it was unfeasible to measure family involvement. Similarly, Greenhaus et al. (2003) set the same criteria to assure that research participants faced certain family responsibilities. Many subsequent work-family studies (e.g., Adams et al., 1996; Anderson et al., 2002; Aryee et al., 2005; Carlson & Perrewé, 1999; Frone et al., 1992b; Netemeyer et al., 1996; Noor, 2004) employed this sampling strategy to gather their participants. In a review, Kossek and Ozeki (1998) provided a summary about sample characteristics in work-family research and showed that the majority of research participants were married or working parents.

Several critics noted that research samples overemphasised married employees (Beauregard et al., 2009; Kossek & Ozeki, 1998). In reality, not all employees are married; a huge part of employees are single without children (Young, 1999). To understand these singles' work and nonwork balance has become an important task for organisations and researchers.

Allen and Pickett (1987) conducted an interview study with a specific aspect to understand never-married women's experience of life. Since these women did not have a spouse and children, their idea of family was not that of a typical nuclear family. The result indicated that single women alternatively had more connection with their extended kin as family caregivers compared with their married counterparts. It is reasonable to consider that single participants belong in work-nonwork or work-life research (e.g., Hamilton et al., 2006) instead of work-family research, since the experience of typical family life does not apply for single employees.

Up to now, much of the research (e.g., Fu & Shaffer, 2001; Grzywacz & Bass, 2003; Kirrane & Buckley, 2004; Nohe & Sonntag, 2014; O'Driscoll, Brough, & Kalliath, 2004) has removed the restriction of only using married participants to conduct studies. They have recruited both single and married employees. However, an inclusion of single participants without children in work-family studies to investigate family-related variables, such as spouse support and parental demand, could raise some consideration for the validity of participants. Single employees could not be able to answer questions about their family experience because they were not married or parents. More than one study showed these controversial circumstances and it could be critically appraised.

For example, Kirrane and Buckley (2004) conducted a survey to investigate the connections between spouse support and work family conflict. Both married and unmarried participants were recruited. Under these circumstances, the effects of spouse support measures would be adulterated by questionnaire responses from single participants. It is clear that single working adults did not have any experience of spouse support and should not fill the measure of spouse support. It can be problematic to interpret the data if single individuals reported any level of spouse support on a survey.

Therefore, the inclusion of single employees without children in work-family research should be carefully considered while investigating these family-related variables. The risks being that recruiting single participants might produce misleading results.

2.3.3 Section conclusions

According to these two discussed issues in previous sections, a matrix (see Figure 7) has been developed to further explain the different types of family structure between Western and Chinese societies in the work-family research.

The two primary dimensions are definition of family (i.e., nuclear family and Chinese family) and sampling strategy (i.e., single employees and married employees). It presents possible significant family members that employees consider when they face the questions related to work-family balance.

		Sampling strategy	
		Married	Single
Definition of Family	Nuclear	Spouse Children	Work-life Parents?
	Chinese	Spouse Children Parents	Parents

Figure 7. Dimensions of family members

Through this matrix different types of family formations can be identified. Previous studies have drawn a considerable attention to married employees' in nuclear families considering the effects of spouses and children. This is a prototype work-family model for researchers. This is a possible reason why in most studies, childcare was the only care responsibility considered and spouse support was the only example of social support participants received from their families.

Under the predominance of the traditional family structure, it makes sense to assume that single employees would not experience work-family conflict and enrichment since they did not have 'family' experience. A few researchers (Hamilton et al., 2006) noticed this phenomena and conducted investigations with only never-married women. They expanded work-family conflict to work-

life conflict and looked at the nonwork activities for never-married women. According to this, studies using single employees under the nuclear family concept may be classified as work-life research. For example, when researchers referred to singles without children they used the term work-life, rather than work-family (Casper et al., 2007).

However, as researchers recruited both married and single employees for work-family balance studies, it aroused some problems regarding what is the meaning of family to single employees and how they rate their work-family balance. Most of these studies did not provide relevant information. It is rational to presume that their parents would be recognised as key elements when rating their work-family conflict and enrichment. The rationales behind emergence of conflict and enrichment between work and family for these two groups are distinctly different. However, the majority of the Western studies which considered both single and married employees have only focused on the discussion on the influences of spouse and children. It is rare to discuss the impact of parents for single employees. As the literature is ambiguous, it is difficult to define single adults in the work-family field.

In the Taiwanese context, a configuration of family could consist of more than one household (Tu et al., 1993). This is because parents are the cores of Taiwanese family structure. As individuals leave their parents' household, the family becomes a multi-household unit. Parents provide family linkages between different households and their children still depend on or contribute their earnings to them. When these individuals start their own families, they still believe that their parents are the members of the family. Regarding Chinese family, parents are both significant family members for single and married employees.

Accordingly, it is obvious that both single and married Taiwanese employees consider their parents as family members when they measure their work-

family balance. However, previous studies have rarely considered employees' parents in the work-family research. Most predictor variables (e.g., family involvement) focused on evaluating the influence of spouse and children (Rothausen, 1999). There is a general lack of research in discussing how parents affect employees' work-family balance.

In this thesis, Taiwanese family structure will substitute for nuclear family structure in this project. To be more precise, employees' parents will be considered in the definition and formation of family in Taiwan. Both single and married employees will be recruited in following studies. Their marital status becomes less relevant because this thesis aims to understand the potential influence of their parents on employees' work-family balance. It is only crucial to recruit employees who have certain experience concerning the influence of their parents.

2.4 Chapter Summary

By reviewing previous work-family theories, this chapter provided a general knowledge of work-family research and outlined a framework for conducting work-family balance research. It also discussed two important considerations: (a) the definition of family and (b) sampling issues. At the end, the chapter focused on providing a definition of family for Taiwanese. It considered employees' parents within the family structure and provided justification to employ both married and single participants for subsequent studies. The next chapter will provide a systematic review in order to explore how employees' parents influenced on employees' work-family balance in previous literature.

Chapter 3 Systematic Review: The Role of Employees’ Parents in Work-Family Research

3.1 Chapter Overview

This chapter presents a systematic review of published research into the role of employees’ parents in work-family research. The structure of the chapter is displayed in Figure 8. First, Section 3.2 discusses the general absence of employees’ parents in work-family research. This gave rise to a need for a more systematic enquiry to locate any papers which do include parents. Then Section 3.3 presents the method for systematic review, in five subsections: Section 3.3.1 provides the justification for applying a systematic review; Sections 3.3.2 to 3.3.5 describe the procedure for conducting a systematic review. Next, Section 3.4 presents results and Section 3.5 the discussion and emerging research objectives.

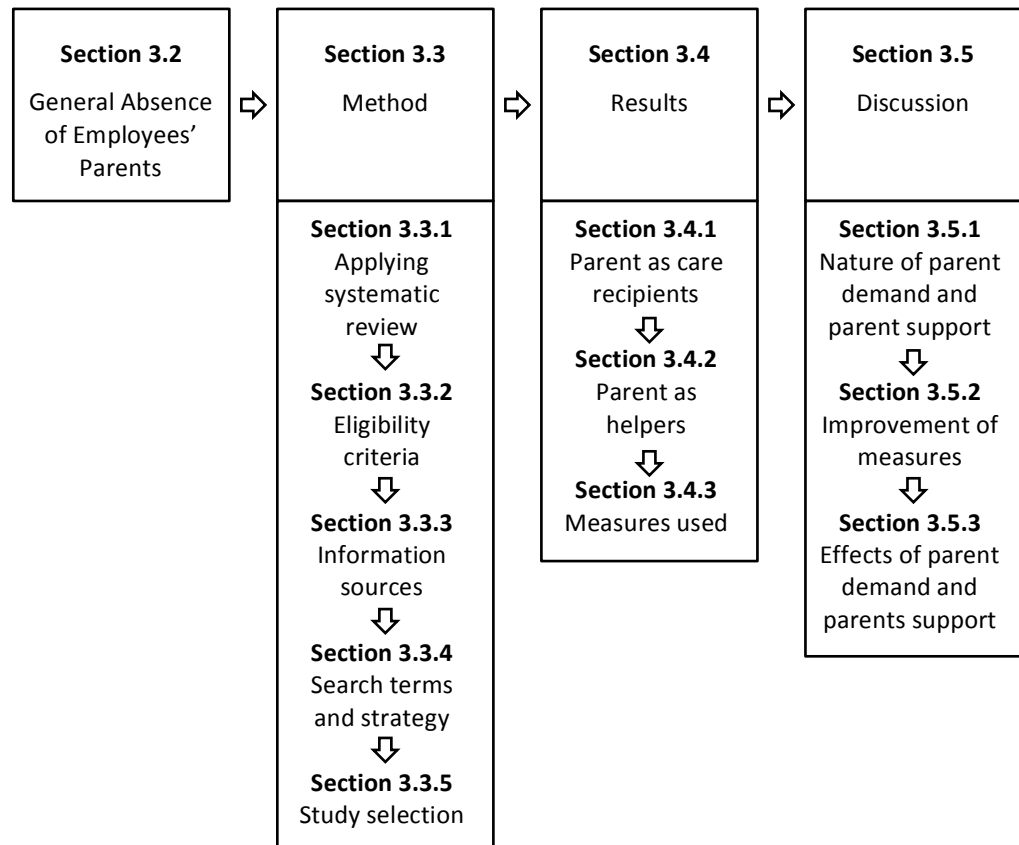


Figure 8. Chapter three structure

3.2 General Absence of Employees' Parents

The issues discussed in the last chapter highlighted how work-family studies have largely focused on nuclear families. Because of the confined family definition, employees' parents have been largely neglected in the majority of work-family research. Even studies conducted in Chinese societies failed to consider the potential influence of parents. For example, studies conducted in Hong Kong measured only the influence of spouses as sources of family conflict (Aryee, Fields, et al., 1999), or family support (Aryee, Luk, et al., 1999). In another study examining the family domain resources on work-family conflict with 248 Hong Kong working parents (Luk & Shaffer, 2005), only employed domestic servants were considered as family support resources. In addition, Stoeva, Chiu, and Greenhaus (2002) investigating family stress with a sample of Hong Kong Chinese only considered the employees' roles of spouse and parent and not their role of son or daughter. As regards work-family

studies in Taiwan, researchers only considered employees' spouses and children as sources of family demand (Lu, Gilmour, Kao, & Huang, 2006; Lu et al., 2008).

Additionally, researchers have identified the absence of employees' parents in studies in Western countries. In a conceptual article by Parasuraman and Greenhaus (2002), the scarcity of investigating extended family members, such as parents or siblings, in published studies was discussed. Possible influential family members have been omitted from the work-family research. This represents a gap in work-family research. This situation may result in the undervaluation of family support by failing to estimate the supportive sources from other significant family members in previous research. These significant members should be considered in the future studies to broaden the knowledge within the work-family research. In the same vein, Beauregard et al. (2009) argued that the lack of consideration of diverse family structures in the past decades produced limited knowledge of work-family research. Several different family configurations were proposed in their conceptual paper for future investigation. These covered same-sex families, extended families (including multi-generation families also known as sandwich families) and virtual families. Their attention to extended family shared the same interest of this thesis. It highlighted the need for expanding family definition to appropriate scopes helping work-family research to reflect realities.

Together, the evidence provided above demonstrates the general absence of employees' parents in previous work-family studies and highlights the necessity of considering potential family members in future research. This thesis focuses on employees' parents with the purpose of expanding the boundaries of work-family research. As it is a relatively new research direction to consider employees' parents in the work-family field, there is no relevant review investigating the role of employees' parents in the existing literature. The present chapter, therefore, conducts a review aiming to identify the role

of employees' parents in the work-family research field. This can provide basic knowledge for recognising what role they have played in the literature.

3.3 Method

3.3.1 Applying systematic review

The studies of employees' parents in the work-family area are scarce and the work-family literature has accumulated a great amount of articles. It is unfeasible using traditional review method to scan the whole work-family literature and identify articles with the concept of employees' parents. Alternatively, this chapter uses a systematic review to develop an overview of employees' parents in work-family research. A systematic review is "a method of making sense of large bodies of information, and a means to contributing to the answers to questions about what works and what does not" (Petticrew & Roberts, 2006, p. 2). Employing a systematic review method can efficiently search unmanageable amounts of existing literature following a scientific methodology (Mulrow, 1994) and obtain a reproducible result. Moreover, systematic reviews are more impartial than traditional literature reviews. It helps to minimise selection and publication bias and produce a more reliable summarised finding for a specific research question (Egger, Smith, & Altman, 2008; Higgins & Green, 2011). In addition, using a systematic review can help identify the research gaps and new research areas, and also highlight the absence of studies in the literature (Egger et al., 2008; Petticrew & Roberts, 2006). Therefore a systematic review was conducted as a precursor for further studies in this thesis. Since this systematic review aims to provide a more comprehensive picture of the prevalence of employees' parents in work-family research, all study types are considered. It is slightly different to traditional systematic review limited to a single preferred study design (e.g., randomised controlled trials). Thus, researchers have also named this kind of systematic review as 'systematic search and review' (Grant & Booth, 2009).

3.3.2 Eligibility criteria

Following a guideline provided by Liberati et al. (2009), this systematic review set several criteria for appraising the validity, applicability, and comprehensiveness of the review. These criteria help ensure that a systematic and unbiased process was used for the review. Articles would be considered as potential targets if they fulfilled all of the following requirements: (a) articles were conducted between 1985 and 2012; (b) articles should be published in peer-reviewed journals; (c) language included English and Chinese; (d) articles were restricted to human studies; and (e) keywords were searched in title and abstract with work-family and employees' parents related terms.

3.3.3 Information sources

Reviewed articles were mainly identified through searching electronic databases. In order to select databases, the present study surveyed previous work-family review studies for exploring possible databases. After analysing databases of 12 review studies, the result showed that the most common databases were PsycINFO (7 studies used) and ABI/INFORM Global (5 studies used) databases (see Table 1). The database of ABI/INFORM Global contains most of the business related academic journals and the most important trade journals, and PsycINFO contains the majority of psychology literature including peer-reviewed journals, books, and dissertations. These two databases are suitable since this thesis is an interdisciplinary research to apply psychology in the management field. In addition, most work-family studies encompass both occupational health psychology and human resource management perspectives.

Table 1
Previous Work-Family Review Studies

Author	Summary	Database
Kossek and Ozeki (1998)	A meta-analytic review which investigates the relationship between work-family conflict, policies, job and life satisfaction.	Psychological Abstracts Expanded Academic Index
Allen et al. (2000)	A meta-analytic review which studies the outcomes of work-family conflict.	PsycLIT OVID
Byron (2005)	A meta-analytic review that examines the antecedents of work interference with family and family interference with work.	PsycINFO
Eby, Casper, Lockwood, Bordeaux, and Brinley (2005)	A content analysis and narrative review in work and family research among industrial-organisational psychology and organisational behaviour journals.	PsycINFO ABI/INFORM Global
Casper et al. (2007)	A methodological review on work-family research published in industrial-organisational psychology and organisational behaviour journals.	PsycINFO ABI/INFORM Global
Bardoel, De Cieri, and Santos (2008)	A review of work-life research in Australia and New Zealand.	Proquest (ABI/INFORM Global included) EBSCOhost Expanded Academic (Gale) Emerald ISI Web of Science The Sloan Work and Family Research Network at Boston College Google Scholar
Chang et al. (2010)	A critical review on methodological choices in work-life balance research	EBSCOhost Proquest

Author	Summary	Database
McNall et al. (2010)	A meta-analytic review which investigates the consequences of work-family enrichment.	PsycINFO ERIC Business Source Complete EBSCO JSTOR EconLit Dissertation Abstracts International Google Scholar
Michel, Clark, and Jaramillo (2011)	A meta-analytic review that examines the relationship between five-factor model of personality and work-nonwork spillover.	PsycINFO Web of Science Google Scholar
Michel, Kotrba, et al. (2011)	A meta-analytic review which investigates the antecedents of work-family conflict.	ABI/INFORM Global ERIC PsycINFO Dissertation Abstracts
Özbilgin et al. (2011)	A critical review that provides diversity of work-life research.	ISI Web of Knowledge
Shaffer et al. (2011)	A review of studies conducted in non-US countries.	ABI/INFORM Global PsychINFO EBSCO

Regarding the language criteria, of the 12 review studies above, only 3 studies (i.e., Byron, 2005; Chang et al., 2010; Özbilgin et al., 2011) stated that they limited article language to English, but the other 9 reviews failed to report their language criteria. A few researchers (e.g., Özbilgin et al., 2011) reported the shortcomings of studies which are limited to English, although they only drew upon English language studies in their own reviews. It is appropriate to include different languages in order to yield more related articles. As the present study considered Chinese culture, to obtain articles from Chinese societies can enhance the credibility and validity and thus articles written in English and in Chinese were included.

To enlarge coverage, supplementary articles written in Chinese were also retrieved from Chinese electronic periodical services (CEPS), and Chinese

electronic theses and dissertation service (CETD). These databases collect articles from China and Taiwan.

3.3.4 Search terms and strategy

The search terms were adopted from previous studies. Most studies used work-family balance related terms, such as work-family conflict, work-family enrichment and work-family balance. In order to reach more potential articles, this systematic review created two clusters of search terms which were employed to extract target work-family articles. The first cluster of terms consisted of 'work-family' and 'work-life' to cover a more comprehensive concept of work-family research. The second cluster related to divergent topics of work-family such as 'balance', 'conflict', 'facilitation', 'enrichment', 'enhancement', 'interfere' and 'spillover'. The combination of these two clusters generated various work-family terms and articles (e.g., work-family conflict; work-family enrichment; work-family balance; work-life balance).

In terms of employees' parents, this systematic review used another cluster of terms including 'parent', 'grandparent' and 'elder' to locate parent-related articles. Articles were retrieved for further examination if they included terms from all three clusters. The details of the search strategy can be found in Appendix A. Target articles can be directly extracted via search engines in PsycINFO and ABI/INFORM Global. However, because of the limitation of search methods in CEPS and CETD databases, only key words (work-family and work-life) can be searched to obtain work-family related articles and then by manually selecting those articles containing parent-related terms in their title or abstract fields.

3.3.5 Study selection

After the extracting procedure, there were 206 articles from PsycINFO and 180 articles from ABI/INFORM Global. A total of 386 journal articles obtained from PsycINFO and ABI/INFORM Global (see Table 2). These articles were imported into the reference management software Endnote for analysis. After excluding 65 duplicates, 321 articles were included. In addition, a total of 15 Chinese articles were selected from CEPS (3 articles) and CETD (12 articles) and also imported into Endnote. As a result, a total of 336 articles were recruited for further screening.

Table 2
Search Terms and Results

Step	Term	ABI/INFORM			
		PsycINFO	Global	CEPS	CETD
1	Work-family Work life	2637	23103	51	73
2	Balance Conflict Facilitation Enrichment Enhancement Interfere Spillover	88782	62814	-	-
3	Parent Grandparent Elder	124964	14800	-	-
4	1 AND 2 AND 3	206	180	3	12

Note. CEPS = Chinese electronic periodical services; CETD = Chinese electronic theses and dissertation service

Most articles could be excluded through examination of titles and abstracts alone, since they clearly irrelevant to work-family research. Their inclusion might be largely due to the common usage of work-family balance and work-life balance terms in people's daily life (Greenhaus & Allen, 2010). In the current review, these terms have been identified in journals related to psychology, human resource management, family, economics, sociology,

social policy, and child development. In consequence, a total of 158 articles were categorised as non work-family studies and were excluded.

A total of 12 articles were also eliminated since they were book reviews. Although the rest of articles were regarding work-family issues, a further 132 articles were removed since they related to single parents, working parents, dual-earner parents, parental leave, or parental demand, rather than employees' parents. As a result, a total of 302 articles were excluded and a total of 34 articles remained. After excluding three articles without full-text, 31 target studies entered for full examination.

Although the final 31 articles passed the exclusion criteria on the basis of title and abstract, after examination of the full paper 3 further articles were excluded. The study conducted by Heponiemi, Elovainio, Pekkarinen, Sinervo, and Kouvonen (2008) did not consider employees' parents since they examined work-family conflict with female nurses caring for elderly people. One study put its main focus on family and sociological perspectives and there was no work-family measure involved, although it did consider hours for caring of parents and was also titled work-family conflict Gerstel and Gallagher (1993). A third article (Konopaske, Robie, & Ivancevich, 2009) examined its model without any work-family variables and aimed to investigate problems with expatriation. This left a total of 28 articles for the final stage of reviewing. The process of article selection represents in Figure 9, using a flow diagram (Gough, Oliver, & Thomas, 2012; Liberati et al., 2009; Moher, Liberati, Tetzlaff, Altman, & The PRISMA Group, 2009).

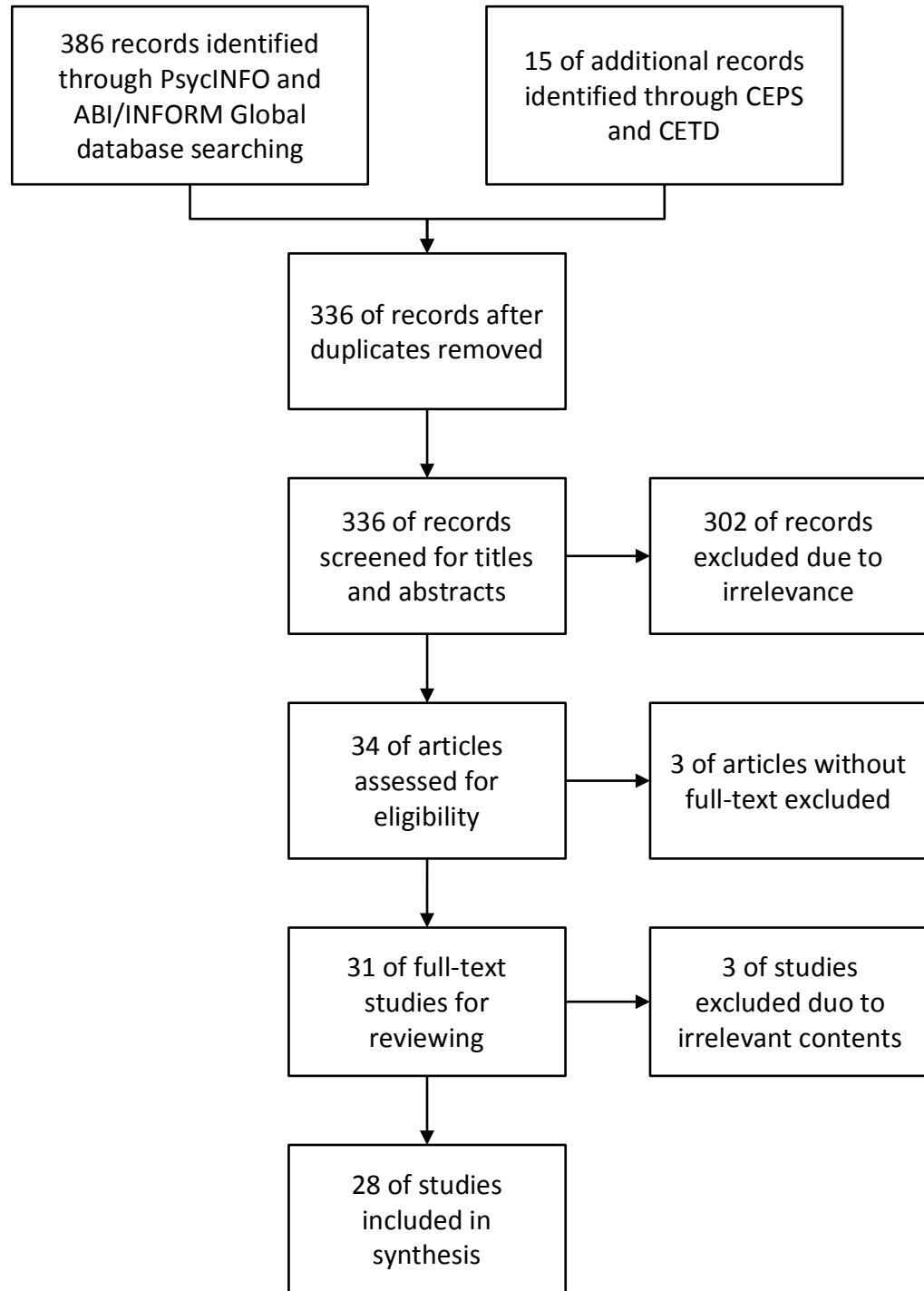


Figure 9. Flow diagram of study selection

3.4 Results

Of those 28 qualified articles, 22 were empirical studies, 1 was a review article, and 5 were conceptual articles. All studies were published in English journals,

with the exception of three articles which were in Chinese. Three articles were published in the 1990s, 15 were conducted in the 2000s, and 10 were identified between 2010 and 2012. After interpreting and analysing, the homogeneity and heterogeneity of these studies and articles generated three findings.

3.4.1 *Parents as care recipients*

The current review identified that most of the work-family studies considered employees' parents as elderly parents, often in the context of 'frailty'. In most cases, employees' parents were usually only explored as a source of conflict, where employees had to spend time providing care for them.

Of the 28 articles included, 24 discussed eldercare issues. These articles highlighted the needs for considering the impact of taking care of elder people on the balance between work and home for employees'. Fallon (1997) noted a steady growth in the family responsibility for the caring of elderly parents. This might be one of the consequences contributed by the world's ageing population. World Health Organization asserted that the percentage of the world's elder population would grow twofold to 22% by 2050 (World Health Organization, 2012). Thus, the issue of eldercare could be problematic for employees in the foreseeable future.

Recently some studies have showed a significantly increased number of employees with eldercare responsibilities. For example, Boushey (2011) reported that almost half (42%) of the working population in the United States had been carers of the elderly within the past five years in 2008. Their article singled out the importance of introducing government assistance laws and regulations for those who have responsibilities to care for their elder family members. In a work-family conflict study, Hassan, Dollard, and Winefield (2010) found that almost three quarters of Malaysian participants

had to take care of their elderly family members and pointed out the necessity for providing support from government and organisations to reduce conflict between employees' work and family domains. Not only researchers noticed this phenomena, International Labour Organisation also advised employers to fulfil employees' family responsibilities and to provide supportive programmes for those with elders to care for in order to prevent employees' work stress (International Labour Office, 2012).

Further, researchers showed their interests in many perspectives of eldercare. Some research was focused on recruiting employees with eldercare responsibilities as participants. In a longitudinal work-family conflict study, Huang, Hammer, Neal, and Perrin (2004) recruited 234 dual-earner couples with experience of caring for both children and aging parents. Although they considered employees' parents in the study, the only information reported was the amount of hours per week spent on eldercare. Additionally, in order to understand employees' coping strategies for eldercare, Neal and Hammer (2009) set a criteria to hire carers who spent at least three hours per week caring for their parents. In the same way, Bernard and Phillips (2007) conducted a study applying mixed methods to a sample of employees with eldercare responsibilities and explored what supported and impeded employees with taking care of their elderly dependents. There was no further analysis regarding parents in these studies. In addition, one article attempted to examine two different definitions of family in work-family conflict measures. The family in the first scale was defined as only spouse and children and in the second scale included parents, siblings, grandparents, and relatives (Pitney, Mazerolle, & Pagnotta, 2011). Another study considering employees parents as influential family members, Greenhaus and Powell (2003) conducted an experimental design to examine how employees prioritise their choices between business meetings and demands of parents.

Another 4 of the 28 included studies focused on the consequences of looking after elder parents. In a qualitative study examining self-employed women, Bourke, Pajo, and Lewis (2010) found that eldercare responsibilities limited the growth and development of their business and affected their emotions. Loder (2005) conducted an interview with elementary and secondary school administrators and reported that employees with eldercare responsibilities had a higher incidence of anxiety and taking time off work. Moreover, one study (i.e., Lai, Chang, & Wu, 2011) indicated the demands of elderly parents had a significantly negative impact on job satisfaction.

Although it has been widely identified that there are similarities between eldercare and childcare responsibilities, a few studies have argued that these responsibilities are quite different. Researchers reported that employees' with parent care responsibilities may encounter higher levels of demand at home and more health related issues while their parents are ageing or unwell. The findings of a focus group study by Secret and Swanberg (2008) stated that employees aroused more concern about the caring of adults or elder dependents than children, since the responsibilities of eldercare were more complicated and unmanageable than childcare. One of their participants said "The biggest difference between worrying about child care and elder care is that you know your children will eventually outgrow the need for child care. But, with aging parents and relatives, you know it's going to get worse" (Secret & Swanberg, 2008, p. 210).

Additionally, a comparative study by Larsen (2010) indicated that employees who had caring responsibilities for their elders and children together reported that the burden of caring for old people was higher than that of caring for children. Beauregard et al. (2009) also discussed the same point of view in their conceptual article which highlighted the importance of eldercare to employees in work-family research. In addition, MacDonald, Phipps, and Lethbridge (2005) analysed secondary data and reported that women

experienced more stress when taking care of elders than children. Moreover, one study which investigated how employees decide on whether to care for children or parents at home, and how that affected the employees' wellbeing, Kossek, Colquitt, and Noe (2001) found that those employees who arranged to care for their elderly dependants at home would receive more threats to their own wellbeing than those who arranged to care for their children at home. This finding suggested that researchers should view eldercare and childcare respectively when studying the consequences of dependent caregiving decisions. Eldercare, thus, may contribute its unique effects to work-family research.

