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WORK AND FAMILY INTERFACE: WELLBEING AND THE ROLE OF RESILIENCE AND WORK-LIFE BALANCE

A thesis

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ABSTRACT

Wellbeing research has recently gathered impetus largely due to the emergence of positive psychology. Researchers and practitioners are now exploring the science of positive subjective experiences, positive traits, positive states, aspects of human strengths and quality of life. Despite work and family deemed to be two of the most important domains of life, work and family wellbeing has received little attention in the positive psychology literature. Therefore, this thesis expands the landscape of the wellbeing literature by focusing on the work-family interface, the roles of resilience and work-life balance in achieving job and family satisfaction and psychological health. Specifically, my research sought to examine cross-sectional and longitudinally, the mediation effects of resilience and work-life balance between work-family conflict (time, strain and behaviour), work-family enrichment (development, affect and capital/efficiency) and a broad range of wellbeing outcomes (job satisfaction, family satisfaction, anxiety/depression, and social dysfunction) with health professionals.

Health professionals in New Zealand are consistently exposed to psychosocial risk factors such as heavy workloads, irregular work schedules, and long hours of work. In addition, global demand for health professionals is at an all time high, with New Zealand-trained staff looking overseas for employment. The work-family literature is plentiful in studies exploring work-family conflict with a multitude of outcomes (e. g. job satisfaction, psychological and physical health, organisational commitment, turnover and turnover intentions). However, there are several gaps in the literature. Firstly, the work-family interface where little attention has been given to exploring a) the family to work directionality and the

three forms of conflict (time-based, strain-based, and behaviour-based) is limited. In addition, a few studies have provided a holistic perspective in analysing the positive of the work-family interface in the form of (b) work-family enrichment (development, affect and capital/efficiency) and the impact on their experiences of life health professionals in New Zealand. Furthermore, most studies that have utilized resilience have done so with adolescents in family settings with little emphasis placed on (c) exploring employee resilience in the workplace and its role towards wellbeing. Finally, the literature often fails to categorize and (d) test work-life balance as a subjective measure. Consequently, the present thesis examines all these issues.

This research involved a two-wave panel design with a 10-12 month time-lag. Self reports on the eighteen latent variables were obtained from 1,598 health professionals at Time 1 and 296 at Time 2, employed by two District Health Boards (Waikato District Health Board and Lakes District Health Board) and one health provider (Toi Te Ora-Public Health) in New Zealand. SPSS was used to undertake the correlation analyses and structural equation modelling (SEM) to assess the mediation hypotheses. The Time 1 cross-sectional results provided evidence for a mediating effect of resilience with work→family conflict (time and strain), family→work conflict (strain and behaviour), work→family enrichment (capital), family→work enrichment (development and efficiency) with all four wellbeing variables (job and family satisfaction, anxiety/depression and social dysfunction) and work-life balance. However, at Time 2 the results were less frequent, with mediation support for resilience between work→family conflict (time, and behaviour), and three of the wellbeing variables (family satisfaction, anxiety/depression and social dysfunction) and work-life balance.

In addition at Time 1, work-life balance mediated the relationships between work→family conflict (time and strain), family→work conflict (time) and work→family enrichment (affect) with the wellbeing variables (job satisfaction, family satisfaction, and anxiety/depression). At Time 2, work-life balance mediated the relationship between work→family conflict (time and strain) with family satisfaction, and social dysfunction. The longitudinal analyses confirmed that work-life balance mediated the relationship between work→family conflict (time) with job satisfaction, family satisfaction, anxiety/depression and social dysfunction, whereas, no longitudinal support was found for mediation effects of resilience.

This research makes several contributions, including that in order to improve levels of wellbeing, health professionals need to continue to alleviate work-family conflict. This research showed the strength of conflict on employee wellbeing and that resilience and work-life balance may provide mechanisms that may improve such wellbeing outcomes. The work-life balance longitudinal mediation results have implications for developing time based strategies are needed between work and family that aim in reducing ‘conflict’ to increase the health professionals’ wellbeing. Although there was considerable support for resilience as a mediator at Time 1 (35 significant paths out of a potential 60 mediation routes tested) limited findings were evident at Time 2 (8 mediation paths were significant out of a possible 60 routes tested) and no longitudinal effects were found. This may indicate that resilience as mediator is not stable over time and therefore may be more state-like rather than a stable trait.

Further research is needed to investigate resilience and work-life balance and their role within a wellbeing model to advance theory and practice. Overall,

the thesis shows the value of testing fuller models of conflict and enrichment (with all dimensions) towards wellbeing outcomes, and the importance of accounting for resilience and work-life balance in these models.

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Life is a daring adventure or nothing! Hellen Keller

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Derek.

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LIST OF ABBREVIATIONS

A/D: Anxiety and depression

FWC: Family→work conflict

FWE: Family→work enrichment

F/S: Family satisfaction

GHQ: General Health Questionnaire

LDHB: Lakes District Health Board

J/S: Job satisfaction

S/D: Social dysfunction

WFC: Work→family conflict

WFE: Work→family enrichment

Waikato DHB: Waikato District Health Board

Note: In this thesis the terminology work-family conflict and work-family enrichment are referring to the constructs that include both directions (i e., work to family and family to work). Thus, work-family conflict and work-family enrichment refer to the broad and encompassing literature. Work→family and family→work are emphasising a specific direction of transmission of conflict or enrichment between work and family domains.

CHAPTER 1

INTRODUCTION

Chapter Overview

The research presented in this thesis was conducted to examine the relationship between resilience, work-life balance and work and family wellbeing among a group of healthcare professionals in New Zealand. This chapter includes a brief discussion about individual wellbeing, statement of the problem, background to the study, research issues, relevance of the research, and the structure of the thesis.

Introduction

Psycho-social wellbeing is a dynamic, multivariate process that involves a broad spectrum of constructs. In recent years, wellbeing and its relationship to the work-family interface has become increasingly important to employers and employees because workers are under pressure to meet work and family demands and cope with the stresses, strains, and time issues associated with their responsibilities. The changes in the composition of the workforce (e.g., increased number of women in the workforce), demographic shifts (e.g., single-parent families), and changes in technology (e.g., increased use of cell phones) have contributed to a lack of balance between work and family (Bardoel, De Cieri, & Santos 2008; Greenhaus & Powell, 2006). As a result of this pressure, over the past 30 years work and family research has mainly focussed on the conflict caused by work and family demands and the repercussions on work outcome variables such as job satisfaction, psychological and physical health, and employee turnover.

Recently, psychological research has moved away from solely examining the role played by conflict in health and wellbeing and started to examine the positive factors that affect wellbeing. The information from this research has produced a new branch of psychology called positive psychology (Seligman & Csikszentmihalyi, 2000; see also Cameron, Dutton, & Quinn, 2003; Luthans, 2002a). Positive psychology is based on empirical knowledge that there is more to wellbeing than the absence of disease, stress, strain, anxiety, and negative symptoms. Positive psychology research has examined how positive factors (e.g., work-life balance) are related to wellbeing and increased flourishing, purpose, and meaning. Positive psychology has addressed human strengths and weaknesses over time, and has changed the way illness and wellbeing are conceptualised. As a result of this paradigm shift, there has been increased interest in positive constructs such as resilience and work-life balance and how they interact with other constructs. This research explored the positive constructs of resilience and work-life balance and their relationship to work and family wellbeing.

Statement of the Problem

Healthcare organisations worldwide are facing staff shortages (Ryall 2011). According to the World Health Organisation (WHO, 2005), there is a shortage of more than four million doctors and nurses worldwide. As a result of this shortage, healthcare workers are in high demand and being actively recruited by many Western countries. New Zealand relies heavily on healthcare workers from other countries, and it competes for these workers with Australia, Canada, and the United States. In addition, doctors and nurses trained in New Zealand are being lured overseas (e.g., to Australia) by higher salaries, which is especially

attractive to new healthcare practitioners with student loans (Badkar, Callister, & Didham, 2008, 2009; Collins, 2005). This global demand for healthcare workers, increased demand for specialist healthcare skills, and an ageing population are areas of concern for New Zealand's healthcare industry (Department of Labour, 2002). This problem is exaggerated by the fact that there is increased demand on healthcare services, and this demand is expected to increase rapidly as the baby boomer generation ages (Badkar et al., 2008, 2009).

The existing healthcare workforce in New Zealand is confronted by daily demands from work and family that may affect their wellbeing. In particular, family demands have increased as a result of demographic factors such as two-income households and eldercare. (These demographic factors are discussed in more detail in chapter 4). The challenges that face workers trying to juggle work and family responsibilities are well documented (Frone, Russell, & Cooper, 1992; Williams & Allinger, 1994; Tennant & Sperry, 2003). Work and family research in the 21st century has coined catchphrases such as “time-crunch”, “time-bind”, or “time-squeeze” to describe these challenges and found time demands from work and family have a negative effect on the health and wellbeing of employees and family members (Hochschild 1997).

Depression is one of the negative consequences of the work and family challenges faced by workers and their families. According to the World Health Organization (2008, cited in Seligman, 2011) by 2020 depression will affect 16 million adults living in the United States, and in the United Kingdom depression is the third most common reason for seeking healthcare services (Layous, Chancellor, Lyubomirsky, Wang, & Doraiswamy, 2011). The cost to treat depression is high. For example, it costs US\$5,000 a year to treat individual case

of depression in the United States (Seligman, 2011). Healthcare workers in New Zealand are not immune to the negative consequences of work and family demands, and there has been an increase in sick leave and decreased productivity in the healthcare system, which cost New Zealand, an estimated NZ, \$94 million a year (Toi Te Ora-Public Health, 2010). As a result of increased work and family demands and the potential for serious consequences for workers and their employers, there is growing interest in how characteristics such as resilience affect workers' wellbeing.

Background to the Research

International work-life balance (WLB) project. The study reported in this thesis was part of an international project that was conducted to validate a newly developed work-life balance measure in two Western settings (i.e., Australia and New Zealand) and two non-Western settings (i.e., China and Hong Kong). I was the manager and coordinator of the New Zealand research project under the guidance of Professor Michael O'Driscoll, School of Psychology, University of Waikato, New Zealand. I conducted the present study to investigate how the seven variables (i.e., work-family conflict, work-family enrichment, work-life balance, job and family satisfaction, anxiety/depression, and social dysfunction) examined in the WLB project related to each other. I included resilience due to my interest in positive psychology. The variables were chosen after reviewing the work and family literature, and this literature review resulted in the development of a work and family wellbeing model. The theoretical reasoning for the selection of each of the variables is discussed in chapter 6. The participants for this study were healthcare professionals (e.g., doctors, nurses,

social workers, and allied health practitioners) who worked for two district health boards and one healthcare provider in New Zealand. Chapter 7 contains a brief description of these three organisations.

Research Issues

The present study was designed to examine the relationship between resilience and work-life balance and New Zealand healthcare professionals' wellbeing (i.e., job and family satisfaction and psychological health). The following research question guided this study:

1. Does resilience mediate the relationship (cross-sectional and longitudinal) between work-family conflict, work-family enrichment, and the wellbeing variables?

Relevance of the Research

The results of the present study reveal relationships between variables such as work-family conflict, work-family enrichment, work-life balance and wellbeing and add to the body of empirical knowledge about wellbeing, resilience, and the work-family interface. This study also examined a comprehensive work and family wellbeing model tested with a group of healthcare professionals in New Zealand. This group was chosen because New Zealand must find ways to retain its existing health professional workforce and attract qualified staff to New Zealand. This is important for New Zealand as international healthcare workers accounted for 41% of New Zealand's medical workforce in 2009 (Health Workforce New Zealand, n.d.), and the Ministry of

Health (MOH, 2006) is concerned about this reliance on foreign workers because the global demand for healthcare workers is likely to increase in the future.

Along with the staff shortages that are affecting the viability of some specialist services, an increase in life expectancy, expected increase in numbers of people with chronic conditions (e.g., heart disease, cancer, and tobacco-related deaths), and an ageing population are additional challenges faced by the healthcare system in New Zealand (MOH, 2011). There is ongoing debate in the literature about the impact of these demographic trends in the future and the effect they will have on the healthcare system and availability of healthcare professionals. However, MOH (2006) suggested that by 2051 26% of population in New Zealand will be over 65 years of age. As a result of these demographic trends, it is necessary to determine the factors that have a positive effect on healthcare workers (e.g., their wellbeing) in New Zealand in order to attract new workers and retain the existing workforce. Therefore, the results of this study may provide healthcare, and other, organisations with the information they need to develop policies that will enhance workers' job and family satisfaction and, in the process, increase productivity and reduce employee turnover (Greenhaus, Collins, & Shaw 2003).

The present study also adds to the wellbeing literature by providing longitudinal evidence on the influence of positive factors such as work-life balance on workers' wellbeing. This study is important because there does not appear to be any longitudinal studies that examined the influence of work-life balance and resilience on employee wellbeing. The focus of studies that have examined the work-family interface has been predominately cross-sectional in nature, and the lack of longitudinal research designs in psychological wellbeing

research, which would test causal relationships over time, is a widely acknowledged limitation (Cooper, Dewe, & O'Driscoll, 2001). The longitudinal design has distinct advantages: (a) This type of study can determine the direction and extent of change among individual participants, and (b) it is considered the best survey design for assessing the effects of naturally occurring events (Breakwell, Hammond, & Fife-Schaw, 1995). A longitudinal design was used to determine the impact of work and life conflict and enrichment on employees' wellbeing and test the causal relationships between work-life balance and resilience and wellbeing over time. In addition to filling a gap in the wellbeing literature, the results of the present study significantly increase the theoretical and practical knowledge on the relationship between resilience and work-life balance and wellbeing.

The present research also investigated the psychological capital of resilience and the impact of resilience on job and family satisfaction, anxiety/depression, and social dysfunction. This is important because stress-related illnesses result in absenteeism, sickness, and employee turnover. Although there is continuing debate about whether resilience is a state or a trait, and some research (Elliot, Sahakian, & Charney, 2008) claimed there are aspects of resilience that are biological, it is possible to increase the level of resilience by teaching people cognitive and solution-focussed strategies. Research that examined resilience in a workplace setting is limited; however, the results of the present study may help managers' foster resilience in their employees to increase their own level of resilience.

The results of the present study may help managers, personnel researchers, behavioural scientists, and management practitioners to formulate strategies that enhance wellbeing among their employees.

Structure of the Thesis

This thesis is divided into 11 chapters. A brief description of each chapter is provided below.

Chapter 1 contains a discussion of the background to the research and work and family wellbeing research. It also contains a discussion of how the study relates to the healthcare workforce, the aims of the study, and the research question.

Chapter 2 contains a review of the wellbeing literature, its historical trend, and mainstream psychology's recent interest in wellbeing. In addition, the chapter addresses the benefits of individual wellbeing and introduces the wellbeing variables used in the present study.

Chapter 3 provides a brief literature review of the demographic factors affecting the work-family wellbeing interface. These factors include increased number of women in the workforce, two-income households, single-parent families, and eldercare.

Chapter 4 contains a review of the work and family literature and the theories that have driven work and family research. It includes definitions of the work-family interface variables used in this study (i.e., work-family conflict and work-family enrichment) and discusses the concept of work-life balance. It also provides details about the predictors and outcomes of the work-family interface variables.

Chapter 5 provides a detailed discussion of resilience. This discussion includes an overview of the history of the resilience construct and its development over the years. The chapter explores the predictors and outcomes of resilience and describes the work and family wellbeing model that was tested in the present study.

Chapter 6 outlines the theoretical framework for the present study and describes the hypotheses about the effect of resilience and work-life balance on wellbeing. This chapter addresses the idea that individual differences in resilience and work-life balance can mitigate the effects of conflict and enhance healthcare professionals' satisfaction (job and family) and psychological health.

Chapter 7 discusses the research method used to conduct the present study and contains a brief introduction to the three organisations involved in this study. In addition, there is a description of the research design, participants, and instruments used in this study and how the data were analysed.

Chapter 8 and chapter 9 describe the cross-sectional results at Time 1 and Time 2, respectively. Each chapter describes the results of confirmatory factor analyses (CFA) used to determine the robustness of all the measures used in this study. These analyses are followed by a discussion of how well the work and family wellbeing model fits with the healthcare professional data. In addition, there is a description of the correlation analyses conducted using SPSS (Statistical Package for the Social Sciences) and the structural equation modelling (SEM) conducted using AMOS.

Chapter 10 describes the longitudinal analyses. It includes a description of the method used to collect longitudinal data and whether the data supported the

hypotheses that predict resilience and work-life balance have a positive effect on workers' wellbeing over time.

Chapter 11 contains a discussion of the cross-sectional and longitudinal results of the present study and the importance and contribution of this research. It describes the strengths and limitations of the present study and provides recommendations for further research in this area.