Of those 22 empirical studies, 8 of the studies (see Table 3) have examined employees' parents as care recipients and explored how the caring responsibilities of their parents affected their balance between work and family. The findings of these studies showed the divergent impact of employees' parents on work-family balance without consistency. As caring for elder parents could be a draining and disruptive task, most researchers expected that eldercare was detrimental to employees' work-family balance. Studies have demonstrated this phenomenon. Employees caring for parents had a higher level of conflict between work and family (Marks, 1998), which also disturbed their work-family balance (Buffardi, Smith, O'Brien, & Erdwins, 1999). Two studies which focused on gender difference, reported that females with higher level of demands of the care for parents reported higher WFC (Cullen, Hammer, Neal, & Sinclair, 2009) and FWC (Anafarta & Kuruüzüm, 2012).

Although the evidence showed these negative effects on work-family balance, it is important to note that several studies failed to establish the relationships between parent care and work-family balance (e.g., Barrah, Shultz, Baltes, & Stolz, 2004; Grandey, Cordeiro, & Michael, 2007; Hammer, Neal, Newsom, Brockwood, & Colton, 2005; MacDonald et al., 2005).

Table 3
Studies of Parents as Care Recipients

Author	Location	Finding
Anafarta and Kuruüzüm (2012)	Turkey	Women who had to care elderly parents had a higher level of FWC
Barrah et al. (2004)	United States	Total time spent providing eldercare per week was not related to FWC
Buffardi et al. (1999)	United States	The responsibilities of eldercare was negatively related to levels of work-family balance
Cullen et al. (2009)	United States	Females with high aging parent care demands had higher level of WFC
Grandey et al. (2007)	United States	There was no relationship between eldercare and WFC
Hammer et al. (2005)	United States	Total aging parent care hours failed to affect WFC
MacDonald et al. (2005)	Canada	Eldercare hours was not related to satisfaction of work-home balance
Marks (1998)	United States	Parent care was positively associated with WFC and FWC

Last of all, in an article reviewing the methodology of work-family studies between 1987 and 2006, Chang et al. (2010) have noted that sampling of participants with eldercare responsibilities was infrequent and suggested that researchers should pay attention to the impact of eldercare on employees' work-family balance.

3.4.2 Parents as helpers

Apart from being viewed as care recipients, employees' parents have been looked at as helpers in this review. Only three articles (see Table 4) investigated the support from parents, albeit in the form of providing domestic help. In these cases, parents were not perceived as contributing to conflict between work and family life. It is quite the reverse. Employees' parents can provide assistance to facilitate the balance between work and

family. Parasuraman and Greenhaus (2002) also proposed that employees' parents could be one of the possible support sources that can help employees to deal with adverse effects between work and family.

All of these three studies have found that employees who had domestic support from their parents reported a lower level of conflict between work and family. For example, Fu and Shaffer (2001) conducted a study in Hong Kong with a sample of university employees. They considered both employees' parents and domestic servants as sources of domestic help. Their results indicated that domestic help significantly decreased employees' FWC. This suggested employee' parents could provide helpful assistance with childcare and other domestic activities.

However, the other two studies investigated domestic support only using parents as sources. Chang and Lu (2011) examined work-family conflict with 327 Taiwanese full-time employees and their results revealed that domestic support from employees' parents reduced female employees' WFC. Another survey of schoolteachers conducted in China by Wu, Zhang, Yu, Guo, and Chen (2010) discovered that teachers had less FWC when they lived with their parents. The findings from these studies suggest that these parents provided family assistance such as childcare and household chores to release some of the employees' pressures at home.

This review found that all three studies that considered domestic help were conducted in Chinese societies. However, the majority of Western studies treated parents as dependents who required care. Taken together, these empirical studies suggest that employees' parents are more likely to be considered as a help source in Chinese societies than in Western countries.

Table 4
Studies of Parents as Helpers

Author	Location	Findings
Chang and Lu (2011)	Taiwan	Domestic help from parents was negatively related to WFC
Fu and Shaffer (2001)	Hong Kong	Domestic support (parents and domestic servants) was negatively related to time-based FWC
Wu et al. (2010)	China	Employees who lived with parents had a lower level of FWC

3.4.3 Measures used

A summary of measures used in those studies examining the relationships between the effects of parents and work-family balance shows in Table 5. Most of the included studies (e.g., Anafarta & Kuruüzüm, 2012; Barrah et al., 2004; Buffardi et al., 1999; Grandey et al., 2007; Marks, 1998; Wu et al., 2010) evaluated eldercare or domestic help using a dichotomous view (i.e., yes or no question). Participants only indicated whether or not they provided eldercare to their parents or received domestic help from their parents. Some researchers (e.g., Cullen et al., 2009; Hammer et al., 2005; MacDonald et al., 2005) asked how many hours per week employees spent on caring for their parents, the frequency of domestic help (e.g., Chang & Lu, 2011) or the percentage of help from their parents (e.g., Fu & Shaffer, 2001).

Table 5
Summary of Measures Used

Author	Role of parents	Measure
Anafarta and Kuruüzüm (2012)	Care recipients	Having parents who need care: Yes or no.
Barrah et al. (2004)	Care recipients	Do you currently provide special attention to someone 65 years old or older?
Buffardi et al. (1999)	Care recipients	Any response that indicated responsibility for one or more elderly parents or other elderly relative or individual was coded as 2; all others were coded 1.
Chang and Lu (2011)	Helper	Parents provide domestic help to me: 1 (never) to 5 (everyday).
Cullen et al. (2009)	Care recipients	Number of hours spent caring for an aging parent (parent care) per week.
Fu and Shaffer (2001)	Helper	Respondents indicate who assisted them with childcare and other domestic activities and the percentage of relief that they received from these individuals in these two areas.
Grandey et al. (2007)	Care recipients	Respondents indicated whether they have eldercare.
Hammer et al. (2005)	Care recipients	Average number of hours per week spent caring for parents.
MacDonald et al. (2005)	Care recipients	Last week, how many hours did you spend providing unpaid care or assistance to one or more seniors?
Marks (1998)	Care recipients	Have you ever given care for parents?
Wu et al. (2010)	Helper	Do you live with your parents?

3.5 Discussion

As was pointed out in the first section of this chapter, the aim of this systematic review was to explore the role of employees' parents in the past work-family research. This systematic review located 28 articles related to employees' parents and indicated that employees' parents were highly associated with issues of eldercare and few researches discussed employees'

parents from a supportive perspective. This demonstrates that employees' parents have been treated as care recipients and helpers. Similar to previous findings, this systematic review identified little work that discussed employees' responsibility for eldercare (Chang et al., 2010). The results also provided evidence that parents may be a source of family support to reduce employees' conflict between work and family life (Parasuraman & Greenhaus, 2002) and Chinese employees may be more likely to receive greater domestic help from their parents than Western workers (Ling & Poweli, 2001). Moreover, this review identified that most of these empirical studies used a single question to measure eldercare or domestic help.

There are four limitations of this systematic review. First, this review used two primary English language databases and two additional Chinese language databases to collect studies. Due to the selection of databases, some articles may have been missed in this review. Second, searching Chinese articles is time-consuming since there is no professional database to integrate the journal articles written in Chinese across Chinese societies. Although this review used two databases which provided Chinese article search tools, this only reached a small fraction of Chinese journals. It is possible that some related Chinese articles failed to be found in this review. Third, the meaning of employees' parents could be varied in the literature. This review searched 'parents', 'grandparents', and 'elder' to identify employees' parents. It is possible to miss some parents-related terms in this review. Finally, although a systematic review is more scientific than a traditional review, the results and conclusion are still restricted to subjective perceptions of articles. Other research following the same procedure might come across different results.

This systematic review provided a preliminary understanding of the role of employees' parents. According to the results, several key objectives for work-family research on the influence of employees' parents identified for subsequent empirical investigation in Taiwan.

3.5.1 Nature of parent demand and parent support

The results of this review categorised the role of employees' parents into care recipients and helpers. Caring for elderly parents would occupy employees' free time to fulfil the demands of their parents. It is also possible to cause employees to leave early and arrive late or even result in absence from work. Researchers also have distinguished eldercare from childcare and highlighted that the influence of employees' parents may be more adverse than that of their children. On the other hand, employees' parents could share some employees' family responsibilities at home, such as managing household chores. These two distinct impacts of employees' parents have been named parent demand and parent support in this thesis and they provides a fundamental framework of what impact Taiwanese parents may have on employees' working life.

However, this systematic review has noticed that the included studies solely focused on the demands of eldercare, or the support of domestic help from employees' parents. Most researchers (e.g., Cullen et al., 2009; Grandey et al., 2007) only considered the demands of aged or unwell parents, not looking at the demands of parents that did not fit into these categories. This narrow concept of parent demand ignores the other possible circumstances that exist in parent-child relations. In the same vein, employees' parents might have other practical assistance. By only examining domestic help the researchers may fail to recognise some unique elements which employees' parents can contribute. The neglected factors could be also influential in affecting employees' work and family balance. This indicates an insufficient investigation in current work-family research. In addition, the purpose of this thesis is to understand how employees' parents can influence employees' work-family balance in Taiwan. Thus, showing a linkage between a general influence of parents and work-family balance may be more relevant and informative than just examining eldercare and domestic help. More

sophisticated impacts of parents on employees should be considered in the future. This thesis will, therefore, address this research gap by exploring the essential features of parent demand and parents support in Taiwan.

Research Objective One: To explore other possible influences of employees' parents in Taiwan. Within this objective, both parent demand and parent support will be investigated.

3.5.2 Improvement of measures

Furthermore, most of the included studies used simple indicators (e.g., whether employees have eldercare responsibilities or hours for eldercare) as predictors to measure parents' effects on their children. Although these measures could obtain certain information regarding employees' parents, they are possibly lacking in the essential characteristics of parents' impacts. Using these objective indicators could cause concerns about poor reliability (Gottlieb, Kelloway, & Fraboni, 1994). It would also limit the abilities to provide a comprehensive understanding of the diverse influences from employees' parents.

Researchers have noted the disadvantages of using these objective characteristics as predictors. While these simple indices can capture possible influences from parents, they are very indirect indicators of actual demands or support from parents. Furthermore, these types of measures are not likely to reflect the whole complex nature of work and family life (Eby et al., 2005). For example, having responsibilities for parents and receiving assistance from parents are complicated matters and cannot be explained by dichotomous questions or approximations of hours. Such simple conceptualisations of the demands and support from parents provide little information about the extent of parents' need and/or what kind of assistance they provide to their children. Moreover, these simple indicators do not demonstrate how

employees perceive the demands or support from their parents. Using single items to measure parents' effects seems insufficient. Therefore, this thesis will aim to provide more phenomenological constructs.

Research Objective Two: To develop multidimensional indicators for rating both parents demand and parents support in Taiwan.

3.5.3 Effects of parent demand and parent support

The included studies present that previous research has taken employees' parents into consideration. However, only a little evidence in the literature has been identified in this systematic review. Of those 28 included studies, only 11 empirical studies directly investigated the influence of employees' parents and work-family balance. Apart from a little work-family research conducted in Chinese societies, a bulk of the included studies was from the United States. This indicates that the knowledge about the effects of employees' parents is scarce and has been confined to Western countries.

In this systematic review, four empirical studies showed that eldercare had adverse effects on work-family balance, but another four did not demonstrate the significant relationships between eldercare and employees' work-family balance. This suggests the link between eldercare and work-family balance is still ambiguous and further studies should devote more effort into it. On the other hand, with the support from employees' parents, employees would face less conflict between their work and family life. Although researchers have consistently demonstrated the positive relationships between domestic help and work-family balance, there has been little research on the support of employees' parents. Taken together, it still needs more empirical studies to clarify how employees' parents affect their children's work-family balance.

Moreover, researchers also treated parent demand and parent support as antecedents of work-family balance in their studies. Accordingly, this thesis will focus on parent demand and parent support as main predictors in the framework of work-family balance and conduct a research model (see Figure 10) to understand the influence of employees' parents on work-family balance in Taiwan.

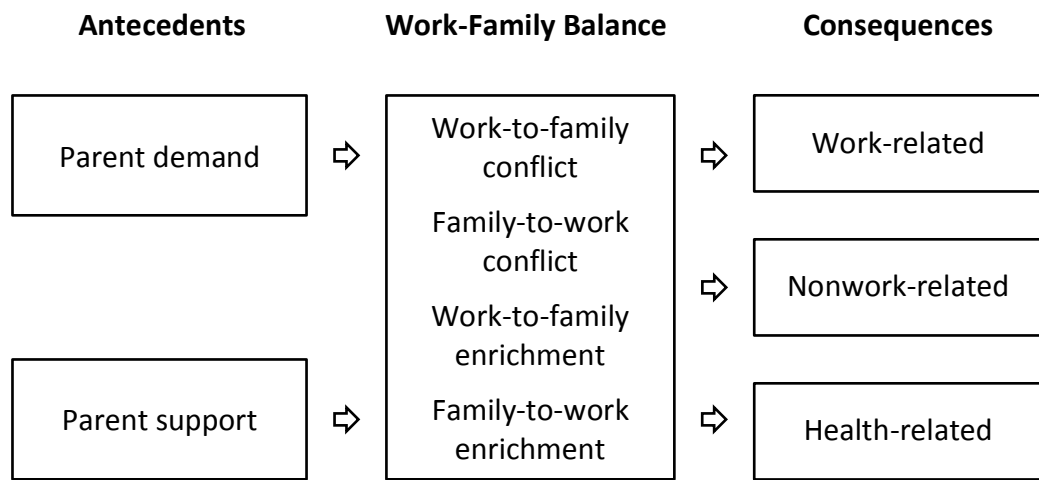


Figure 10. Preliminary research model

Research Objective Three: To examine the effects of parent demand and parent support on Taiwanese employees' work-family balance and its related outcomes.

Although researchers have produced various work-family models via structural equation modelling (Casper et al., 2007), a comprehensive model including parent demand and parent support as antecedents, and consequences along with all four aspects of work-family balance has never been empirically tested. This thesis will provide a model with the influence of employees' parents, work-family balance and related consequences.

Research Objective Four: To establish a statistical model of work-family balance for Taiwanese employees with the influence of their parents.

3.6 Chapter Summary

By applying a systematic review method, this chapter identified the role of employees' parents within included articles from selected databases. According to the results, the review provided compelling evidence to demonstrate two different roles of employees' parents: care recipients and helper, in work-family literature. Whilst some research has been carried out on employees' parents in work-family research, there was very limited scientific understanding of their influence. At the end of this chapter, four research objectives have been formulated in order to understand the influence of employees' parents in Taiwan, including (a) to explore the nature of parent demand and support, (b) to develop the measures for parent demand and support, (c) to examine the effects of parent demand and support, and (d) to establish a Taiwanese model of work-family balance. The next chapter will focus on exploring the nature of parent demand and parent support in Taiwan.

Chapter 4 Interview Study: Exploration of Parent Demand and Parent Support in Taiwan

4.1 Chapter Overview

This chapter presents a qualitative study to explore the influence of employees' parents in Taiwan. The structure of this chapter is shown in Figure 11. First, the concepts of parent demand and parent support are introduced in Section 4.2. Then, the method for exploring parent demand and parent support in this study is described (Section 4.3). The rationale for the choice of a qualitative approach (interviews) is presented. Section 4.4 presents the results, identifying various forms of parent demand and support in Taiwan. Section 4.5 presents a developing model about the influence of employees' parents on work-family balance and suggests how the findings can be used in further investigation.

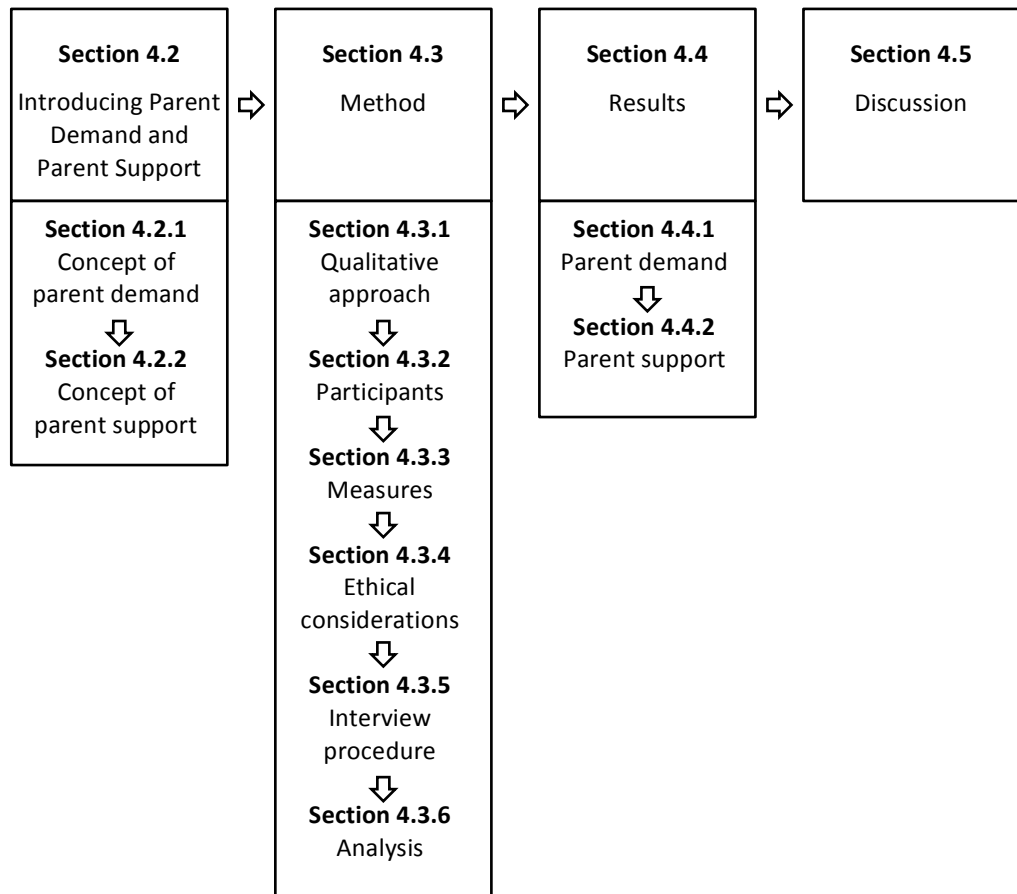


Figure 11. Chapter four structure

4.2 Introducing Parents Demand and Parent Support

As adult children, Taiwanese employees have more responsibility to take care of their parents than American and British employees. In return, Taiwanese employees are more likely to receive help offered by their parents. According to the discussion in the last chapter, these impacts of employees' parents can be categorised into parent demand and parent support. These two concepts emerged in the systematic review but were rarely found in the work-family research. Thus, the current section conceptualises them based upon existing work-family literature.

4.2.1 Concept of parent demand

To date, there is no well-developed measure for parent demand. Nevertheless, the concept of parent demand usually has been discussed within the construct of family demand or family responsibility. To measure family demand, researchers had narrowly considered housework hours and childcare hours as indicators in previous work-family studies (Voydanoff, 1988). This excluded the responsibilities of other significant family members. In order to improve the narrowly defined family responsibility, Boyar et al. (2003) considered both formal and informal family members and thus they took spouse, parents and siblings into account. Moreover, Korabik, Lero, and Ayman (2003) have examined family demand using variables such as family time demand and kinship responsibilities. The kinship responsibilities could cover a wider range of care which included relatives within extended family. This presented a very general concept of family responsibilities. In a recent study, Boyar et al. (2007) further defined family demand as a perception of the responsibilities within the family domain. With reference to these studies, the responsibility of eldercare has been considered in the concept of family demand.

It is obvious that family demand can possibly be considered as a source of pressure for employees. Researchers have demonstrated that having family demand may put extra pressure on employees' lives and identified its negative effects on work-family balance (Boyar et al., 2007; Boyar, Maertz, Mosley, & Carr, 2008). However, most studies (e.g., Boyar et al., 2008; Boyar & Mosley Jr, 2007; Poelmans et al., 2003) measured family demand using a general concept. For example, Boyar et al. (2007) used a term 'family' to assess the demands, an example for this is "My family requires all of my attention" (p. 113). The demands of employees' parents have been covered under the umbrella of 'family demand'. Researchers rarely examined the specific demands on employees' parents. Thus, it lacks knowledge about the

demands of employees' parents in the work-family field. This thesis singles out parent demand from the concept of family demand for further investigation.

4.2.2 *Concept of parent support*

On the other hand, the concept of parent support is derived from social support. Social support has been proposed as an important antecedent to work-family conflict (Frone, 2003; Greenhaus & Beutell, 1985) and highlighted its significant influence on both work and family domains (Frone et al., 1997; Grzywacz & Marks, 2000; Muse & Pichler, 2011). The investigation of social support in the workplace is ubiquitous. Many studies have concluded that colleague support and supervisor support are significantly related to work-family conflict and work-family facilitation (Michel, Kotrba, et al., 2011). Also, researchers have suggested that social support in the workplace could help individuals reduce strain and conflict. For instance, Anderson et al. (2002) found the informal workplace practice, such as manager support, is negatively associated with WFC. With regard to work-family facilitation, Hill (2005) carried out research which showed that supervisor support was positively related to work-family facilitation. This highlighted that the support from supervisors is a crucial element to help employees balance their work and family domains.

On the other hand, Carlson and Perrewé (1999) suggested that social support could also come from family domain. Employees' social support may be received from their family members including spouse, parents, and siblings, even other relatives (Kirrane & Buckley, 2004; Korabik et al., 2003). However, the majority of researchers have focused on spouse support and found that spouse support was negatively associated with work-family conflict and family-work conflict (Aryee, Luk, et al., 1999; Frone et al., 1997; van Daalen, Willemssen, & Sanders, 2006). Social support from other family members has

been largely excluded from work-family research (Adams et al., 1996; Parasuraman & Greenhaus, 2002). Although a study by van Daalen et al. (2006) examined diverse sources of social support, including colleagues, supervisors, spouses, relatives and friends, there was still no category for parents themselves. In their study, parent support would possibly be included in the group of relatives. Moreover, King, Mattimore, King, and Adams (1995) developed a measure of family support and treated supportive family members as a whole concept. An example question asked employees whether they agreed with the statement is “When I succeed at work, members of my family show that they are proud of me” (King et al., 1995, p. 240). In this question family members could be interpreted to include spouse, siblings, parents and relatives. It is clear that the social support from employees’ parents was rarely considered and investigated as an individual concept. The present study extracts the concept of parent support from the concept of family support.

Overall, this thesis focuses on the role of employees’ parents in work-family research. Based on the concepts of parents demand and parent support, the current chapter aims to explore these possible impacts of employees’ parents in Taiwan (Research Objective One).

4.3 Method

4.3.1 Qualitative approach

Facing decisions to conduct a study, there are two main types of research which can be employed, qualitative and quantitative research. As regards the methodological fit, qualitative research is suitable for a relatively new theory while quantitative research is appropriate for a well-established theory (Edmondson & McManus, 2007). They are two entirely distinct research paradigms. Qualitative research helps researchers to probe for underlying

values, beliefs, and assumptions. In contrast, quantitative research facilitates data collection and analysis with an overview perspective and focus on preconceived issues and concepts with the premise. In terms of the data formats, Yauch and Steudel (2003) described that the data of quantitative research is “the numbers” collected through surveys or other measurement techniques and the data of qualitative research is “the words” collected through interviews, focus groups, or related methods. According to these radical differences, qualitative research is deemed to be appropriate for examining the Research Objective One since “the words” can allow participants to provide the information that may not be uncovered in previous work-family studies.

The nature of qualitative research is based on an interpretive paradigm which seeks to understand a phenomena from the perspective of people themselves (this is contrasted with a positivism paradigm, which put emphasis on objective measurement of social issues) (Hennink, Hutter, & Bailey, 2011). Qualitative research is also referred to as an inductive emic approach which begins with gathering data, then conceptualising a general pattern from the data, and providing conclusions that could build a depth of understanding about research issues (Tracy, 2013).

Qualitative research represents an approach to understand social reality and it is an umbrella term for a wide range of research techniques to explore, describe, or explain social phenomenon (Leavy, 2014). Researchers employ qualitative research methods to elicit real-life experience from people. This allows researchers to identify specific issues from the perspective of the research participants and to explain underlying meanings of their behaviour. Qualitative researchers need to be open-minded and curious and have the ability to listen to people sharing their personal life story and experience (Hennink et al., 2011). Hennink et al. (2011) indicated that qualitative research is suitable for researchers who aim to explore new topics,

understand complex issues, explain people's beliefs and behaviour, and identify social or cultural norms. It can be used to understand and interpret research issues that embrace the cultural context in which participants live.

However, previous work-family studies were constrained in quantitative studies. Chang et al. (2010) reviewed 245 empirical work-family studies before 2006 and found that over three quarters (77.6%) of the studies employed quantitative design. In addition, another published article by Shaffer et al. (2011) particularly examined 219 studies conducted in non-US countries and reported 85% of the studies applied quantitative methods. The usage of qualitative methods has been particularly underutilised in work-family issues, despite their potential for revealing relatively informative data. Shaffer and her colleagues (2011) indicated that these circumstances may limit the development of work-family research.

Recently, Schonfeld and Mazzola (2012) suggested applying qualitative research in underdeveloped areas and in understudied populations to occupational health researchers. Conducting a qualitative study in the work-family field could bring several benefits. It can provide insight into cultural behaviour that might be missed in the work-family literature, uncover potential issues that can be further investigated, and help work-family researchers to understand the work-family balance issues between different cultural contexts (Tracy, 2013). In accordance with the discussion above, qualitative research is considered to be an adequate method for exploring the parent demand and parent support in Taiwan.

There are several qualitative data collection methods available to work-family researchers. Focus groups and interviews are most frequently used in qualitative research. A focus group discussion involves a small number of participants in an informal discussion and has a focus on an issue specified by the researchers (Wilkinson, Joffe, & Yardley, 2004). It is led by a trained

moderator (usually the researcher) to manage the discussion process including posing the questions, encouraging contribution from participants and keeping the discussion focused on research topics. The discussions highly depend upon the dynamics of participant-participant and participant-moderator. The objective of focus groups is to collect various opinions on a specific topic. Researchers can quickly obtain a huge amount of information focused on research topics and identify new issues.

However, it must be noted that the information and opinions emerge from the group interactions and are therefore more suitable for identifying community norms or socio-cultural behaviours. Moreover, several disadvantages have been identified. First, focus group discussions can be difficult to conduct because it requires a skilled moderator to organise and monitor the interactive discussions. Second, the group dynamics could be influenced by social pressure. Participants may be reluctant to express some sensitive opinion for fear of peer group disapproval. This would lead to generate certain types of socially acceptable opinion (Smithson, 2000). Next, the participants' responses are not independent and not suitable to represent the individual perspectives of each participant (Hennink et al., 2011). Finally, since participants have to share their experience within the focus group, it may arouse some considerations of confidentiality and anonymity (Gibbs, 1997). These limitations have precluded focus groups from being adapted in the current investigation.

On the other hand, the use of interviews can overcome many of the limitations of focus group discussions. An interview is a one-to-one conversation on a specific issue that is usually comprised of an interviewer and an interviewee. Interviewers seek to elicit interviewees' deep insight into certain topics and gain information on participants' personal experience, life stories and feeling (Hennink et al., 2011). Moreover, interviews can probe contexts, situations and insights regarding cultural differences (Miller &

Glassner, 2011). To unravel the complexities of parents' influences, it is necessary to investigate the intricacy of employees' family experience. Individual interviews provide the opportunity to understand what kind of effects the employees face from their parents.

However, there are some disadvantages. Carrying out interviews takes a great deal of time (Seidman, 2006). Researchers have to contact potential participants, arrange each individual interview and transcribe a lot of interview data. This may explain why interviews have been infrequently used in work-family research. Moreover, the information collected may be filtered through the views of interviewees and the presence of the interviewer may bias interviewees' responses (Creswell, 2009). Despite its limitations, the advantages of using interviews to explore the influence of employees' parents in Taiwan make it the most appropriate research method for the present investigation.

4.3.2 Participants

Interviewees were recruited in Taiwan via the researcher's personal contacts. Recruitment messages were sent via emails and also announced in an executive master programme in Taiwan. The criteria of eligible interviewees were full-time, white-collar workers with at least one of their parents alive. This aimed to assure participants had certain experience of parent demand and support. Since not only married employees had this experience but also single ones, there is no criterion for marital status. In order to enhance the credibility of this interview study, participants from several organisations were recruited to reduce the effect of specific organisation culture and policy. This intentional random selection helped to ensure the diversity of informants and correspond with the nature of the purpose of exploratory investigation (Shenton, 2004). The sample consisted of 18 participants who met the criteria with ages ranging from 25 to 59. They were employed at a wide range of

organisations from government to private business, from traditional industries to high-tech companies. The characteristics of interviewees are presented in Table 6. There were more females than males. The majority of the employees were aged between 30 and 39. 10 participants were single, 7 were married, and only 1 was divorced. Seven employees were living with their parents. All married and divorced participants had at least one child.

Table 6
Demographic Characteristics of Interviewees

Characteristic	Frequency
Gender	
Female	12
Male	6
Age	
20-29	4
30-39	9
40-49	2
50-59	3
Marital status	
Single	10
Married	7
Divorced	1
Living with parents	
Yes	7
No	11
Children	
Yes	8
No	10

Note. $N = 18$.

The sample size of qualitative research could be varied from 5 or 6 to 30 or 40. The sample size of the current study was determined as 18 ($N = 18$) because it reached the saturation explained by Fossey, Harvey, McDermott, and Davidson (2002). Saturation happens when the answers from employees start repeating and no more new information emerges. Based on this interview study, the repetition of interview data significantly occurred round the 10th to 12th interviewee and interviews terminated at 18 participants to avoid recurrent answers. This saturation phenomenon shared the similarities with

an experimental study of data saturation by Guest, Bunce, and Johnson (2006). According to their experiment, the saturation had been found within first 12 interviews. A recent study by Ando, Cousins, and Young (2014) also supported this point of view and reported that 92% of their thematic codes were contributed by the first 12 interviewees. Accordingly, it was considered that the sample size was adequate in this interview study.

4.3.3 Measures

There are three types of interviews: structured interviews, semi-structured interviews and unstructured interviews (DiCicco-Bloom & Crabtree, 2006). Structured interviews as their name suggests, use structured interview schedules, including both a set of fixed choice questions and few open-ended questions (Wilkinson et al., 2004). They are very similar to questionnaires but researchers collect data in person. The structured interviews are usually conducted to produce quantitative data and so structured interviews are not the main focus of the current study. This prevents interviewees providing their personal experience. Therefore, using structured interviews can be difficult to explore the underlying influence of employees' parents. The use of unstructured interviews is also limited. Although it can obtain a great amount of information, interviewees may guide the direction of the topic (Wilkinson et al., 2004) and dominate the interview contents with their preference. Unstructured interviews are often conducted in conjunction with participant observations; however, semi-structured interviews are often utilised as the sole data source for a qualitative study (DiCicco-Bloom & Crabtree, 2006). Using semi-structured interviews may be the most appropriate method to understand how employees feel about the influence of employees' parents. Semi-structured interviews are based on a less structured interview guide, which contains several open questions and probes (Gillham, 2005). Researchers have to develop questions that cannot be answered with 'yes' or 'no'. It can lead interviewees into focusing on a certain issue (Fossey et al.,

2002) and elicit respondents to describe their unique experience (Wilkinson et al., 2004). Using semi-structured interviews in the current study was suitable because it enabled interviewees to describe the influence of their parents from their own perspective within specified topics.

Therefore, data were collected via semi-structured interview in this chapter. In order to centre the topics of parent demand and parent support, a schedule of interview questions was developed in advance and all interviewees had to answer the same questions. The questions equally covered the two main topics and were open-ended.

4.3.3.1 Interview schedule

The interview schedule consisted of 10 questions (see Appendix B). Of those questions, the first three aimed to initiate a small talk to get acquainted with the interviewees in order to establish rapport (e.g., please briefly tell me what your job involves). Six primary questions were focused on the influence of employees' parents: with three relating to parent demand (e.g., describe any demands you face from your parents) and three to parent support (e.g., describe any support you receive from your parents). The last question was regarding interviewees' demographic data such as gender, age, marital status, and number of children.

4.3.3.2 Back translation

Since the interview questions were developed by the researcher and the primary research supervisor and are provided only in English, each of the questions in the interview schedule was translated into Chinese, following the back-translation guideline (Brislin, 1980; Brislin, MacNab, & Bechtold, 2004). A bilingual person translates English into Chinese, and another bilingual person

translates it back into English, and then the researcher examines two English versions.

4.3.3.3 Pilot study

The interview schedule was piloted to several participants, including researchers' Chinese colleagues and friends. The participants were asked the questions and provided their comments on which questions were ambiguous or difficult to answer. Afterwards they were also asked to share their experience of the pilot interview about whether or not the interview schedule makes sense to them. A small number of changes emerged from this piloting process. Interview questions, wording and structures were modified accordingly.

4.3.4 Ethical considerations

This interview study protocol had been reviewed and approved by Institute of Work, Health and Organisations (I-WHO) Ethics Committee at the University of Nottingham. The ethics approval was applied prior to data collections. Interviewees were not interviewed until after the approval had been obtained in September 2012 (see Appendix C).

The information sheet provided in interviews informed participants regarding the confidentiality of digitally recorded files. Permission to record the interviews was obtained from each participant via the consent form before the interview started. According to the 1998 Data Protection Act, all collected data were treated confidentially and was securely stored and preserved electronically. There was no personal identification in the interview data. The data were only available to the research team including the researcher and supervisors. In case of any concerns from participants in the interview, they could stop the interview at any time and a suggestion that participants could

contact their doctor or approach any hospital within the National Health Insurance system in Taiwan was given.

4.3.5 Interview procedure

Participation was voluntary and permission was obtained directly from the participants. When participants showed their interest and willingness to participate in this interview study, face-to-face interviews were arranged between October and November 2012 in Taiwan. In an attempt to make each interviewee feel as comfortable as possible, interviews took place after working hours in a public area, convenient for participants. Each interview lasted about 30-45 minutes.

Before commencing the interviews, information sheets and consent forms were given to interviewees. A brief introduction of the interview was made to explain the aims of the study as well as assure confidentiality and anonymity of the recording data. Interviewees had been told that there were no right or wrong answers to encourage sharing their own experience. They were also informed they had the right to withdraw from the study without justification.

4.3.6 Analysis

All interview voice recordings were transcribed into interview transcripts. The transcripts were entered into the NVivo 10 data management software for analysis. NVivo 10 provides a set of tools that give assistance of organising and managing qualitative data (Bazeley & Jackson, 2013). It is, of course, true that NVivo 10 is just software and it cannot evaluate and assess the contents of qualitative data. However, this software allows researchers to efficiently organise huge amounts information and complicated coding schemes. Having the benefit of NVivo 10, a pragmatic analytical approach is still required.

To date, various popular analytical methods have been developed and introduced to examine interview data and reveal the hidden information of interview transcripts, such as framework analysis, thematic analysis, interpretative phenomenological analysis (see Rapley, 2010). Of those methods, thematic analysis was chosen since it pays more attention to extracting meaning from the content of interview data and discovering underlying norms and rules of human behaviour (Joffe & Yardley, 2004; King, 2004). This fits the purpose of the current study to explore the nature of the parent demand and support. In addition, thematic analysis is a prevailing approach for analysing interview data for the reason that the transcripts can be substantially shaped into excerpts and effectively shared with a wider audience (Seidman, 2006). Therefore, a thematic analysis was conducted to examine employees' responses to interview questions.

To conduct a thematic analysis, the current study followed Braun and Clarke's (2006) six steps: (a) familiarizing the interview data, (b) generating initial codes, (c) searching for themes, (d) reviewing themes, (e) defining and naming themes, and (f) producing the report. The process of analysis involves coding the transcripts into various codes and then identifying themes by gathering relevant codes. Each theme contains one specific area of interest within the interview data. Development of themes and their labels is an iterative process which involved the research team. The coding scheme of this interview study were reviewed and discussed within the research team to assure the reliability of this thematic analysis (Cook, 2012).

4.4 Results

The interview data generated two overarching themes relating to the influence of employees' parents in Taiwan (see Table 7). The findings have been categorised into parent demand and parent support.

Table 7
Summary of Parent Demand and Parent Support

Parent demand	Parent support
Regular visits	Emotional support
Frequent contact and information	Financial support
Ailing health care	Domestic help
Financial demand	Childcare
Expectation of the job choice	Accommodation
Marriage pressure	Discussing work experience

4.4.1 Parent demand

The demands of employees' parents in Taiwan included (a) regular visits, (b) frequent contact and information, (c) ailing health care, (d) financial demand (e) expectation of the job choice, and (f) marriage pressure.

4.4.1.1 Regular visits

Taiwanese employees reported that they had a very close connection with their parents. Out of the 18 participants, 7 of them lived together with their parents. Those who lived away from home indicated that they would make regular visits to their parents. Many stated that the frequency of visits was at least within once a month and agreed that the distance from their parents' house influenced the visit frequency.

"My parents live in the south part of Taiwan, so I visit them once a month." (Participant 3)

"I visit my mother once every two or three weeks." (Participant 10)

"I visit my parents every weekend." (Participant 11)

Some participants also reported that their parents loved to see them frequently claiming that their parents would be happier and more satisfied

when they spent time with them. There was consensus among employees that providing company to their parents was a duty, but most did not feel any pressure to visit them.

*“I don’t need to take care of my parents, I only need to stay with them...They’ll expect the whole family to go out together regularly.”
(Participant 6)*

“My parents don’t say that I need to see them, but I think I should do that.” (Participant 11)

However, a few employees indicated that they felt a demand from their parents to visit regularly, and their parents even expressed their wishes to them. This was more like a real demand and an order that needs to be fulfilled by employees. Some participants indicated that their parents complained when they did not make time for them and sometimes employees had the conflict between visiting parents for company and working on weekends.

“They hope I can visit them as much as I can.” (Participant 9)

“They hope you can spend time with them at least having dinner together, especially on the weekends.” (Participant 14)

4.4.1.2 Frequent contact and information

Aside than face-to-face visits, another type of demand identified in interview data was for keeping touch by other means, such as phone calls, messages, Skype etc. Many employees stated that they felt that it was normal within Taiwanese culture to make regular contact with parents when away from home and described how their parents looked forward to updates on their life. In addition, it was a way for employees to enquire about parent’s health. A few employees reported that having contact with their parents was an

alternative when they were unable to visit. This frequent contact could be considered as emotional demands from the employees' parents. Most of the participants indicated it helped them to have a good relationship with their parents.

*"...have phone calls everyday like a traditional family... They just want me call them regularly. If I can't go to visit them, I can just phone them and show concern for their health. This would be OK too."
(Participant 1)*

*"They just want me call them regularly. If I can't go to visit them, I just phone them for a chat and ask about their health."
(Participant 7)*

*"I will try to call my parents as often as possible...Sometimes my mother or my sister would remind me to call my father as often as possible to make him feel loved."
(Participant 17)*

4.4.1.3 Ailing health care

Employees who mentioned the most strong need from their parents were those with experience of caring for ailing parents in their family. A few participants shared their experience and suggested that eldercare was a considerable influence from parents in Taiwan. These eldercare demands usually directly affected employees' working life, as employees believed that to care for their parents was an inevitable responsibility. Some participants said that they increased the frequency of visiting their ailing parents. Employees admitted that the eldercare responsibilities negatively affected their work-family balance. They could not fulfil both work and family responsibilities. Due to the need of eldercare, participants chose to relocate their jobs nearer to their parents, or even to quit their jobs.

"I was expatriated in China for 5 years. As my mother was getting older and had health issues, I came back to Taiwan and worked in Taiwan." (Participant 2)

"...my father needed to have cancer therapy. I usually had to go to hospital to take care of him...I gave up my job and chose to take care of my father." (Participant 3)

4.4.1.4 Financial demand

Five employees described how they had to contribute their earnings to their parents. In Taiwan, it is normal that adult children need to support their parents as a way to practice filial piety. To financially support one's parents is regarded as a traditional virtue; however, it is not a must for all adult children. Some employees indicated that there was no need to give money to their parents because their parents could afford their own life. Moreover, a few stated that to offer part of their salary to their parents was a necessity, even when they had poor relationships with their parents. Overall, they felt a sense of responsibility for providing financial support to their parents, which is not burdensome and does not affect their work-family balance.

"I need to give my parents their living expense." (Participant 6)

"I give my parents part of my salary every month." (Participant 8)

*"I need to afford family expense including bills and mortgage."
(Participants 16)*

4.4.1.5 Expectation of the job choice

Several participants said that their parents had expressed expectations regarding their job choice. Their parents preferred if they could live and/or

work near them. In order to do so, a few participants adjusted their job searching strategy and tried to find a job to satisfy them. Under Confucius's ideological system, filial piety guides children to have respect for and obey their parents. Some employees reported that their parents had significant influence on their job choice in Taiwan.

"They hope I can stay in Taiwan...My parents didn't let me work in other countries. So I got my present job in a local company and they are quite happy with that." (Participant 3)

"They want me to find a job, which has regular working hours, because they want me to spend more time with them. So I won't find a job with demanding hours." (Participants 5)

"While searching for jobs, my parents are usually one of the criteria which I will consider. For instance, I once had a chance to work in Sweden but considering the distance between Taiwan and Sweden, I ended up choosing not to." (Participant 17)

4.4.1.6 Marriage pressure

Three single participants concurrently described how they received a huge amount of marriage pressure from their parents. Traditionally, Taiwanese parents have a great expectation for their child's marriage. It is common that parents express their wishes to unmarried children. One of these single participants mentioned they personally found this annoying, but it was inescapable in Chinese culture. This strong marriage pressure from parents is an exclusive parent demand for those single employees. Although it was been identified as a demand of their parents, participants did not describe any concern relating to work-family balance.

“The only expectation from my parents is marriage... They just want me to get married as soon as possible.” (Participant 4)

“The only thing is they hope I can get married as soon as possible.” (Participant 8)

“There is another pressure from my parents. I'm single. My parents saw other people the same age as me who had children but I don't. They didn't directly talk about this to me. They said someone's daughter has got married instead.” (Participant 15)

4.4.2 Parent support

Six subcategories were established to describe support from employees' parents: (a) emotional support, (b) financial support, (c) domestic help, (d) childcare, (e) accommodation, and (f) discussing work experience.

4.4.2.1 Emotional support

The most common type of support that employees received from their parents was emotional support. Almost all of the participants mentioned that their parents gave them positive encouragement and psychological support. While having a bad time at work, employees' found their parents provided support through expressing sympathy. Participants indicated that this emotional support made them feel encouraged and supported. A few participants expressed that this emotional support helped them to deal with their unbalanced life.

“My parents actually are very supportive of me. They always support my decisions.” (Participant 4)

“They definitely give me emotional support. They always listen to my problems and complaints.” (Participant 7)

4.4.2.2 Financial support

Some participants mentioned that they received financial support from their parents such as with paying rent and bills, and shopping. In Taiwan, parents would give financial support when they are able to and their children need it. This monetary support can ease a large amount of employees’ financial pressure, especially during periods of unemployment or while looking for work.

“My parents also told me not to worry about the rent or bills before finding a suitable job.” (Participant 17)

4.4.2.3 Domestic help

Participants described that their parents helped to do the housework at home. Generally, employees’ parents provided their domestic help such as cooking, laundry and housekeeping to those children who lived with them or near them. Employees who received this help reported a benefit from reducing employees’ family responsibility and also preventing a certain degree of the conflict between work and family.

“I don’t need to do housekeeping like cooking and cleaning. I don’t worry about my daily life at home.” (Participant 8)

“Actually, my parents take care of my living” (Participant 13)

“I don’t need to cook for myself because my mother is a full-time housewife.” (Participant 16)

4.4.2.4 Childcare

5 of 8 participants with children had childcare support from their parents. These participants described how there were several benefits from receiving childcare help from their parents. It reduced the time pressure of taking care of children and the financial expense of hiring a babysitter. This largely eliminated their conflict between work and childcare responsibilities. Employees reported that their parents helped to pick up them after school and took care of their children when they were busy at work. They appreciated their parents providing this help.

“For other people, they may have some problems with babysitters...I don’t have this kind of problems because my parents take care of my children for me. (Participant 6)

“...they helped me to take care of my children. It’s good for my job and family.” (Participant 10)

“My mother helped pick my children up from kindergarten.” (Participant 12)

4.4.2.5 Accommodation

Three employees reported that their parents provided free accommodation for them. The accommodation support reduced their financial worries especially when they were unemployed. A few participants viewed having accommodation support as another form of financial support.

“...they let me live at home. Just like when I was a student.” (Participant 5)

“Living at home can save a lot of money. I don’t have many concerns when I want to quit or change a job...Some people would think about preparing rent for unemployment time. I don’t need to think that, so I have more flexibility for decision-making.” (Participant 14)

4.4.2.6 *Discussing work experience*

Participants shared some experience related to problem-solving help from their parents. According to the participants’ statements, their parents provided useful advice and suggestions. After talking with their parents, participants said they felt better and it was good to have parents’ help when they faced work related problems. This kind of support helped employees enhance their performance at work.

“...if I have a problem I don’t know how to solve, I will talk to them. They have more work experience. They would tell me what to do in the situation.” (Participant 5)

“I could talk to them when some situation happened in my company. They would offer opinions or advice and share their experience.” (Participant 10)

4.5 Discussion

The current study interviewed Taiwanese employees with a variety of occupations and identified several types of demands and support relating to employees’ parents. Typical parent demand of Taiwanese employees included having regular visits, keeping frequent contact, providing eldercare, contributing necessary finance, fulfilling job expectation and marriage. Also there were several notable forms of parent support that Taiwanese employees received including providing emotional support, offering financial

help, helping with household chores, caring for children, providing free accommodation, and discussing work experience. Additionally, participants' experience identified the effects of parent demand and parent support on employees' work-family balance.

In the same vein as previous studies, the results confirm the effects of eldercare and domestic help from employees' parents in Taiwan, and demonstrate that eldercare has a detrimental effect on employees' balance between work and family life (Anafarta & Kuruüzüm, 2012; Buffardi et al., 1999; Cullen et al., 2009; Marks, 1998) and domestic help from parents has a positive effect on employees' work-family balance (Chang & Lu, 2011; Fu & Shaffer, 2001; Wu et al., 2010). The results also reveal that it is common that Chinese parents often provide childcare assistance to married children and help adult children with household chores (Yang et al., 2000). Moreover, Chinese employees are more likely and expected to provide emotional and financial support to their parents (Ling & Poweli, 2001).

In addition, this interview study makes two major contributions to work-family research. The results enlarge the scope of parent demand and parent support. Several potential influences from employees' parents have been demonstrated in the results. This is useful in item development for constructing more comprehensive instruments of parent demand and parent support. Second, the findings suggest potential linkages between parent demand, parent support and work-family balance. This presents a preliminary examination in the effects of parent demand and parent support on work-family balance with Taiwanese employees and provides a developing model (see Figure 12) for the subsequent studies.

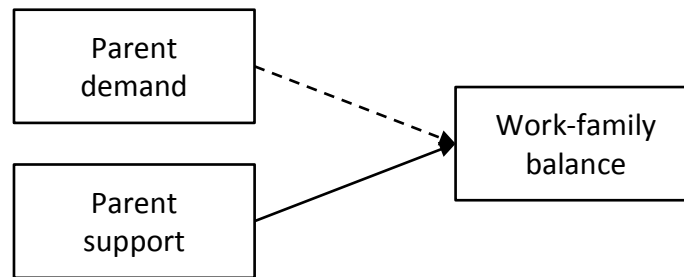


Figure 12. Preliminary work-family balance model

Note. Solid lines represent positive effects and dotted lines represent negative effects.

According to the results, different types of parent demand had varied effects on employees' work-family balance. Participants suggested that financial demand and marriage pressure would not be considered as sources of conflict between work and family. However, other types of demand, for example visiting parents and providing health care to parents, did generate some conflict between work and family. This is in line with Boyar and his colleagues' (2007) finding that family demand positively predicted work-family conflict. Thus, it has been identified that parent demand has negative effects on work-family balance that destabilised the employees' work-family balance.

Regarding parent support, participants had similar insights. Although there are different types of support provided by employees' parents, many participants appreciated that their parents provide helpful support and assistance to them and expressed that parent support had a positive relationship with their work-family balance. Thus, it has been proposed that parent support has a positive relationship with work-family balance.

There are weaknesses in this interview study that may limit the generalisability of the findings. First, the number of participants was small. The aim of this interview study, however, was not to provide a statistical representative sample of all Taiwanese employees, but to employ an

adequate sample size that allowed exploring previously unstudied influences from employees' parents. Second, the participants in this interview study were recruited in the north of Taiwan. It would be interesting to repeat this interview study in other areas of Taiwan and in other Chinese societies.

This interview study provides a useful first step towards understanding parents' roles in work-family balance for employees in Taiwan. Moreover, researchers suggested that the findings of qualitative methods could later be applied in quantitative studies (Schonfeld & Mazzola, 2012; Taris, de Lange, & Kompier, 2010). Consistent with this notion, further investigation aims to develop a detailed quantitative investigation into this phenomenon, and will serve to raise awareness of the unique role that employees' parents perform in work-family research.

4.6 Chapter Summary

This chapter presented an interview study to explore the nature of the influence from employees' parents. First, the concepts of parent demand and parent support were introduced. Next, the justification for conducting this interview study was provided and then the detailed methodology used in this chapter was presented. The findings demonstrated the diversity of parent demand and parent support which has rarely been considered in previous work-family studies. In addition, a developing model of the relationships between parent support, parent demand and work-family balance were provided. Understanding these unique demands and support in the Taiwanese context helped to extend the knowledge of family demand and family support by looking into parents - the principal family members in Taiwanese societies. The next chapter will put these findings into practice using a quantitative method to develop measures of parent demand and parent support and to establish a model for understanding how employees' parents affect employees' work-family balance.

Chapter 5 Questionnaire Survey: The Influence of Employees' Parents on Work-Family Balance in Taiwan

5.1 Chapter Overview

This chapter presents a questionnaire survey to examine the influence of parent demand and parent support on employees' work-family balance in Taiwan. The structure of this chapter is displayed in Figure 13. First, the justification of conducting a quantitative study to follow an interview study is explained (Section 5.2). The next section (Section 5.3) describes the method: research design, participants, measures, ethical considerations, procedure, analysis, and sample size issues. The results comprise of four statistical analyses: exploratory factor analysis (Section 5.4.1), confirmatory factor analysis (Section 5.4.2), regression analysis (Section 5.4.3), structural equation modelling (Section 5.4.4), and *t* test (Section 5.4.5). At the end of this chapter, a discussion is provided (Section 5.5).

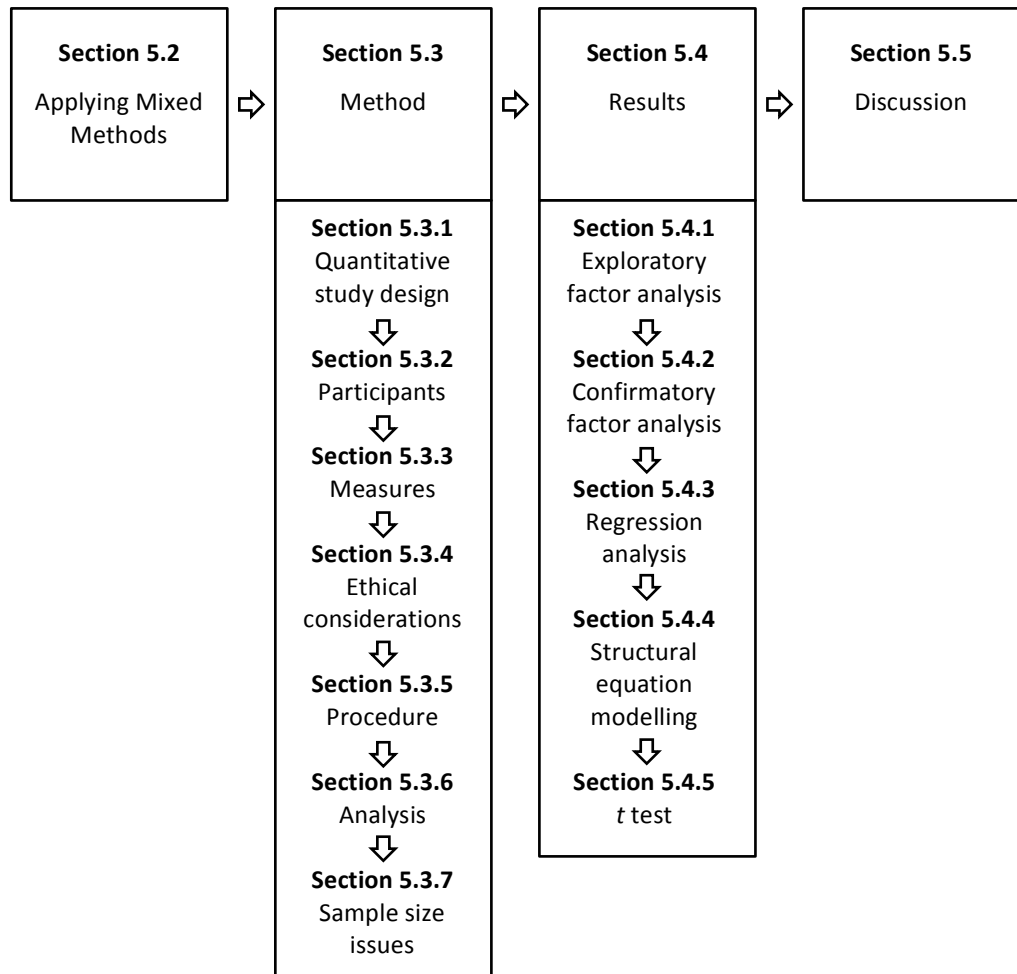


Figure 13. Chapter five structure

5.2 Applying Mixed Methods

After exploring the influence of employees' parents (Research Objective One), this chapter aims to apply the interview findings in order to develop measures of parent demand and parent support for Taiwanese employees (Research Objective Two), to generalise these findings on a large-scale survey for examining the effects of parent demand and parent support on Taiwanese employees' work-family balance (Research Objective Three) and providing a statistical model (Research Objective Four).

Due to the usage of both qualitative and quantitative methods for examining the research objectives, this thesis adopts a mixed methods approach. Tashakkori and Creswell (2007) provided a definition of mixed methods as “research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or a program of inquiry” (p. 4). Mixed methods research combines the advantages of qualitative and quantitative methods and reduces some of mono-method problems (Molina-Azorín, 2011). Creswell and Plano Clark (2011) have proposed several advantages of mixed methods that include offsetting the weaknesses of both quantitative and qualitative research, providing more evidence for the understanding of research questions than using a single method, and helping resolve research problems that cannot be answered by conducting qualitative or quantitative research alone. Six major mixed methods designs have been introduced, such as convergent parallel design, explanatory sequential design, and exploratory sequential design (see Creswell & Plano Clark, 2011). For the research objectives in this thesis, an exploratory sequential design was applied. A sequential design is the process of conducting a qualitative study prior to a quantitative study. Researchers in the occupational health psychology field have also advocated the usage of a qualitative approach in underinvested fields with a following quantitative approach. Utilising open-ended research approaches to make discoveries can contribute to complementary quantitative research (Schonfeld & Mazzola, 2012). In this thesis, a qualitative method was conducted to explore and understand different demands and support from employees’ parents whereas a quantitative method was applied to develop parent demand and parent support measures, and examine the relationship among parent demand, parent support, and work-family related variables. Using an exploratory sequential design provides an opportunity for exploring an underlying phenomenon and then to generalise findings for different samples (Creswell, 2009, 2011). This can help the development of instruments and theories.

However, some critics argued that it is inappropriate to combine a qualitative method with a quantitative method, since these two methods depends on different assumptions (Yauch & Steudel, 2003). Purists insist that researchers should restrict themselves either to qualitative or quantitative research methods. As critics disagree on using both qualitative and quantitative simultaneously, Sieber (1973) pointed that each method has its inherent strengths and weaknesses. Researchers should utilise the strength of both methods to obtain a better understanding of their research problems. Consistent with this notion, several researchers (e.g., Kelle, 2006; Molina-Azorín, 2011; Onwuegbuzie & Leech, 2005; Yauch & Steudel, 2003) have described the benefit of combining qualitative and quantitative. Using mixed methods in organisational culture studies, Yauch and Steudel (2003) concluded that the findings were deeper and more comprehensive than with only one method alone. Although the appropriateness to employ mixed methods is arguable regarding methodological philosophies, pragmatists still promote integrating methods (Onwuegbuzie & Leech, 2005). Many paradigm studies have provided compelling evidence to demonstrate the pragmatic benefits of mixed methods. It is believed that these advantages of a combined qualitative and quantitative approach far outweigh the philosophical disadvantages.

The discussion above paves the way for combining a qualitative method and a quantitative method and employing an exploratory sequential design. Thus, this chapter forms the quantitative parts of the mixed methods approach in this thesis.