CHAPTER 2

WORK AND FAMILY INTERFACE AND WELLBEING

Chapter Overview

This chapter focuses on work and family interface and wellbeing, its meaning, and its relevance in today's workplace. This chapter contains the following: (a) an introduction to the topic, (b) a discussion about the prominent theories associated with wellbeing, (c) the changing employee-employer relationship over time and its relationship to wellbeing, (d) the antecedents and some of the wellbeing interventions that have been used in organisations, and (e) an introduction to the wellbeing variables used in the present study.

Introduction

The continued and rapid pace of change is a characteristic of organisations in the 21st century. Volatile economic environments, rapidly changing technologies, global competition, workforce diversity, and new organisational structures are some of the challenges faced by today's managers (Callan, & Lawrence 2009; Russell & Russell 2006). Organisations may differ in the priority they attach to human resources (see Seligman, 1965), but they all recognise the value of a qualified, motivated, stable, responsive team of employees (Dolan, 1971; Dolan, & Garcia 2002). Retention, productivity, and worker wellbeing needs to be essential concerns, but the recent global economic crisis has had a substantial impact on managers and workers (Dolan, & Garcia 2002; McPhail, 1997).

Organisations have introduced new work arrangements with short term contracts as the need arises to independent contractors (Connelly & Gallagher 2004). Connelly & Gallagher (2004) argued that the new work arrangements have been borne out of the recent global economic crises. The U.S. economy started its slide in 2007, and initially, the rest of the world showed some degree of immunity to their financial woes (Chiang, & Prescott 2010). At the start of the 2009, however, the U.S. financial problems had rippled around the world and affected the economies of many countries including New Zealand (Auerbach 2009). These financial woes have made today's global marketplace very competitive, and as a result, there is increasing pressure on organisations to perform. This has filtered down to employees, who are expected to increase their productivity (Easterling 2003; International Institute for Labour Studies 2009). Because of the changes in technology and demand of the marketplace for product and services more pressure has been placed on the employees. As a result employees are reporting higher levels of stress, increasing the risk of psychological and physical illness (Toi Te Ora-Public Health, 2010). Toi Te Ora Public Health (2010) estimate that the cost of these health concerns to New Zealand businesses is 940 million dollars (NZ) per year.

Organisations have dealt with these difficult economic conditions in different ways. Some organisations are cutting expenditure and slashing operating costs and terminating staff. Employers have been results driven and focused primarily on the bottom line to increase market share, at the expense of employer health and wellbeing (APA, 2008). Some scholars have called for employers to be focused on promoting employee wellbeing to gain a competitive advantage that gives benefits to both employers (decreased absenteeism, presenteeism, and

turnover; increased capacity to attract and retain high achievement employees) and employees (increased job satisfaction, increased physical and psychological health) (see APA, 2008). The present study examined work and family wellbeing and the impact resilience and work-life balance has on mitigating the effects of conflict and enhancing the effects of work-family enrichment towards employee wellbeing.

In the next 10 to 15 years, businesses will need to deal with growing consumer and worker consciousness. Businesses may have to be more creative to survive, and some Western organisations will need to change, or they may fail. Many Western businesses are still based on the old feudal system in which employees are just expendable cogs in the wheel. It has been suggested that organisations will have to embrace a new ideology (Senge, Scharmer, Jaworski, & Flowers 2005).

The time may have come for a new paradigm that enables workers to maintain a stable work and family interface. Senge, et al., (2005) stated in their book, *Presence*, that it is necessary for businesses to see their employees as a whole being, to use their heart, (instead of focussing solely on profit, see APA, 2008) and abandon past paradigms that appear to inhibit employee and organisational wellbeing. It is time to adopt a paradigm that promotes human flourishing and human and organisational wellbeing in order to create a synergistic win/win paradigm that enables people and organisations to flourish. Human flourishing is at the core of the positive psychology movement that is heralded by Seligman a leading exponent of the psychological perspective (Seligman 2011). Human flourishing has been characterised as a capacity for optimism and hope (Schnieder, 2001), happiness (Lyubomirsky, 2001), resilience

(Fredrickson, 2001), flow (Massimini & Delle Fave, 2000), work engagement (Schaufeli & Bakker, 2004), and wellbeing (Diener, 2000).

Today's businesses may need to create a workplace culture that promotes worker and family wellbeing and reduces competition (time) between work and family in order to remain competitive in today's global economy. According to Zahn (2005), this requires the capacity to suspend old paradigms and see workers and their families with fresh eyes. Indeed, Einstein stated categorically 'that problems cannot be solved at the same level of consciousness that created them'. In the past, a chronic ailment approach was used to fix what was wrong. There was little consideration for promoting what was right. An approach that focuses on positive behaviour (i. e. building individual resilience and achieving work-life amongst their employees) may improve the work-family interface and encourage workers and organisations' growth, prosperity, and wellbeing.

As a result of this call for a new way to encourage the flourishing of the human spirit and organisations, Seligman and Csikszentmihalyi (2000) pioneered the positive psychology movement. This movement emphasizes the strengths and characteristics of employees rather than just focussing on maladaptive behaviours and treating the deficits and disorders of human functioning. The present study examined the bi-directional relationship between work and family (e.g., work→family and family→work conflict and work→family and family→work enrichment) and job and family satisfaction. This study focused on how resilience affects people's wellbeing when confronted by conflict or a positive experience. In order to understand the role of resilience in this process, it is necessary to conceptualise work, family, and wellbeing and examine the dominant theories of wellbeing (i.e., subjective wellbeing and psychological wellbeing). The

definitions of subjective and psychological wellbeing will be defined later in this chapter. The next chapter will look at the work and family interface.

Work and Family Defined

Work is an important aspect of human life, and it has many benefits for people (Henry, 2004): (a) helps people establish their identity, (b) provides the opportunity for social interaction that goes beyond work-related activities, (c) promotes relationships, (d) encourages engagement, (e) provides purpose and meaning to people's lives, and (f) provides an opportunity for status and income. According to Edwards and Rothbard (2000), work is an activity that provides people with the resources needed to live. Ryan and Deci (2001) expanded the concept of work to include feelings of belongingness, social contribution, and personal growth, which they believe are central to a sense of wellbeing.

Family is an important part of everyday life, and it is a group with people (e.g., grandparents, spouses, and children) bound together by cultural ties (Edwards & Rothbard, 2000). Home life is where family members find solace in an atmosphere of belonging (Kelly & Kelly, 1994), and the family unit influences people's sense of wellbeing.

Clark (2000) and Voydanoff (2005a) argued that work and family are the two most important domains in people's lives and, as a result, work and family can cause conflict if they compete with each other (Allen, Herst, Bruck, & Sutton, 2000; Frone et al., 1992). Work and family, however, are synergistic and can complement each other. In fact, the positive side of the work and family can enhance the wellbeing of the family unit. Greenhaus and Powell (2006) stated that

the experiences in one role may improve people's sense of wellbeing in other roles and their quality of life. Chapter 4 of this thesis examines in more detail the work and family literature and these roles' impact on wellbeing variables, but first it is necessary to understand what is meant by the term wellbeing.

Wellbeing Defined

Wellbeing is the process of "living at one's highest possible level as a whole person" (Schafer, 1996, p. 33). It is more than just an absence of disease, ill health, or ill-being (Linley & Joseph, 2004). Corbin and Lindsey (1994) asserted that wellbeing is the integration of "an emotional, intellectual, physical, spiritual and social dimension that expands one's potential to live and work effectively and to make a significant contribution to society" (p. 233). Wellbeing is associated with core states of emotion, such as happiness, joy, self-actualisation, optimism, faith, vitality, passion, flow, optimal human functioning, and domain satisfaction (Caruthers & Deyell-Hood, 2004; Diener, 1984; Seligman, 2002). Ryan and Deci (2001) pointed out that there are two main theories of wellbeing: (a) subjective wellbeing (SWB), which is based on hedonic philosophy; and (b) psychological wellbeing (PWB), which is based on eudaimonic philosophy.

Hedonism philosophy is concerned with the positive affect and the absence of negative affects whereas eudemonia tends to be a higher order construct where individuals strive to reach their full potential (Vazquez, Hervas, Rahona, & Gomez 2009). Generally speaking wellbeing researchers have divided themselves into these two camps focusing on subjective or psychological wellbeing. Debate continues today on the differences, similarities and the validity of the two wellbeing factors in academic literature. Some studies have shown that

these two concepts are related but two distinct constructs (Biaobin, Xue, & Lin 2004; Keyes, Shmorkin, & Ryff 2002). Linley, Maltby, Wood, Osborne, and Hurling (2009) investigated the association between the two wellbeing conceptualisations and argued that they are more closely related than initially determined. Indeed, the authors argued that subjective wellbeing may be a predictor of psychological wellbeing. Because of this conceptualisation both wellbeing concepts are discussed below in a view of being thorough in the literature review.

Subjective wellbeing (SWB)

Subjective wellbeing is sometimes defined as emotional wellbeing. Ed Diener and his colleagues have conducted SWB research based on employees' cognitive assumptions and responses (Diener, Lucas, & Oishi, 2005). Diener's (see Diener's research profile, 2011) research has focused on personality and cultural influences on wellbeing and the relationship between income and wellbeing. The idea of SWB dates back to Aristippus in the fourth century BC who believed the ultimate in life was to have bodily pleasures and elude suffering (Ryan & Deci, 2001). The pleasure-pain principle is the basis for the hedonism model of wellbeing.

Subjective wellbeing is a multi-faceted construct illustrated by a person's perception of their cognitive or affective positive states (e.g., happiness and satisfaction) and the avoidance of undesirable states of consciousness (e.g., depression and anxiety) (Diener et al., 2005). Actually, this research investigates job and family satisfaction, anxiety/depression and social dysfunction in determining the health professionals' wellbeing. As its name suggests, subjective

wellbeing can be defined as people's evaluation of their current state of happiness, joy, satisfaction, and positive mood. More specific, satisfaction occurs when a person fulfils a desire or need, while happiness is an emotional/affective response to events in a person's environment (Samman, 2007). Ryan and Deci (2001) stated that wellbeing has three components: (a) life satisfaction, (b) the presence of a positive mood (e.g., positive affect), and (c) the absence of a negative mood (e.g., negative affect). These components are often summarised as happiness.

There is some debate in the literature about whether happiness is the goal of subjective wellbeing because happiness is a Western construct (Ricard, 2003). Moreover, some Eastern academics stated that happiness is a choice one makes, an optimal state of being; a state of flourishing that arises from mental balance rather than a reaction to cognitive stimuli in a person's environment (Ricard, 2003). According to Ricard (2003), happiness is

a deep sense of flourishing that arises from an exceptional healthy mind.

This is not a mere pleasurable feeling, a fleeting emotion, or a mood, but an optimal state of being. Happiness is also a way of interpreting the world, since while it may be difficult to change the world, it is always possible to change the way we look at it. (p. 19)

According to Diener et al., (2003), subjective wellbeing is an essential ingredient for a high-quality, happy life.

Researchers (e.g., Diener, 2000; Forgeard, Jayawickreme, Kern, & Seligman, 2011) have used measures of happiness and life satisfaction to examine subjective wellbeing, and these measures are included in the World Values Survey and the European Values Study Group Questionnaire (European and World Values Surveys four-wave integrated data file, 1981-2004). The World Values

Survey (2011) happiness scores are used to compare nations' happiness quotient and their trend in subsequent years. Government policymakers in Australia, Canada, France, Germany, Italy, New Zealand, and the United Kingdom have acknowledged that measuring life satisfaction is important for determining wellbeing (Samman, 2007). This research uses job and family satisfaction in determining wellbeing. This will be covered in more detail later in this chapter.

Within the past decade, subjective wellbeing has received considerable attention from positive psychologists (see, for example, Handbook of Positive Psychology; Encyclopaedia of Positive Psychology, Positive Psychological Assessment, Oxford Handbook of Methods in Positive Psychology, and Designing Positive Psychology), and they use this to measure the good life. Ryan and Deci (2001) pointed out that wellbeing is an important construct in comprehending an employee's optimal human functioning. Therefore, positive psychologists have focussed on how to increase the levels of wellbeing using people's subjective perspective.

Psychological wellbeing

Psychological wellbeing (i.e., the eudaimonic theoretical model of wellbeing) is based on Aristotle's idea that eudaimonia (i.e., a contented state of being happy, healthy, and prosperous) is the highest state to achieve, the pinnacle of life (Ryff & Singer, 2003). The eudaimonic model gained momentum with Rogers' (1951) fully functioning person theory. This theory of wellbeing deals with people's sense of wellbeing when they try to reach their full potential as a human being and their daily activities align with their values, endeavours, and attitude (Steger, Kashdan, & Oishi, 2008). According to Ryff and Keyes (1995)

and Ryff and Singer (2003), eudaimonic wellbeing consists of autonomy, personal growth, self-acceptance, life purpose, mastery, and positive attitude, and it is essential for self-actualisation.

Overall, this research has developed and analysed a complex wellbeing model and assessed wellbeing of the health professionals using significant levels of job and d family satisfaction and psychological health.

To appreciate the importance of the present study, it is necessary to discuss the historical emphasis placed on employee wellbeing in the workplace. Thus, a brief synopsis of worker wellbeing in organisations over time is discussed below.

The Changing Employee-Employer Relationship Over time and Wellbeing

Before the 19th century, most organisations were based on agriculture and structured around the family, with shopkeepers and craftspeople being small, local organisations (Hill 1996). Craftspeople did most of their own work, and their trades included carpentry, shoemaking, and tailoring. In this system, people's skills were enhanced, and most workers saw their projects from start to finish. In this system, however, production was slow and cumbersome.

In Western societies, this system of agriculture-based organisations and small businesses was based on the Protestant work ethic. The Protestant work ethic, or the Puritan work ethic, is based on the Reformed theology approach to the Christian way of life. It emphasizes the dominion of God over all things, and people become successful by hard work (Hill, 1996). According to this idea, it was the duty of everyone to work, and in doing so, they are considered the Elect (i.e., people who were chosen to inherit the Kingdom of Heaven; God's chosen

ones) (Hill, 1996). Hill (1996) identified several characteristics of the Protestant work ethic: (a) diligence, (b) punctuality, (c) deferment of gratification, and (d) primacy of the work domain.

The deferment of worker satisfaction and the primacy of the work domain over family considerations were carried into the early 20th century. The work environment promoted by the Protestant work ethic became more dehumanising when Fredrick Taylor (1911) introduced the concept of scientific management, which uses a reductionism approach to job tasks to improve production (Muchinsky, 2000) and accommodate the demands of mass production. During World War 1, time and motion studies and systematic analyses of each distinct operation were conducted to determine the most efficient means for production (Howard, 1995). Taylor believed both workers and managers had to share equally in the rewards of increased production and profitability; however, at this time, most managers used this management system to exploit workers, and little attention was paid to the wellbeing of employees. Working conditions were poor, and little effort was made to motivate staff (Howard, 1995). Nevertheless, Taylor's scientific management approach did improve efficiency and production, and some of its methods (e.g., time studies and piece-rate work) are still used in organisations today (Gilbert, Jones, Vitalis, Walker, & Gilbertson, 1997).

During the 1930s, the human relations paradigm was introduced by socialist Elton Mayo and brought fresh insight to the workplace (Gilbert et al. 1997). Mayo suggested that worker efficiency and productivity would be improved by motivating workers and viewing them as complex human beings. This idea was in complete opposition to Taylor's (1911) ideas. For the first time, managers were asked to consider workers' feelings and attitudes and focus on

their wellbeing. Mayo stated that the workplace needed to meet the social and emotional needs of workers (Gilbert et al., 1997). At this time, Mayo tested his ideas at the Hawthorne plant of Western Electric near Chicago in the United States. Jones, George and Hill (2000) state that the Hawthorne studies, as they are known, were conducted to investigate different work conditions and employee productivity, and these experiments produced remarkable results that shaped the human relations paradigm. In one experiment, the researchers reduced the intensity of lighting while the employees were working. They expected lower productivity, but production increased. The researchers concluded that productivity increased because of the attention the workers received from the research staff. The research concluded that productivity could be improved by meeting some of the workers' needs. In this case, the attention paid by the researchers satisfied workers' need to collaborate with and be in contact with their fellow workers (Jones, et al., 2000).

In the late 1980's, Deming's management model came to the fore, where the emphasis was on organisational behaviour and practice (Anderson, Rungtusanatham. & Schroeder, 1994). Many organisations began to realise the importance that quality management of organisational processes could lead to increased competitiveness in the market place (Anderson et al., 1994). Driven by the foundations of Deming and Duran, the quality movement began to accelerate as organisational suppliers requested formal processes in ensuring quality of product/services to the customer (Beattie, & Sohal, 1999; Evans, & Lindsay, 2008). Instead of focusing on worker wellbeing, during this time organisations concentrated on meeting quality assurance standards (e.g., the ISO 9000 quality assurance standards), and businesses worked to improve processes and systems.