5.3 Method

5.3.1 Quantitative study design

Quantitative research is aimed at investigating the relationships among research variables measured by numerical instruments (Creswell, 2009). Researchers use quantitative research to quantify research problems with a large number sample size and to generalise findings across a broader population (Hennink et al., 2011). Quantitative data can be interpreted by statistical techniques such as descriptive statistics and statistical significance testing. Common types of quantitative research designs which can be conducted include experimental designs and survey designs. This chapter adopts a survey design since it can identify trends and relationships in a large group of participants. However, an experimental design focuses on examining whether an intervention (e.g., a practice or procedure) influences an outcome or dependent variable. In this design, researchers usually have two or more groups of participants to study and compare participants that have an intervention with those that do not. The purpose of this chapter is to examine the influence of employees' parents on employees' work-family balance. Thus, a survey design is deemed to be appropriate.

This questionnaire employed an online survey method. An online webpage was established to collect questionnaire survey data. The advantages of online survey are saving on printing and mailing costs of questionnaires, obtaining data twenty-four hours a day seven days a week, and managing data in electronic format (Vicente & Reis, 2010). Online surveys can also shorten the amount of time for reaching participants, collecting data, and entering data to statistical software (Evans & Mathur, 2005; Wright, 2005).

5.3.2 Participants

All participants were recruited in Taiwan. Several recruitment methods were applied. Most participants were recruited through email invitations with the online survey link sent by managers or secretaries in local organisations. Only local, non-expatriate, white-collar employees in Taiwan were targeted to rule out the possibility of influence from other cultures. In addition, only employees who were in full-time employment and had at least one parent alive were eligible for this online survey, to ensure participants had certain experience of demands and support from their parents.

A total of 543 employees reached the online survey website. Of these, 394 completed and submitted their surveys, yielding a completion rate of 72.6%. Although the inclusion criteria were clearly stated on the cover page of the online survey, two questions (e.g., parents' health and job type) were designed to check the eligibility for undertaking this survey in order to detect invalid participants. After exclusion of 4 employees raised by a single parent that was now deceased and 14 participants who were in part-time employment, it resulted in a final sample of 376 employees for investigation.

Table 8 showed an overview of sample characteristics. The sample consisted of 31.4% of male and 68.6% of female, with ages ranged from 21 to 59 and an average age of 33.10 (standard deviation (*SD*) = 5.41). The majority of participants were single (62.5%) and over a third (36.2%) of participants were married. Apart from three participants, all of the participants had graduated from colleges or universities and almost half of them (43.6%) had postgraduate degrees. Participants worked in diverse industries, mainly consisting of manufacturing (16.5%), information and communications technology (11.2%), retailing (10.9%), finance (13.3%), and service (13.3%). Nearly one in five (19.7%) employees had subordinates or people who reported to them.

Table 8
Demographic Characteristics of Participants in the Questionnaire Survey

Characteristic	Frequency	Percentage
Gender		
Female	258	68.6%
Male	118	31.4%
Age		
20-29	79	21.0%
30-39	260	69.1%
40-49	28	7.4%
50-59	9	2.4%
<i>M</i> = 33.10		
<i>SD</i> = 5.41		
Marital status		
Single	235	62.5%
Married	136	36.2%
Divorced	5	1.3%
Education		
High school	5	1.3%
College or University	207	55.1%
Postgraduate	164	43.6%
Occupation		
Manufacturing	62	16.5%
ICT	42	11.2%
Retail	41	10.9%
Finance	50	13.3%
Service	50	13.3%
Education	23	6.1%
Estate	23	6.1%
Government	29	7.7%
Health	30	8.0%
Non-profit	19	5.1%
Others	7	1.9%
Position		
Non manager	302	80.3%
Manager	74	19.7%

Note. *N* = 376. *M* = mean; *SD* = standard deviation; ICT = information and communications technology.

5.3.3 Measures

A survey questionnaire was used as the primary research instrument (see Appendix D). The questionnaire consisted of four sections including work-

family balance, antecedents of work-family balance, outcomes of work-family balance, and participants' demography.

5.3.3.1 *Antecedents of work-family balance*

The first section of the questionnaire included two measures that corresponded to antecedents of work-family balance in the research model.

First, parent demand scale was based on the family demand scale by Boyar et al. (2007). The current study changed words relating to family in the original scale to words relating to parents in order to establish a parent demand scale, such as revising "I have to work hard on my *family*-related activities" to "I have to work hard on my *parent*-related activities". In addition, the findings of the interview study were applied to enhance parent demand scale to be more suitable for Taiwanese employees. Parent demand scale was developed using nine questions to measure regular visits (e.g., my parents require frequent visits from me and), frequent contact (e.g., my parents require me to contact them frequently), health care of parents (e.g., my parents need my company or care when they are ill), expectation of job choices (e.g., my parents like/would like my workplace or house to be near where they live) and financial demand (e.g., my parents need money from me). Parent demand was captured using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

Second, parent support scale was developed using items from the Family Support Inventory for Workers (King et al., 1995). The references to family in the original questions were changed to parents in order to form a specific scale for employees' parents. For example, "when I succeed at work, members of my *family* show that they are proud of me" was changed to "when I succeed at work, *my parents* show that they are proud of me". Eight questions were designed to measure employees' parent support. These

questions were used to measure emotional support (e.g., my parents want me to enjoy my job), domestic help (e.g., my parents help me to get things done around the house), financial help (e.g., when I have financial difficulties, my parents give me their support), and work advice (e.g., I feel better after discussing job-related problems with my parents). Parent support was captured using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The other two type of parent support, providing accommodation and childcare, were asked in the participants' demographic section.

5.3.3.2 *Work-family balance*

The second section of the questionnaire focused on work-family balance. Employees' parents were considered as employees' family members in this survey, and thus an instruction of considering parents within the family formation was given on the questionnaire. Work-family balance was measured using a 16-item scale developed by Grzywacz and Marks (2000). A recent study used this scale with a Chinese sample and obtained good reliabilities (Gan, Gan, Chen, Miao, & Zhang, 2014). Four dimensions were incorporated in the scale: work-to-family conflict, family-to-work conflict, work-to-family enrichment, and family-to-work enrichment. Items for WFC were: (a) "Your job makes you feel too tired to do the things that need attention at home"; (b) "Stress at work makes your irritable at home"; (c) "Job worries or problems distract you when you are at home"; and (d) "Your job reduces the effort you can give to activities at home". Items for FWC were: (a) "Personal or family worries and problems distract you when you are work"; (b) "Stress at home makes you irritable at work"; (c) "Responsibilities at home reduce the effort you can devote to your job"; and (d) "Activities and chores at home prevent you from getting the amount of sleep you need to do your job well". Items for WFE were: (a) "Having a good day on your job makes you a better companion when you get home"; (b) "The things you do at work help you deal with personal and practical issues at home"; (c) "The things you do at

work make you a more interesting person at home”; and (d) “The skills you use on your job are useful for things you have to do at home”. Items for FWE were: (a) “The love and respect you get at home makes you feel confident about yourself at work”; (b) “Your home life helps you relax and feel ready for the next day’s work”; (c) “Talking with someone at home helps you deal with problems at work”; and (d) “Providing for what is needed at home makes you work harder at your job”. Responses to this measure chose on a 5-point Likert scale from 1 (never) to 5 (all of the time).

5.3.3.3 Outcomes of work-family balance

The third section of the questionnaire comprised of three work-related outcomes (job satisfaction, organisational commitment, and turnover intention), one nonwork-related outcome (life satisfaction), and two health-related outcomes (anxiety and depression). According to Warr’s discussion (2012), life satisfaction could be used to assess a broader scope of wellbeing, and anxiety and depression are common measures for individual’s affective wellbeing. This study integrates nonwork related and health related outcomes into a single concept of wellbeing. In addition, this study labels work related outcomes as organisational behaviour since the job satisfaction, organisational commitment, and turnover intention are focused on employees’ attitudes at work. The final research model is displayed in Figure 14.

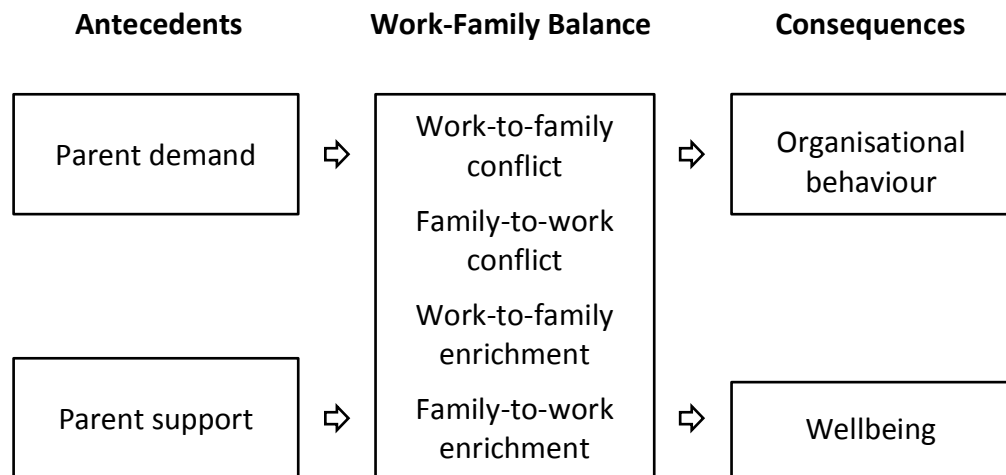


Figure 14. Final research model

Job satisfaction was measured using a 3-item scale from the Michigan Organisational Assessment Questionnaire (Cammann, Fichman, Jenkins, & Klesh, 1979). Researchers have adopted this scale to examine employees' job satisfaction in Taiwan and obtained an internal consistency of .80 (Lu, 2011). Three items were: (a) "All in all I am satisfied with my job"; (b) "In general, I don't like my job"; and (c) "In general, I like working here." Responses to these items were marked on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The second question was a negative-phrased item. A reverse coding process was applied on that question before data analysis. In consequence, a higher score indicated a higher level of job satisfaction.

Following Aryee, Srinivas, and Tan's (2005) suggestion, organisational commitment was focused on affective commitment, rather than continuance or normative commitment, since researchers found a positive link between employees' affective commitment and job performance. This indicates that employers may benefit from fostering affective commitment in their employees (Meyer, Allen, & Smith, 1993; Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989). Thus, organisational commitment in this survey was based on a 6-item affective organisational commitment scale (Meyer et al., 1993). The questions were: (a) "I would be very happy to spend the rest of my career

with this organization”; (b) “I really feel as if this organization's problems are my own”; (c) “I do not feel like 'part of the family' at my organization”; (d) “I do not feel 'emotionally attached' to this organization”; (e) “This organization has a great deal of personal meaning for me”; and (f) “I do not feel a strong sense of belonging to my organization”. Participants’ responses to these questions were marked on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The scores of questions (c), (d), and (f) were reversed coded. Consequently, employees with higher scores of this measure indicated higher degrees of organisational commitment.

Turnover intention was measured using a 3-item scale developed by Irving, Coleman, and Cooper (1997). The items were: (a) “I intend to stay in this job for the foreseeable future”; (b) “I will probably look for a new job within the next year”; and (c) “I do not intend to pursue alternate employment in the foreseeable future”. Responses to this measure were captured using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The scores of the first and third questions were reverse scored. After that, employees with a higher score of this measure indicate a higher intention to leave their job.

Life satisfaction was measured using a 5-item life satisfaction scale developed by Diener, Emmons, Larsen, and Griffin (1985). This scale was adopted by Aryee, Luk, et al. (1999) and the scale produced a good internal consistency in a Chinese sample. The items were: (a) “In most ways my life is close to my ideal”; (b) “The conditions of my life are excellent”; (c) “So far I have gotten the important things I want in life”; (d) “If I could live my life over, I would change almost nothing”; and (e) “I am satisfied with my life”. Responses to these items were marked on a 5-point Likert scale where higher scores indicated higher levels of life satisfaction. The response scale labelled from 1 (strongly disagree) to 5 (strongly agree).

In order to examine employees' health, the current survey adopted a commonly used assessment of anxiety and depression: the Hospital Anxiety and Depression Scale (HADS) Zigmond and Snaith (1983). Although this scale was originally used in clinical areas for assessing cancer patients' psychological health, researchers have noted HADS could also be used for evaluating anxiety and depression in the general population (Bjelland, Dahl, Haug, & Neckelmann, 2002). In addition, Thomas, Bergström, and Rosqvist (2012) advocated that applying clinical assessments (e.g., HADS) to organisational research, researchers could benefit from assessing anxiety and depression with a different perspective, which could enhance the evaluation of health in organisational research. Accordingly, HADS was used for evaluating employees' anxiety and depression in this questionnaire survey. The scale includes two subscales, which are HADS-anxiety (HADS-A) and HADS-depression (HADS-D). The measure contained seven questions for each. The items for HADS-A were: (a) "I feel tense or 'wound' up"; (b) "I get a sort of frightened feeling as if something awful is about to happen"; (c) "Worrying thoughts go through my mind"; (d) "I can sit at ease and feel relaxed"; (e) "I get a sort of frightened feeling like 'butterflies' in the stomach"; (f) "I feel restless as if I have to be on the move"; and (g) "I get sudden feelings of panic". The items for HADS-D were: (a) "I still enjoy the things I used to enjoy"; (b) "I Can laugh and see the funny side of things"; (c) "I feel cheerful"; (d) "I feel as if I am slowed down"; (e) "I have lost interest in my appearance"; (f) "I look forward with enjoyment to things"; and (g) "I can enjoy a good book or radio or TV programme". In each question, participants were asked to select a best description from four provided statements and each statement was coded from 0 to 3. The coding scheme was varied for each question (see Zigmond & Snaith, 1983). One anxiety score and one depression score were calculated for each employee, with a higher score indicating a higher symptom level of anxiety or depression.

5.3.3.4 *Demographic information*

Demographic data contained basic information on participants including gender, age, marital status, education, job position, job type and occupation. Moreover, information about parents' health was also collected and two questions asked whether employees' parents provided childcare and accommodation.

Gender was a dichotic checkbox and coded as female = 0 and male = 1; age was a drop-down list and coded in years; marital status was a checkbox item with four possible responses (single, married, divorced, or widowed) and coded as single = 0, married/divorced = 1; education was a checkbox item with three possible responses and coded as high school or below = 1, college or university = 2, and postgraduate = 3; job position was a dichotic checkbox and coded as non-managers = 0 and managers = 1; job type was a dichotic checkbox and coded as part-time = 0, full-time = 1; occupation was a checkbox with 11 possible responses; parents' health was a checkbox item with nine possible responses and was measured by indicating whether employees' parents were in good or bad health for their ages; parents providing childcare assistance was a dichotic checkbox and coded as no = 0, yes = 1; parents providing accommodations was a dichotic checkbox and coded as no = 0, yes = 1.

5.3.3.5 *Common method variance issues*

The current study used a self-report questionnaire to collect both the predictor and outcome variables which may cause a common method variance or bias. This bias comes from the measurement error rather than the construct of interest (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

Podsakoff et al. (2003) have introduced several techniques to reduce or minimise common method biases. One of direct method is to collect predictor and outcome variables from different sources. This approach is not feasible for the current study. Despite for the possibility of obtaining parent demand and support from employees' parents, employees providing the rating of their perceptions themselves is more adequate. It is doubtful whether the influences of an objective parent demand and support measure is as good a measure as the employees' perceptions on their own work-family balance. The current study focuses on perceived parent demand and support and believes it is more relevant to employees' work-family balance. Another possible strategy to eliminate substantial method biases is with a time-lagged method to collect predictor and outcomes separately, but it is possible to suffer unexpected intervention between predictors and outcomes and increase cost and time (Podsakoff et al., 2003).

Alternatively, this questionnaire survey has imposed several remedial measures on the research questionnaires while the questionnaire was being designed. One is the anonymity and confidentiality of data collection procedures. Since the questionnaires were collected via the Internet and there were no questions about personal information (i.e., name, date of birth or ID number), no individual identification can be made. In addition, a statement was provided in the cover page of the survey to assure participants that there were no right or wrong answers. Podsakoff et al. (2003) said this could "reduce people's evaluation apprehension and make them less likely to edit their responses to be more socially desirable" (p. 888). In order to reduce the vague concepts, instructions and notes were carefully articulated on the questionnaires and every question was short and simple. With these remedial measures, common method variance was not a serious problem in this study.

5.3.3.6 Back translation

Items of questionnaire were translated from English to Chinese and then back translated following the Brislin's Guidelines (Brislin, 1980; Brislin et al., 2004). The researcher, a native Chinese speaker, translated questions into Chinese. A Chinese literature teacher proofread the Chinese version in order to identify any grammar and wording issues. The proofread Chinese version questionnaire was re-translated back to English by a Chinese graduate student who lives in the United States and reads and writes English fluently. The original and translated version were compared and discussed. Considering the culture difference, some words were revised to fit the Chinese culture in Taiwan.

5.3.3.7 Pilot study

The final version of the Chinese questionnaire was piloted with a small number of employees to ensure its feasibility before distributing it to a large-scale survey. Twenty employed participants took part in the pilot study. They were asked to identify any wording problems and provided their opinions about instruction statements and layout of the questionnaire. By doing this, it could make sure each question was understandable and enhance the readability of the questionnaire.

On the other hand, it provided an opportunity to check the functions of the Internet-based survey. Through answering the questionnaire on the website, participants were asked to give feedback on the experience of the online survey. Also they could inspect potential errors that occurred when choosing a response from scales or selecting an answer from the drop-down lists. Unlike traditional paper-based surveys, the participants' responses were saved in electronic format. It is important to make sure the data were

recorded with a proper coding scheme. The responses of the pilot study helped to examine whether data were coded as expected.

5.3.4 Ethical considerations

After completing the interview study, a separated ethics approval for questionnaire survey had been reviewed and approved by Institute of Work, Health and Organisations (I-WHO) Ethics Committee at the University of Nottingham. The website-based survey was launched while receiving the ethics approval in May 2013 (see Appendix E).

Before commencing data collection, information sheet and participant consent was provided. Regarding the use of a website to collect questionnaires, information sheet and participant consent was displayed on screen. Permission to participate in the survey was directly obtained from each participant via a click to tick at the end of the consent statement before the questionnaire started. Participants also had been informed that they had a right to withdraw from the research at any point in time without giving any reason. According to the 1998 Data Protection Act, all collected data will be treated confidentially. All data will be securely stored and preserved electronically. There will be no personal identification in the questionnaire data. The data will only be available to the researcher. Data were stored on a secure University driver with password protection which only the researcher could access.

5.3.5 Procedure

Online survey invitations were sent to participants' email addresses. All participants were led to the survey website via an enclosed hyperlink. The invitations were sent out during June 2013 and questionnaire data were collected between June and July 2013. Each participant saw an explanatory

cover page on the website. This page made clear the following points: (a) the purpose of the questionnaire research; (b) the typical length of time required to complete the questionnaire; (c) the anonymity and confidentiality of participation; (d) the criteria to participate this questionnaire survey; (e) the right not to participate and quit at any point of time; and (f) the researcher's contact details.

5.3.6 Analyses

The questionnaire survey data were analysed by Statistical Package for the Social Sciences (SPSS) version 22 and Mplus version 7. Several statistical techniques had been used for different purposes in the analysis. These included factor analysis, regression analysis, structural equation modelling (SEM), and *t* test.

After all collected data were input into a SPSS data set, an initial examination was made. The accuracy of the data was examined using descriptive statistics and frequency tables. By processing this, it could probe unusual values in the data and also scan the minimum and maximum values for each variable. In addition, since the data were downloaded from the survey website, consistency checks were carried out by verifying the SPSS file against the original online data set.

In order to develop new scales for the influence of employees' parents (Research Objective Two), two factor analyses were conducted to investigate the psychological components of parent demand and parent support. As regards factor analysis, there are two distinct types of factor analyses which can be applied, which are exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Hair, Black, Babin, and Anderson (2013) articulated the primary purpose of these factor analyses is to define the underlying structure among the variables. However, researchers have pointed out the fundamental

differences between EFA and CFA. EFA is a data-driven approach such that the latent factors emerge from the data itself and no number of factors are assumed, whereas CFA is a theory-driven approach which analyses data with a strong empirical or conceptual foundation and the structure of latent variables is pre-specified based on proposed theories (Brown, 2012).

The current study developed two new scales (parent demand and parent support) to measure the influence of employees' parents. Several findings of the interview study were incorporated into these two scales and it has never been used previously. There is no expectation of the number of factors and the relationships between observed variables and latent variables. In addition, the aims of conducting these factor analyses were not to test any given hypothesis related to latent variables and structures. Thus it was appropriate that this questionnaire survey employed EFA to explore the underlying aspects of parent demand and parent support and condense the observed questions into a manageable set of factors for further investigation of the relationships between work-family balance and related outcomes.

Common factoring analysis and component analysis are commonly used for identifying factors of observed variables. Component analysis attempts to summarise most of the original information in a minimum number of factors while common factor analysis aims to identify underlying factors (Field, 2013; Hair et al., 2013). The aim of this analysis was to explore the latent structures of parent demand and parent support. Thus, employing common factoring analysis can be considered as an appropriate approach.

As regards assessing the validation of exploratory factor analysis, Hair et al. (2013) suggested that researchers could replicate the exploratory factor analysis results either with a split sample in the original data set or with an entirely new sample. However, the comparison of two or more exploratory factor analyses could be problematic. Using CFA could be considered as one of

optimal options making an objective evaluation of the results of the factor analysis (Hair et al., 2013). Therefore, a CFA was conducted using Mplus, which assessed the convergence validity and discriminant validity of the parent demand and parent support scales. Moreover, a competing model evaluation was conducted to verify the underlying structure of parent demand and parent support. In addition, following Aryee, Srinivas and Tan's (2005) procedure for analysing work-family balance, another CFA were conducted to test the factor structure of work-family balance items. The four subscales of work-family balance were also validated using competing model test.

In the next stage, several regression analyses were conducted to examine Research Objective Three. A regression analysis is a common statistical technique to discover the relationship between several independent variables and a dependent variable (Hair et al., 2013). The current study used this technique to analyse the strength of relationship between parent demand, parent support, work-family balance, and related outcomes. First, four hierarchical regression models were constructed to examine parent demand and parent support variables for predicting four-dimensional work-family balance, including WFC, FWC, WFE, and FWE. There were two steps in each hierarchical regression model. In the first step of the analysis, demographic variables were entered, consisting of gender, age, marriage, education and position. In the second step, parent demand and parent support were also included. The second step allowed the contribution of the influence of employees' parents to be assessed in predicting work-family balance scores, after controlling for demographic variables. Second, six hierarchical regression models were constructed to examine work-family balance components on related outcomes. There were three steps in each hierarchical regression. Using the similar order of variable entry, the five demographic variables were initially entered in Step 1, and then the components of parent demand and support were entered as a block in Step 2. Finally, four work-family balance

components were added in Step 3. Step 3 allowed the contribution of work-family balance variables to be assessed in predicting related outcomes, after controlling for the demographics and the influence of employees' parents.

Third, SEM was used to demonstrate the relationships between variables in order to provide overall model fits (Research Objective Four). Two models were established for two categories of outcomes via SEM. Although using hierarchical regression analysis can identify the relationship between predictor variables and outcome variables, this technique can only examine each relationship separately (Hair et al., 2013) and cannot provide information regarding all possible variables at the same time. However, by conducting SEM, the whole system of variables can be tested statistically in a simultaneous examination (Byrne, 2012). In addition, SEM provides goodness-of-fit indices to explain how well the research model fit the input data and to determine the acceptability of the entire model (Hair et al., 2013).

Due to the difference of using scale anchors, childcare support and accommodation support from employees' parents in Taiwan were not included in the scales of parent demand and parent support. In order to understand the effects of these two types of support on work-family balance, two *t* tests were conducted.

5.3.7 Sample size issues

Sample size has been recognised as a crucial issue in multivariate analysis. It could have substantial effects on all analysis results. A small sample size may result in a low statistical power, lacking generalisability and making the statistical test insensitive, while a very large sample size could result in an overly high statistical power and could easily achieve significance that makes the statistical test overly sensitive (Hair et al., 2013). Thus it is important to consider whether the sample size is sufficient in the current study.

The rule of thumb for sample sizes varies in different analytical approaches. In terms of EFA, many articles reported that a sample size is better with at least 100 participants or larger (Ferguson & Cox, 1993; Guadagnoli & Velicer, 1988; Hair et al., 2013; MacCallum, Widaman, Zhang, & Hong, 1999). Comrey and Lee (1992) provided more detailed guidelines and proposed that a sample size of 50 could be considered as very poor, 100 as poor, 200 as fair, 300 as good, 500 as very good and 1000 as excellent. Tabachnick and Fidell (2007) further suggested a sample size of 300 as a standard. Also, Field (2013) indicated that a stable factor structure should consist of 300 participants or more.

As regards CFA and SEM, generally a large sample size is required. Many researchers suggested that more than 200 participants are needed as a rule of thumb since it provides sufficient statistical power for data analysis (Hoe, 2008; Kline, 2011). For the sample size in the regression analysis, Field (2013) suggested that 160 participants can be sufficient to expect a medium effect size with a high statistical power of 80%. In terms of *t* test, VanVoorhis and Morgan (2007) reported that 30 participants per group in *t* test should achieve an 80% power with a medium to large effect size.

The current study collected 376 participants. This sample size can be identified as an appropriate size.

5.4 Results

5.4.1 Exploratory factor analysis

Before analysing, two initial checks were made. First, the univariate normality and correlations between variables were checked. All of the variables had univariate skewnesses and kurtoses with coefficients between -2.0 and +2.0 and most did not exceed 1.0, which indicated there was not much distortion of the normality and the results were acceptable for factor analysis (Ferguson

& Cox, 1993; Muthén & Kaplan, 1985). Inspection of the correlation matrix revealed that 28 of the 36 correlations of parent demand and 25 of the 28 correlations of parent support were significant at level .01 and many of the coefficients were .3 and above, which provided an adequate basis for processing factor analyses (Hair et al., 2013).

Second, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test were examined. Kaiser (1974) recommended the KMO value should be greater than .50 and values in the .60s are mediocre, .70s are middling, .80s are meritorious, and .90s are marvellous. In terms of Bartlett's test, the value should be significant (Field, 2013). The KMOs of parent demand and parent support were .75 and .83 respectively, while Bartlett's tests were both significant. Accordingly, the KMO statistic and Bartlett's test of parent demand and parent support had met these criteria.

In addition, there was no extremely large value (greater than .9) within all correlation coefficients and the determinant of the correlation matrices were .071 and .054 respectively, exceeding the recommended value of .00001 (Field, 2013). The problem of multicollinearity should not exist. These indicators supported the factorability of the correlation matrices.

Two exploratory factor analyses were conducted using the principal axis factoring extraction method with varimax rotation to discriminate between factors. Parent demand and parent support were treated as two individual scales and thus were analysed separately. Originally parent demand consisted of nine items. One item related to financial demand was eliminated since its factor loading was only .25, which was lower than the minimum recommended value .4 (Stevens, 2009), and the loadings were recalculated. The final version of parent demand contained eight items and two factors were retained with eigenvalues greater than 1 following Kaiser's (1960) criterion. These two factors explained 47.13% of the variance. Table 9 shows

the factor loadings after rotation. The items that cluster on the same factors suggest that factor 1 represents a need for help and factor 2 represents a need for company. The internal reliability of the scales was evaluated by Cronbach's alpha (α). Researchers recommended that Cronbach's α should be more than a threshold of .7 (Hair et al., 2013; Nunnally & Bernstein, 1994). Two subscales of the parent demand, need for help and need for company, had acceptable reliabilities, Cronbach's $\alpha = .72$ and $.75$ respectively.

Table 9
Factor Loadings of Exploratory Factor Analysis for Parent Demand

	Item	Rotated factor loading	
		Need for company	Need for help
PD2	I have to spend a lot of time on parent-related activities	.41	
PD3	My parents require frequent visits from me	.93	
PD4	My parents require me to contact them frequently	.84	
PD7	My parents need my company or care when they are ill	.44	
PD8	My parents like/would like my workplace or house to be near where they live	.46	
PD1	It seems as if my parents are always asking me to do something for them		.53
PD5	I feel that my parents need me a lot		.72
PD6	I have a lot of responsibility for my parents		.74

On the other hand, originally parent demand consisted of eight items. Two items, domestic help and financial support, were removed because their factor loadings were lower than the threshold of .4 and the item of "when something at work is bothering me, my parents try to cheer me up" was identified as a candidate of deletion since it was cross loading on two factors. After deleting these variables, there were five items in the final analysis and factor loadings were recalculated. The result indicated that only one factor had eigenvalue over Kaiser's criterion of 1. By screening the scree plot, it

indicated that the number of factor would be two or three. Some researchers have argued that Kaiser’s criterion is too strict and suggested that eigenvalues greater than .7 are acceptable (Jolliffe, 1972). Referencing the scree plot and taking Jolliffe’s suggestion, the two-factor solution was chosen because it explored the underlying factors and provided a clearer structure of parent support than the one-factor model. These two factors explained 59.54% of the variance. The rotated factor loadings are provided in Table 10. The items grouped in factor 1 were named problem-solving support and in factor 2 were named emotional support. The problem-solving support and emotional support subscales of parent support both had acceptable reliabilities, Cronbach’s $\alpha = .84$ and $.72$ respectively.