The ISO Quality Assurance Standard (ISO 9000 Series Standard) was adopted around the world, with increased veracity with more than 200 countries recognising the ISO 9000 quality standards and published documents describing in detail what systems could be used by an organisation to manage production and service quality (Gunby, 1998).

In contrast, in the 21st century, employees are beginning to be recognised as the most crucial asset of today's organisations by academics, managers, and practitioners. Luthans and Youssef (2004) suggested that employees create a competitive advantage, especially in organisations that promote employee involvement. Luthans and Youssef (2004) pointed out that as a result of this idea researchers have started to examine the role of worker wellbeing in achieving a competitive advantage, and they have focused on positive emotions (e.g., happiness, flow, work engagement, work involvement, hope, optimism, the need to find meaning in one's job, and self-efficacy) and their relationship to competitive advantage.

Antecedents and Wellbeing in Organisations

In the past decade, organisations have been under pressure to improve their performance in order to meet the demands of the global marketplace. As a result, there has been an increasing emphasis on individual wellbeing research that has taken a new impetus into promoting positivity and wellbeing as a factor for improving employees' performance (Cotton, & Hart 2003). Many studies have examined the effect of wellbeing programmes and found that wellbeing programmes improve employee health, fitness, and wellbeing (Sparks, Faragher, & Cooper, 2001), promote job performance, and are cost effective (Baun,

Bernaki, & Tsai, 1986). Daley and Parfitt (1996) conducted research with a sample of employees from a British food retail organisation and found that workplace wellbeing programmes reduce absenteeism and increase job satisfaction and physical and psychological wellbeing. Fredrickson (2004) examined the effect of positive emotions and attitudes on a group of college students for one year. In this study, the students were asked to find positive meaning in their daily lives and then document their experiences. At the end of one month, Fredrickson found that the group who found positive meaning in their daily encounters showed an increase in resilience, and their coping strategies were enhanced.

There is growing evidence that positive emotions promote people's resilience (Fredrickson, 2004), but there are few studies that have examined the effect of positive emotions and wellbeing on people's resilience in the workplace (Fredrickson, Tugade, Waugh, & Larkin, 2003). The majority of resilience research has been confined to children and at-risk families. Luthans and Youssef (2004) suggested that resilience is a competitive advantage in today's organisations. Therefore, the present study was designed to examine the effect of resilience and work-life balance on workers' wellbeing when confronted with work-family conflict and enrichment, and as a result, it will add to the positive psychology literature. The work-life balance literature will be discussed in chapter 4, and the resilience literature will be discussed in chapter 5.

The variables used in the present study were chosen to reflect a variety of work and family experiences and include wellbeing, job satisfaction, family satisfaction, and psychological health (e.g., anxiety/depression and social dysfunction). These variables were used to determine the mediating effect of

resilience and work-life balance in work→family and family→work conflict and work→family and family→work enrichment. The following section contains a brief discussion of the relationship between these variables (i.e., job satisfaction, family satisfaction, and psychological health) and wellbeing.

Job and family satisfaction

The present study used hedonic-based measures of job and family satisfaction, which are subjective emotional evaluations. These evaluations are made consciously or unconsciously by people and defined as pleasurable emotional states that result from appraisals about job and family experiences. Many researchers (Bedeian, Burke, & Moffett, 1988; Frone et al., 1992; Guelzow, Bird, & Koball, 1991; Higgins, Duxbury, & Irving, 1992; Kopelman, Greenhaus, & Connolly, 1983; Noor, 2002; O'Driscoll, Brough, & Kalliath, 2004; O'Driscoll, Ilgen, & Hildreth, 1992; Rice, Frone, & McFarlin, 1992) have used job and family satisfaction (i.e., cognitive evaluation of wellbeing) to assess wellbeing.

Job satisfaction

There are many predictors of job satisfaction. This variable (i.e., job satisfaction) is consistently used in organisational settings to measure the affective and cognitive components of satisfaction and determine if people experience pleasure and gratification from their work (Paton, Jackson, & Johnston, 2003). Some of intrinsic factors that affect job satisfaction include education, tenure, family demands, job expectations, and meaningfulness of work. The work-related variables that affect job satisfaction include role ambiguity, role overload and conflict, skill variety, job security, and supervisor support (Paton et al., 2003). In

addition, work and family conflict is associated negatively with job satisfaction. These aspects of job satisfaction are discussed in more detail in chapter 4.

Family satisfaction

Family satisfaction refers to the “extent to which an individual is satisfied with family life” (Ahmad 1996 cited in Namayandeh, Juhari, & Yaacob, 2011, p. 27), but unlike job satisfaction, family satisfaction and its relationship to worker wellbeing has received less attention from researchers. This gap in the literature has occurred even though it is recognised that work and family relationships are bi-directional and workers’ family life can shape and influence the workplace (Perry-Jenkins, Reppetti, & Crouter, 2000). The limited amount of research that examined family satisfaction focused on the role of cross-domain relationships in work and family conflict. Family satisfaction is discussed in more detail in chapter 4.

Psychological health

The present study also examined psychological health as a determining factor of wellbeing. Psychological health has been defined as a state of wellbeing where individuals are able to lead a fulfilling life (World Health Organisation, 2005). This study uses the General Health Questionnaire (GHQ-12) (Goldberg, 1972) measure, which has been used in many studies to determine psychological health (Whaley, Morrison, Wall, Payne, & Fritschi, 2005). This measure identifies symptoms of anxiety, depression, social dysfunction, and feelings of uncertainty and incompetence. Psychological health is discussed in more detail in chapter 4.

Benefits of Addressing Wellbeing

When employees have a sense of wellbeing, they perform better, tend to be happier, are better organisational citizens, help resolve conflicts and improve social relationships, promote more effective coping strategies, improve interpersonal behaviours, tend to be better decision makers, and receive higher remuneration (Pavot, & Diener, 2004). Burke, Burgess, and Oberrlaid (2004) found that organisations with values centred on work-life initiatives had workers who were happier, had increased physical and mental health, lower intentions to leave the organisation, higher job satisfaction, and higher levels of wellbeing.

Today's managers are faced with the flow of workers in and out of the organisation, the availability and timing of resources, and the ever-changing product, labour, and economic markets. To deal with these challenges, managers need to understand that worker wellbeing affects their organisations' competitive advantage, and as a result, they need to institute policies that foster employee wellbeing (Burke, 2000). The present study was designed to determine how wellbeing is affected by work and family characteristics and whether resilience and work-life balance mediate the effects of these characteristics on wellbeing.

Summary

It is possible that organisations that promote worker wellbeing may help mitigate workplace stress. To understand the factors that affect wellbeing, especially resilience, the present study examined indicators of wellbeing in the work and family domains, including job and family satisfaction, work-family balance, psychological health, and the importance of resilience. Harter, Schmidt, and Hayes (2002) conducted a meta-analysis of 7,939 business units in 39

organisations and found that employees with high levels of job satisfaction and greater psychological health had higher productivity and less intention to leave an organisation and helped increase the organisation's customer satisfaction and profitability. As a result of findings such as these, it is important for organisations to understand the factors that contribute to worker wellbeing and promote these factors.

The philosophical framework for the present study was positive psychology (Seligman 1999); positive organizational behaviour (Luthans, 2002a); and positive organisational scholarship (Cameron et al., 2003). Although there has been a shift towards positive psychology in recent years, few studies have examined the effects of resilience and work-life balance on the wellbeing of health professionals.

Effective functioning in both domains of work and family, with outcomes of job and family satisfaction, anxiety/depression and social dysfunction, produces a sense of inner fulfilment and wellbeing (Caruthers & Deyell-Hood, 2004). Essentially, it is about increasing people's satisfaction with their family and work life. Therefore, the present study was designed to bridge the gap between work and family from a wellbeing perspective.

The next chapter (Chapter 3) critically reviews the literature that discusses the demographic factors affecting the work and family interface

CHAPTER 3

DEMOGRAPHIC FACTORS AFFECTING THE WORK-FAMILY INTERFACE

Chapter Overview

The individual wellbeing factors that influence the interaction between work and family were reviewed in chapter 2, including the benefits health professionals may derive from understanding more about wellbeing. This chapter reviews the demographic factors that have emerged and reshaped the work and family interface and includes perspectives on international and New Zealand research. The chapter is divided into six sections: (1) increasing proportion of women in the workforce and changing family patterns; (2) dual income households; (3) solo parent families; (4) increase in the proportion of elderly; and finally (5) the rise of eldercare. These five themes indicate that the environments in which organisations now operate are totally different from any time in history, with new demands and in a constant state of flux (Shoemaker, Brown, & Barboer, 2011). For example, the family unit may now consist of a three generational unit where both spouses are employed and have care responsibilities for their children and eldercare of one or more of their parents (Grundy & Henretta, 2006).

Introduction

From an organisational perspective, managers are faced with a transient workforce that is growing older and is more culturally diverse than at any other time in history (Mazur, & Bialostocka, 2010). Hence, a workforce dominated by white males is not the norm (EEO Trust, 2008). These factors provide

challenging situations for organisations and managers, and for employees in effectively manoeuvring their responsibilities in the domains of work and family. Many countries and organisations have introduced work and family policies that attempt to foster a lifestyle based on a congenial work and family relationship (Milliken, Dutton, & Beyer 1990). Work and family policies have become a popular topic and open for public debate so employees can attempt to balance their lives between work and family responsibilities more effectively (Ferber, O'Farrel, & Allen, 1991). Indeed, economic pressures, work place diversity and advances in technology are prompting changes in the nature of work and family life. The prominent demographic factors that affect the work and family interface are addressed below.

Increased Female Participation in the Workforce

After the Second World War there was an increase in women's participation in the labour force in all the OECD countries (Doress-Worters, 1994). Moreover, internationally there was a significant rise in the number of women entering the workforce including New Zealand (Bellavia, & Frone 2005; Gina, 1998; Human Rights Commission (NZ) 2006; Smith, & Gardner 2007). This trend occurred despite the predominant western model that suggested the traditional family norm of society is that women are the home and children caregivers and the male is the breadwinner (Borris, & Lewis 2006). The male spent his time being a good provider for the home and provided the necessary tangible needs for the viable functioning of the family. The male's predominant role was seen as being separate from the family home. In western ideology, the

male took on a provider and protector identity, which anchored the traditional norm (Boris, & Lewis 2006; Pocock, 2005; Williams, 2000).

Furthermore, the percentages of women entering the workforce have been brought about by differing push and pull factors. Some researchers (Edwards, 2001; England, & Browne, 1992; Department of Labour, New Zealand, 2004) have argued that the male earning capacity has declined in recent years and therefore the woman has gone to find work as an economic necessity for the effective functioning of the household. The costs of having children, education and general welfare of the family unit have all increased (Esping-Andersen, 1999; Esping-Andersen, Gallie, Hemerijck, & Myles, 2002), thus women have searched for employment to increase the financial viability of the family unit (Bergstrom, 1995).

Women have been proactive to end the dominant religious and educational paradigms that have previously restricted women wanting to enter the workforce (Freeman n.d.). Some factors affecting the rise of women in the workforce have been the rise of the feminist movement during the 1960s ending suffrage, the introduction of the pill for contraception and more so in the 90's and today, equal rights in society in the areas of political, social, sexual, intellectual need and economics (Freeman, n.d.). Furthermore, today's modern women are choosing to enter careers, delaying getting married, having children later in life and deciding to have fewer children, thus the role of the stay-at-home mum has dwindled considerably (Alpass & Mortimer, 2007; Elloy, & Flynn, 1998; Varuhas, Fursman, & Jacobsen, 2003).

According to the United States Department of Labor (2010) in 2007 68 million women were full time employed in the United States workforce. This

represents 75% of the available population, and compares to 59.8% in 1998 and only 33.9% in 1950. In 2007, women in the workforce occupied 39% of senior management roles and 34% of sales and office occupations. A defining characteristic of the US workforce is that 75% of these women work full time and 39% hold senior business executive careers, such as chief executives, lawyers, psychologists, management analysts, computer and information managers and human relation managers – and have a bachelors degree or higher.

Green, Moore, Easton and Heggie (2004) investigated a sample of women in the North West of England and found that the biggest barrier to women's employment was the availability, quality, and cost of child care facilities and the incompatibility of start and finish times at school with work demands. Furthermore, the women advocated a holistic approach to the demands of their career and family. The availability of adequate childcare facilities appears to be a major problem in most Western economies. According to Elsberry (1999), 80% of all childcare facilities in the United States were unable to take parents with babies under 12 months old due to the increasing demand exceeding supply. Consequently, Elsberry (1999) argued that 200,000 babies went to work with their mother and were entertained in a playpen, or pram and watching television in an empty office. Similarly, many researchers (Brown, & Barbosa, 2001; Blumenberg Moga & Ong, 1998; Ong & Blummenberg, 1999) suggested that the main reason why women failed in continued employment was due to inadequate childcare facilities.

Despite the changing family patterns and women's proactive approach to liberation, women are predominate gender responsible for the effective and efficient running and maintaining the family unit (Gornick, & Meyers, 2001;

Michaels, & McCarthy 1993). Thus, the juggling of responsibilities and roles between home and work is likely to be challenging and affect their wellbeing. When things go awry in the home environment, for example when a child is sick, it is women who typically have to organise their routines to accommodate work and home responsibilities. Some authors argue that motherhood is far more stressful than fatherhood, which may require employers to develop new ways to work to assist in minimising workplace stressors (Elsberry, 1999; Green et al., 2004).

Green et al (2004) stated that the healthy functioning of the family unit has a profound impact on the decisions women make in their career aspirations and choices. As the changing family patterns continue in the 21st century, women's careers are expected to take first priority over matrimony and motherhood. Research by Tinklin, Croxford, Ducklin, and Frame (2005), with a sample of 14-16 year olds, asked questions about work and family roles and found that their attitudes were in favour of an equality approach in the workplace and to having joint responsibilities in the home environment. However, upon further investigation the past gender stereotyping still existed, becoming evident in their behaviour whereby, as part of the experiment, they chose careers and tasks based upon stereotypical gender conditioning. Hence, it appears that women's roles are still sustained by opportunity costs, dogma and ideological patterns of behaviour and this is likely to continue into the future.

In 1984, the Labour government was elected to power in New Zealand and the Minister of Finance made sweeping changes in economic reform that swept aside New Zealand's democratic socialistic state (Gould, 2006). One of the flow-on effects of the government's restructuring into a free market regime was an

escalation of part time employment positions to which women now make a significant contribution (Dwyer, & Ryan, 2008; Gould, 2006). With the economic reforms, the purchasing power of the household diminished, in particular the low income cohort, and to minimise this effect women joined the workforce in mass numbers to sustain their accustomed living standard (Gould, 2006).

According to the New Zealand EEO Trust in 2001, there were 516,378 women in the workforce working full time and 287, 934 working part time. Recent figures from Statistics New Zealand (2011) showed that for the year ending March 2011 a total of 1,767,200 females aged over 15 years, representing 62.3% of the workforce was employed, while the remaining percentage of women were not in the workforce, due to child rearing, retirement or studying. In New Zealand the increasing yearly trend over the last five years is that women entering the work force have risen by 1% each year. Women who do choose to have a family they are electing to come back to work earlier after child birth.

As previously mentioned women are still the dominant home-carer. However, juggling the demands of work and family can be stressful if supportive networks are not available. The managing and balancing of home and work life, between paid and unpaid responsibilities can provide added pressures and produce conflict at work and home (Noor, 2002; Voydanoff, 2005a).

Dual Income Households

Within the last three decades we have seen a large increase in two-income earner families. This trend has seen a demise of the male breadwinner and the female stay-at-home mum (Higgins & Duxbury, 1992). Consumption expectations within families have increased and with it the need for two incomes

to maintain the living standards that the family has been accustomed to (Edwards, 2001).

In the United States, Brennan, Barnett and Gareis (2001) advocated that one of greatest impacts on the workforce in recent times has been the impact of dual income couples, who represent 78% of the US workforce where both spouses work full time. There are similar trends of increasing dual career couples in the workforce in Singapore. According to the Singapore Department of Statistics (2005), in 1980 27,1% of married females were in a dual career relationship, increasing to 39.8% in 1990 and up to 40.9% in 2000, with a total of 300,400 married couples in dual career relationships. In 2005 it increased to 43.8% (353,000 couples) and as expected the working status of the typical male breadwinner family unit diminished and in 2000 was 295,200 (40.9%) and in 2005, 287,600 (35.7%) – a decline of 5.2% in five years.

According to Schober (2007), the British Dual Income Household Survey found women undertook most of the domestic duties at home. Moreover, Sullivan (2000) found the division of labour between spouses in the period 1975 and 1997 in western society showed a minimal increase in the male population helping in the home, providing evidence of little change in a male ego dominated worldview, with the male as the breadwinner and the woman's role to stay home and care for the family. Sullivan (2000) argued that gender based stereotyping is changing and we are now seeing fathers spending more time in family activities. Conflicting demands of home and work are still prevalent and are exacerbated when both partners strive for upward career progression, disadvantaging women more than men and adversely affecting their work performance (Brennan et al., 2001).

Hence, the increased escalation of dual income parents brings challenges for the management of the family where both caregivers want a career.

According to Sweet, Casey, and Lewis (2009), where both parents are working, there are added pressures of both being employed for economic sustainability of the family unit, as the majority of middle class families have limited savings and a high debt load (Sweet, & Moen 2006). Furthermore, if one parent needs to relocate or loses his/her employment the effects are compounded as staying in the same geographical location may limit the other person. In addition, a recent phenomenon identified is the 'trailing spouse syndrome' which is a form of stress created where each spouse has the perception of being in competition with the other in terms of their careers (Brennan et al., 2001). This situation is especially likely when one of the spouses makes sacrifices for the effective functioning and flourishing of the family unit, which can cause marital and work-family conflict.

Walsh (2002) argued that having effective dimensions of family functioning, including family cohesion, involvement adaptability/flexibility, problem solving abilities and shared beliefs and values, has a strong effect on the spouse attitude and attachment to the family. Placing the needs of the family as a pivotal consideration is necessary for the effective functioning of the family unit. However, the demands being placed on the family unit are becoming exorbitant and women are often making choices between career and family (Sceats, 2006). Thus, as previously mentioned, women are choosing to have fewer children and later in life. Evidence suggests that the fertility rates are declining below the replacement level of 2.1 births per woman (Statistics New Zealand 2006). Statistics New Zealand data suggest that in the past New Zealand women had

children in their teenage and early twenties, and now there is a deferment to 30-34 years as the most popular ages to have children. Some women are now deciding that the demands of childrearing and having a career are too stressful, and they are choosing to be career orientated and expect to remain childless (Elloy & Flynn 1998).

As Sceats (2003) argued: “The combining of work and family is harder than it has ever been. People work longer hours in a very competitive and fast changing labour market in which there is no such thing as job security anymore. Unless some changes are made to accommodate the dual roles of men and women as members of families as well as members of the workforce, it would not be surprising if increasing number of New Zealand women look at their options and conclude, as many of their counterparts in Europe and Japan have done, that trying to have it all is a bit too hard, and decide not to have children after all” (p. 169). The impact these factors have on labour supply and economic sustainability are substantial and requires a strong catalyst to stimulate organisational policy making and implementation so employees can work towards adopting a balanced work and family lifestyle.

In sum, dual income households where both parents work and have dependent children are more likely to suffer from the time crunch, resulting in tiredness, exhaustion, and frustration. These families have difficulty in juggling work and family life and having time for them to rejuvenate are beginning to receive less attention. (Department of Labour, New Zealand, 2004).

Increase in the Number of Solo Parent Families

According to the Australian Bureau of Statistics (2009), the dominant family structure in Australia was couple families at 85% (5 million) followed by single parent families at 18% (808,000). An increasing emerging trend in Australia is the increase in child-free couples without children at home. Of couple families in 1986, 37% had no children living within the home compared to 43.2% in 2001 (de Vaus 2004). This trend is duplicated here in New Zealand as Statistics, New Zealand (2005) predicted that the growing family structure of childless couples will grow between 2001 and 2021 and this trend is due to women deciding to have children later in life or not at all.

Marriage and child bearing norms have changed over the years. Morality issues concerning children being born out of wedlock, de facto relationships and divorce are seen as more socially acceptable – which has seen the number of solo parents, in particular solo mothers, has increased in subsequent years (Statistics New Zealand, 2000).

Statistics New Zealand (2005) state that the increasing trend of one parent families continues and they are inevitable economically disadvantaged when compared to dual parented households. Indeed, Statistics New Zealand argued that New Zealand has one of the highest countries of its population (along with Canada and the United Kingdom) with one parent families and where women are the dominant care-giver in the 20-34 years cohort group.

The outcome of this situation is that one parent families tend to have increased tendency to be ill and unable to afford day to day living expenses. This is endorsed by the Families Commission, New Zealand (2001) who argued that single parent households have a higher probability of a lower standard of health

and wellbeing in comparison to dual income households. Thus, the continued demands on the single parent in managing work and family responsibilities are increasing, therefore managers of organisations may need to provide policies that can assist, to ensure workforce continuation and for productive endeavours.

Increase in Elderly Population

Another emerging trend likely to affect the work-family interface is an increased elderly population. This emerging trend brings with it multi-faceted dilemmas for consideration in the form of incorporating the elderly in workplace activity as they near retirement and the growing need for family households to accommodate eldercare in looking after their parents. These growing trends have implications for workplaces and household management practices. As the baby boom generation cohort group born between 1946 and 1964 reaches retirement, this ageing workforce cohort population is a worldwide phenomenon and provides managers of organisations and governments challenging opportunities for effective policy planning and labour market management (Alpass, & Mortimer, 2007). As Oizumi (2005) explained, it is expected that the growing trend of sub-replacement levels of fertility and increasing life expectancy in the majority of OECD countries and East Asia will be a continuing feature of workplaces in the future.

He, Sengupta, Velkoff, and DeBarros (2005) argued that the population statistics predict that in 2030, 42% of the population in the United States will be 45 and above. The United States workforce is projected to increase to 51.7% of employees over the age of 40 years by 2012. This significant increase will be in the 55 years and above cohort which in 2000 represented 13 per cent of the

workforce, and was estimated to increase to 20 per cent by 2020 (Mosner & Emerman, 2003). In the New Zealand context, Alpass and Mortimer (2007) stated that 50% of the workforce in 1991 was represented by the over 36 years, and in 2012 50% of the workforce is forecasted to be 41.9 years of age, as well as the workforce including a higher representation of Maori and Pacific cohorts due to their higher fertility rates. Consequently, governments and organisations need to make concentrated and long-term efforts to change how they attract, develop and retain talent as the workforce labour supply diminishes.

The exiting of older employees from the workforce and their expertise, a perceived shortage of workers, and an ageing workforce may be of concern to managers of organisations. As the exiting of the older workforce takes place, increasing importance will be placed on the loss of intellectual capital. Knowledge transfer is an important attribute in the sustainability of profit and growth of organisations. With the exiting of the baby boom cohort group to retirement comes important challenges to ensure their knowledge is passed on to others within the organisation.

Managers of organisations need to look at accommodating the needs of the baby boom cohort group in formulating work-family retention policies and informal practices to prevent support their abrupt leaving when retiring. For example, a transition period into retirement might be provided, with provision of assistance to managers in preparation for replacing them. This may also require additional support towards flexibility in workplace scheduling.

Increase in Eldercare

An emerging issue in the last decade is eldercare, the caring for older parents which has recently become a workplace concern. It is not uncommon to find three generations living in the same household, which provides added demands on the family unit (Grundy & Henretta, 2006). The term 'sandwich generation' has been given to employees with dependent children and who also have their parents living with them and may have to take some responsibility for their parents' personal needs (Pierret 2006; Spillman, & Pezzin 2000). This cohort will increase in number and it will be important to understand the interplay between the social demands and intergenerational exchanges over time and the tradeoffs between work, individual family members and time for self (Grundy & Henretta, 2006). As family unit roles and functions change, with many women leaving childbirth until later in life, persons living longer and the inclusion of cross-cultural family types that now form the workforce, it is expected the term 'family' will show more variation and inclusiveness in the form of extended family members. It is well documented that eldercare responsibilities are primarily performed by women (Pierret, 2006; Cranswick, & Dosman, 2007). The elder carers are usually in the 50s and 60s age group, married (Pierret, 2006) and are likely to be absent from the job more frequently than parents looking after children (Shoptaugh, Phelps, & Visio, 2004; Johnson & Lo Sasso, 2006). They are also likely to have poor attendance at work, leave their workplace early and talk over the phone on eldercare business during work hours (Shoptaugh et al., 2004). The elderly person requires a different type of care to children. Research has shown that, depending on the degree of care, other outcomes can be that elder carers may have an increase in psychological and physical health symptoms such

as fatigue, stress, depression, exhaustion, tiredness and this will impair their performance at work (Haar, 2002). Other outcomes include work to family 'spill over' whereby the pressure at work to perform and give the work task the appropriate cognitive attention becomes transferred to the home environment where there is little opportunity to escape the 24/7 care giving responsibilities (Phillips, 1998).

Shoptaugh et al.'s (2004) examination of employees in hospitals in the United States found that employees with eldercare responsibilities had high levels of organisational commitment, job satisfaction and the majority of the sample had high tenure with their organisation. Participants in this study said they often had dissonant cognitions between allegiance to their employer and attachment to their job and on the other hand to a family member's wellbeing. As mentioned earlier, employees who report high demands as caregivers often experience stress, strain, increased turnover intentions, decreased job satisfaction and work-life conflict (Potter, 2003). Thus, what appears to have a buffering effect on aspects of eldercare is to provide workplace support and more workplace schedule flexibility. For example, reducing work hours, job sharing, flexitime, tele-working and a workplace culture that proactively promotes the use of the workplace programmes coupled with the positive attitude of the employer as these are key factors in the uptake and effectiveness of the programmes (Wagner, 2003; Phillips, 1998). In Scandinavian countries, a proactive stance is more forthcoming, where special leave is given with the guarantee of re-employment once the employee is able to return to full time employment (Brandth, & Kvande, 2002; Feldman, Sussman, & Zigler, 2004). These care giving schemes with eldercare facilities either onsite or offsite may become an employer's

responsibility as the increasing trend of eldercare continues to rise because people are living longer and women are deciding to have children later in life. Furthermore, managers may be increasingly faced with employees who have eldercare and children responsibilities in the same household and have challenges addressing their professional and private domains.

In sum, the increased cost of eldercare in time, energy, and resources will increase dramatically as the baby boomer cohort retire. This will have a dramatic impact on the families to care for their aged parents putting added pressure on the family unit (Prasad, 2006). In addition, Badkar et al., (2009) argued that New Zealand is currently facing skilled shortages in health professionals. In turn this will increase the pressure on managers of organisations to retain their skilled health workforce and to provide creative responses to attract new health professionals (Badkar et al., 2009).

Summary

This chapter has highlighted some of the relevant factors associated with the work-family interface. Over several decades there have been dramatic changes in the working environment and the family structure. As the traditional conceptualisations of the worker being male, married and with children, where the wife is a stay at home mum and would deal with family issues, has been superseded with a more diverse cohort group whose needs are more complex. The family structure may now include dependent children, grandparents and both parents may have careers. Thus, today's workplace is more multi-faceted and requires managers of organisations to deal with new complexities. The escalation of environmental forces and the transient supply of labour have meant that

organisations need to use a wide range of approaches to ease the conflicts between work and family. Supportive work-family policies (e.g. flexible work options) and work-life balance initiatives are needed to accommodate the demands of work and family responsibilities to increase worker productivity and an effective integration of work and family practices. Employees who leave an organisation due to conflicting work and family demands may have negative consequences for employers, especially those facing tight labour markets, as well as for the employees and their families. Although managers of organisations and the New Zealand government have responded to the nation's demographic and work-life interdependency issues, current policies and practices new concepts seem necessary to meet the demands of the employee and the family structure for employees' wellbeing and productivity. Therefore, this research brings to the fore work-life balance issues and how managers of organisations can look at fostering resilience in the individual as a means to retain valuable employees towards continued growth and prosperity. Management of the work-family interface needs to keep pace with the demands of the work-family responsibilities with a new impetus necessary, without financial constraints on the organisation.

The next chapter, (Chapter 4) contains a critical review of the current literature on work and family. The review includes the literature on work and family conflict, enrichment, and work-family balance, a construct that was assumed to exist if there was an absence of work-family conflict and the presence of work-family enrichment.

CHAPTER 4

WORK AND FAMILY

Overview

Chapter 3 focused on the factors affecting the work and family interface (e.g. increased women in the workforce, dual income households, and increase in single-parent families, elderly population, and elder care). This chapter starts with a brief introduction to the work and family interface, and it contains a discussion about three key themes: (a) work-family conflict, (b) work-family enrichment, and (c) work-life balance. There is also a discussion of the antecedents and consequences of these three themes and the work-family theories that are prevalent in the work and family literature.

Introduction

The early pioneers of work and family research viewed work and family as separate worlds (Wharton, 2006), and most of their focus was on improving productivity. In the early part of the 1900s, Taylor introduced the concept of ‘scientific management’, which uses a reductionism approach to job tasks to improve production (Muchinsky, 2000) and accommodate the demands of mass production. Although Taylor believed workers and management should both benefit from improved production, managers used this concept to exploit workers and considered workers to be machines. At this time, workers were expected to leave family issues and problems at home and leave job issues and problems at work (Barnett & Gareis, 2006). During the late 1970s, Rosabeth Kanter’s (2006) seminal writing challenged this separate-sphere mentality because workers were caught in a situation in which one of these domains (i.e., work or family) would

inevitably take precedence over the other domain (Gutek, Searle, & Klepa, 1991), and as a result, the wellbeing of the worker would suffer.

Today, some scholars and organisations recognize the benefit of integrating work and family because work and family are both an integral part of people's everyday lives (Zedeck & Mosier, 1990). In fact, some scholars have argued that effectively balancing work and family is an important concern in today's society (Milkie & Peltola, 1999). Given the importance of finding a balance between work and family, it is necessary to understand how health professionals can help people effectively manage the work-family interface.

Situational Influences on the Work-family Interface

In recent years, there has been increased pressure on organisations to increase productivity and increased demand on workers' time (Rahim, 2011), which has reduced workers' time with their families. Moreover, the workforce composition has changed in recent years. For instance, there has been an increase in women in the workplace (Bardoel et al., 2008; Bellavia & Frone, 2005), and two-income families and single parents are now becoming the norm in society (Bardoel, et al., 2008; Cárdenas, Major, & Bernas, 2004). In fact, in the United States, two-income families are the dominant work-family model (Bruck, Allen, & Spector, 2002). The traditional nuclear family is becoming more obsolete as more women enter the workplace and more people assume responsibility for the care of elder members of their family (Cribb 2009). These changes have put many workers under pressure to try and find a balance between work and family, and in particular, these changes have created challenges for health professionals, who are often expected to work night shifts, long hours, and weekends. These

factors affecting the work-family interface were discussed in more detail in chapter 3 (e.g., increased number of single parents in the workforce, more eldercare, and two-income households).

As a reaction to the increased competition in the marketplace, many organisations have had to increase productivity, reduce costs, and restructure their workforce. Downsizing, amalgamations, and the loss of employees have become a natural occurrence as organisations become concerned with profitability (Hirsch & Soucey 2006). These changes have also affected healthcare systems. In New Zealand, the District Health Boards have been pressured by the government to restructure and become more efficient (Scheridan, Kenealy, Connolly, Mahony et al., 2011). In addition, the global demand for health professionals is high and countries such as United States, Canada and Australia are able to attract New Zealand health professionals because they are able to offer higher incentives than in New Zealand (Badkar et al., 2008). Badkar et al., (2008) argued that New Zealand relies on importing health care professionals, and attracting and retaining staff continues to be an ongoing challenge for the industry. As a result, New Zealand health professionals are shouldering extra workloads and working longer hours to make up for the vacant positions and increased healthcare demand.

New technology, such as mobile phones, laptops, Blackberries, pagers, and home computers, are now seen as a necessary part of working life. Stephens, McGowan, Stoner, and Robin (2007) argued that new technology has done more harm to the work-family interface because employers can easily contact workers 24 hours a day, 7 days a week. As with other segments of the workplace, these changes are often at the expense of the physical, emotional, and psychological

health of workers, including health professionals (Harwood, Laschinger, Ridley, & Wilson, 2009).

For some health professionals (e.g., doctors, surgeons, and allied health practitioners), the boundaries between work and family have been blurred because their office is transportable, and this situation has affected family functioning (Rubery, Ward, Grimshaw, & Beynon 2005). Employees' family time and space have been slowly been eroded in the name of increased productivity (Poelmans, O'Driscoll, & Beham 2005). This has resulted in an increasingly stressed healthcare workforce (Higgins & Duxbury, 2005; Toppinenn-Tanner, Kalimo, & Mutanen, 2002).

In addition, the financial survival of the family unit is under constant pressure, and Hipkins (2009) argued it is necessary for both parents to work longer hours to meet family expenses and to maintain the lifestyle that the employees have become accustomed too. As a result, it may be difficult for many employees' to find a balance between work and life/family.

Research Limitations and Gaps in the Work-family Conflict Literature

Gaps and limitations in the research that examined the work-family interface include the following: (a) too many models, (b) lack of information about the bi-directionality of the work-family interface, (c) lack of information about work-family conflict in New Zealand, (d) lack of information about the positive aspects of the work-family interface, and (e) lack of information about the role played by resilience in the work-family interface.