Table 10
Factor Loadings of Exploratory Factor Analysis for Parent Support

Item	Rotated factor loading	
	Problem-solving support	Emotional support
PS5 I feel better after discussing job-related problems with my parents	.70	
PS6 I feel comfortable asking my parents for advice about a problem situation at work	.92	
PS1 When I succeed at work, my parents are proud of me		.65
PS2 My parents want me to enjoy my job		.72
PS7 My parents have a positive attitude towards my work		.56

5.4.2 Confirmatory factor analysis

A confirmatory factor analysis (CFA) was conducted to validate the results of the exploratory factor analysis. Several indicators were examined including Chi-square test of model fit, root mean square error of approximation (RMSEA), comparative fit index (CFI), Tucker Lewis index (TLI) and standardized root mean square residual (SRMR).

Chi-square (χ^2) statistic is a goodness-of-fit index to provide the most basic evaluation of the discrepancy between the observed sample data and the estimated model. The statistical insignificance of the χ^2 statistic indicates that the sample and model's estimated covariance matrices are equal which means that the model fits perfectly. However, the significance of χ^2 test is overly sensitive to the number of the sample size (Hair et al., 2013; Kline, 2011). The value of χ^2 becomes greater when the model does not fit and the sample size is large (Jöreskog & Sörbom, 1993). With a large sample, the χ^2 test is more likely to fail to achieve a statistical insignificance. Thus, alternative model fit indices were developed. Researchers reported that some measures are least affected by sample size, such as RMSEA, CFI and TLI (Fan, Thompson, & Wang, 1999).

Following Byrne's (2012) suggestion, model fit indices can be categorised into two groups: absolute and comparative (or incremental). RMSEA and SRMR are absolute indices of fit which measure how well the hypothesised model fits the observed sample data. RMSEA and SRMR are also known as badness-of-fit since these indices with high values represent poor fit (Hair et al., 2013). RMSEA is a measure that attempts to correct the disadvantage of χ^2 test (Hair et al., 2013). A lower value of RMSEA demonstrates a better model fit. Values less than .08 shows good fit (Hooper, Coughlan, & Mullen, 2008). MacCallum, Browne, and Sugawara (1996) suggested that the values of RMSEA between .08 and .10 indicates a mediocre fit and those above .10 indicate a poor fit. SRMR measures the average value across all standardised residuals between the covariance matrices for the hypothesised model and sample data, ranged from 0 to 1 (Byrne, 2012). A small number of SRMR means that the model fit well. Byrne (2012) recommended that SRMR values less than .05 represent a well-fitting model. However, Hu and Bentler (1999) suggested a higher cut-off of .08 as acceptable criterion.

Comparative fit indices measure how well the estimated model fits compared with a restricted baseline model (Hair et al., 2013). CFI and TLI (also known as non-normed fit index, NNFI) are commonly used to assess comparative model fit indices. CFI is an improved version of the normed fit index (NFI), since NFI is affected by the complexity of model (Hair et al., 2013). CFI is a normed index with values ranging from 0 to 1. Hair et al. (2013) provided a guideline that CFI values above .90 show the model fits well. A more rigorous criterion of .95 was advised (Byrne, 2012; Hu & Bentler, 1999). By comparison with CFI, TLI is a non-normed fit index which means the values of TLI can fall outside the range of 0 and 1; a higher value of TLI suggests a better model fit (Hair et al., 2013). Researchers suggested above .80 as a cut-off (Hooper et al., 2008).

The results of CFA for both parent demand and parent support obtained that χ^2 of 167.229 ($df = 59$) was significant, which is to be expected given the large sample size ($N = 376$). The other model fit indices met the criteria (RMSEA = .070, CFI = .94, TLI = .92, SRMR = .058). The detailed results are reported in Table 11.

Table 11
Summary of Confirmatory Factor Analysis for Parent Demand and Support

Subscale	Item	Standard factor loading	Residual variance	R^2	CR	AVE
Need for help	PD1	.46***	.79***	.21	.73	.49
	PD5	.89***	.21**	.79		
	PD6	.70***	.52***	.49		
Need for company	PD2	.45***	.80***	.20	.78	.44
	PD3	.92***	.16***	.84		
	PD4	.84***	.29***	.71		
	PD7	.46***	.79***	.21		
	PD8	.47***	.78***	.22		
Emotional support	PS1	.68***	.54***	.47	.73	.47
	PS2	.71***	.49***	.51		
	PS7	.67***	.56***	.44		
Problem-solving support	PS5	.90***	.20**	.80	.84	.73
	PS6	.81***	.34***	.66		

Note. $N = 376$. R^2 = R-square; CR = construct reliability; AVE = average variance extracted. ** $p < .01$. *** $p < .001$.

First, all factor loadings and residual variances were statistically significant, thus providing initial evidence of convergent validity, and over above .45. Jöreskog and Sörbom (1996) suggested that the value of factor loading in analysis should be above .45. Thus, the factor loadings in this analysis were acceptable. Second, Jöreskog and Sörbom (1996) also proposed that if R-square (R^2) is lower than .2 it should be deleted from the analysis since it indicated a very high level of error (Hooper et al., 2008). The indicators of R^2 met this requirement.

The next step was to calculate the validity of construct by using convergent validity and discriminant validity. First, construct reliability (CR) was assessed to evaluate construct validity using the equation advised by Hair et al. (2013).

$$CR = \frac{(\sum_{i=1}^n L_i)^2}{(\sum_{i=1}^n L_i)^2 + (\sum_{i=1}^n e_i)}$$

In this equation, L_i is standardised factor loadings and e_i is error variance. The rule of thumb for CR should be .7 or higher (Hair et al., 2013). All CR of constructs in this CFA were above .7 (.73 for need for help, .78 for need for company, .73 for emotional support and .84 for problem-solving support), which indicated that the measures had good reliability.

Second, the average variance extracted (AVE) was also calculated as an indicator of convergence using the following equation.

$$AVE = \frac{\sum_{i=1}^n L_i^2}{n}$$

Hair et al. (2013) suggested that an AVE higher than .5 indicates adequate convergence. As shown in Table 11, only an AVE estimate for the construct of

problem-solving support met the criterion. The others (.49 for need for help, .44 for need for company and .47 for emotional support) were slightly lower than the threshold value. Values of AVE could be improved by eliminating the item that diminishes most AVE. However, this procedure has been criticised as not random and may develop an acceptable AVE with less content validity and weak internal consistency (Ping, 2009). Moreover, Ping (2009) has argued that a value of AVE slightly lower than .5 could be acceptable when conducting a study for new measures. In order to retain the results of the exploratory factor analysis and preserve the diversity of scale items, the current analysis did not seek any improvements on increasing AVE indicators.

In terms of discriminant validity, two tests were conducted to assess that a construct was truly different from other constructs. A useful discriminant validity test proposed by Bagozzi, Yi, and Phillips (1991) can determine whether constructs are significantly different. This test examines the covariance of two latent constructs. A coefficient of covariance equalling 1 indicates no difference between the two constructs, meaning they measure the same concept.

$$\textit{Discriminant Validity Test} = \phi \pm 1.96 \times SE$$

Here ϕ (phi) is correlation between two constructs and SE is standard error for the correlation (Hooper et al., 2008). These values showed in Table 12. Six estimates were calculated and all estimates were lower than 1, the largest value was .76 ($= .66 + 1.96 \times .05$) for the correlation of emotional support and problem-solving support, meaning that latent constructs were relatively distinct.

A more conservative discriminant validity was also conducted which is to compare the squared correlation estimate with its AVE values. The AVEs should be greater than the squared correlation estimate. All squared correlations were smaller than the corresponding AVE estimates, which provided sufficient evidence of discriminant validity between these construct pairs.

Table 12

Construct Correlation Matrix for Parent Demand and Support

Subscale	1	2	3	4
1. Need for help	.49	.16	.00	.00
2. Need for company	.40 (.05)	.44	.24	.07
3. Emotional support	-.02 (.07)	.49 (.05)	.47	.44
4. Problem-solving support	.04 (.06)	.27 (.06)	.66 (.05)	.73

Note. Values below the diagonal are correlation estimates among constructs with standard errors in parentheses, diagonal elements are AVEs, and values above the diagonal are squared correlations.

Together these results of CFA provided strong support for the factor structure that was obtained in the exploratory factor analysis. All subscales of parent demand and support demonstrated good internal consistency and construct validity as well as acceptable convergent and discriminant validity.

To further test the adequacy and validity of the parent demand and parent support model, the four-factor model was compared with two alternative measurement models, including a one-factor model (where all items were loaded to a single latent construct) and a two-factor model (where items were assigned to two main constructs, parent demand and parent support). The results presented in Table 13 suggested that a four-factor model with highest values in CFI (.94) and TLI (.92) and lowest value in RMSEA (.07) fits the data better than other alternative models. The significance of differences between models was computed by X^2 test. The results showed that a four-factor model was significantly better than a two-factor model ($\Delta X^2 = 344.88$, $\Delta df = 5$, $p < .001$) and a one-factor model ($\Delta X^2 = 739.35$, $\Delta df = 6$, $p < .001$). Therefore a

four-factor model of parent demand and parent support was applied for analysis.

Table 13
Model Comparisons for Parent Support and Demand Measures

Model	RMSEA	χ^2	<i>df</i>	CFI	TLI
1. Four-factor	.070	167.23	59	.94	.92
2. Two-factor	.136	512.11	64	.73	.67
3. One-factor	.186	906.58	65	.50	.40
Model comparison		$\Delta\chi^2$	Δdf	<i>p</i>	
Model 1 vs Model 2		344.88	5	< .001	
Model 1 vs Model 3		739.35	6	< .001	

Note. *N* = 376. *df* = degree of freedom; CFI = comparative fit index; TLI = Tucker Lewis index; RMSEA = root mean square error of approximation.

Another CFA was conducted to test the factor structure of work-family balance items. The results of CFA for work-family balance are presented in Figure 15. All factor loadings were above the threshold .45 except two items. These two items loaded onto more than one latent factor and were deleted from the scale. The items were “Activities and chores at home prevent you from getting the amount of sleep you need to do your job well” (FWC4) and “Providing for what is needed at home makes you work harder at your job” (FWE4). The latter one was also identified with cross-loading problem in Grzywacz and Mark’s (2000) study.

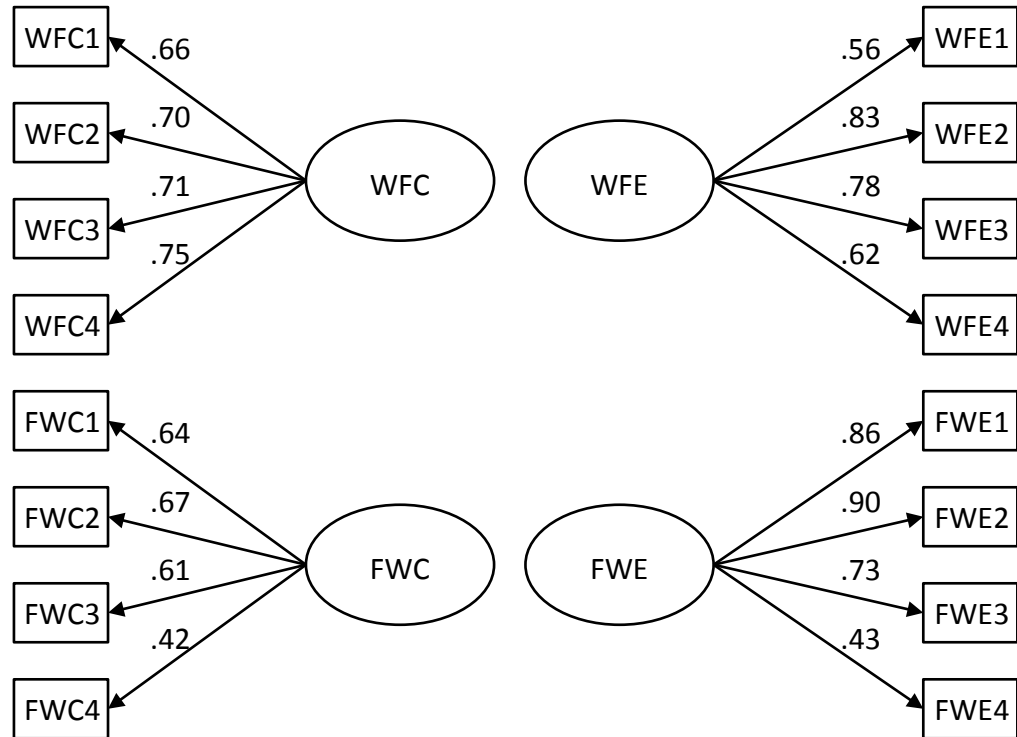


Figure 15. Confirmatory factor analysis of work-family balance

After eliminating cross-loading items, the fourfold taxonomy of the work-family balance model (WFC, FWC, WFE, and FWE) was compared with two-factor and one-factor alternative models. In the two-factor model, WFC and FWC were assigned to the conflict construct and WFE and FWE were assigned to the enrichment construct. In the one-factor model, all items contributed their loadings to one construct. The results (see Table 14) indicated that the four-factor model had good model fit indices (RMSEA = .075, CFI = .93, TLI = .91) and was significantly better than the two-factor model ($\Delta X^2 = 280.94$, $\Delta df = 5$, $p < .001$) and one-factor model ($\Delta X^2 = 1212.47$, $\Delta df = 6$, $p < .001$). Therefore a four-factor model of work-family balance was used for analysis.

Table 14

Model Comparison for Work-Family Balance Measures

Model	RMSEA	χ^2	<i>df</i>	CFI	TLI
1. Four-factor	.075	219.92	71	.93	.91
2. Two-factor	.122	500.86	76	.79	.75
3. One-factor	.216	1432.39	77	.33	.21
Model comparison		$\Delta\chi^2$	Δdf	<i>p</i>	
Model 1 vs Model 2		280.94	5	< .001	
Model 1 vs Model 3		1212.47	6	< .001	

Note. *N* = 376. *df* = degree of freedom; CFI = comparative fit index; TLI = Tucker Lewis index; RMSEA = root mean square error of approximation.

5.4.3 Regression analysis

5.4.3.1 Descriptive statistics

All variables used in this analysis are summarised in Table 15. Inspection of normality using significance tests of skew and kurtosis showed some degree of variation in the distributions of each variable. This was expected since large samples (200 or more) will earn small standard errors and so are likely to achieve statistical significance in the skew and kurtosis test (Field, 2013). Field (2013) suggested not to examine the significance for large samples but instead to visually check the shape of the distributions and look at the value of the skewness and kurtosis statistics. Further observation of the histograms provided evidence that all variables were not distinctly different from normal distribution.

Some researchers suggested that there is no marked distortion and the variable is at least approximately normal when the skewness and kurtosis statistics hold value between -1.0 and 1.0 (Morgan, Leech, Gloeckner, & Barrett, 2011). Kline (2011) further advised that the absolute values of skewness greater than 3 are identified as extremely skew and the absolute values of kurtosis greater than 10 indicates an issue with kurtosis. Moreover, Curran, West, and Finch (1996) reported that significant nonnormality

problems have been detected with a coefficient of 2.0 for skewness and 7.0 for kurtosis. As presented in Table 15, all of the skewness and kurtosis coefficients were ranging between -1.0 and 1.0 except one variable. The kurtosis of parents' emotional support had coefficient of 1.05 but was still significantly less than 2.0. Thus, the examination of the kurtosis and skewness indicated that the data were approximately normal in distributions.

Table 15
Descriptive Statistics of Questionnaire Survey

Variable	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Parent demand for help	2.67	.86	.41	.29
Parent demand for company	3.79	.71	-.40	.26
Parent emotional support	4.16	.69	-.91	1.05
Parent problem-solving support	3.06	1.10	.07	-.71
Work-to-family conflict	2.72	.85	.43	-.12
Family-to-work conflict	2.31	.74	.37	.07
Work-to-family enrichment	3.25	.85	-.10	-.33
Family-to-work enrichment	3.36	1.01	-.38	-.42
Job satisfaction	3.30	.88	-.36	-.09
Organisational commitment	3.51	.86	-.40	-.15
Turnover intention	2.80	1.09	.17	-.78
Life satisfaction	3.19	.84	-.12	-.36
Anxiety	1.43	.51	.61	.03
Depression	.86	.53	.71	.67

Note. *N* = 376. *M* = mean; *SD* = standard deviation. Each variable had a standard error of .13 for skewness and a standard error of .25 for kurtosis.

5.4.3.2 Correlations and Cronbach's alphas

The correlations, and Cronbach's alphas for study variables are presented in Table 16. All Cronbach's α s were between .72 and .89 with only exception of FWC ($\alpha = .67$). The Cronbach's α of FWC was slightly lower than .70 and was deemed acceptable, because some researchers suggested that the coefficient of .60 is the lower requirement for Cronbach's α (Hair et al., 2013; Nunnally & Bernstein, 1994). There was a significant relationship between parent demand for help and company ($r = .36, p < .001$) and parent emotional and problem-solving support ($r = .53, p < .001$). WFC was significantly related to FWC (r

= .47, $p < .001$), while WFE was significantly related to FWE ($r = .55, p < .001$). The influence of employees' parents had various effects on work-family balance variables. The coefficients showed that the two components of parent support correlated significantly with all outcomes of work-family balance variables (job satisfaction, organisational commitment, turnover intention, life satisfaction, anxiety and depression), whereas the two components of parent demand did not correlate with any outcomes. Four work-family balance variables were significantly related to their outcome variables. Finally, there was a significant relationship between anxiety and depression ($r = .66, p < .001$).

Table 16

Correlations and Cronbach's Alphas of Questionnaire Survey Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. PD help	.72													
2. PD company	.36***	.75												
3. PS emotional	-.05	.35***	.72											
4. PS problem	.01	.24***	.53***	.84										
5. WFC	.08	.01	-.07	-.13*	.80									
6. FWC	.26***	.16**	-.11*	-.07	.47***	.67 [†]								
7. WFE	.14**	.21***	.30***	.31***	-.09	.08	.79							
8. FWE	.01	.19***	.30***	.47***	-.12*	.04	.55***	.87						
9. JS	.01	.04	.20***	.16**	-.24***	-.20***	.40***	.25***	.83					
10. OC	.02	.07	.24***	.16**	-.16**	-.17**	.45***	.25***	-.75***	.87				
11. TI	-.03	-.04	-.19***	-.08	.13*	.12*	-.27***	-.15**	-.69***	-.71***	.85			
12. LS	.05	.10	.27***	.21***	-.30***	-.18***	.42***	.31***	.70***	.52***	-.47***	.89		
13. ANX	.05	.05	-.19***	-.14**	.55***	.36***	-.23***	-.17**	-.43***	-.31***	.24***	-.46***	.84	
14. DEP	.01	-.03	-.29***	-.22***	.39***	.27***	-.28***	-.24***	-.50***	-.39***	.26***	-.57***	.66***	.80

Note. $N=376$. Diagonal elements are Cronbach's alphas. PD help = parent demand for help; PD company = parent demand for company; PS emotional = parent emotional support; PS Probelem = parent problem-solving support; WFC = work-to-family conflict; FWC = family-to-work conflict; WFE = work-to-family enrichment; FWE = family-to-work enrichment; JS = job satisfaction; OC = organisational commitment; TI = turnover intention; LS = life satisfaction; ANX = anxiety; DEP = depression. [†] Cronbach's alpha for FWC was slightly lower than .70.

* $p < .05$. ** $p < .01$. *** $p < .001$.

5.4.3.3 Regressions of work-family balance

The hierarchical regression analysis summarised in Table 17 demonstrates the effects on WFC. In Step 1, demographic variables accounted for only 3% of the variation in WFC. In Step 2, the influence of employees' parents accounted for only an additional 2%. In combination, a significant model emerged and the variables accounted for 5% of the variance in WFC ($R^2 = .05$, $R^2_{\text{adjusted}} = .03$, $F(9, 366) = 2.13$, $p < .05$). The standardised regression coefficients (β s) indicate that parent problem-solving support had a significantly negative relationship with WFC ($\beta = -.15$, $p < .05$).

Table 17
Hierarchical Multiple Regression Analysis of Questionnaire Survey for Variables Predicting WFC

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	.25	.10	.14**	.25	.10	.14**
Age	-.01	.01	-.06	-.01	.01	-.08
Marriage	-.07	.10	-.04	-.06	.10	-.03
Education	.02	.09	.01	.04	.08	.02
Position	-.03	.11	-.01	-.05	.11	-.02
PD help				.07	.06	.07
PD company				.02	.07	.02
PS emotional				.03	.08	.02
PS problem				-.12	.05	-.15*
R^2		.03			.05	
Adjusted R^2		.01			.03	
<i>F</i>		1.93			2.13*	
<i>df</i>		(5, 370)			(9, 366)	

Note. $N = 376$. * $p < .05$, ** $p < .01$, *** $p < .001$.

The hierarchical regression analysis summarised in Table 18 shows the effects on FWC. In Step 1, demographic variables accounted for just 6% of the variation in FWC. In Step 2, the influence of employees' parents accounted for only an additional 8%. In combination, a significant model emerged and the variables accounted for 14% of the variance in FWC ($R^2 = .14$, $R^2_{\text{adjusted}} = .12$, $F(9, 366) = 6.48$, $p < .001$). The standardised regression coefficients indicate that both parent demand for help ($\beta = .20$, $p < .001$) and company ($\beta = .13$, $p < .05$) had significantly positive relationships with FWC after controlling for demographic variables.

Table 18
Hierarchical Multiple Regression Analysis of Questionnaire Survey for Variables Predicting FWC

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	.30	.08	.19***	.27	.08	.17***
Age	-.02	.01	-.13*	-.02	.01	-.14*
Marriage	.21	.09	.14*	.20	.08	.13*
Education	-.04	.07	-.03	-.02	.07	-.02
Position	-.13	.10	-.07	-.10	.09	-.05
PD help				.17	.05	.20***
PD company				.13	.06	.13*
PS emotional				-.11	.07	-.10
PS problem				-.05	.04	-.07
R^2		.06			.14	
Adjusted R^2		.04			.12	
<i>F</i>		4.28**			6.48***	
<i>df</i>		(5, 370)			(9, 366)	

Note. $N = 376$. * $p < .05$, ** $p < .01$, *** $p < .001$.

The hierarchical regression analysis summarised in Table 19 presents the effects on WFE. In Step 1, demographic variables accounted for only 7% of the variation in WFE. In Step 2, the influence of employees' parents accounted for an additional 14%. In combination, a significant model emerged and the variables accounted for 21% of the variance in WFE ($R^2 = .21$, $R^2_{\text{adjusted}} = .19$, $F(9, 366) = 10.67$, $p < .001$). The standardised regression coefficients indicate that parent demand for help, parent emotional support, and problem-solving support were significant related to WFE. Parent demand for help ($\beta = .12$, $p < .05$) had a positive relationship with WFE. Both parent emotional support ($\beta = .15$, $p < .05$) and problem-solving support ($\beta = .23$, $p < .001$) had positive relationships with WFE.

Table 19
Hierarchical Multiple Regression Analysis of Questionnaire Survey for Variables Predicting WFE

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	.01	.09	.00	.00	.09	.00
Age	.02	.01	.10	.02	.01	.11*
Marriage	.32	.10	.19**	.26	.09	.15**
Education	-.14	.08	-.08	-.16	.08	-.10*
Position	.10	.11	.05	.12	.10	.06
PD help				.12	.05	.12*
PD company				.05	.07	.04
PS emotional				.18	.07	.15*
PS problem				.18	.04	.23***
R^2		.07			.21	
Adjusted R^2		.06			.19	
<i>F</i>		5.89***			10.67***	
<i>df</i>		(5, 370)			(9, 366)	

Note. $N = 376$. * $p < .05$, ** $p < .01$, *** $p < .001$.

The hierarchical regression analysis summarised in Table 20 shows the effects on FWE. In Step 1, demographic variables accounted for only 3% of the variation in FWE. In Step 2, the influence of employees' parents accounted for an additional 23%. In combination, a significant model emerged and the variables accounted for 26% of the variance in FWE ($R^2 = .26$, $R^2_{\text{adjusted}} = .24$, $F(9, 366) = 13.95$, $p < .001$). The standardised regression coefficients indicate that parent problem-solving support was a significant predictor of FWE. Parent problem-solving support ($\beta = .44$, $p < .001$) had positive relationships with FWE.

Table 20
Hierarchical Multiple Regression Analysis of Questionnaire Survey for Variables Predicting FWE

Variable	Model 1			Model 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	-.13	.11	-.06	-.15	.10	-.07
Age	.01	.01	.03	.01	.01	.07
Marriage	.30	.12	.14*	.21	.10	.10
Education	-.04	.10	-.02	-.09	.09	-.05
Position	-.10	.13	-.04	-.03	.12	-.01
PD help				-.02	.06	-.02
PD company				.10	.08	.07
PS emotional				.04	.08	.03
PS problem				.40	.05	.44***
R^2		.03			.26	
Adjusted R^2		.02			.24	
<i>F</i>		2.42*			13.95***	
<i>df</i>		(5, 370)			(9, 366)	

Note. $N = 376$. * $p < .05$, ** $p < .01$, *** $p < .001$.

5.4.3.4 Regressions of outcome variables

The hierarchical regression analysis summarised in Table 21 shows the effects on employees' job satisfaction. In Step 1, demographic variables accounted for only 6% of the variation in job satisfaction. In Step 2, the influence of employees' parents accounted for an additional 4%. In Step 3, work-family balance variables contributed another 16%. In combination, a significant model emerged and the variables accounted for 26% of the variance in job satisfaction ($R^2 = .26$, $R^2_{\text{adjusted}} = .23$, $F(13, 362) = 9.54$, $p < .001$). The standardised regression coefficients indicate that WFC ($\beta = -.13$, $p < .05$) and FWC ($\beta = -.16$, $p < .01$) were negatively related to job satisfaction, whereas WFE ($\beta = .34$, $p < .001$) had a positive association.

Table 21
Hierarchical Multiple Regression Analysis of Questionnaire Survey for Variables Predicting Job Satisfaction

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	.03	.10	.02	.04	.10	.02	.13	.09	.07
Age	.02	.01	.14*	.02	.01	.14*	.01	.01	.07
Marriage	.17	.10	.10	.15	.10	.08	.08	.09	.05
Education	-.02	.09	-.01	-.03	.09	-.02	.03	.08	.02
Position	.24	.11	.11*	.23	.11	.10*	.16	.10	.07
PD help				.04	.06	.03	.04	.05	.04
PD company				-.08	.07	-.07	-.07	.07	-.06
PS emotional				.18	.08	.14*	.10	.08	.08
PS problem				.10	.05	.12*	-.01	.05	-.01
WFC							-.13	.06	-.13*
FWC							-.20	.07	-.16**
WFE							.35	.06	.34***
FWE							.04	.05	.04
R^2		.06			.10			.26	
Adjusted R^2		.04			.08			.23	
<i>F</i>		4.45**			4.59***			9.54***	
<i>df</i>		(5, 370)			(9, 366)			(13, 362)	

Note. $N = 376$. * $p < .05$, ** $p < .01$, *** $p < .001$.

The hierarchical regression analysis summarised in Table 22 shows the effects on employees' organisational commitment. In Step 1, demographic variables accounted for 11% of the variation in organisational commitment. In Step 2, the influence of employees' parents accounted for an additional 5%. In Step 3, work-family balance contributed another 14%. In combination, a significant model emerged and the variables accounted for 30% of the variance in organisational commitment ($R^2 = .30$, $R^2_{\text{adjusted}} = .27$, $F(13, 362) = 12.06$, $p < .001$). The standardised regression coefficients indicate that FWC ($\beta = -.17$, $p < .01$) was negatively related to organisational commitment, whereas WFE ($\beta = .38$, $p < .001$) had a positive association.

Table 22
Hierarchical Multiple Regression Analysis of Questionnaire Survey for Variables Predicting Organisational Commitment

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	-.03	.09	-.01	-.01	.09	-.01	.05	.09	.03
Age	.03	.01	.20***	.03	.01	.21***	.02	.01	.14**
Marriage	.19	.10	.11*	.16	.09	.09	.10	.09	.06
Education	-.11	.08	-.07	-.12	.08	-.08	-.07	.07	-.04
Position	.33	.11	.15**	.32	.11	.15**	.25	.10	.12*
PD help				.03	.05	.03	.02	.05	.02
PD company				-.05	.07	-.04	-.04	.06	-.03
PS emotional				.21	.08	.17**	.12	.07	.10
PS problem				.08	.05	.11	.00	.05	.00
WFC							-.02	.05	-.02
FWC							-.20	.06	-.17**
WFE							.39	.06	.38***
FWE							.00	.05	.01
R^2		.11			.16			.30	
Adjusted R^2		.10			.14			.27	
<i>F</i>		9.30***			7.95***			12.06***	
<i>df</i>		(5, 370)			(9, 366)			(13, 362)	

Note. $N = 376$. * $p < .05$, ** $p < .01$, *** $p < .001$.