First, some researchers (Allen, et al., 2000; Kalliath 2010) argued that there are too many fragmented models and theories to explain the work-family

interface. For example, organisational psychologists have focused on work-related constructs, while social psychologists have mainly focused on the family domain. The present study examines both work and family domains (e.g., job satisfaction and family satisfaction).

Second, work-family conflict is bi-directional in nature; however few studies have explored this aspect of the work-family interface. In addition, this aspect of the work-family interface has not been examined in relation to the three dimensions of conflict identified by Carlson, Kacmar, and Williams (2000): (a) time-based conflict, (b) strain-based conflict, and (c) behaviour-based conflict. Therefore, the present study addresses both these limitations by providing a succinct, detailed account of factors that affect work-family balance and resilience.

Third, despite the large amount of literature on work-family conflict, there is little research that examined the job and family-related outcomes of work-family conflict in New Zealand, especially longitudinal evidence. Therefore, the present study provides longitudinal evidence from New Zealand about the bi-directional aspect of the work-family interface and its relationship to WFC and FWC.

Fourth, little attention has been given to the positive side of the work and family interface. Frone et al., (2003) and Voydanoff (2005b) argued that people can experience conflict and enrichment at the same time, and this information should be incorporated into a work-family model.

Fifth, the majority of work and family studies have investigated the direct effect of the work-family interface on people's lives. The present study enhances the work-family literature by analysing the mediation effects of resilience and

work-life balance in the relationship between the predictors (i.e., work and family) and wellbeing variables (i.e., job satisfaction, family satisfaction, anxiety/depression, and social dysfunction).

WORK-FAMILY CONFLICT

Work-family Conflict Defined

Work-family conflict is defined as “a form of inter-role conflict in which role pressures from the work and family domains are mutually incompatible in some respect” (Greenhaus & Buetell, 1985, p. 77). Some authors have used different terminology when referring to work-family conflict: (a) job-family role strain, (b) work family tension, (c) family/work role incompatibility, and (d) inter-role conflict (Greenhaus & Beutell, 1985). Regardless of the term used to describe work-family conflict, many researchers (Greenhaus & Beutell, 1985; Wang, Lawler, Walumbwa, & Shie, 2004) suggested this conflict is primarily caused by excessive work demands, and it predicts negative family outcomes. Cardenas et al. (2004) argued that employees have limited time and energy to devote to the numerous domains in their lives. This suggests it is necessary to ignore the demands of one domain (e.g., family) to satisfy the demands of another domain (e.g., work), and this imbalance can cause conflict (O’Driscoll, 1996).

Research that examined the work-family interface has predominantly focused on the negative side of combining work and family roles. A scarcity paradigm approach, mainly spearheaded by the work of Greenhaus and his colleagues, has been used in a number of studies (Wayne, Musica, & Fleeson, 2004). This approach, sometimes referred to as the scarcity hypothesis or scarcity theory (Barnett, Marshal, & Singer, 1992), describes employees as people with

finite resources of time, energy, and cognitive attention. As a result, demands on people's resources can create conflict. For example, a female nurse can be a mother, caregiver, homemaker, spouse, and economic provider. Therefore, she experiences multiple demands on her personal resources. The emotional and physical cost of multiple-role occupancy has resulted in job and family dissatisfaction, increased psychological and physical health symptoms (e.g., stress, burnout, depression, and somatic symptoms), absenteeism, and increased employee turnover (Barnett & Gareis, 2006; Posig & Kickul, 2004; Stoddard & Madsen, 2007).

The following theories dominated early work and family research: (a) role theory, (b) spill-over theory, (c) segmentation theory, and (d) compensation theory. These four work and family theories provided a framework to illustrate the relationship between these two domains. As a consequence of these original theories' limitations, more comprehensive theories have emerged e.g., Hobfoll's 1989 conservation of resources (COR) theory.

Work-family Interface Theories

Role theory

Role theory was derived from the work of Kahn, Wolfe, Quinn, Snoek, and Rosenthal (1964). According to role theory, people play many roles in their life (e.g., father, mother, daughter, son, worker, and family caregiver), and they have a limited amount of time and attention to devote to each role. As a result, there can be conflict between roles when people try to accommodate all the roles in their life. This desire to meet the demands of all roles can lead to role ambiguity and role stress in one or all roles and have detrimental effects on

people's health and wellbeing (Poelmans, O'Driscoll, & Beham, 2005). However, role theory is limited because different roles can reinforce each other and may increase people's health and wellbeing.

Spill-over theory

Spill-over theory (Pleck, 1977) has been the most popular theory for examining the work-family interface (see Doby & Caplan; 1995; Grzywacz, Almeida, & McDonald 2002; Lambert, 1990; Williams & Allinger, 1994; Staines, 1980; Young & Kleiner, 1992). This theory is based on the notion that there are permeable boundaries between work and family (Greenhaus, Parasuraman, Granose, Rabinowitz, & Beutell, 1989; Hammer, Allen, & Grigsby, 1997), and moods, attitudes, emotions, feelings, stress, and behaviours generated in one domain can spill over into the other domain (Rothbard & Dumas, 2006). Positive spill-over refers to situations where satisfaction, sense of accomplishment, and wellbeing gained from one domain (e.g., work) are transferred to the other domain (e.g., family). In contrast, negative spill-over occurs when problems created in one domain spill-over into the other domain, resulting in harmful consequences. For example, a doctor who had a difficult day at work may still be affected by the stress of the day when at home. Although this is an example of a negative experience from one environment affecting another environment, it does not have to be a negative experience. However, the main focus of the spill-over theory has been on negative experiences. This will be covered in more detail in the work-family enrichment section later in this chapter.

Segmentation theory

This theory suggests that work and family are separate worlds (Kanter, 2006) and have no influence on each other (Edwards & Rothbard 2000). Indeed, researchers (e.g., Eckenrode & Gore, 1990; Lambert, 1990) who supported this theory suggested that people need to establish firm boundaries between work and family and, if necessary, suppress the thoughts, feeling, attitudes, and emotions from one world when in the other world. For example, a doctor in very stressful situations at work may segregate the thoughts, feelings, and attitudes needed to deal with work situations in order to reduce spill over into the family environment. Segmentation theory is mainly used as an alternative theory when the spill-over theory cannot explain non significant effects (Smyrnios, Romano, Tanewski, Karofsky, Millen, & Yilmaz, 2003). However, Parasuraman, Greenhaus, and Granrose (1992) investigated career couples and found that work role stressors were related with job satisfaction whereas family role stressors were related with family satisfaction. These researchers argued that the segmentation theory explains how career couples segregate different spheres of their life to minimise the stress caused by multiple roles. Thus, segmentation theory may be a deliberate strategy for coping with potential work-family conflict.

Compensation theory

Edwards and Rothbard (2000) defined compensation theory as “the synergistic interaction between work and non-work roles.” In this theory, negative experiences in one role can be offset by positive experiences in another role (Rothbard, 2001). According to compensation theory, dissatisfaction with the family role will lead to less involvement in that role, and consequently, a person

might devote more time and energy to the work role to compensate for this dissatisfaction.

Conservation of resources (COR) theory

The conservation of resources (COR) theory (Hobfoll, 1989, 2001, 2002, 2011) proposes that individuals will be motivated to acquire and maintain resources in order to deal with the demands of work and family. COR theory has been predominantly used in the stress and motivation literature and explains how and what resources are invested to gain more positive states (Halbesleben & Bowler, 2007). COR theory moves away from the purely pathogenic focus to a salutogenic perspective (i.e., prime focus is on the approach that supports health and wellbeing), builds on research from a positive health arena (e.g., positive psychology perspective), and draws on individual regulatory processes such as resilience, positive emotions, and hardiness (Kent & Davis, 2010). This positive resource reinvestment is a perpetual cycle in which people acquire additional resources (i.e., a broader resource reservoir) that act as buffers against problems in the work and family environments.

Resources can be defined as anything people value, such as self-esteem, close attachments, inner peace, work-life balance, feelings of being resilient, and materialistic objects such as houses and cars. In particular, Hobfoll (1989, 2002, 2009) categorized the resources from a Western perspective into four general areas: (a) personality traits (e.g., self-esteem, self-efficacy, optimism, sense of coherence, resiliency, and mastery); (b) conditions (e.g., wellbeing and physical and mental health); (c) objects (e.g., socioeconomic status and housing); and (d) energies (e.g., time, money, skills, and knowledge).

Hobfoll suggested that resources have a synergistic and compounding effect. COR theory postulates that resources are in constant loss or gain cycles that are cumulative. With resource losses being more salient than resource gains, people strive more to maintain their status quo rather than invest time, energy, and commitment to resource gains. Therefore, people who experience work-family conflict experience resource loss cycles that are harmful to effective functioning, work-life balance, and wellbeing. However, Hobfoll (2002) argued that individuals with a strong resource pool to draw on are more resistant to resource loss, experience greater levels of wellbeing, are able to problem solve, are solution focused, have the cognitive capacity to positively reframe the situation (i.e., emotion-focused coping strategy), and are more amenable to activities that increase resource gains (e.g., increasing knowledge and skills). As stated in COR theory, resilience can be viewed as a valued resource. People who respond positively to adversity or work-family conflict are more likely to rebound to a satisfactory work-life balance and sense of wellbeing. In the context of the present research, resilience and work-life balance are considered two important individual resources that can foster health and wellbeing.

Work-family Conflict Explored

As mentioned previously, work and family researchers now agree that work-family conflict occurs bi-directionally (Wayne et al., 2004). In other words, negative experiences at work can affect people's family life and vice versa. Continued work demands over a period of time may cause people to think they are not effective family members. For example, a health professional may have to work extra hours on a weekend and, as a result, fail to attend a child's weekend

sporting programme. Alternatively, a family role could interfere with the health professional's work role. For example, a health professional may miss work to care for a sick family member. A significant amount of research has concluded that work→family and family→work conflict are two distinct variables, albeit reasonably correlated, with discriminant variability (Casper, Martin, Buffardi, & Edwins, 2002; Netemeyer, Boles, & McMurrian, 1996). However, work→family conflict is regarded as a more dominate direction of conflict (Frone et al., 1992; Gutek et al., 1991; Netemeyer et al., 1996).

There are three dimensions of work→family and family→work conflict: (a) time-based conflict, (b) strain-based conflict, and (c) behaviour-based conflict (Greenhaus & Beutell, 1985). Time-based conflict is based on the scarcity paradigm and occurs when time pressures in one role make it difficult to meet expectations in another role. This conflict occurs because of a scarcity mentality and the Newtonian principle (i.e., segmentation theory) that time is a finite resource (Kelly, & Moen, 2007). Therefore, time-based conflict occurs when people feel work-related or family matters are in competition with other activities (Yang, 2005). According to Lily, Duffy, and Virick (2006), time-based conflict arises when people's roles in life are incompatible and compete for their time. For example, a doctor has received a late request to work extra shifts or weekends, and this request causes conflict because the doctor is unable to meet the demands of other roles (e.g., parent or caregiver).

In contrast, strain-based conflict exists when workplace demands become excessive. Workplace pressures may occur when anxiety, job insecurity, dissatisfaction, irritability, depression, or interpersonal withdrawal in one role are

transferred to another role, making it difficult to function (Edwards & Rothbard, 2000).

Behaviour-based conflict occurs when behaviour in one role is not congruent with the behaviour expected in another role (Greenhaus & Beutell, 1985). For example, a doctor may need to be (at certain times) unemotional and unattached when providing relatives with news about a family members' ill health. However, these same behaviours may not be appropriate and may lead to interpersonal conflict when the same attitude and behaviour are used with family members. For example, a spouse talks about his or her busy, stressful day at work, and the doctor appears unemotional and uninterested, leaving the spouse feeling unappreciated. This form of conflict is not caused by work or family demands; rather, it is caused by the transference of behaviour to another situation (Edwards & Rothbard, 2000).

Review of Work-family Conflict Measures

Some researchers (Carlson, Brooklyn, Derr, & Wadsworth, 2003; Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005; Stephens & Sommer, 1996) agree that these variables (i.e., time, strain, and behaviour) are discrete and have different relationships with other constructs. Although Bruck et al. (2002) found that behaviour-based conflict was significantly related to job satisfaction, the majority of research on work-family conflict up to 2001 used mainly global measures based on time- and strain-based variables, with behaviour-based conflict receiving little to no attention. Bruck et al. (2002) argued that work-family conflict research should use the six different dimensions of work-family conflict rather than focusing on global measures.

Antecedents of Work-family Conflict

This section contains a discussion of the antecedents of work-family conflict. It is beyond the scope of this research to fully explore all the antecedents of work-family conflict; however, there is a brief examination of how gender, work and family demands, and organizations' work-family policies affect work-family conflict.

Gender differences

Changes in labour roles have changed the idea that the husband is the breadwinner and the wife is the homemaker (Duxbury & Higgins, 1991; Frone & Yardley, 1996; Gutek et al., 1991; Rogers & Amoto, 2000). Despite males taking on more of a family role, however, women still continue to spend more hours engaged in domestic duties than men (Kornblum, 2008; Silver & Goldscheider, 1994). Past research (Barnett, 2004; Barnett & Hyde, 2001; Gutek et al., 1991; Jick & Mitz, 1985; Williams & Allinger, 1994) suggested that women experience no more work-family conflict than men. Kinnunen and Mauno (1998) conducted a study of 501 employees in four organisations in Finland and found no differences between genders when they examined work→family conflict or family→work conflict. However, in a household study (Frone et al., 1992) of 631 people, men reported that work interfered less with their home life more often than women reported this problem. In New Zealand, Haar and Spell (2001) found no gender difference in work-family conflict but a significant difference in family-work conflict, with females reporting higher levels of conflict. Overall, the research has produced mixed results, and it is difficult to draw any conclusions about the effect of gender on work-family conflict.

Work and family demands

Perceptions of work demand vary because it is a subjective experience. Researchers (Frone et al., 1992; Parasuraman, Purohit, & Goldshalk, 1996; Yang, Chen, Choi, & Zou, 2000) have identified hours worked, number and age of children at home (Kinnunen & Mauno, 1998), dependants at home, high workload, rush jobs, and pressure to meet deadlines (Frone, 2003; Yang et al., 2000) as negative aspects of work demand. The dominant theme from this research appears to be excessive workload, and this aspect of work demand has been found to be a stronger predictor of work-family conflict than long work hours (Allan, Loudoun, & Peetz, 2007).

Using structural equation modelling, Boyar, Maertz, Pearson, and Keough (2003) found that work stress (i.e., work role conflict and work role overload) was significantly correlated (i.e., .29 for work role conflict and .30 work role overload) with work-family conflict. In a similar vein, Voydanoff (2005a) investigated work demands and found there are three groups of work demands: (a) time-based demands, which include paid work hours, extra hours without notice, and tight work schedule; (b) strain-based demands, which include job insecurity, time pressure, and workload pressure; and (c) boundary-spanning demands, which include an unsupportive workplace culture, working at home, commuting time, and bringing work home. The results indicated significant positive relationships among work demands, time-based, strain-based, and boundary-spanning demands and work-family conflict. Voydanoff (2005a) concluded that strain-based demands have a stronger correlation with family-work conflict than do time-based or boundary-spanning demands.

Work and family organisational policies.

According to a national study in the United States (Rau & Hyland, 2002), an organisation's work-family balance policies were a significant factor in attracting job applicants and retaining current employees. Organizations have used flexible work alternatives, on-site child-care, job sharing, working at or from home, parental leave, and employee assistance programmes as a way to reduce work-family conflict and achieve work-family/life balance. Many researchers (Baltes, Briggs, Huff, Wright, & Neuman, 1999; Hill, Miller, Weiner, & Colihan, 1998; Thomas & Gangster, 1995; Trent Smith & Wood, 1994) have found a significant positive relationship between flexitime and telecommuting with job satisfaction, productivity, and employee retention and a negative relationship with absenteeism. In a New Zealand context, Haar (2007) found that employees thought flexitime was an important way for them to balance their work and family lives.

Consequences of Work-family Conflict

Allen et al. (2000) provides a useful summary of the consequences of work-family conflict. They reviewed 67 articles published between 1980 and 1999 and found that job satisfaction is the most widely researched construct (i.e., 38 studies) and had a mean correlation, $r = -.24$, across all samples. The 38 studies examined many groups: (a) management personnel, (b) healthcare workers, (c) real estate employees, (d) teachers, (e) employed Black mothers, and (f) working mothers with children attending day care which gives a broad coverage of sample. Haar, Spell, and O'Driscoll (2009) conducted a study with government employees in New Zealand and found a significant relationship

between work→family conflict and family→work conflict and job satisfaction, $r = -.19$, and $r = -.16$, respectively.

On the other hand, Bruck et al. (2002) conducted a study with hospital employees and used the six dimensions of conflict measure to examine employee job satisfaction. They found a significant relationship between behaviour-based conflict and the directional of work→family conflict, $r = -.27$, and a stronger relationship between behaviour-based conflict and family→work conflict, $r = -.36$. The results of this study highlight the importance of assessing the six dimensions of conflict and both directions (i.e., work→family and family→work) of conflict.

In contrast to job satisfaction, studies that examined family satisfaction are more limited (Aryee, Luk, Lueng, & Lo, 1999; Kopelman et al., 1983). However, these studies have found that high work-family conflict is associated with lower levels of family satisfaction. Rice, Frone, and McFarlin (1992) explored the relationship among work-family conflict, work-leisure conflict, and quality of life and found there were significant direct paths between work-family conflict and family satisfaction (beta = $-.11$), job satisfaction (beta = $-.11$), and leisure satisfaction (beta = $-.16$). Similarly, work-leisure conflict was significantly negatively correlated to job satisfaction but not family satisfaction. Furthermore, they found that the indirect path from work-family conflict to global life satisfaction was mediated by job, family, and leisure satisfaction. These researchers concluded that the work-family interfaces are interwoven experiences and more research should examine the relationship between the work and family domains so that managers can establish suitable organisational policies. Brough, O'Driscoll, and Kalliath (2005) offered some support for this view by noting that

the relationship between family→work conflict and family satisfaction is stronger than the relationship between work→family conflict and job satisfaction.

Psychological health.

Early studies indicated that psychological distress can be an antecedent of work-family conflict (Frone et al., 1992; Greenglass, Pantony, & Burke, 1988; Gutek et al., 1991). In the literature, there is overwhelming support (see the meta-analyses by Eby et al., 2005) that work-family conflict has a strong correlation with psychological distress (Smith-Major, Klein, & Ehrhart, 2002). For example, anxiety and depression have been found to have positive correlations with work→family conflict (MacDermid & Harvey, 2006). As state-like emotions (e.g., anxiety and depression), people may be worried about the future loss of resources, which has a negative effect on their psychological health. Kinnunen and Mauno (1998) found significant relationships between work→family conflict and reduced work wellbeing (e.g., job anxiety, job depression, and job exhaustion) and reduced family wellbeing (e.g., marital and parental satisfaction) in a large group of participants from different organisations. As mentioned previously, many researchers (Allen et al., 2000; Klitzman, House, Israel, & Mero, 1990; Netemeyer et al., 1996; Thomas & Ganster, 1995) have found a strong relationship between work→family conflict and depression, with a weighted mean correlation ranging from .20 to .51. However, Frone et al. (1992) conducted a 4-year longitudinal study with employed parents and found that work-family conflict and depression had no positive relationship over time. In contrast, family→work conflict did show a positive association, suggesting that family→work conflict has greater influence over time.

Physical health

Lee (1997) conducted a study with a group of eldercare workers and found that employees who have high work demands suffered from physical symptoms such as stress, weight loss or gain, drowsiness, inability to sleep, headaches, and reduced worker performance. Moreover, the strain imposed by work-family conflict has led to ill health and somatic symptoms, such as obesity (Greenhaus, Allen, & Spector, 2006), and both directional measures are positively related to high blood pressure and high cholesterol levels (Thomas & Ganster, 1995), decreased energy levels, increased fatigue (Allen et al., 2000), and hypertension (Bellavia & Frone 2005). In addition, Bellavia and Frone (2005) found that work-family conflict may lead to unhealthy behaviours, such as overeating, substance abuse, and skipping meals.

Overall, a number of factors appear related to increased work→family and family→work conflict, and these factors are likely to be highly relevant for this study of health professionals. In addition, the outcomes associated with conflict are universally detrimental, making the exploration of wellbeing outcomes appropriate. While people may experience negative aspects when work and family come into conflict, work and family can result in positive outcomes for people.

WORK AND FAMILY ENRICHMENT

In the past 10 years, research (e.g., Haar & Bardoel, 2009; Stoddard & Madsen, 2007; Wayne et al., 2004) has found that the work-family interface can have significant benefits for people. Indeed, some researchers (Haar & Bardoel, 2009; Stoddard & Madsen, 2007; Wayne et al., 2004) suggested that employees

who have high-quality resources are able to transfer these resources from one role to another, which enhances employees' wellbeing.

To date, researchers (Greenhaus & Parasuraman, 1999; Greenhaus & Powell, 2006) have predominantly focused on the conflict perspective of the work-family interface and assumed these domains are time-based and human energy is used in one domain at the expense of another. These researchers viewed roles as static and divided rather than fluid and dynamic. In the past 10 years, there has been a move to examine the positive aspects of the work-family interface and how both domains can enhance one another. Seligman (1998, 2011), one of the founders of positive psychology, pointed out that researchers have focused on what is wrong with human functioning rather than focusing on positive experiences, wellbeing, resilience, positive futures (e.g., self efficacy/confidence, optimism, and hope), and strengths, and in order to understand and advance work and family theory, it is necessary to use the negative and positive aspects of the work-family interface to create a model that could help people achieve a sense of wellbeing.

Researchers have used different terms to describe the positive aspects of the work-family interface: (a) work-family facilitation (Frone, 2003; Rotondo & Kincaid, 2008), (b) work-family enhancement (Greenhaus & Parasuraman, 1999), (c) work-family compensation (Edwards & Rothbard, 2000), (d) work-family enrichment (Greenhaus & Parasuraman, 1999; Greenhaus & Powell, 2006; Rothbard, 2001), and positive spill over from family to work and vice versa (Grzywacz & Marks, 2000). Fundamentally, while some differences do exist among these different terms, they all explore the positive relationship between work and family and its beneficial influence on the opposite role (i.e., family or

work). Work→family enrichment (i.e., WFE) and family→work enrichment (i.e., FWE) are used in this research to describe the positive aspects of the work-family interface. Work-family enrichment is a multidimensional construct described as the process in which employee experiences can benefit and increase the quality or performance of a person in the family (work) role and their wellbeing (Greenhaus & Powell, 2006; Voydanoff, 2001).

Work-family Enrichment Explored

Carlson et al. (2006) suggested that the process of enrichment occurs when resources gained from one role directly enrich other roles, referred to as the instrumental path. For example, employees learn skills at work (e.g., conflict resolution or effective problem solving) and transfer the new skills from work to home, resulting in improved interactions with family members (Stoddard & Madsen, 2007). In addition, enrichment can occur when the emotions and moods experienced in one role enrich another role, which is referred to as the affective path (Hanson, Hammer, & Colton, 2006). The social exchange theory explains this reciprocity between work and family (Blau, 1964; van Dyne & Ang, 1998). According to this theory, an exchange between roles occurs when people base social decisions on the benefit and cost to each role, leading to favourable outcomes in both roles. Thompson, Beauvais, and Allen, (2006) argue that the multiple roles have a synergistic effect on each other and compliment each other. According to the role accumulation hypothesis, the multi-directional effect of positive experiences blending from one role to another increases skills, creates a more positive mind set, heightens self-esteem, produces feelings of success and confidence, and improves physical and psychological wellbeing. Researchers

(Allis & O'Driscoll, 2008; Edwards & Rothbard, 2000; Greenhaus & Powell, 2006) argued that when enrichment occurs the experiences, values, and skills from one role will make participation in other roles more enjoyable and satisfying. To test the role accumulation hypothesis, Wetherington and Kessler (1986) conducted a longitudinal study with married women and found that multiple roles had a beneficial effect on their participants' health. They concluded that the women's multiple roles increased psychological functioning and lowered psychological distress.

The integration effect of combining multiple roles has been found to lead to intensified organisational commitment, increased job satisfaction, personal growth (Kirchmeyer, 1992), and better health (Moen, Dempster-McClain, & Williams, 1992). Indeed, Rice et al. (1992) suggested that a supportive marital relationship with high-quality roles may act as a buffer against stressors in the workplace. In maintaining the work-family equilibrium, Allis and O'Driscoll (2008) thought personal benefit activities (e.g., sport, hobbies, spiritual commitments, studying, spiritual experiences, meditation, family outings, and so forth) helped people maintain a work-family/life balance. They concluded that people who engage in personal benefit activities regenerate their sense of self, which leads to effective functioning and wellbeing.

Review of Work-family Enrichment Measures

As previously mentioned, measures of work-family enrichment in the work-family interface are in their infancy compared to work-family conflict measures (Frone, 2003). Work and family researchers (e.g., Barnett & Hyde, 2001; Grywacz & Marks, 2000) who have examined the positive aspects of the

work-family interface have found that multiple roles played by employees can have beneficial effects (i.e., positive resources) that enhance each role. These researchers have used measures that examine facilitation, enhancement, compensation, and positive spill over.

Greenhaus and Powell (2006) described a positive resource as “an asset that may be drawn on when needed to solve a problem or cope with a challenging situation” (p. 80) and identified several positive resources: (a) skills and perspectives (e.g., interpersonal, problem-solving, and coping skills), (b) psychological and physiological resources (e.g., self-efficacy, hope, optimism, and resilience), (c) social capital resources (e.g., networking information), (d) flexibility (e.g., work-family policies such as flexitime and teleworking), and (e) material resources (e.g., remuneration).

Several researchers (see Carlson, Kacmar, Wayne, & Grzywacz, 2006; Kirchmeyer, 1992; Grzywacz & Bass, 2003) have developed measures that examine the positive side of the work-family interface. Carlson et al. (2006) argued that previous measures did not accurately define the positive side of the construct and had inconsistent meanings, which made it difficult to validate the construct (see also Tetrick & Buffardi, 2006). Therefore, in response to empirical concerns, Carlson et al. (2006) developed and validated a work-family enrichment measure and considered work-family enrichment as resources that may assist people to perform better in all their roles (e.g., work and family/life). The measure contains three dimensions that examine work to family (i.e., development, affect, and capital) and three dimensions that examine family to work (i.e., development, affect, and efficiency).

Stoddard and Madsen (2007) identified the following dimensions of WFE:

Work→family direction:

Development occurs when involvement in work leads to the acquisition or refinement of skills, knowledge, behaviours, or ways of viewing things that help an individual be a better family member. *Affect* is defined as a positive emotional state or attitude which results when involvement in work help the individual be a better family member. *Capital* occurs when involvement in work promotes levels of psychosocial resources such as a sense of security, confidence, accomplishment, or self-fulfilment that helps the individual be a better family member.

Family→work direction:

Development occurs when involvement in family leads to the acquisition or refinement of skills, knowledge, behaviours or ways of viewing things that help an individual be a better worker. *Affect* occurs when involvement in family results in a positive emotional state or attitude which helps the individual be a better worker. *Efficiency* occurs when involvement with family provides a sense of focus or urgency which helps the individual be a better worker. (p. 4).

This measure accurately defines the current concepts associated with the positive aspects of the work-family interface, and as a result, it was used in the present study.

Antecedents of Work-family Enrichment

Certain dispositional characteristics are associated with work-family enrichment. Hammer and Hanson (2006) found certain personality characteristics were associated with enrichment constructs. They found that constructs such as

extraversion, agreeableness, conscientiousness, and coping mechanisms are associated more with family→work enrichment. Moreover, the desire for growth, extraversion, and openness is associated more with work→family enrichment. Grzywacz and Marks (2000) found that a high level of neuroticism and extraversion were associated with WFE. They found low levels of education and incomes were negatively associated with WFE for women.

Bhargava and Baral (2009) conducted a study that used data from full-time managers and used core self-evaluations as a global measure of self-esteem, neuroticism, locus of control, and self-efficacy in both directions of enrichment (i.e., WFE and FWE). They found that core self-evaluations were positively related to FWE only. This finding supported other studies (Aryee, Srinivas, & Tan, 2005; Hammer & Hanson 2006; Wayne et al., 2004) that found neuroticism, one of the core self-evaluations constructs, to be negatively associated with WFE.

Grzywacz and Marks (2000) investigated situational antecedents and found that work autonomy (i.e., the employee is given freedom to perform his/her job) results in WFE and FWE. Moreover, Bhargava and Baral (2009) used the Hackman and Oldham (1976) measure of job characteristics (e.g., dimensions of autonomy, variety, identity, significance, and feedback) with 245 participants in India who worked in manufacturing and IT departments. These researchers found that job characteristics have a significant association with work→family enrichment, and they concluded that jobs can be psychologically enriching.

Supervisor support has been related positively to work→family enrichment (Bhargava & Baral, 2009; Ma, Tang, & Wang, 2008). Bhargava and Baral (2009) also found a significant relationship between supervisor support and family→work enrichment.

Consequences of Work-family Enrichment.

McNall, Nicklin, and Masuda (2010) conducted one of the first meta-analyses that examined the positive side of the work-family interface. They reviewed 21 studies that described workfamily enrichment constructs and 25 studies that investigated family→work enrichment and its relationship to work constructs, non-work outcomes, and physical and mental health issues. The work-related constructs included job satisfaction, affective commitment, and turnover intentions. Job satisfaction (WFE, $p = .34$, and FWE, $p = .20$) and affective commitment (WFE, $p = .35$, and FWE, $p = .24$) were positively related to WFE and FWE, but turnover intention was not positively related to WFE and FWE (WFE, $p = -.07$, and FWE, $p = .02$).

McNall et al. (2010) found that work→family and family→work enrichment had a positive relationship, $p = .14$ and $p = .43$, respectively, with family satisfaction, and family→work enrichment was more strongly related to family satisfaction than work→family enrichment. These researchers also found that work-family enrichment ($p = .21$) were positively related to physical and mental health.

Ma et al. (2008) used participants from 10 organisations in China to investigate work→family enrichment as a mediator between supervisor and colleague support and job satisfaction. They found that supportive work colleagues and supervisors met the employee's needs and increased work→family enrichment and job satisfaction. Bhagava and Baral (2009) also found that work→family enrichment is an antecedent of job satisfaction, affective commitment, and organisational citizenship behaviour.

Overall, research that examined work-family enrichment is limited when compared to research that examined work-family conflict. However, the positive side of the work-family interface provides a more balanced approach, and as a result, it was used in the present study to examine the effect of the work-family interface on health professionals.

WORK-LIFE BALANCE

This last section contains a discussion of the literature that on work-life balance. The first part is focused specifically on the background and definitions of work-life balance and is followed by the antecedents and consequences of the construct. Work-family balance (Clarke, 2000; Fouad & Tinsley, 1997; Voydanoff, 2005b) originated as a Western concept and is also referred to as work-family fit (Clarke, Koch, & Hill, 2004), work-family interaction (Halpern, Drago, & Boyle, 2005), work-personal life balance (Burke, 2000; Lewis, 2003), work-life balance (Lewis, Gambles, & Rapoport, 2007), work-life integration (Bailyn, Drago, & Kochan, 2001), and work-family integration (Polk, 2008; Whitehead, Korabik, & Lero, 2008). There is still debate about the definition of work-life balance, but it implies that there is a balance between the demands of work and life (Guest, 2001).

Work-life Balance Defined

Work-life balance has been a catch phrase over the past decade as a result of increased demands from work and family. The term has been popularised in the business literature, but the meaning is vague, and there is no accurate definition of work-life balance (Frone, 2003). Some researchers (Clarke et al.,

2004; Joplin, Schaffer, Francesco, & Lau, 2003) prefer to use an overarching concept of equilibrium, balance, and harmony, while other researchers (Crooker, Smith, & Tabak, 2002) use the concept of fit and incorporate the demands of the role and environment and the availability of personal resources. In addition, some researchers (Buffardi, Smith, O'Brien, & Erdwins, 1999; Clark, 2001) have defined *work-life balance* as an absence of work-family conflict or increasing levels of work-family enrichment. *Work-family balance* is defined by the New Zealand Department of Labour (2006) website as an effective "juggling act between paid work and the other activities that are important to people" (n.d.). Some researchers (Kalliath & Brough, 2008) have focused on the compatibility of both roles and their promotion of growth (Brough et al., 2005), satisfaction between multiple roles (Clark, 2000; Kirchmeyer, 2000), fulfilment of role salience between multiple roles (Eby et al., 2005), perceived control between multiple roles (Fleetwood, 2007), and relationship between conflict and facilitation (Frone, 2003).

In the work-life literature, however, there are four main definitions of work-life balance. Greenhaus et al., (2003) defined *work-life balance* as "the amount of time and the degree of satisfaction with the work and family role." (p. 511). Clark (2000) argued that work-life balance occurs when there is a sense of satisfaction with work and family roles. Frone (2003) stated that balance is a four-fold taxonomy between the dimensions of direction of influence (i.e., work to family and family to work) and type of effect (i.e., conflict and facilitation). Carlson, Grzywacz, and Zivnuska (2009) recently addressed limitations in the definitions of work-life balance and suggested that people have balance when they

believe they can facilitate work and family commitments and effectively negotiate with significant others in their different life domains.