The hierarchical regression analysis summarised in Table 23 shows the effects on employees' turnover intention. In Step 1, demographic variables accounted for 10% of the variation in turnover intention. In Step 2, the influence of employees' parents accounted for an additional 3%. In Step 3, work-family balance contributed only another 4%. In combination, a significant model emerged and the variables accounted for 17% of the variance in turnover intention ($R^2 = .17$, $R^2_{\text{adjusted}} = .14$, $F(13, 362) = 5.79$, $p < .001$). The standardised regression coefficients indicate that WFE ($\beta = -.19$, $p < .01$) was negatively related to turnover intention.

Table 23
Hierarchical Multiple Regression Analysis of Questionnaire Survey for Variables Predicting Turnover Intention

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	.01	.12	.00	-.02	.12	-.01	-.07	.12	-.03
Age	-.05	.01	-.24***	-.05	.01	-.24***	-.04	.01	-.20***
Marriage	-.23	.12	-.10	-.21	.12	-.09	-.18	.12	-.08
Education	.15	.10	.07	.15	.10	.07	.12	.10	.06
Position	-.12	.14	-.05	-.09	.14	-.03	-.05	.14	-.02
PD help				-.06	.07	-.05	-.06	.07	-.05
PD company				.10	.09	.06	.09	.09	.06
PS emotional				-.27	.10	-.17**	-.21	.10	-.13*
PS problem				-.03	.06	-.03	.03	.06	.03
WFC							.06	.07	.05
FWC							.15	.09	.10
WFE							-.24	.08	-.19**
FWE							.01	.07	.01
R^2		.10			.13			.17	
Adjusted R^2		.09			.11			.14	
<i>F</i>		8.48***			6.18***			5.79***	
<i>df</i>		(5, 370)			(9, 366)			(13, 362)	

Note. $N = 376$. * $p < .05$, ** $p < .01$, *** $p < .001$.

The hierarchical regression analysis summarised in Table 24 shows the effects on employees' life satisfaction. In Step 1, demographic variables accounted for 10% of the variation in life satisfaction. In Step 2, the influence of employees' parents accounted for an additional 8%. In Step 3, work-family balance contributed another 14%. In combination, a significant model emerged and the variables accounted for 32% of the variance in life satisfaction ($R^2 = .32$, $R^2_{\text{adjusted}} = .30$, $F(13, 362) = 13.07$, $p < .001$). The standardised regression coefficients indicate that WFC ($\beta = -.19$, $p < .001$) was negatively related to life satisfaction, whereas WFE ($\beta = .29$, $p < .001$) was positively related.

Table 24
Hierarchical Multiple Regression Analysis of Questionnaire Survey for Variables Predicting Life Satisfaction

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	-.22	.09	-.12*	-.21	.09	-.12*	-.13	.08	-.07
Age	.03	.01	.16**	.03	.01	.16**	.02	.01	.10*
Marriage	.29	.09	.17**	.25	.09	.14**	.17	.09	.10*
Education	.11	.08	.07	.10	.08	.06	.15	.07	.10*
Position	.22	.11	.11*	.22	.10	.11*	.17	.09	.08
PD help				.07	.05	.08	.07	.05	.07
PD company				-.05	.07	-.04	-.05	.06	-.04
PS emotional				.21	.07	.17**	.15	.07	.12*
PS problem				.11	.04	.15*	.01	.04	.01
WFC							-.19	.05	-.19***
FWC							-.10	.06	-.09
WFE							.29	.05	.29***
FWE							.06	.05	.07
R^2		.10			.18			.32	
Adjusted R^2		.09			.16			.30	
<i>F</i>		8.80***			8.80***			13.07***	
<i>df</i>		(5, 370)			(9, 366)			(13, 362)	

Note. $N = 376$. * $p < .05$, ** $p < .01$, *** $p < .001$.

The hierarchical regression analysis summarised in Table 25 shows the effects on employees' anxiety. In Step 1, demographic variables accounted for only 4% of the variation in anxiety. In Step 2, the influence of employees' parents accounted for an additional 5%. In Step 3, work-family balance contributed another 31%. In combination, a significant model emerged and the variables accounted for 40% of the variance in anxiety ($R^2 = .40$, $R^2_{\text{adjusted}} = .38$, $F(13, 362) = 18.34$, $p < .001$). The standardised regression coefficients indicate that WFC ($\beta = .47$, $p < .001$) and FWC ($\beta = .14$, $p < .01$) were positively related to anxiety, whereas WFE ($\beta = -.15$, $p < .01$) was negatively related.

Table 25
Hierarchical Multiple Regression Analysis of Questionnaire Survey for Variables Predicting Anxiety

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	.00	.06	.00	-.02	.06	-.02	-.11	.05	-.10*
Age	-.01	.01	-.13*	-.01	.01	-.13*	-.01	.00	-.06
Marriage	-.07	.06	-.07	-.07	.06	-.06	-.04	.05	-.04
Education	.00	.05	.00	.01	.05	.01	-.02	.04	-.02
Position	-.13	.07	-.10*	-.12	.07	-.10	-.09	.05	-.07
PD help				.00	.03	-.01	-.03	.03	-.05
PD company				.10	.04	.14*	.09	.04	.12*
PS emotional				-.11	.05	-.16*	-.10	.04	-.13*
PS problem				-.05	.03	-.11	.01	.03	.01
WFC							.28	.03	.47***
FWC							.09	.03	.14**
WFE							-.09	.03	-.15**
FWE							-.01	.03	-.02
R^2		.04			.09			.40	
Adjusted R^2		.03			.07			.38	
<i>F</i>		3.37**			4.19***			18.34***	
<i>df</i>		(5, 370)			(9, 366)			(13, 362)	

Note. $N = 376$. * $p < .05$, ** $p < .01$, *** $p < .001$.

The hierarchical regression analysis summarised in Table 26 shows the effects on employees' depression. In Step 1, demographic variables accounted for only 2% of the variation in depression. In Step 2, the influence of employees' parents accounted for an additional 10%. In Step 3, work-family balance contributed another 18%. In combination, a significant model emerged and the variables accounted for 30% of the variance in depression ($R^2 = .30$, $R^2_{\text{adjusted}} = .27$, $F(13, 362) = 11.86$, $p < .001$). The standardised regression coefficients indicate that WFC ($\beta = .31$, $p < .001$) and FWC ($\beta = .13$, $p < .05$) were positively related to depression, whereas WFE ($\beta = -.19$, $p < .001$) was negatively related.

Table 26
Hierarchical Multiple Regression Analysis of Questionnaire Survey for Variables Predicting Depression

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	.02	.06	.02	.00	.06	.00	-.07	.05	-.07
Age	.00	.01	-.02	.00	.01	-.02	.01	.01	.05
Marriage	-.02	.06	-.02	.00	.06	.00	.03	.06	.03
Education	-.08	.05	-.08	-.07	.05	-.07	-.10	.05	-.10*
Position	-.15	.07	-.11*	-.13	.07	-.10	-.10	.06	-.07
PD help				-.03	.03	-.05	-.05	.03	-.07
PD company				.08	.04	.11	.08	.04	.10
PS emotional				-.20	.05	-.27***	-.18	.04	-.23***
PS problem				-.06	.03	-.12*	.01	.03	.02
WFC							.19	.03	.31***
FWC							.09	.04	.13*
WFE							-.12	.04	-.19***
FWE							-.04	.03	-.08
R^2		.02			.12			.30	
Adjusted R^2		.01			.10			.27	
<i>F</i>		1.57			5.47***			11.86***	
<i>df</i>		(5, 370)			(9, 366)			(13, 362)	

Note. $N = 376$. * $p < .05$, ** $p < .01$, *** $p < .001$.

In order to assess the issue of multicollinearity, variance inflation factor (VIF) and tolerance statistics were inspected. Field (2013) suggested that a value of VIF greater than 10 or a value of tolerance lower than .1 indicates a serious

collinearity problem. All coefficients of VIF in these analyses were between 1.02 and 1.72, which satisfied the threshold of 10 and all tolerance indicators were above .1, with values ranged between .59 and .98. This confirms that collinearity was not an issue for these hierarchical regression models. The Durbin-Watson tests showed that the assumption of independent errors was tenable since all coefficients of Durbin-Watson were close to 2 with values varied between 1.95 and 2.12 thus meeting the criteria of between 1 and 3 (Field, 2013).

5.4.4 Structural equation modelling

Based on two groups of consequences, two models were built to provide overall statistical indices for the research model.

5.4.4.1 Organisational behaviour model

The first model focused on predicting organisational behaviour variables (job satisfaction, organisational behaviour, and turnover intention). Three sets of competing models were used to test the organisational behaviour model. First, a direct path model was specified. This model assessed direct effects of parent demand and parent support on organisational behaviour variables, and simultaneously constrained paths to/from work-family balance variables to 0. Second, this direct model was compared with two more complex models, which were a full mediation model and a partial mediation model. The full mediation model consisted of effects of parent demand and parent support on work-family balance variables, and of work-family balance variables on organisational behaviour. The partial mediation model estimated both direct and mediation paths. The comparison of fit indices of these models is detailed in Table 27.

Table 27

Model Comparison for Organisational Behaviour Model

Model	RMSEA	χ^2	<i>df</i>	CFI	TLI
1. Direct	.075	1216.36	387	.82	.80
2. Full mediation	.064	935.18	371	.88	.86
3. Partial mediation	.065	926.59	359	.88	.85
Model comparison		$\Delta\chi^2$	Δdf	<i>p</i>	
Model 1 vs Model 2		281.18	16	< .001	
Model 1 vs Model 3		289.77	28	< .001	
Model 2 vs Model 3		8.59	12	= .74	

Note. *N* = 376.

Both the full mediation model ($\Delta\chi^2(16) = 281.18, p < .001$) and partial mediation model ($\Delta\chi^2(28) = 289.77, p < .001$) showed a significantly better fit than the direct model. However, the differences between the full mediation model and partial mediation model were not significant ($\Delta\chi^2(12) = 8.59, p = .74$). A closer examination of model fit showed that the full mediation model had slightly better indices for TLI (.86) and RMSEA (.064). Moreover, inspection of the coefficients revealed that there was no significant direct path between the influence of employees' parents and organisational behaviour variables. Together, the full mediation model provided the most parsimonious fit to the data.

Following researchers' (Aryee, Fields, et al., 1999; Frone et al., 1992a; Lu & Chang, 2014) suggestions, there were reciprocal relationships between bi-directional work-family conflict and bi-directional work-family enrichment. This modified the model by allowing WFC and FWC, and WFE and FWE to correlate. To examine the effects of reciprocal relationships, the original model (without reciprocal relationships) was compared with a modified model (with reciprocal relationships). The results are summarised in Table 28.

Table 28

Model Comparison for Reciprocal Relationships in Organisational Behaviour Model

Model	RMSEA	χ^2	df	CFI	TLI
1. Original	.064	935.18	371	.88	.86
2. Modified	.052	749.76	369	.92	.90
Model comparison		$\Delta\chi^2$	Δdf	p	
Model 1 vs Model 2		185.42	2	< .001	

Note. $N = 376$.

The modified model produced a significantly better fit than the original model ($\Delta\chi^2(2) = 185.42, p < .001$) and the model with reciprocal relationships was therefore selected as a final model for predicting organisational behaviour. The value of CFI for this model was .92, TLI was .90, and RMSEA was .052, indicating a good fit to the data.

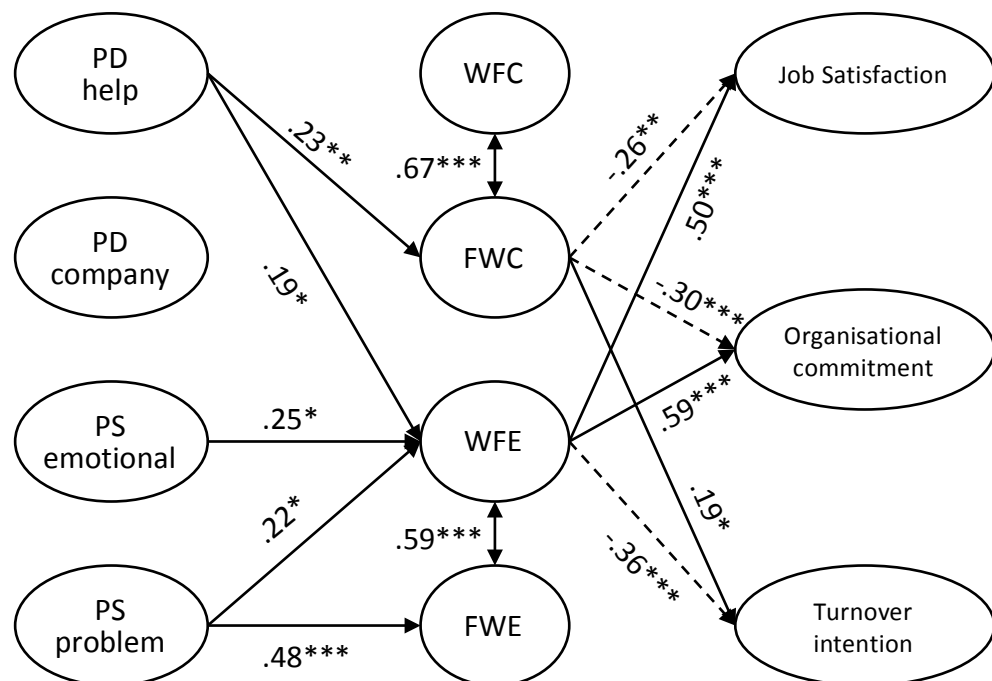


Figure 16. Research model for predicting organisational behaviour

Note. $N = 376$. Solid lines represent significantly positive paths and dotted lines represent significantly negative paths. The double arrows represent the correlations between variables. * $p < .05$, ** $p < .01$, *** $p < .001$.

Inspection of the paths and parameter estimates for the organisational behaviour model are shown in Figure 16. In terms of the relationship between parent demand and work-family balance, the model demonstrates that parent demand for help significantly predicted FWC ($\beta = .23, p < .01$) and WFE ($\beta = .19, p < .05$), while parent demand for company did not predict any work-family balance variables. Therefore, parent demand for help had positive impacts on employees' FWC and WFE. With respect to the relationship between parent support and work-family balance, the model showed that parent emotional support significantly predicted WFE ($\beta = .25, p < .05$), while parent problem-solving support significantly predicted WFE ($\beta = .22, p < .05$) and FWE ($\beta = .48, p < .001$). Thus, parent emotional support had a positive impact on employees' WFE, and parent problem-solving support had a positive impact on both WFE and FWE. Overall, parent demand affected both conflict and enrichment but parent support only affected enrichment.

Regarding the relationships between work-family conflict and organisational behaviour outcomes, FWC led to lower job satisfaction ($\beta = -.26, p < .01$) and organisational commitment ($\beta = -.30, p < .001$), and higher turnover intention ($\beta = .19, p < .05$). On the other hand, WFE led to higher job satisfaction ($\beta = .50, p < .001$) and organisational commitment ($\beta = .59, p < .001$), and lower turnover intention ($\beta = -.36, p < .001$).

5.4.4.2 *Wellbeing Model*

The second model focused on predicting wellbeing variables. Using the same approach, three sets of competing models were conducted to test the wellbeing model. The results are summarised in Table 29.

Table 29

Model Comparison for Wellbeing Model

Model	RMSEA	χ^2	<i>df</i>	CFI	TLI
1. Direct	.080	1325.57	387	.79	.77
2. Full mediation	.066	975.20	371	.87	.84
3. Partial mediation	.066	952.59	359	.87	.84
Model comparison		$\Delta\chi^2$	Δdf	<i>p</i>	
Model 1 vs Model 2		350.37	16	< .001	
Model 1 vs Model 3		372.98	28	< .001	
Model 2 vs Model 3		22.61	12	< .05	

Note. *N* = 376.

Both the full mediation model ($\Delta\chi^2(16) = 350.37, p < .001$) and partial mediation model ($\Delta\chi^2(28) = 372.98, p < .001$) showed a significantly better fit than the direct model. In addition, the comparison of the full mediation and partial mediation models was significant ($\Delta\chi^2(12) = 22.61, p < .05$), indicating that the partial mediation model had a better fit to the data. Inspection of the coefficients revealed that there were several significant direct paths between the influence of employees' parents and wellbeing variables. Together, the partial mediation model provided the most parsimonious fit to the data. The effects of reciprocal relationships were also examined and the results are summarised in Table 30.

Table 30

Model Comparison for Reciprocal Relationships in Wellbeing Model

Model	RMSEA	χ^2	<i>df</i>	CFI	TLI
1. Original	.066	952.59	359	.87	.84
2. Modified	.055	768.54	357	.91	.89
Model comparison		$\Delta\chi^2$	Δdf	<i>p</i>	
Model 1 vs Model 2		184.05	2	< .001	

Note. *N* = 376.

The modified model produced a significantly better fit compared with the original model ($\Delta\chi^2(2) = 184.05, p < .001$) and the model with reciprocal relationships was thus selected as a final model for predicting wellbeing. The value of CFI for this model was .91, TLI was .89, and RMSEA was .055, indicating a good fit to the data.

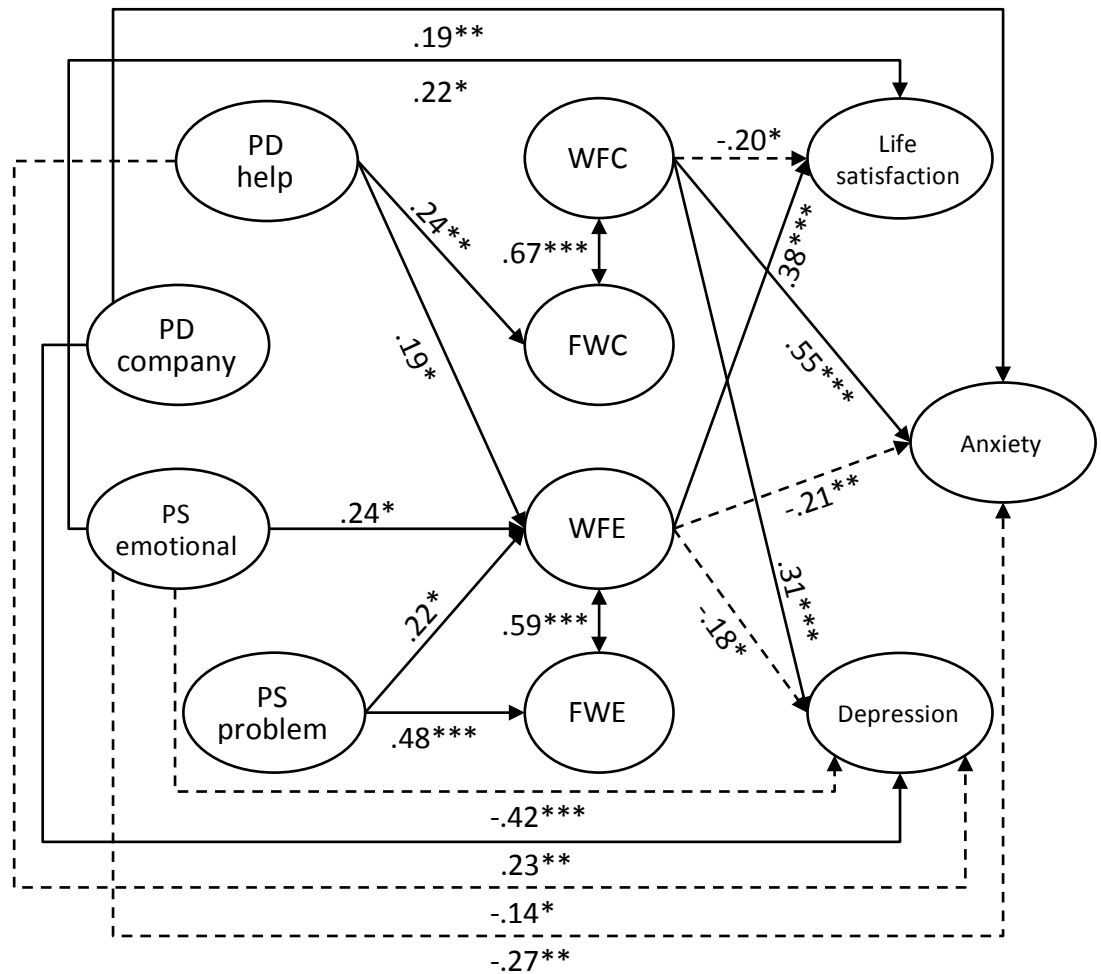


Figure 17. Research model for predicting wellbeing

Note. $N = 376$. Solid lines represent significantly positive paths and dotted lines represent significantly negative paths. The double arrows represent the correlations between variables. * $p < .05$, ** $p < .01$, *** $p < .001$.

Inspection of the paths and parameter estimates for wellbeing model are shown in Figure 17. In terms of the relationship between parent demand and work-family balance, the model demonstrates that parent demand for help significantly predicted FWC ($\beta = .24, p < .01$) and WFE ($\beta = .19, p < .05$), while parent demand for company did not predict any work-family balance variables. Therefore, parent demand for help had positive impacts on employees' FWC and WFE. With respect to the relationship between parent support and work-family balance, parent emotional support significantly predicted WFE ($\beta = .24, p < .05$), while parent problem-solving support

significantly predicted WFE ($\beta = .22, p < .05$) and FWE ($\beta = .48, p < .001$). Thus, parent emotional support had a positive impact on employee' WFE, and parent problem-solving support had positive impacts on employees' WFE and FWE. Overall, parent demand affected both conflict and enrichment but parent support only affected enrichment.

Regarding the relationships between work-family conflict and wellbeing outcomes, WFC led to lower life satisfaction ($\beta = -.20, p < .05$), and higher anxiety ($\beta = .55, p < .001$) and depression ($\beta = .31, p < .001$). On the other hand, WFE led to higher life satisfaction ($\beta = .38, p < .001$), and lower anxiety ($\beta = -.21, p < .01$) and depression ($\beta = -.18, p < .05$).

In addition, the following relationships were also significant: parent demand for help on depression ($\beta = -.14, p < .05$); parent demand for company on anxiety ($\beta = .19, p < .01$) and depression ($\beta = .23, p < .01$); and parent emotional support on life satisfaction ($\beta = .22, p < .05$), anxiety ($\beta = -.27, p < .01$) and depression ($\beta = -.42, p < .001$).

5.4.5 t test

Two supplementary analyses were used to examine the effects of childcare and accommodation support from employees' parents. The first *t* test aimed to investigate the difference between those participants that received childcare support from parents and those that did not. Only married employees were entered in analysis since single employees were less likely to receive childcare from their parents. Of 141 married participants, more than half (78 participants) reported that their parents provided childcare assistance. The results are shown in Table 31 and indicate that married employees with childcare help from parents reported higher levels of FWC ($M_{no} = 2.23, M_{yes} = 2.51, t(139) = -2.32, p < .05$, Cohen's $d = -.39$) and FWE ($M_{no} = 3.33, M_{yes} = 3.75, t(139) = -2.62, p < .01$, Cohen's $d = -.45$) than those without.

Table 31
Parents Providing Childcare Differences

Variables	No (<i>n</i> = 63)		Yes (<i>n</i> = 78)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
WFC	2.74	0.81	2.56	0.83	1.25
FWC	2.23	0.71	2.51	0.73	-2.32*
WFE	3.39	0.87	3.60	0.77	-1.52
FWE	3.33	1.02	3.75	0.85	-2.62**

Note. *N* = 141. * $p < .05$. ** $p < .01$.

Considering the differences in accommodation support, 193 participants reported that their accommodation was provided by their parents. The *t* test results in Table 32 demonstrate that receiving accommodation support from parents had no effect on employees' work-family balance.

Table 32
Parents Providing Accommodation Differences

Variables	No (<i>n</i> = 183)		Yes (<i>n</i> = 193)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
WFC	2.68	0.84	2.75	0.86	-.73
FWC	2.30	0.73	2.33	0.75	-.36
WFE	3.32	0.84	3.18	0.85	1.68
FWE	3.39	0.99	3.32	1.02	.66

Note. *N* = 376. * $p < .05$.

According to Cohen's (1992) suggestion, Cohen's *d* of .20 represents a small effect size, .50 represents a medium effect size, and above .80 represents a large effect size. Following this interpretation, the effect sizes reported above indicate small-sized effects.

5.5 Discussion

This questionnaire survey was designed to develop measures of parent demand and parent support; to examine the relationships between the influence of employees' parents and work-family balance; and to provide a work-family balance model which includes the influence of employees'

parents. The data were collected from 376 employees in Taiwan and were analysed using various statistical techniques.

In order to develop multidimensional measures to assess the influence of employees' parents (Research Objective Two), parent demand and parent support scales were introduced. The adequacy and validity of the proposed measures were assessed by means of EFA and CFA to ensure the factor structures of scales possessed appropriate levels of internal consistency, composite reliability, convergent validity and discriminant validity. Parent demand and parent support were properly structured in analyses, and two factors each emerged from parent support and parent demand. Parent demand for help and parent demand for company were identified from the parent demand scale, while parent emotional support and parent problem-solving support were recognised from the parent support scale. These subscales produced good convergence and discriminant validity and the structure of parent demand and parent support was also validated. This provided multidimensional indicators to investigate the influence of employees' parents in Taiwan. These scales also measured demand and support from parents specifically, unlike previous research, which looked at the influence of families in general, such as Boyar and his colleagues' (2007) family demand and King and her colleagues' (1995) family support. This can help to further understand the impact of employees' parents in work-family research.

Since one type of parent demand and two types of parent support were eliminated in EFA (see Section 5.4.1), the current study further examines the correlations between the three impacts of employees' parents (financial demand, domestic help, and financial support) and work-family balance. The correlation coefficients are summarised in Table 33. First, the results show that financial demand from employees' parents had no impact on employees' work-family balance, which supports participants' statement in the interview

study (Chapter 4) that it is not stressful to give money to their parents. Second, parent domestic help was not related to work-family balance, which was inconsistent with previous studies. This may be due to the different concept of domestic help. In this survey, domestic help only relates to household assistance from employees' parents. However, in Fu and Shaffer's (2001) study, domestic help refers to household assistance and childcare help provided by parents and servants. The domestic help from parents in Chang and Lu's (2011) investigation also considered the support from employees' parents-in-law. In addition, the interview participants described how domestic help could reduce the conflict between work and family domains, but the questionnaire survey data did not demonstrate this relationship. Further examination may be needed in the future. Third, financial support from parent had significant associations with WFE ($r = .14, p < .01$) and FWE ($r = .20, p < .001$). This is consistent with the findings of the interview study that receiving parents' financial support helped employees to deal with their work-family balance. In addition, it is also in the same vein as Aryee and his colleagues' examination (2005) that family support was more strongly related to FWE than WFE.

Table 33
Correlations Between Domestic Help, Financial Support, Financial Demand, Work-Family Balance and Outcome Variables

Variable	Financial demand	Domestic help	Financial support
1. WFC	.09	.10	.04
2. FWC	.07	.07	-.09
3. WFE	.02	.05	.14**
4. FWE	-.04	.07	.20***

Note. $N = 376$. ** $p < .01$, *** $p < .001$.

The results of two t tests revealed the impact of childcare and accommodation support from parents on employees' work-family balance. First, parents providing childcare would enhance married employees' ability to participate in the work domain, which is in line with the evidence provided in the interview study. This kind of help from employees' parents has been

identified as a valuable source of childcare (Wheelock & Jones, 2002). However, a negative effect was found in that it also produced a higher level of conflict at home. This highlighted that childcare provided by parents not only could strengthen employees' work-family enrichment, but could also produce certain stresses. This may be due to interpersonal conflicts with parents (Ling & Poweli, 2001). Overall, parents providing childcare had a stronger correlation with FWE ($r = .22, p = .01$) than FWC ($r = .19, p < .05$). Second, there was no significant relationship between parents providing accommodation and employees' work-family balance indicating that accommodation support did not help employees to balance their work and family. This fails to support the findings of the interview study in which the interviewees noticed a positive impact on their work-family balance. Further examining the correlation coefficients, accommodation support had a negative relationship with organisational commitment ($r = -.11, p < .05$) and a positive relationship with turnover intention ($r = .12, p < .05$). A plausible explanation for this is that employees whose parents provide a house or flat to them have less concern about the repercussions of quitting their job, since they do not have the pressure of monthly rent.

Using the parent demand and parent support scale, this questionnaire survey examined the relationships between the influence of employees' parents, work-family balance and outcome variables (Research Objective Three). The results of regression analyses indicated that parent demand led to a higher level of FWC, whereas parent support led to a lower level of WFC and a higher level of WFE and FWE. This provides evidence that parents had a significant impact on their children's work-family balance. These results are in line with the preliminary model in the interview study, which proposed that work-family balance would be negatively affected by parent demand and positively affected by parent support. Moreover, work-family balance variables had significant relationships with outcome variables. These relationships were

expected and in line with previous meta-analytic reviews of the consequence associated with work-family balance (Amstad et al., 2011; McNall et al., 2010).