Guest (2001) offered a subjective definition about work-family balance. He argued that balance is determined by a person's subjective feelings and emotions. That is, they feel they are living a balanced life. Guest suggested that people assess the balance in their life using subjective evaluations based on their beliefs and feelings. Kalliath and Brough (2008) defined *work-life balance* as “the individual's perception that work and non-work activities are compatible and promote growth in accordance with an individual's current life priorities” (p. 326). This definition is used in the present study. When referring to specific research, the researchers' terminology will be used (e.g., work-family balance or, work-life balance).

Work-life Balance Explored

Changes in employment practises, technology, and social developments have placed work-life balance at the forefront of health concerns (Poelmans et al., 2005). Reaching a desired state of work-life balance has been thought to promote wellbeing. According to Kofodimos (1990), imbalance between work and life leads to high levels of stress and reduces people's capacity to effectively function in the domains of work and life. Recently, there has been an increase in research into work-life/family balance, usually by organisations implementing more family-friendly policies. This has largely occurred because organisations and employees have recognized that a balanced approach is required for optimum health, wellbeing, and job performance. This focus has become prominent in New Zealand (New Zealand Department of Labour, 2006) and other countries

because the need for balance has become increasingly important as a result of the increase in single parents, working women, two-income families, and fathers who are more involved in parenting (see Chapter 3; Clark, 2001).

In OECD countries, governments have started to introduce policies and services to help workers and their families balance their work and family responsibilities (New Zealand Department of Labour, 2006). These policies about work-life/family balance are the result of a mutual gains philosophy, and they can be considered mutual partnership arrangements. The New Zealand government's work-family balance project, which was initiated in 2003 by the Department of Labour, proposed that greater flexibility in worker time can benefit organisations and employees and interventions can increase efficiency and fairness at work. This project was created in response to the large number of New Zealand workers leaving the country in search of a better-quality life (Catley, 2001; Kerr, 2001). These policies aim to create more employee commitment, flexibility, and contribution to organisational efficiency.

Employees in OECD countries have not fully endorsed these policies, and several factors seem to hinder their use of them: (a) a workplace culture that does not support them, (b) lack of supervisor and work colleague support, (c) perceived career damage, (d) societal and cultural norms, and (e) job design (Bailyn et al., 2001; Smith & Gardner 2007). Haar and Spell (2003) studied a group of government employees in New Zealand and found little evidence of a backlash against work-family practices and little difference in the attitude towards the job and organization between employees who took advantage of New Zealand's work-family policies and employees who did not take advantage of these policies.

In New Zealand, employee wellbeing is addressed in the Health and Safety in Employment Act (HSEA, 1992), which requires employers to identify and manage risks in the workplace. In May 2003, the Health and Safety in Employment Act 1992 was amended to include the psychological wellbeing of employees, and occupational stress is now considered as a work-related hazard. Research (Brough & O'Driscoll, 2005) has found that work stress has a negative effect on employees, their organisations, and the community at large. When work stress is prevalent, staff can have low morale and high absenteeism, and there is higher staff turnover, lower quality work, diminished productivity, and limited work-life/family balance (Brough & O'Driscoll 2005). Organisations have used different methods to facilitate work and family wellbeing, including work redesign, wellbeing programmes, including work-life/family balance initiatives, family-friendly policies, and coordinated rehabilitation initiatives. These organizations appear to understand that retaining a competent workforce is essential for on-going organisational profitability, and this may be achieved, at least partially, through greater work-life/family balance.

Antecedents of Work-life Balance

Work-life balance policies have been developed to increase employees' productivity and performance and minimise conflict, distress, and ill health, but there has been little research that examined the consequences of these policies for organizations. In addition, there has been little examination of how work-family conflict and enrichment affect people's perceptions about work-life balance.

Work-family conflict

Kalliath and Monroe (2009) conducted research that examined work-life balance and found that work→family conflict (i.e., time, strain, and behaviour) and family→work conflict (i.e., time) were significantly and negatively related to work-life balance. These researchers found that work-family time-based conflict was the strongest predictor of (reduced) work-family balance, which suggests this variable must be addressed in order to improve employees' work-life balance. These researchers also found that supervisor and co-worker support were positively and significantly related to work-family balance. As a result, it appears that work-life balance policies must address time demands and encourage supervisor and co-worker support in order to ensure work-life balance policies are effective.

Work and family organisational policies

Organisations have responded to the work-family imbalance by instituting work-family-friendly policies (e.g., flexitime, telecommuting, childcare, and eldercare), sometimes referred to as work-life initiatives (Clark, 2001; Flynn, 1997). From a manager's perspective, however, these policies are mainly viewed as an effective strategy for recruiting and retaining employees (Brough, O'Driscoll, & Kalliath, 2005) rather than a strategy for improving employee wellbeing (Allen, 2001; Haar & Roche 2010; Thompson, Beauvais, & Lyness, 1999).

Workplace flexibility

Some research (e.g., Clark, 2000) has suggested that workplace flexibility improves employee health and wellbeing and work-life balance. Clark (2000)

found that individuals who have flexible work schedules have more balance between work and family, less role conflict, and more job satisfaction, work functioning, home activity satisfaction, and family functioning. In the same study, Clark found supervisor support, in the form of encouraging individuals to use family-friendly policies and showing empathy for employees during times of family crisis, had a positive effect on employees. Significant positive effects were found for the five work-family balance measures except home satisfaction.

Long work hours

Valcour (2007) conducted a study with service workers and found conclusive evidence that long work hours are associated with low work-family balance. This finding was consistent with white and blue-collar workers (Casper, Eby, Bordeaux, Lockwood, & Lambert, 2007). Long working hours have been found to contribute to poor health, workplace dissatisfaction, reduced employee wellbeing (Sparks, Cooper, Fried, & Shirom, 1997), lower productivity, and higher absenteeism, turnover, and accident rates (Dawson, McCulloch, & Baker, 2001).

Taris, Beckers, Verhoeven, Guerts, Kompier, and van der Linden (2006) conducted a study with 50,000 participants from a Dutch retail outlet and found that long working hours did not have adverse effects on health and wellbeing. Weston, Gray, Qu, and Stanton (2004) found that fathers who had high job satisfaction and worked in excess of 60 hours a week had a greater sense of wellbeing than a similar group of fathers working 40 hours a week with low job satisfaction. Taris et al. (2006) found that factors such as employee motivation and job satisfaction play an important role. Similarly, Poelmans, Kalliath, and

Brough (2008) argued that individuals can make significant sacrifices (i.e., work long hours) and tolerate conflict and disharmony to achieve long-term goals. While these findings are important, they are limited because just evaluating the impact of long working hours on employee health and work-family balance does not take into consideration the reasons why people accept less work-life balance.

Consequences of Work-life Balance

Although people appear willing to accept working conditions that have a negative effect on their work-life balance, it appears that a better balance between work and family can have positive consequences for employees and organizations. There is evidence that better work-life balance can have a positive effect on employee productivity and job satisfaction and reduces absenteeism and employee turnover.

Productivity/performance

The majority of research that discusses the relationship between work-family/life balance and productivity has used work-family policies (see Employment Opportunities Trust, New Zealand 2007) as an indication of balance between work and family. The New Zealand Department of Labour (2006) found a significant correlation between employees' work-family balance and self-reported performance. In a similar vein, research conducted in the United Kingdom (Working Families, United Kingdom, 2005) found an interaction between self-report performance and satisfaction with work-family balance. The Equal Opportunities Trust (2007a) reviewed financial and statistical data from large U. S. organisations and found that work-family initiatives have a positive

impact on productivity. Bloom and Reenen (2006) conducted research with medium-sized manufacturing organisations in the United States, France, Germany, and the United Kingdom and found that the organisations with high-quality management practices also had better work-family balance policies and higher productivity.

Satisfaction

Some researchers (Hudson Highland Group 2005; Keeton, Fenner, Johnson, & Hayward, 2007; Virick, Lilly, & Casper, 2007) have found a significant positive relationship between work-family balance and job satisfaction. Virick et al. (2007) conducted research with employees of a large telecommunications company in the United States and found that work-family balance was positively significantly associated with job and life satisfaction. They also found that work-family balance was a mediator between role overload and job satisfaction, while life satisfaction partially mediated the relationship. This finding suggests that work-life/family balance is an effective way to reduce the effects of role overload. De Cieri, Holmes, Abbott, and Pettit (2005) emphasised the significant benefits available to an organisation if employees are able to balance their work and family commitments. These benefits include increased employee morale, increased commitment, job satisfaction, and less stress.

Keeton et al. (2007) conducted research with a group of physicians and found work-family balance was positively significantly associated with career satisfaction, emotional resilience, and personal accomplishment. No significant effects were found between genders, number of dependants at home, and age. In

addition, Keeton et al. (2007) found that control over schedule and work hours was a significant predictor of work-family balance.

Further evidence suggests that work-life balance problems result in absenteeism and turnover and affect employees' psychological and physical health (e.g., burnout and fatigue) (Hughes & Bozionelos, 2007). In contrast, according to Guest (2001), and Hudson Highland Group (2005), organisations that support work-family balance initiatives have been successful in increasing organisational commitment.

Summary

Work and family/life are two of the most important areas of people's lives. This chapter has highlighted the positive and negative sides of the work-family interface (i.e., work-family conflict and work-family enrichment) and the importance of balance. Early research has predominately focused on the conflict side of the work-family interface, and this research has used the scarcity model to explain work-family conflict. Recent research has investigated the benefits of the work-family interface, and as a result, a more holistic picture is starting to emerge, especially the benefits of helping employees achieve better balance between work and life.

In the next chapter (Chapter 5) the literature on resilience will be critically reviewed. Included in the review, resilience will be defined, and a discussion on its antecedents and outcomes will eventuate. In addition, a resilience process model has been developed and will be explained as an aid to understand the resilient process.

CHAPTER 5

RESILIENCE

Chapter Overview

Chapter 4 reviewed the relevant literature on work and family and associated work and family theories. While it is important to understand health professionals' work and family interface and wellbeing, it is also important to understand the relationship between individuals' inner motivation, drive, and resilience and their ability to overcome everyday challenges at work and in the family. Therefore, this chapter focuses on resilience and its contribution to work and family interface and wellbeing. The chapter contains a discussion of the importance of people's resilience in relation to work and family life and that there are three main resilience discourses: (a) psychological, (b) physiological, and (c) psychophysical (Southwick, & Miller, 2010). Psychological resilience and its relationship to work and family wellbeing is the focus of this chapter because physiological and psychophysical resilience are beyond the scope of the present study. This literature review includes the following: (a) definitions of psychological resilience, (b) resilience at the individual level, (c) the four waves of resilience research, (d) the antecedents and consequences of resilience, and (e) the process model of resilience is provided.

Introduction

The 21st-century workplace is more demanding than ever as a result of restructuring (e.g., need to accommodate or replace an aging workforce), ethnic changes (e.g., a multicultural workplace), labour shortages, and demographic challenges (e.g., more single-parent families; see chapter 3). In addition, people

are expected to perform more efficiently and effectively at work and home (Ilies, Schwind, Johnson, DeRue, & Ilgen 2007). As a result, workplace adversity has become an area of interest. Although people may have good work-family arrangements, they can still experience conflict (e.g., between work and family). For example, people can experience conflicts when there is a need to meet deadlines at work and deal with the sudden illness of children. Everyday experiences with adversity and stressors can be overwhelming for health professionals and people generally, and their families. How people and their families respond to everyday challenges can influence individuals' wellbeing and ability to adapt and prosper.

The demanding work and family environment has been complicated by changing communication technology, including laptops, internet access, and cell phones. Today, it is possible to contact people at anytime and from anywhere in the world. As a result, time and space have become closely intertwined (Larson & Luthans, 2006). This complex situation has created challenges for individuals, families, and organisations and produced an array of psychological and physiological stress-related difficulties (Biron, Cooper, & Bond, 2009).

There are various behavioural outcomes associated with stress: poor health (Johnson, 2009a), conflict at work and home (O'Driscoll, Brough, & Kalliath, 2009), decreased morale and productivity (Cooper et al., 2001), lower job satisfaction, decreased work-life balance (Executive Office of the President Council of Economic Advisors 2010; O'Driscoll et al., 2009), absenteeism, and turnover intentions and turnover (Executive Office of the President Council of Economic Advisors 2010; Siegrist, 2009). According to the American Institute of Stress (2001), 40% of employee turnover is the result of stress-related disorders.

This is a serious problem because it costs 3,000 to 13,000 U.S. dollars to replace an employee. Sauter, Murphy, and Hurrell (1990) estimated that workplace stress costs American businesses 50 to 150 U.S. billion dollars a year. In Australia workplace stress results in the loss of \$14.8 billion per year in revenue, with 3.2 days per worker are lost due to having a stressful workplace (Medibank 2008). At time of writing (October, 2011) workplace costs for stress in New Zealand's workplace are not available.

Biological and psychological systems were not meant to handle continued stress (Lipton 2008; Pert 2006), and in the United States, sale of antidepressants and the use of prescription drugs to deal with everyday pressures are at an all-time high, rising from 40 billion U.S. dollars in 1990 to 189 billion U.S. dollars in 2004 (Kaiser Family Foundation 2009). As a result of this serious situation, some organisations, researchers, and practitioners have examined the concept of resilience and its impact on individuals, families, and organisations. This study will enhance the resilience literature by investigating its role in work and family wellbeing using work→family and family→work conflict, work→family and family→work enrichment as predictors, four wellbeing variables (i.e., job satisfaction, family satisfaction, anxiety/depression, and social dysfunction), and work-life balance.

In the past decade, many psychologists and other researchers have investigated the positive effects of human functioning and why some people survive and thrive in the face of adversity while other people suffer. This study of positive human behaviour has resulted in the emergence and development of positive psychology (Seligman 1999), positive organisational behaviour (Luthans & Youssef, 2007), and positive organizational scholarship (Cameron et al., 2003).

This paradigm shift from the study of negative human behaviour to positive human behaviour has produced new theories that suggest resilience is a pliable resource that can be learned and fostered by any individual. Managers, positive psychologists, and practitioners believe resilience can contribute to people's success and sense of satisfaction, and, as a result, organisations such as Hewlett Packard include resilience training as part of their employee education and development programme (Norman, Luthans, & Luthans, 2005).

Resilience Defined

The Latin word *resilire*, which means “to spring back, be springy, or rebound,” is the root word for the English word resilience. In addition, the generic approach in defining resilience is the ability to be adapt from illness, trauma, adversity or the like (Kent & Davis, 2010).

The American Psychological Association (APA, 2009), in its publication *The Road to Resilience*, argued that resilience is the process of adapting well in the face of adversity, trauma, tragedy, threats, family and relationship problems, serious health problems, or workplace and financial problems. Resilience means “bouncing back” from difficult experiences. According to APA, resilience is not a genetic trait. It involves behaviours, thoughts, and actions that can be learned and developed in anyone. Sutcliffe and Vogus (2003) suggested that resilience is not a static state but develops over time and is used when an individual is confronted with unanticipated situations or events and has the ability to be resilient.

In sum, resilience is multi-dimensional process whereby individuals exhibit positive adaptation after exposure to adversity, trauma, threats, stress or conflict (Luther, Cicchetti, & Becker 2000).

The study of resilience is in its infancy, and there is continued debate among academics about its definition (Luther et al., 2000; Masten, 1999a; Wang & Gordon, 1994). A review of the literature revealed a plethora of meanings for and interpretations of resilience and these differences appear to be related to the group (e.g., engineering, business, economics, family, cultural, organizational, community) defining resilience (Doron, 2005; Woods, 2006). In studies conducted during the 1970s and 1980s, resilience was described as a trait, system, process cycle, state of being, qualitative category, and fluid attribute. Resilience as a process and as a trait is used interchangeably throughout literature (Luthar et al., 2000), but even though there is still debate about the definition of resilience, in the past 10 years, researchers have concluded that resilience is not fixed but can be flexible and pliable, depending on an individual's disposition and situational resources. There is still debate today whether resilience is a trait or state-like.

In the past decade, resilience research has shifted from examining the influence of protective and risk factors on people's wellbeing towards investigating the impact of transformative processes on people's wellbeing (Rutter, 2008). As a result, researchers in the early 21st century are examining the use of resilience-based interventions to promote positive functioning (Earvolino-Ramirez, 2007).

Resilience Explored at the Individual Level

To date, psychiatric research has focused on young adults and children and how they deal with drug addiction, marriage dissolution, psychological distress, socio-economic depravity, traumatic events, para-suicide, and dysfunctional families (Luther, & Cicchetti, 2000; Martin, 2005; Masten, 2001; Slap, 2001). Although resilience was recognized as a coping mechanism in the 1970s, it was considered a special trait in some privileged children (Masten, 2001). Buggie (1995) suggested that some special children were blessed with resilience, and it made a vast difference to their lives. Resilience was used to describe invincible, stress-resistant, super kids (Buggie, 1995; McDowell, 1995).