With SEM technique, two statistical models were generated for organisational behaviour outcomes and wellbeing outcomes (Research Objective Four). The path analysis results further confirm the relationships between the influence of employees' parents, work-family balance, and outcome variables. Full mediation effects were identified in the model for predicting organisational behaviours, while partial mediation effects were found in the model for predicting wellbeing. Each model depicts a comprehensive picture of how parents affect employees' work-family balance in Taiwan. In addition, the results of SEMs are partly in line with previous research, discussed below.

Voydanoff (2005) proposed two mechanisms for identifying the relationship between the influence of employees' parents and work-family balance: (a) positive relationships between family demands and work-family conflict, and (b) positive associations between family resources and work-family enrichment. Family demands are relatively salient for FWC because they would reduce employees' ability to meet obligations in the work domain, while family resources are relatively salient for FWE because they would enhance employees' performance in the work domain (Voydanoff, 2004, 2005, 2008). This thesis found that FWC was influenced only by parent demand for help. In contrast, WFE and FWE were affected by parent emotional support and parent problem-solving support. Parent emotional support was more beneficial for FWE than WFE. Taken together, the findings are thus mostly consistent with Voydanoff's (2005) hypotheses.

More interestingly, a positive relationship between parent demand for help and WFE were found within both SEM models. This means that providing help to parents can in some ways have a positive impact on employees work performance. A possible reason for this phenomenon is that Taiwanese

employees with demands from parents at home may feel they have a greater obligation to succeed at work, and therefore, have a more positive attitude towards work. In addition, researchers suggested that providing care not only could increase levels of psychological distress, but also produce some degree of accomplishment (Abel, 1991; Gerstel & Gallagher, 1993). Thus, it is understandable that the positive relationship between parent demand for help and WFE may be due to a sense of accomplishment from taking care of their parents. Although this positive effect was identified, parent demand for help had a stronger impact on FWC than WFE. Moreover, the current survey also found that parent demand for help had a negative relationship with depression in the research model for predicting wellbeing. This phenomenon is along the lines of Grestel and Gallagher's (1993) finding that caring for parents did not significantly contribute to depression and spending more hours with helping parents reduced employees' depression.

In terms of the relationships between work-family balance variables and outcomes, researchers (Ford et al., 2007; Frone et al., 1992a; Frone et al., 1997) advocated an effective cross-domain mechanism, which proposed that the effects from the work domain (WFC and WFE) are related to family-related outcomes and the effects from the family domain (FWC and FWE) are related to work-related outcomes. For example, when work roles interfere with family roles, employees will find difficulties meeting family demands and thus are more likely to experience greater distress and lower satisfaction in the family domain. In the findings of this survey, the significant relationships between FWC and organisational behaviour, and WFC/WFE and wellbeing support the cross-domain mechanism.

However, in a meta-analytic review, Shockley and Singla (2011) further introduced the source attribute mechanism to reconsider the relationships between work-family balance variables and satisfaction. The rationale for the source attribute mechanism is that, for example, when work interferes with

family, employees may not only experience decreased satisfaction in the family domain, but may also blame the work domain because it was the source of the conflict. In terms of conflict perspective, Amstad et al. (2011) have found that WFC had stronger relationships with work-related outcomes than nonwork-related outcomes, while FWC had stronger relationships with nonwork-related outcomes than work-related outcomes. In terms of enrichment perspective, McNall et al. (2010) indicated that the correlations between WFE and work-related outcomes were higher than WFE and nonwork-related outcomes, whereas the correlations between FWE and nonwork-related outcomes were higher than FWE and work-related outcomes. In the same vein, the results of this survey also found that WFE had significant relationships with organisational behaviour variables and its coefficients were higher than the coefficients between WFE and wellbeing variables. Thus, this is in line with Shockley and Singla's (2011) contention.

This questionnaire survey also serves as a triangulation for the interview study in Chapter 4. This kind of triangulation can test the degree of cross/external validation (Jick, 1979) between methods. The analyses of numerical data help check the consistency of and enhance the credibility of qualitative findings (Patton, 2014). According to the discussion above, this questionnaire survey provides considerable evidence to support the majority of the interview findings.

Since this survey only collected data within several companies and organisations in a Chinese society, Taiwan, it imposes limitations on the generalisability of the findings. First, several studies had identified the significant differences between Chinese and Western societies in cross-cultural work-family research (Aryee, Fields, et al., 1999; Lu et al., 2010; Yang et al., 2000). Thus, the generalisability of the survey findings to non-Chinese may be restricted. Second, this study only surveyed Chinese employees in Taiwan. Therefore, generalising the findings to other Chinese societies, such

as China, and Hong Kong, should be approached with caution. Researchers have mentioned the differences between Taiwan and China in political, economic, and social characteristics (Lu, Cooper, Kao, & Zhou, 2003). Third, the participants were recruited mainly from companies in northern Taiwan, and therefore findings may not be regarded as representative of all Taiwanese employees.

In order to enhance the findings' reliability, this thesis conducted another study as a triangulation to provide the verification and validation of this questionnaire survey analysis. A possible method was to access other organisations to recruit new participants for re-examining the same questionnaire. However, the researcher has found it was difficult to obtain new organisation-based samples since many organisations in Taiwan were reluctant to allow data collection. Shultz, Hoffman, and Reiter-Palmon (2005) also identified the same complication in the United States and proposed the use of secondary data sets as an alternative data collection method within the industrial-organisational psychology field. In the same vein, occupational health psychology researchers also suggested that secondary data could be another source of acquiring research data and could be supplementary to primary data source (Fisher & Barnes-Farrell, 2012). Following these suggestions, the next chapter will conduct another study to examine the influence of parents on employees' work-family balance using a secondary data set.

5.6 Chapter Summary

This chapter presented a questionnaire survey to examine the relationships between the influence of parents on employees' work-family balance and outcomes. First, two measures of parent demand and parent support were developed. The measure of parent demand consisted of the need for help and company while the measure of parent support was comprised of parent

emotional support and problem-solving support. Next, using regression analysis, the impact of employees' parents was identified. The results indicated that parent demand and parent support had significant influence on employees' work-family balance. After further examination, the work-family balance models for predicting organisational behaviours and wellbeing had good fits of the data. In order to improve the reliability of the results of this questionnaire survey, the next chapter will carry out a supplementary analysis to investigate the influence of parents on employees' work-family balance in Taiwan using a secondary data set.

Chapter 6 Secondary Data Analysis

6.1 Chapter Overview

This chapter presents a secondary data analysis as an additional examination of the relationships between parent demand, parent support and work-family balance. The structure of this chapter is shown in Figure 18. First, Section 6.2 introduces the rationale of using secondary data. In Section 6.3, the detailed methodology is described including the data set used, sampling criteria, measures and analysis procedure. The analysis results are described in Section 6.4, following a brief discussion in Section 6.5.

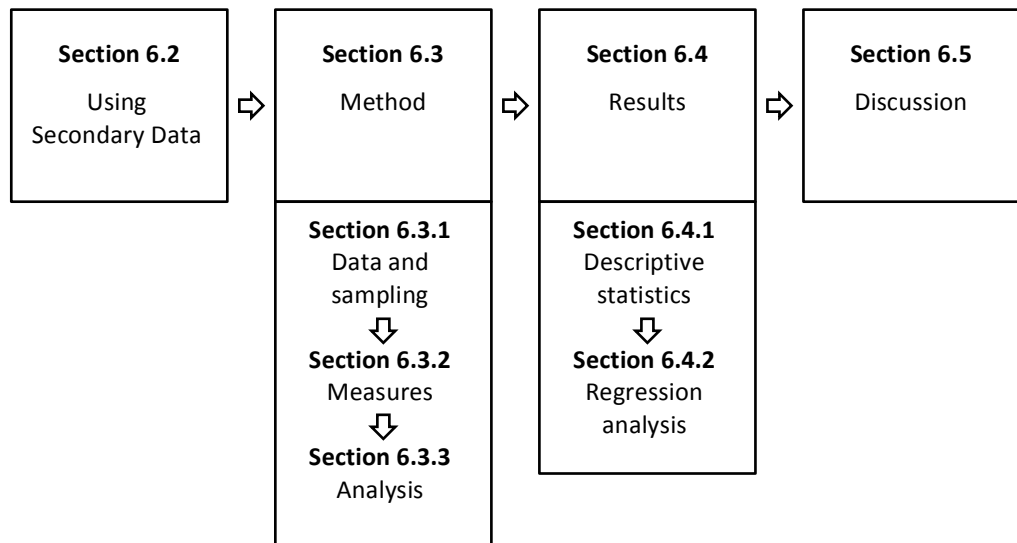


Figure 18. Chapter six structure

6.2 Using Secondary Data

This chapter analyses a secondary data set to provide a triangulation for the findings of the questionnaire survey. First, a brief introduction of secondary data is provided. Secondary data can be varied referring to data generated through systematic review, documentary analysis, and large-scale surveys

(Smith, 2008). The data formats include journal papers, newspaper articles, letters, diaries, photographs, conversations, medical records, and survey data sets. This chapter focuses on the numeric empirical data such as the General Social Survey (GSS) that has been collected and made available by a data gatherer. Due to the advance of information technology, the accessibility of secondary data has been largely improved and thus researchers can efficiently reach and obtain large-scale data sets online (Fisher & Barnes-Farrell, 2012). The purpose of analysing second-hand numeric data is to re-analyse data for answering the original research question with better statistical techniques, or answering new questions with old data (Glass, 1976).

The use of secondary data offers many advantages. First, the most beneficial advantage is that secondary data already exist. Researchers may save a considerable amount of time on designing questionnaires and collecting data and may even access databases with no cost using publicly available secondary data resources. Second, secondary data often employ a rigorous sampling approach, which provides samples that are likely to be representative of a specific group of people. Using a representative sample can enhance the generalisability of the analysis findings. Third, secondary data sets may embrace a wide scope of variables across disciplines, which can facilitate interdisciplinary studies. Finally, secondary data sets are typically comprised of large samples, which provide good statistical power for analysis.

With these benefits, secondary data can be an appropriate data source for researchers. Nonetheless, several disadvantages have been identified that should be noted. First, researchers need to be familiar with the policy provided by the original data owners and approval to use data sets has to be obtained in advance. Second, the majority of secondary data sets consist of enormous variables and information that may be difficult to navigate. Researchers may spend a large amount of time organising a data set for their analysis. Third, the measurement properties were design by gatherers, and

therefore researchers cannot hope to obtain specific measures that they prefer (Andersen, Prause, & Silver, 2011; Fisher & Barnes-Farrell, 2012; Shultz et al., 2005).

Although there are many issues to be considered regarding using secondary data, occupational health psychology researchers have identified the underutilisation of and advocated the benefits of secondary data (Fisher & Barnes-Farrell, 2012). Moreover, in a review study, Casper et al. (2007) found a significant increased tendency for working with secondary data in the work-family field. Several secondary data sets have been used in previous work-family studies including the 1977 Quality of Employment Survey (Pleck et al., 1980), National Survey of Midlife Development in the United States (MIDUS) (Grzywacz & Bass, 2003; Grzywacz & Marks, 2000; Voydanoff, 2005), the 1997 National Study of the Changing Workforce (Voydanoff, 2004) and the IBM 2001 Global Work and Life Issues Survey (Hill et al., 2004). Recently, researchers also published an article which investigated the influence of work and family demand on work-family conflict in Taiwan using a Taiwanese national survey (Lu et al., 2008). These studies provide paradigms to use large-scale survey in work-family research. Accordingly, a secondary data set was obtained to examine the influence of parents on employees' work-family balance.

6.3 Method

6.3.1 Data and sampling

After searching possible secondary databases and using Lu and her colleagues' (2008) study as reference, a nation wide survey in Taiwan called the Taiwan Social Change Survey (TSCS) was selected. The TSCS started in the early 1980s. The aim of the survey is to track the long-term trends of social changes and provides national representative survey data on various topics, which include

Taiwan's family, education, politics, economics, culture, religion, health and globalisation.

The first cycle was a two-year survey held in 1984 and 1985. Followed by a five-year second cycle survey between 1990-1994 and then carried out every five years cyclically. The survey was conducted by the Institute of Sociology, Academia Sinica (surveys before the third cycle were conducted by the Institute of Ethnology, Academia Sinica), and sponsored by the National Science Council, the Republic of China.

The TSCS organiser also cooperates closely with neighbouring countries, for example China and South Korea, in designing international comparative surveys. In addition, the TSCS has been part of the International Social Survey Programme (ISSP) since 2001 and has included questionnaire modules from the ISSP since 2002. In 2003, TSCS was incorporated into the East Asian Social Survey (EASS), along with the Japanese General Social Survey (JGSS) and the Korean General Social Survey (KGSS). The EASS later included the Chinese General Social Survey (CGSS) and the Hong Kong Social Indicator Survey and became a major regional survey project.

The TSCS has been conducted on more than 100,000 participants with rigorous methodology. It has a high reputation in Taiwan. The TSCS data sets are accessible to scholars for academic use. The TSCS has become one of the largest survey projects of all the general social surveys in the world (Smith, Kim, Koch, & Park, 2006).

The analysis data were collected from the sixth cycle's second year TSCS in 2011 since the information about the influence of parent and work-family related variables could be retrieved. The questionnaire consists of two modules, the Family questionnaire and the Health questionnaire. This analysis

only adapted the Family questionnaire, repeated every five years. A total of 2,135 participants' completed questionnaires were obtained. Participants recruited for data analysis were restricted to (a) those in full-time employment, (b) those aged under 65 years, since statutory age for retirement is 65 in Taiwan (The Ministry of Labor of the Republic of China, 2013b), and (c) those with at least one parent alive. A total of 829 respondents met these inclusion criteria. After exclusion of 33 respondents who had considerable missing data, this resulted in a final sample of 796 respondents for further analysis.

Table 34
Demographic Characteristics of Secondary Data

Characteristic	Frequency	Percentage
Gender		
Female	361	45.4%
Male	435	54.6%
Age		
10-19	5	0.6%
20-29	189	12.7%
30-39	253	31.8%
40-49	225	28.3%
50-59	105	13.2%
60-69	19	2.4%
<i>M</i> = 38.10		
<i>SD</i> = 10.21		
Marital status		
Single	292	36.7%
Married	504	63.3%
Education		
High school	339	42.6%
College or University	376	47.2%
Postgraduate	81	10.2%
Position		
Non manager	570	71.6%
Manager	226	28.4%

Note. *N* = 796. *SD* = standard deviation.

The details of respondents' characteristics can be found in Table 34. The sample consisted of 54.6% of male and 45.4% of female, with ages ranged between 19 to 63 and a mean age of 38.10. More than a third (36.7%) of the

respondents were single and never married. Most people had a college or university degree. Almost 30% of respondents were managers. Both white-collar and blue-collar employees were included.

6.3.2 Measures

The analysis was essentially based on secondary data. The questions for each variable were taken from the TSCS questionnaire directly. The research variables included parent demand, parent support, WFC, FWC, WFE, FWE, job satisfaction, life satisfaction and demographics. Established multi-item scales for these variables were not used because a large-scale survey covers a broader scope of variables within limited questionnaire space or length, and thus obtains information on each construct using only a few questions or just a single-item.

6.3.2.1 Parent demand and parent support

Six questions were obtained from the survey as proxies for demands and support from employees' own parents. Questions were in a symmetrical pattern to ask the interaction between employees and their own parents. The direction from employees to their own parents measured parent demands and the direction from parents to employees measured parent support. Each direction had three questions that were (a) provide financial support; (b) take care of household chores or care work; and (c) listen to personal problems or concerns. A 5-point scale was used to measure how frequently these statements happened in participants' life, coded 1 (very frequently) to 5 (not at all). After reverse coding, a higher score indicates a higher level of parent demand or parents support.

6.3.2.2 *Work-family balance*

Six questions were used to measure four dimensions of the work-family balance. Participants indicated how their job interferes with their family life. WFC was measured on one question: “The demand of your job interfered with your family life”; FWC was asked on one question: “The demands of your family life interfered with your job”; WFE was rated on two questions: (a) “Experience at work helped you in your family life”, and (b) “Being happy at work improves your spirits at home”; FWE was acquired on two questions: (a) “Experience at home helped you in your work life”, and (b) “With family members’ support, you were able to concentrate on your work”. A 5-point scale was used to rate how often these statements happened to participants, marked 1 (very frequently) to 5 (not at all). After reverse coding, a higher score indicated a higher frequency.

6.3.2.3 *Outcomes*

Outcome variables used single-item measures. Job satisfaction was measured by “How satisfied are you with your current job?” and life satisfaction was questioned by “All things considered, how satisfied are you with your life as a whole these days?”. Five point scales were applied and participants rated 1 (very satisfied) to 5 (very dissatisfied). After reverse scoring, a higher score indicated a higher level of satisfaction.

6.3.2.4 *Demographics*

Information on background characteristics, including gender (0 = female; 1 = male), age (in years), marital status (0 = single; 1 = married), education (high school or below = 1, college or university = 2, and postgraduate = 3), and position (0 = non manager; 1 = manager) was also collected.

6.3.3 Analysis

In order to examine the relationships between parent support, parent demand, work-family balance, and outcomes, the processes for conducting hierarchical regressions in the last chapter were repeated in this chapter. First, four hierarchical regression models were constructed to examine parent demand and parent support variables for predicting four-dimensional work-family balance (including WFC, FWC, WFE, and FWE), after controlling for demographic variables. There were two steps in each hierarchical regression model. In the first step of the analysis, demographic variables were entered, consisting of gender, age, marriage, education and position. In the second step, parent demand and parent support were also included. The second step allowed for the contribution of the influence of employees' parents to be assessed in predicting work-family balance scores.

Second, five hierarchical regression models were constructed to examine work-family balance components on related outcomes, after controlling for the demographics and the influence of employees' parents. There were three steps in each hierarchical regression. Using the similar order of variable entry, the five demographic variables were initially entered in Step 1, and then the components of parent demand and support were entered as a block in Step 2. Finally, four work-family balance components were added in Step 3. Step 3 allowed the contribution of work-family balance variables to be assessed in predicting related outcomes.

6.4 Results

6.4.1 Descriptive statistics

All variables used in this analysis are summarised in Table 35. WFC was significantly related to FWC ($r = .54, p < .001$), while WFE was significantly related to FWE ($r = .55, p < .001$). The influence of employees' parents had various effects on work-family balance variables and outcomes variables (job satisfaction and life satisfaction). Four work-family balance variables were significantly related to their outcome variables.

Table 35
Descriptive Statistics and Correlations of Secondary Data Variables

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. PD financial	3.04	1.30											
2. PD domestic	2.82	1.21	.27***										
3. PD problem	3.22	.98	.18***	.31***									
4. PS financial	1.47	.89	-.10**	.10**	.11**								
5. PS domestic	2.64	1.53	.19***	.30***	.12**	.25***							
6. PS problem	2.84	1.10	.06	.18***	-.56***	.19***	.29***						
7. WFC	2.22	1.12	.02	-.02	.04	.13***	.09*	.06					
8. FWC	1.76	.89	.03	-.02	.08*	.04	-.01	.00	.54***				
9. WFE	2.96	.85	.02	.03	.15***	.04	-.05	.11**	.08*	.12**			
10. FWE	3.37	.81	.03	.10**	.25***	.12**	.00	.21***	.09*	.02	.55***		
11. JS	3.68	.87	.00	.01	.04	-.01	-.11**	.02	-.24***	-.12**	.14***	.13***	
12. LS	3.80	.88	.00	.08*	.12**	-.07	-.13***	.10**	-.17***	-.10**	.17***	.20***	.34***

Note. *N* = 796. PD financial = parent financial demand; PD domestic = parent domestic demand; PD problem = parent problem listening demand; PS financial = parent financial support; PS domestic = parent domestic support; PS problem = parent problem listening support; WFC = work-to-family conflict; FWC = family-to-work conflict; WFE = work-to-family enrichment; FWE = family-to-work enrichment; JS = job satisfaction; LS = life satisfaction. * $p < .05$. ** $p < .01$. *** $p < .001$.

6.4.2 Regression analysis

6.4.2.1 Regressions of work-family balance

The hierarchical regression analysis summarised in Table 36 shows the effects on WFC. In Step 1, demographic variables accounted for 12% of the variation in WFC. In Step 2, the influence of employees' parents accounted for an additional 1%. In combination, the variables accounted for 13% of the variance in WFC ($R^2 = .13$, $R^2_{\text{adjusted}} = .12$, $F(11, 784) = 10.36$, $p < .001$). The standardised regression coefficients indicate that parent financial support ($\beta = .08$, $p < .05$) had significantly positive relationship with WFC.

Table 36
Hierarchical Multiple Regression Analysis of Secondary Data for Variables Predicting WFC

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	.14	.08	.06	.12	.08	.05
Age	-.02	.01	-.19***	-.02	.01	-.15**
Marriage	.40	.10	.17***	.42	.10	.18***
Education	.43	.06	.25***	.43	.06	.25***
Position	.27	.09	.11**	.27	.09	.11**
PD financial				.04	.03	.04
PD domestic				-.04	.04	-.04
PD problem				.00	.05	.00
PS financial				.10	.05	.08*
PS domestic				.04	.03	.05
PS problem				.01	.04	.01
R^2		.12			.13	
Adjusted R^2		.11			.12	
<i>F</i>		20.99***			10.36***	
<i>df</i>		(5, 790)			(11, 784)	

Note. $N = 796$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The hierarchical regression analysis summarised in Table 37 shows the effects on FWC. In Step 1, demographic variables accounted for 8% of the variation in FWC. In Step 2, the influence of employees' parents accounted for an additional 1%. In combination, a significant model emerged and the variables accounted for 9% of the variance in FWC ($R^2 = .09$, $R^2_{\text{adjusted}} = .08$, $F(11, 784) = 7.60$, $p < .001$). The standardised regression coefficients indicate that parent problem listening demand ($\beta = .12$, $p < .01$) had significantly positive relationship with FWC.

Table 37
Hierarchical Multiple Regression Analysis of Secondary Data for Variables Predicting FWC

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	.09	.06	.05	.10	.07	.06
Age	-.02	.00	-.17***	-.02	.00	-.20***
Marriage	.46	.08	.25***	.45	.08	.25***
Education	.26	.05	.19***	.25	.05	.19***
Position	.07	.07	.04	.07	.07	.03
PD financial				.04	.03	.05
PD domestic				-.03	.03	-.04
PD problem				.11	.04	.12**
PS financial				.02	.04	.02
PS domestic				-.02	.03	-.03
PS problem				-.07	.04	-.08
R^2		.08			.09	
Adjusted R^2		.08			.08	
<i>F</i>		14.37***			7.60***	
<i>df</i>		(5, 790)			(11, 784)	

Note. $N = 796$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The hierarchical regression analysis summarised in Table 38 shows the effects on WFE. In Step 1, demographic variables accounted for just 3% of the variation in WFE. In Step 2, the influence of employees' parents accounted for an additional 2%. In combination, a significant model emerged and the variables accounted for 5% of the variance in WFE ($R^2 = .05$, $R^2_{\text{adjusted}} = .04$, $F(11, 784) = 3.29$, $p < .001$). The standardised regression coefficients indicate that parent problem listening demand ($\beta = .10$, $p < .05$) had significantly positive relationship with WFE.

Table 38
Hierarchical Multiple Regression Analysis of Secondary Data for Variables Predicting WFE

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	-.08	.06	-0.05	-.03	.06	-.02
Age	.00	.00	0.04	.00	.00	.05
Marriage	.15	.08	0.09*	.15	.08	.08
Education	.07	.05	0.06	.05	.05	.04
Position	.18	.07	0.09**	.17	.07	.09*
PD financial				.01	.03	.01
PD domestic				.01	.03	.01
PD problem				.09	.04	.10*
PS financial				.06	.04	.06
PS domestic				-.02	.02	-.04
PS problem				.05	.03	.06
R^2		.03			.05	
Adjusted R^2		.02			.04	
<i>F</i>		4.38**			3.92***	
<i>df</i>		(5, 790)			(11, 784)	

Note. $N = 796$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The hierarchical regression analysis summarised in Table 39 shows the effects on FWE. In Step 1, demographic variables accounted for 5% of the variation in FWE. In Step 2, the influence of employees' parents accounted for an additional 7%. In combination, a significant model emerged and the variables accounted for 12% of the variance in FWE ($R^2 = .12$, $R^2_{\text{adjusted}} = .11$, $F(11, 784) = 9.45$, $p < .001$). The standardised regression coefficients indicate that parent problem listening demand ($\beta = .12$, $p < .01$), financial support ($\beta = .11$, $p < .01$), and problem listening support ($\beta = .12$, $p < .01$) had significantly positive relationship with FWE.

Table 39
Hierarchical Multiple Regression Analysis of Secondary Data for Variables Predicting FWE

Variable	Step 1			Step 2		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	-.21	.06	-.13***	-.17	.06	-.10**
Age	.01	.00	.07	.01	.00	.09*
Marriage	.04	.07	.02	.05	.07	.03
Education	.22	.04	.18***	.19	.04	.15***
Position	.05	.06	.03	.04	.06	.02
PD financial				.02	.02	.03
PD domestic				.04	.03	.06
PD problem				.10	.04	.12**
PS financial				.10	.03	.11**
PS domestic				-.02	.02	-.04
PS problem				.09	.03	.12**
R^2		.05			.12	
Adjusted R^2		.04			.11	
<i>F</i>		8.19***			9.45***	
<i>df</i>		(5, 790)			(11, 784)	

Note. $N = 796$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

6.4.2.2 Regressions of outcome variables

The hierarchical regression analysis summarised in Table 40 shows the effects on employees' job satisfaction. In Step 1, demographic variables accounted for only 2% of the variation in job satisfaction. In Step 2, the influence of employees' parents accounted for an additional 1%. In Step 3, work-family balance contributed another 9%. In combination, a significant model emerged and the variables accounted for 12% of the variance in job satisfaction ($R^2 = .12$, $R^2_{\text{adjusted}} = .10$, $F(15, 780) = 6.81$, $p < .001$). The standardised regression coefficients indicate that WFC ($\beta = -.28$, $p < .001$) were negatively related to job satisfaction, whereas WFE ($\beta = .10$, $p < .05$) were positively related.

Table 40
Hierarchical Multiple Regression Analysis of Secondary Data for Variables Predicting Job Satisfaction

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	-.13	.06	-.08**	-.11	.07	-.06	-.07	.06	-.04
Age	.00	.00	.02	.00	.00	-.01	-.01	.00	-.07
Marriage	.09	.08	.05	.09	.08	.05	.16	.08	.09*
Education	-.01	.05	-.01	-.02	.05	-.01	.06	.05	.04
Position	.20	.07	.10**	.19	.07	.10**	.22	.07	.12**
PD financial				.02	.03	.02	.02	.03	.03
PD domestic				.03	.03	.04	.02	.03	.02
PD problem				.00	.04	.00	-.02	.04	-.02
PS financial				.02	.04	.02	.03	.04	.03
PS domestic				-.06	.03	-.11*	-.05	.02	-.09*
PS problem				.03	.04	.03	.01	.03	.02
WFC							-.21	.03	-.28***
FWC							-.01	.04	-.01
WFE							.11	.04	.10*
FWE							.08	.05	.07
R^2		.02			.03			.12	
Adjusted R^2		.01			.02			.10	
<i>F</i>		3.19**			2.12*			6.81***	
<i>df</i>		(5, 790)			(11, 784)			(15, 780)	

Note. $N = 796$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The hierarchical regression analysis summarised in Table 41 shows the effects on employees' life satisfaction. In Step 1, demographic variables accounted for just 4% of the variation in life satisfaction. In Step 2, the influence of employees' parents accounted for an additional 3%. In Step 3, work-family balance contributed another 7%. In combination, a significant model emerged and the variables accounted for 14% of the variance in life satisfaction ($R^2 = .14$, $R^2_{\text{adjusted}} = .12$, $F(15, 780) = 8.10$, $p < .001$). The standardised regression coefficients indicate that WFC ($\beta = -.18$, $p < .001$) were negatively related to life satisfaction, whereas FWE ($\beta = .13$, $p < .001$) were positively related.

Table 41
Hierarchical Multiple Regression Analysis of Secondary Data for Variables Predicting Life Satisfaction

Variable	Step 1			Step 2			Step 3		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	-.08	.06	-.04	-.02	.07	-.01	.02	.06	.01
Age	.01	.00	.11*	.01	.00	.07	.00	.00	.02
Marriage	.15	.08	.08	.14	.08	.08	.20	.08	.11*
Education	.06	.05	.04	.05	.05	.03	.09	.05	.07
Position	.13	.07	.07	.12	.07	.06	.14	.07	.07
PD financial				-.01	.03	-.02	-.01	.03	-.01
PD domestic				.09	.03	.12**	.07	.03	.10**
PD problem				.02	.04	.02	.00	.04	.00
PS financial				-.04	.04	-.04	-.04	.04	-.04
PS domestic				-.08	.03	-.13**	-.07	.02	-.12**
PS problem				.11	.04	.13**	.09	.03	.11*
WFC							-.14	.03	-.18***
FWC							-.04	.04	-.04
WFE							.08	.04	.08
FWE							.14	.05	.13**
R^2		.04			.07			.14	
Adjusted R^2		.03			.06			.12	
<i>F</i>		4.94***			5.57***			8.10***	
<i>df</i>		(5, 790)			(11, 784)			(15, 780)	

Note. $N = 796$. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In relation to the statistical assumption of no multicollinearity and of the independence of errors, the coefficients of VIF, tolerance indicators, and the Durbin-Watson statistic were inspected. All coefficients of VIF were between

1.03 and 1.95 and all tolerance indicators were ranged between .51 and .97. All VIF were all below 10 and the tolerance statistics above .1, indicating there was no collinearity within the data (Field, 2013). The Durbin-Watson tests showed that the assumption of independent errors was tenable since all coefficients of Durbin-Watson were close to 2 with values varied between 1.92 and 2.20 in regression analyses, thus meeting the criteria of between 1 and 3 (Field, 2013).

6.5 Discussion

The main purpose of this chapter was to provide a triangulation for the questionnaire survey in Chapter 5 using a Taiwanese secondary data set. The impact of employees' parents was measured using financial demand, domestic demand, and problem listening demand as parent demand, and financial support, domestic support, and problem listening support as parent support. Using a national representative sample, the findings in this chapter provided further statistical evidence relating the influence of employees' parents to work-family balance and outcome variables. Overall, the results of this secondary data analysis found that parent demand had a negative relationship with work-family balance whereas parent support had a positive relationship with work-family balance. Looking into detailed components of the influence of parents, the findings demonstrated that (a) parent problem listening demand had positive relationships with FWC, WFE, and FWE; (b) parent financial support had positive relationships with WFC and FWE; and (c) parent problem listening support had a positive relationship with FWE. With regard to the relationship between work-family balance and outcome variables, job satisfaction was significantly predicted by WFC and WFE while life satisfaction was significantly influenced by WFC and FWE.

These findings triangulate the results of the questionnaire survey. First, the levels of correlations between WFC and FWC (.54), and WFE and FWE (.55) in

this secondary data analysis are similar with those correlations in the questionnaire survey, which was .47 and .55 respectively. Second, parent financial demand and parent domestic support were not significantly related to work-family balance variables. Third, parent problem listening demand had positive effects on both FWC and WFE. This demand demonstrated the same relationships as parent demand for help in the questionnaire survey and parent problem listening demand had a stronger impact on FWC than WFE. The current analysis also found that parent problem listening demand had a positive relationship with life satisfaction. This is in line with the contention proposed by Gerstel and Gallagher (1993) that employees may yield certain satisfaction and gratification when caring for parents.

These findings are mostly in the line with the research findings in the questionnaire survey. This can overcome the intrinsic biases from using a single data set and may provide more robust and generalisable findings. With this data triangulation, this thesis has reasonable confidence to propose that parent demand was negatively related to work-family balance and parent support was positively associated with work-family balance, with the exception of parent demand and WFE in Taiwan. In addition, the positive relationship between parent demand for help and WFE identified in the questionnaire survey can be confirmed, indicating that these were not exceptional circumstances.

Due to the usage of secondary data in this chapter, several inherent limitations should be considered. One of which is that the data lacked desirable measurements in the analysis. For example, measures of work-family balance variables were not well-established instruments. Additionally, several variables were measured using single-item measures such as WFE, FWE, job satisfaction and life satisfaction. These measures may lack reliability (Netemeyer et al., 1996) and inadequately capture the constructs

(Schriesheim, Powers, Scandura, Gardiner, & Lankau, 1993) due to random measurement error.

6.6 Chapter Summary

This chapter has sought to use a secondary data from TSCS to provide a triangulation for the questionnaire survey. First, the rationale of using secondary data was introduced. Next, the information about secondary data and the analysis process used in this chapter were provided. It examined how the influence of parents affects employee' work-family balance. The analyses found that parent demand negatively predicted work-family balance variables, while parent support positively influenced work-family balance variables. By conducting this secondary data analysis, the findings in the questionnaire survey were further supported. The next chapter will sum up the main findings of studies and discuss implications of this thesis.

Chapter 7 General Discussion

This chapter presents a general discussion of this thesis. The structure of this chapter is displayed in Figure 19. First, Section 7.2 summaries the main research findings of each research objective. Next, the implications of this research are highlighted in Section 7.3 by reflecting on theoretical, methodological, and practical perspectives. Section 7.4 discusses possible directions for future research and Section 7.5 concludes the thesis by summarising the contributions.

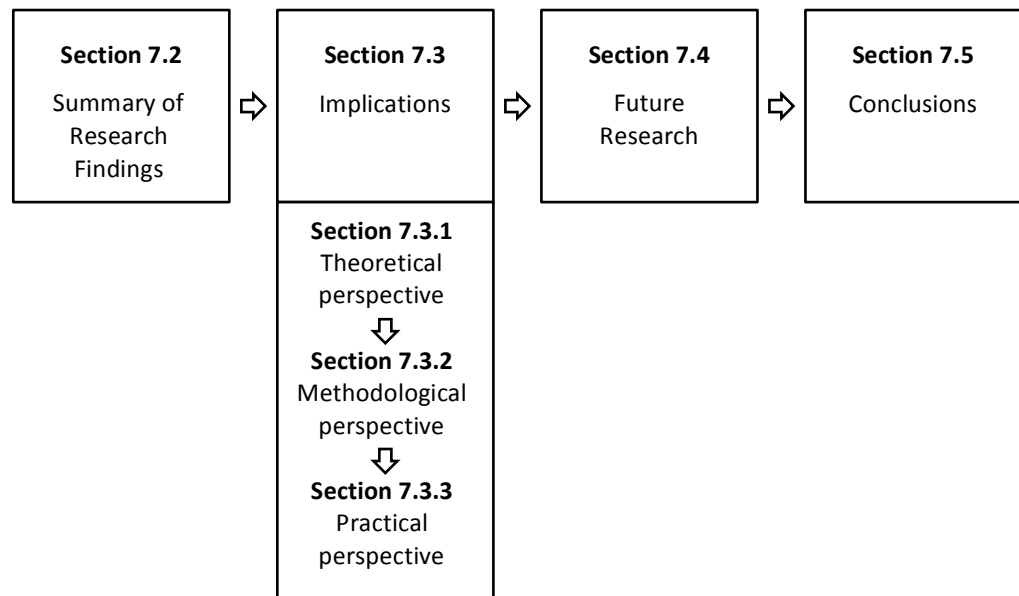


Figure 19. Chapter seven structure

7.1 Summary of Research Findings

The main purpose of this thesis was to explore the influence of parents on employees' work-family balance in Taiwan and understand their impact on work-family consequences. This research began with a general review to introduce the basis and framework of work-family balance. Next, a systematic review was performed for understanding the role of employees' parents in

existing literature. Four research gaps were identified based on the evidence of the review. First, employees' parents were previously only treated as individuals that need eldercare and provide domestic help. Second, the measures for the influence of employees' parents commonly used simple indicators. Third, the effects of the influence of employees' parents were inconsistent in previous studies. Fourth, it lacked a comprehensive work-family balance model which considers the effects of employees' parents. Therefore, four research objectives were pursued.

The first research objective aimed to explore the possible demands and support from Taiwanese parents and thus an interview study was conducted in Taiwan. Analysis of the interview transcripts revealed that Taiwanese employees' perceived six types of demands (regular visits, frequent contact, ailing health care, financial demand, expectation of the job and marriage) and six types of support from their parents (emotional support, financial support, domestic help, childcare, accommodation and discussing work experience). Moreover, interviewees' statements revealed that work-family balance was impacted by parent demand negatively and parent support positively.

The second research objective was to develop multidimensional parent demand and parent support measures for Taiwanese employees using the findings of the interview study. First, EFA was conducted to identify the latent factors of the parent demand and parent support measures. The measure of parent demand is comprised of two factors: need for help and need for company, and the measure of parent support is composed of two factors: emotional support and problem-solving support. Second, the validity of factor structure was examined by using CFA. Last, a four-factor model (need for company, need for help, emotional support, and problem-solving support) for parent demand and support were recognised as a better structure than other alternatives.

The third research objective was to examine the relationships between parent demand/parent support, work-family balance variables and outcome variables in Taiwan. The results of regression analyses supported the relationships between parent demand/parent support and work-family balance that were identified in the interview survey. As expected, work-family balance variables were significantly related to outcome variables.

The fourth research objective was to construct statistical work-family balance models considering the influence of employees' parents. The proposed two work-family balance models (for predicting organisational behaviour and for predicting wellbeing) both obtained good model fits. For predicting organisational behaviour, the model demonstrated full mediation effects, which were that parent demand/parent support indirectly (through work-family balance variables) influenced job satisfaction, organisational commitment, and turnover intention. For predicting wellbeing, the model showed partial mediation effects, which were that parent demand/parent support both directly and indirectly impacted on life satisfaction, anxiety, and depression.

A supplementary analysis was conducted to strengthen the research findings in the questionnaire survey. Using a population-representative survey, TSCS, the secondary data analysis revealed that parent demand had negative relationships with work-family balance variables, while parent support had positive relationships with work-family balance variables. These findings enhance the reliability of the research findings in the questionnaire survey.

7.2 Implications

The research findings in this thesis have several potential implications. They will be discussed in following sections regarding different aspects including (a)

theoretical perspective, (b) methodological perspective, and (c) practical perspective.

7.2.1 Theoretical perspective

Based on calls from researchers (Beauregard et al., 2009; Özbilgin et al., 2011) to modify the concept of family in work-family research to fit cultural backgrounds, this thesis expended the definition of family from that of a typical Western nuclear family to that of a traditional Chinese family. By doing so, employees' parents were considered in the family configuration. This captured the distinctive family context within Chinese society. Moreover, the interactions between employees and their parents were not fully considered in existing work-family balance models. Thus, this thesis focused on parent demand and parent support as antecedents of employees' work-family balance to establish work-family balance models for Chinese employees in Taiwan. Using SEM techniques, two work-family balance models discovered potential patterns of relationships between the antecedents, work-family balance, and outcomes. The results suggest that Taiwanese employees' parents have a recognisable effect on their children's work-family balance. The structural models suggest that parent demand and parent support have both direct and indirect impacts on consequences of work-family balance. These findings examined work-family balance with an alternative aspect which considered employees' role as adult children. In summary, the current research expanded the family structure to fit Taiwanese culture and identified the unique roles of employees' parents in the work-family balance models.

7.2.2 Methodological perspective

First, the systematic review highlighted that most researchers used simple indicators to capture parent demand and parent support and there were no well-established measures for parent demand and parent support. In order to

understand the influence of employees' parents in Taiwan, this thesis developed multidimensional measures for capturing employees' experiences of parent demand and support in Taiwan. The findings suggest these measures can recognise important components of the influence from Taiwanese employees' parents that are less likely to be captured by a single indicator or an objective index. Therefore, future studies in work-family research in Taiwan could benefit from adopting these multidimensional parent demand and parent support measures.

Second, the present thesis adopted multiple methods to examine the main research question. The first and second were complementary and used an explanatory sequential mixed methods design. The first study used interviews to explore the detailed characteristics of demands and support from employees' parents in Taiwan. After interpreting 18 interview transcripts, many different types of parent demand and parent support were identified and preliminary relationships between the influence of parents (i.e., parent demand and parent support) and work-family balance were proposed. The second study built on the findings from the interview study and then surveyed a broad sample of employees in order to understand how parents influence employees' work-family balance. Thus the questionnaire survey focused on responses from 376 employees. The survey data developed the measures for parent demand and parent support and examined the relationships between the influence of parents, work-family balance, and outcomes. Using SEM, two statistical models were established. The findings suggested that parent demand had a negative impact on work-family balance and parent support had a positive impact on work-family balance. In the third study, the use of secondary data analysis was somewhat opportunistic because of the relevance and quality of data found in the TSCS database. This secondary data was comprised of responses from 796 employees and was used to retest the relationships between the influence of parents, work-family balance, and outcomes. The findings validated the linkages between parent

demand/parent support and work-family balance and unintentionally partly supported findings in the interview survey (see Figure 20). These studies applied both cross-method and within-method triangulations (Jick, 1979). By using methodological triangulations, researchers can benefit from providing completeness and confirmation, and discovering consistency and contingencies between studies in their research (Jack & Raturi, 2006).

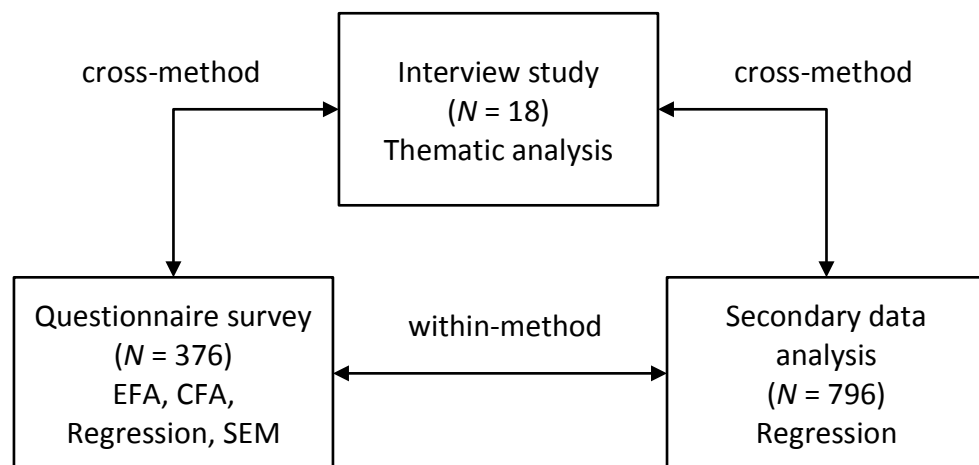


Figure 20. Triangulated studies design

7.2.3 Practical perspective

Having consideration of employees' parents is rare in the work-family field. The present thesis can thus offer some suggestions for the management practice. First, parent demand for help was related to FWC and parent demand for company was related to anxiety and depression. Thus, employers can help employees to cope with these demands from their parents to lessen the impact of conflict on unfavourable organisational behaviour and to reduce detrimental effects on employees' wellbeing. For example, human resource managers may consider providing flexible time off for employees when their parents need help and company.

Second, the Occupational Safety and Health Act (The Ministry of Labor of the Republic of China, 2013c) in Taiwan has been amended and introduced that employers should establish and implement health measures to protect employees' mental health. This went in to effect in July 2014. According to the research findings, employees' wellbeing can improve when they receive support from their parents. Therefore, organisational policy makers should consider employees' parents within family-related programs to facilitate the relationships between employees and their parents.

This thesis may also provide some empirical evidence to the Taiwanese government. The research data showed the importance of parents for Taiwanese employees. Although the Act of Gender Equality in Employment in Taiwan (The Ministry of Labor of the Republic of China, 2013a) describes how employees can have seven days leave per year for taking care of family members, it appears insufficient for Taiwanese employees compared with Western countries. In the United States the Family and Medical Leave Act of 1993 (United States Department of Labor, 2006) provides 12 workweeks of leave in a 12-month period for caring for family members, whereas the United Kingdom government provides a reasonable amount (there is no maximum) of time off for caring for employees' dependents (United Kingdom Government Digital Service, 2014). If enforced in Taiwan, these acts could improve employees' rights for family leave and could ensure employers give more consideration to family demands, particularly those from parents. Thus, the Taiwanese government should consider the benefit of introducing a more supportive act.

7.3 Future Research

First, the multidimensional parent demand and parent support measures were first introduced in the work-family research. Future studies are needed to replicate these measures using different samples within Taiwan. Since

there is a cultural similarity within Chinese societies, it is also worthy to validate the measures of parent demand and parent support using other Chinese samples in Hong Kong and China and to understand the similarity and differences of parents' impacts on employees' work-family balance within these areas.

Second, owing to the original intention of conducting this research, only employees' parents were considered in the research model. This provided a more concise model to understand how parents affected employees' work-family balance. However, it limits other sources of demands and support. Further research should employ multiple constructs of demands and support as stressors and sources, rather than only parents (e.g., work demands, supervisor support, colleague support, childcare demand, spouse support).

Third, a more complex family formation needs to be discussed in the future. For those employees who married in Taiwan, their family members are usually not only comprised of spouse, children and their parent, but also parents-in-law. Employees' spouses' parents were not considered in the current research. However, it is common to see that parents-in-law provide childcare and household chores in Taiwan. For example, married female employees are more likely to live with their parents-in-law in Taiwan (Lin et al., 2003) and they may receive childcare support and domestic help from their parents-in-law. On the other hand, this support may be obtained from male employees' parents-in-law. Therefore, parents-in-law may also have an impact on employees' work-family balance. Future studies should consider parents-in-law to provide a more comprehensive picture of the influence of parents for married employees.

7.4 Conclusions

The aim of this thesis was to understand the possible effects of parents on employees' work-family balance (i.e., WFC, FWC, WFE, FWE), organisational behaviour and wellbeing. This thesis has challenged existing theory on the typical nuclear family structure in the work-family field. A traditional Taiwanese family formation was introduced that consisted of not only employees' own nuclear family but also their parents. While some researchers have focused on employees' parents relating to eldercare and domestic help, this thesis provided evidence suggesting that other forms of parent demand and support are crucial in determining employees' work-family balance. Thereby, this thesis has explored several unique sources of demand and support from parents in a Taiwanese context. Moreover, this thesis has developed the multidimensional scales to measure the influence of employees' parents in Taiwan. This thesis argues that by considering employees' parents in work-family research in Chinese societies, researchers can gain a more accurate picture of work-family interactions that Taiwanese employees face in their real life between the work and family domains. In addition, this thesis has established work-family balance models linking up the influence of employees' parents with consequences such as organisational behaviour and wellbeing. Furthermore, instead of using single method, this thesis has employed multiple ways to collect and analyse data. This multi-method approach would significantly enhance the validity and generalisability of research findings.

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Appendix A Systematic Review Search Strategy

PsycINFO

1. (work-family or work-life).ti. or (work-family or work-life).ab.
2. limit 1 to (peer reviewed journal and human and (chinese or english) and yr="1985 -2012")
3. (balance* or conflict* or facilitation* or enrichment* or enhancement* or interfer* or spillover*).ti. or (balance* or conflict* or facilitation* or enrichment* or enhancement* or interfer* or spillover*).ab.
4. limit 3 to (peer reviewed journal and human and (chinese or english) and yr="1985 -2012")
5. (parent* or grandparent* or elder*).ti. or (parent* or grandparent* or elder*).ab.
6. limit 5 to (peer reviewed journal and human and (chinese or english) and yr="1985 -2012")
7. 2 and 4 and 6

ABI/INFORM Global

(ab(work-family) OR ti(work-family) OR ab(work family) OR ti(work family) OR ab(work-life) OR ti(work-life) OR ab(work life) OR ti(work life)) AND (ab(balance* OR conflict* OR facilitation* OR enrichment* OR enhancement* OR interfere* OR spillover*) OR ti(balance* OR conflict* OR facilitation* OR enrichment* OR enhancement* OR interfere* OR spillover*)) AND (ab(parent* OR grandparent* OR elder*) OR ti(parent* OR grandparent* OR elder*)) AND peer(yes) AND la.exact("English" OR "Chinese") AND pd(1985-2012)

Appendix B Interview Schedule



Institute of Work, Health & Organisations

INTERVIEW SCHEDULE

1. Please briefly tell me what your job involves. (e.g., job title, tenure)
2. How do you usually spend your nonwork time?
3. Do you live with your parents? If not, how often do you see them?
4. Describe any demands you face from your parents?
5. How do you feel about these demands from your parents?
6. How do these demands from your parents influence your work life?
7. Describe any support you receive from your parents.
8. How do you feel about this support from your parents?
9. How does this support from your parents influence your work life?
10. Demographic questions: Gender, age, marital status, children

Appendix C Ethics Approval for the Interview Study

Institute of Work, Health & Organisations

<http://www.nottingham.ac.uk/iwho>



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21/09/2012

Dear Chih-Ying

I-WHO Ethics Committee Review

Thank you for submitting your proposal on "The influence of employees' parents on work-life balance in Taiwan: Implications for organisational behaviour and well-being". This proposal has now been reviewed by I-WHO's Ethics Committee to the extent that it is described in your submission.

I am happy to tell you that the Committee has found no problems with your proposal. If there are any significant changes or developments in the methods, treatment of data or debriefing of participants, then you are obliged to seek further ethical approval for these changes.

We would remind all researchers of their ethical responsibilities to research participants. The Codes of Practice setting out these responsibilities have been published by the British Psychological Society. If you have any concerns whatsoever during the conduct of your research then you should consult those Codes of Practice and contact the Ethics Committee.

You should also take note of issues relating to safety. Some information can be found in the Safety Office pages of the University web site. Particularly relevant may be:

The *Safety Handbook*, which deal with working away from the University.

<http://www.nottingham.ac.uk/safety/>

Safety circulars: Fieldwork P5/99A on <http://www.nottingham.ac.uk/safety/fieldwork.htm>

Overseas travel/work P4/97A on <http://www.nottingham.ac.uk/safety/overseas.htm>

Risk assessment on <http://www.nottingham.ac.uk/safety/risk-assessment.htm>

Responsibility for compliance with the University Data Protection Policy and Guidance lies with all researchers.

Ethics Committee approval does not alter, replace or remove those responsibilities, nor does it certify that they have been met.

We would remind all researchers of their responsibilities:

- to provide feedback to participants and participant organisations whenever appropriate, and
- to publish research for which ethical approval is given in appropriate academic and professional journals.

Yours sincerely

Professor Nadina Lincoln
Chair IWHO Ethics Committee

Appendix D Questionnaire

Please answer the following question and just choose the best one which fits your thought.

	Strongly disagree					Strongly agree
	1	2	3	4	5	
1. When I succeed at work, my parents are proud of me.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. My parents want me to enjoy my job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. My parents help me to get things done around the house ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. When something at work is bothering me, my parents try to cheer me up.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. I feel better after discussing job-related problems with my parents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. I feel comfortable asking my parents for advice about a problem situation at work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. My parents have a positive attitude towards my work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. When I have financial difficulties, my parents give me their support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. It seems as if my parents are always asking me to do something for them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. I have to spend a lot of time on parent-related activities.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. My parents require frequent visits from me.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. My parents require me to contact them frequently.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
13. I feel that my parents need me a lot.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. I have a lot of responsibility for my parents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. My parents need my company or care when they are ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16. My parents like/would like my workplace or house to be near where they live	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
17. My parents need money from me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

How often have you experienced each of the following in the past month?

*Please consider your parents as part of your family

	Never	Rarely	Sometimes	Most of the time	All of the time
	1	2	3	4	5
18. Your job makes you feel too tired to do the things that need attention at home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Stress at work makes your irritable at home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Job worries or problems distract you when you are at home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Your job reduces the effort you can give to activities at home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Personal or family worries and problems distract you when you are work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Stress at home makes you irritable at work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Responsibilities at home reduce the effort you can devote to your job.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Activities and chores at home prevent you from getting the amount of sleep you need to do your job well.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. The love and respect you get at home makes you feel confident about yourself at work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. Your home life helps you relax and feel ready for the next day's work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Talking with someone at home helps you deal with problems at work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Providing for what is needed at home makes you work harder at your job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. Having a good day on your job makes you a better companion when you get home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. The things you do at work help you deal with personal and practical issues at home.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. The things you do at work make you a more interesting person at home.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. The skills you use on your job are useful for things you have to do at home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please answer the following question and just choose the best one which fits your thought.

Strongly disagree
1

2

3

4

Strongly agree
5

34. I would be very happy to spend the rest of my career with this organization
35. I really feel as if this organization's problems are my own...
36. I do not feel like 'part of the family' at my organization.....
37. I do not feel 'emotionally attached' to this organization.....
38. This organization has a great deal of personal meaning for me
39. I do not feel a strong sense of belonging to my organization
40. In most ways my life is close to my ideal
41. The conditions of my life are excellent
42. So far I have gotten the important things I want in life
43. If I could live my life over, I would change almost nothing...
44. I am satisfied with my life
45. In general, I don't like my job
46. In general, I like working here.....
47. All in all I am satisfied with my job.....
48. I intend to stay in this job for the foreseeable future.....
49. I will probably look for a new job within the next year
50. I do not intend to pursue alternate employment in the foreseeable future

Please tick the box beside the reply that is closest to how you have been feeling in the past week. Don't take too long over you replies: your immediate is best.

51. I feel tense or 'wound' up
- Most of the time
 - A lost of the time
 - From time to time, occasionally
 - Not at all
52. I still enjoy the things I used to enjoy
- Definitely as much
 - Not quite so much
 - Only a little
 - Hardly at all
53. I get a sort of frightened feeling as if something awful is about to happen
- Very definitely and quite badly
 - Yes, but not too badly
 - A little, but it doesn't worry me
 - Not at all
54. I Can laugh and see the funny side of things
- As much as I always could
 - Not quite so much now
 - Definitely not so much now
 - Not at all
55. Worrying thoughts go through my mind
- A great deal of the time
 - A lot of the time
 - From time to time, but not too often
 - Only occasionally
56. I feel cheerful
- Not at all
 - Not often
 - Sometimes
 - Most of the time
57. I can sit at ease and feel relaxed
- Definitely
 - Usually
 - Not Often
 - Not at all

58. I feel as if I am slowed down
- Nearly all the time
 - Very often
 - Sometimes
 - Not at all
59. I get a sort of frightened feeling like 'butterflies' in the stomach
- Not at all
 - Occasionally
 - Quite Often
 - Very Often
60. I have lost interest in my appearance
- Definitely
 - I don't take as much care as I should
 - I may not take quite as much care
 - I take just as much care as ever
61. I feel restless as if I have to be on the move
- Very much indeed
 - Quite a lot
 - Not very much
 - Not at all
62. I look forward with enjoyment to things
- As much as I ever did
 - Rather less than I used to
 - Definitely less than I used to
 - Hardly at all
63. I get sudden feelings of panic
- Very often indeed
 - Quite often
 - Not very often
 - Not at all
64. I can enjoy a good book or radio or TV programme
- Often
 - Sometimes
 - Not often
 - Very seldom

Personal Information

65. Gender: Male Female
66. Age: _____
67. Marital status: Single Married Divorced Widowed
68. Education: High school or below College or university degree
 Postgraduate degree and above
69. Your job type: Full-time Part-time
70. I have subordinate, or people who report to me: Yes No
71. Occupation: Manufacturing Information and communications technology
 Retailer Finance Service Education Estate
 Government Health Non-profit Others
72. In comparison with others of their age:
 Both my parents are in good health
 One of my parent is in good health; the other is in poor health
 Both my parents are in poor health
 One of my parent is in good health; the other is deceased
 One of my parent is in poor health; the other is deceased
 Both my parents are deceased
 My single parent is in good health
 My single parent is in poor health
 My single parent is deceased
73. My accommodation is provided by my parents: Yes No
74. My parents provide childcare: Yes No

Appendix E Ethics Approval for the Questionnaire

Survey

Institute of Work, Health & Organisations
<http://www.nottingham.ac.uk/iwho>



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15/05/2013

Dear Chih-Ying

I-WHO Ethics Committee Review

Thank you for submitting your proposal on "The influence of employees' parents on work-life balance in Taiwan: A quantitative research". This proposal has now been reviewed by I-WHO's Ethics Committee to the extent that it is described in your submission.

I am happy to tell you that the Committee has found no problems with your proposal. If there are any significant changes or developments in the methods, treatment of data or debriefing of participants, then you are obliged to seek further ethical approval for these changes.

We would remind all researchers of their ethical responsibilities to research participants. The Codes of Practice setting out these responsibilities have been published by the British Psychological Society. If you have any concerns whatsoever during the conduct of your research then you should consult those Codes of Practice and contact the Ethics Committee.

You should also take note of issues relating to safety. Some information can be found in the Safety Office pages of the University web site. Particularly relevant may be:

The *Safety Handbook*, which deal with working away from the University.

<http://www.nottingham.ac.uk/safety/>

Safety circulars: Fieldwork P5/99A on <http://www.nottingham.ac.uk/safety/fieldwork.htm>

Overseas travel/work P4/97A on <http://www.nottingham.ac.uk/safety/overseas.htm>

Risk assessment on <http://www.nottingham.ac.uk/safety/risk-assessment.htm>

Responsibility for compliance with the University Data Protection Policy and Guidance lies with all researchers.

Ethics Committee approval does not alter, replace or remove those responsibilities, nor does it certify that they have been met.

We would remind all researchers of their responsibilities:

- to provide feedback to participants and participant organisations whenever appropriate, and
- to publish research for which ethical approval is given in appropriate academic and professional journals.

Yours sincerely

Professor Nadina Lincoln
Chair IWHO Ethics Committee