The conceptualisation of resilience as an inborn trait has recently been given new impetus by Suomi (2006) and Caspi et al., (2003), who claim to have found the so-called resilience gene. They suggested that a specific gene is responsible for increasing the behavioural functioning of individuals. However, these researchers, and other leading researchers (Cutuli & Masten, 2009; Masten & Reed, 2005; Peterson, 2006), pointed out that it is the unique relationship between the individual and their environment that can create a resilient response.

Several longitudinal studies in the 1970s and early 1980s examined resilience: (a) the Berkeley Ego-Resilience Study (Block & Block, 1980), (b) the Menninger Coping Project (Murphy & Moriarty, 1976), and (c) the Harvard Preschool Project (White, Kaban, & Attunuci, 1979). These studies highlighted the importance of resilience outcomes as well as specific child protective factors: (a) autonomy, (b) problem-solving skills, and (c) family buffering factors (e.g., open communication and exchange of feelings). The 30-year Kauai longitudinal study conducted by Werner and Smith (1982) sampled all children born in 1955

on the island of Kauai, Hawaii, and this study had a big impact on the future of resilience research. The purpose of the study was to track the development of this cohort group and sample these people at 1, 2, 10, 18, 32, and 40 years of age and collect data about their lives, education, parenting attributes, physical and emotional factors, adverse conditions, and their successes. Werner and Smith (1982) found that a third of the population was subjected to negative situational factors (e.g., poverty, with divorced or alcoholic parents); despite these circumstances they displayed a resilient attitude by transforming themselves into fully functioning adults (Earvolino-Ramirez, 2007).

Characteristics of Resilience

In the resilience literature, more emphasis has been placed on the different characteristics of resilient individuals than on the predictors and outcomes of resilience. Studies found that resilient individuals are flexible (London, 1993), see change as an opportunity for growth and development (Cooper, Estes, & Allen, 2004; Skodol, 2010; Zautra, Hall, & Murray, 2010). In addition, Cooper et al. (2004) argued that resilient individuals tend to be highly motivated to achieve, often set lofty goals, and have a strong work ethic. Along a similar vein, they appear to have an internal locus of control, help friends, family members, and work colleagues (Skodol, 2010), and need workplace autonomy (de Vries & Schields, 2005). The resilient individual uses traumatic/adverse events as a catalyst for personal inner growth that increases their self-esteem and self-efficacy and improves their ability to cope with other traumatic/adverse events (Bonano, 2004; Luthans, 2002b; Reivetch & Schatte, 2002; Sutcliffe & Vogus, 2003; Tugade & Fredrickson, 2004; Youssef & Luthans, 2007).

Bonanno (2004) and Kelley (2005) argued that resilience is a natural part of being a healthy human being. Bonanno (2004) stated that resilience is more than an absence of psychopathology; instead, it is “a stable trajectory of health functioning across time, as well as the capacity for generative experiences and positive emotions” (p. 21). Although some scholars argued resilience may be a trait (Elias, 2005; Reivich & Schatte, 2002), it is still possible to change, adapt, and learn ways to increase a person’s resilience quotient.

Some authors (Carver, 1998; Luther et al., 2000), however, defined resilience as a return to baseline after an episodic event. This definition is similar to the homeostasis model developed by Robert Cummins and his colleagues (Cummins, 2003; Cummins & Nistico, 2002), who suggested that resilience; happiness, wellbeing, and satisfaction are relatively stable and static over time. In addition, they stated that individuals set points to where they can return and manage this return using a homeostatic system. Homeostatic theory states that individuals will return to their optimal level of risk that individuals are comfortable with prior to the adverse event (Cummins, 2003; Cummins & Nistico, 2002). In contrast, some scholars have defined resilience as a process whereby the individual exceeds baseline expectations and can move forward, growing with each adverse event which adds to the individual’s experiences (Fredrickson, 2004; Helgeson, & Lopez, 2010;).

Antecedents and Consequences of Individual Resilience

There are four waves of resilience research evident in the literature (Masten & Wright, 2010), with the first three waves dealing with the development of the human being and the fourth wave dealing with physiological factors (e.g.,

genetics). The first wave of research focused on defining resilience in different contexts and then validating empirical measures of the construct. This field of inquiry focused on investigating the dispositional and situational factors that distinguish individuals who survive and flourish in adverse/stressful conditions from people who do not survive and flourish in adverse/stressful situations. This research identified an array of factors, such as qualities of the resilient person and integrative models of traits and emotions, and mainly focused on children and adolescents. The second wave dealt with how the resilient individual recovers from maladaptive behaviour and flourishes. The third wave centred on using interventions to build adaptive behaviour in individuals. The fourth wave examined the role of genetics and the chemical interactions in the brain when an individual is subjected to adverse/stressful events.

As previously mentioned, there is a wealth of research about resilience among children and adolescents, and this research is part of the first wave of resilience research (Masten & Obradovic 2006). The rigorous validation of constructs applicable to adolescents and children has provided a solid base for future research (Denhardt & Denhardt, 2010); however, research with adults is more limited, specifically in relation to individual employees in organisational settings and family domains. The present study will fill this gap in the work-family conflict/enrichment, resilience, and wellbeing literatures, and the results of this study will help organisational managers and individuals capitalise on opportunities for promoting positive adaptation.

Workplace Resilience Interventions and Research

Turning to workplace resilience interventions, Waite and Richardson (2004) conducted empirically tested resilience training with healthcare workers. These researchers divided the participants into a group who received resilience training and a group that acted as a control. They analysed group's self-esteem, locus of control, purpose in life, interpersonal relations, resilience, and job satisfaction after the experimental group received resilience training. The experimental group who received the resilience training achieved higher scores on all the study constructs after the training, except for job satisfaction.

Similarly, the results from the Promoting Adult Resilience programme in Australia (Millear, Liosis, Sochet, Biggs & Donald 2008) have provided promising outcomes. This programme uses concepts from cognitive behaviour therapy, positive psychology, and the coping and resilience literature to define the programme's content and delivery style. This resilience intervention was undertaken in Brisbane, Australia, with a local government organisation. At the post-test, participants mentioned that they had gained substantial levels of coping self-efficacy, less stress, higher job and family satisfaction, increased work-life balance, and a better relationship between work and family roles. The programme facilitators assessed the participants after 6 months and found the participants still reported the same positive effects of the training.

While resilience research with employees in organisational settings is limited, Luthans (2002a) conducted resilience research in the workplace using positive organisational behaviour (POB), which is part of psychological capital (PsyCap), based on the four psychological states of hope, optimism, resilience, and self-efficacy/confidence. Luthans (2002b) defined PsyCap as "the study and

application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace" (p. 59). To date, the majority of resilience research in the workplace has been conducted by Luthans and his colleagues, and this research has examined the psychological states of self-efficacy/confidence, hope, optimism, and resilience.

Luthans (2002a) argued that resilience, hope, optimism, and self-efficacy are intertwined constructs with similar pathways that can become entangled. Similarly, Youssef and Luthans (2007) stated "these individual capacities or resources coexist and are developed, manifested and utilized as a collective rather than in isolation" (p. 780). Luthans, Luthans, and Luthans (2004) argued that the PsyCap variables (i.e., resilience, hope, optimism, and self-efficacy) have a state-like nature, and as a result, they are open to change through interventions. Therefore, managers of organisations who help their employees develop self-efficacy/confidence, hope, optimism, and resilience can increase productivity and improve their competitive advantage. However, resilience research as an individual construct in a workplace setting has received little or no attention from researchers except from Luthans et al. Therefore, the present study addresses this limitation.

Luthans, Avolio, Walumbwa, and Li (2005) conducted research with Chinese workers from three organisations. These researchers examined workers' psychological states of hope, optimism, and resilience, and they expected these state-like characteristics to be correlated with supervisor-rated performance. The researchers found the psychological states (i.e., resilience, hope, optimism, and self-efficacy) were significantly and positively correlated with supervisor-rated

performance, with resilience having the highest individual construct correlation ($r = 0.24$) compared to hope ($r = 0.17$) and optimism ($r = 0.16$).

Youssef and Luthans (2007) conducted research with workers from different U.S. organisations and found that resilience was correlated with employee satisfaction, commitment, and happiness. Diener, Nickerson, Lucas, and Sandvik (2002) conducted a longitudinal study with a group of university graduates, and they found that individuals with higher positive affect earned higher revenue and had greater job satisfaction. Overall, research that examined the positive aspects of individual wellbeing has found that resilience is linked to positive emotions and outcomes (Tugade, & Frederickson, 2004).

Positive Psychology

The research that examined positive behaviour, which is part of positive psychology, is based on the idea that positive emotions and competencies will enable individuals, organisations, society, families, and communities to flourish (Seligman, & Csikszentmihalyi 2000). Emotions such as happiness, work and family satisfaction, engagement, anger, sadness, and conflict serve as emotional markers for wellbeing. Therefore, people's ability to distinctly calibrate their own positive and negative emotional states, such as resilience, predicts their assessment of wellbeing (Diener, Sandvik, Pavot, & Gallagher 1991). A meta-analysis by Lyubomirsky, King, and Diener (2005) found that individuals who experience positive emotions regularly experience success, satisfaction, increased physical health, better problem-solving skills, more creativity, and better decision-making skills. In addition, research showed individuals live longer and have a distinct positive correlation to optimism (Danner, Snowdon, & Friesen, 2001), and

the individual characteristic of resilience (i.e., individuals' ability to bounce back from stressful or disturbing events) is linked to positive emotions (Tugade & Fredrickson, 2004).

In addition, positive emotions can have a facilitating effect, triggering the resilience process and enabling individuals to proactively engage in their environment. Resilience promotes a willingness to do new things and deal with the changes and adversities of life (Fredrickson, 2004). The concepts of this process have been captured by Fredrickson's (2005) broaden-and-build theory.

According to the broaden-and-build theory, over their lifetime people gather a multitude of positive personal resources, intellectual resources (e.g., problem-solving abilities), physical resources (e.g., health and wellbeing), social resources (e.g., bonds with family and friends), and psychological resources (e.g., resilience, optimism, and a sense of identity). This theory suggests people's positive emotions broaden their attention and thinking abilities. Therefore, over time, individuals build resources, knowledge, skills, and a resilience quotient that enable them to deal with future stressors/events on a path of learning and growth (Fredrickson, 2001, 2005; Fredrickson, Cohn, Coffey, Pek, & Finkel 2008; Wright, 2005).

Research Rationale

As resilience research in organisational settings is limited, building a knowledge base about its predictors (e.g., work-family conflict and work-family enrichment), resilience's interdependent relationship with work-life balance and the influence of wellbeing (e.g., job satisfaction, family satisfaction, anxiety/depression and social dysfunction) may enable individuals and managers

to create intervention strategies that promote the resilience capacity in individuals. The present study was longitudinal and designed to explore the mediation effects of resilience and work-life balance between work and family predictors (WFC, FWC, WFE, and FWE) and wellbeing variables. A process model was developed and provided in Figure 5. 1 as an aid for understanding the resilience process and how it can act as a mediator.

Not all of the variables in the model are tested but the model is put forward to illustrate the multidimensionality of resilience, as a guide to further research, and its dependence on many situational and dispositional factors so that individuals can make decisions to move forward achieving a resilient response dependent upon feelings of safety and connectedness.

Process Model of Resilience

The resilience model was designed from the extant literature review on resilience and its situational and dispositional factors including resilience at the organisational, family and individual levels. It is beyond the scope of this thesis to delve into resilience at the organisational and family levels. However it is important to note these levels do have an important impact on the health professionals' resilience capacity in the workplace. In addition to understand the complexity of the construct, resilience at the individual level some explanation is necessary.

Therefore, figure 5.1 illustrates the process model of resilience from a holistic system perspective in order to encompass the interrelated aspects of individuals and their complex interrelationships. As argued by Peng Spencer-Rodgers and Nian (2006), "one can understand nothing in isolated pieces...as the parts are only meaningful in their relations to the whole" (p. 255).

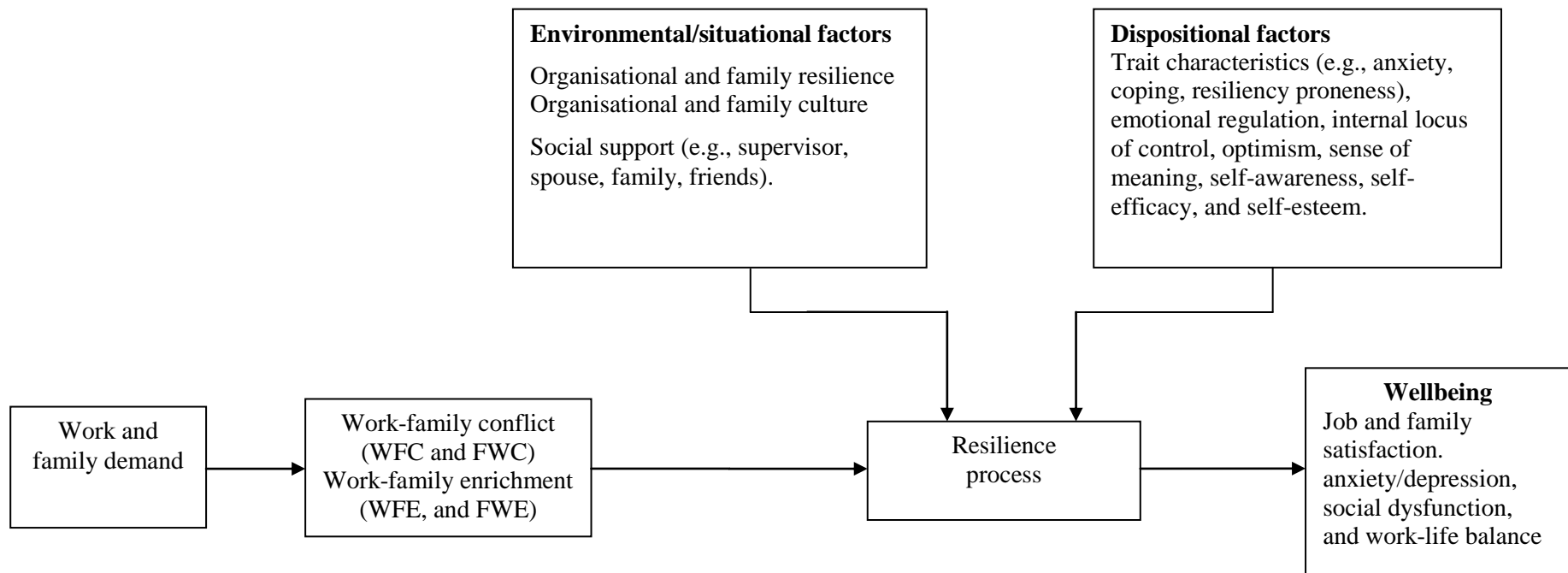


Figure 5.1. The process of resilience over time.

This is in contrast to the Cartesian reductionism perspective that promotes separatism, where independent self-entities are the norm (Mikulas, 2007). In the literature, resilience has been defined as a multidimensional phenomenon (Cicchetti & Blender, 2006; Luther et al., 2000; O'Donnell, Schwab-Stone, & Mueeed, 2002) because people are engaged in an integrated, interdependent, interwoven tapestry of life. This tapestry is illustrated in the transformational model of resilience.

One of the main strengths of the present study is that it takes a work-to-family and family-to-work approach and examines work-to-family and family-to-work predictors: (a) conflict, (b) enrichment, (c) outcomes, (d) work-life balance (e) job satisfaction, and (f) family satisfaction. Therefore, it is an interconnected approach. Danziger (2006) argued that Western psychology is limited because it focuses solely on an individual and excludes the influence of outside factors on the individual. It is not only the personality of individuals that determines the way they act, think, feel, and relate, but rather it is a two-way process of information and experiences with situational factors within their environment. As previously mentioned it is beyond the scope of this research to delve into family and organisational resilience and its impact on the individual in detail; however, it is important to mention that human beings are interconnected and depend on many complex relationships at work and home.

Resilience in individuals, families, and organisations has a cumulative, interactive, and interrelated synergistic effect. For example, when individual employees face a stressful/traumatic event at work, they can call upon their own resources and also those of family members and work colleagues. Individual family and organisational members are strengthened through the use of the shared beliefs in their ability to overcome obstacles. Being solution focused under

challenging conditions can have a very positive effect on productivity and the wellbeing of work and family units (Bandura, 1994). This resilience transference can assist in building strong bonds between work and family and vice versa. The collective resources become an effective force that can be used to perceive situations positively and provide additional opportunities for transformational growth and wellbeing (Youssef & Luthans, 2007). The collective strengths of each individual family member can combine to form the whole, fostering growth and extending the effective action response repertoires of the family (Walsh, 2003; Wood & Bandura, 1989) and the employee. These responses are embedded in families and organisations' cultural norms, personal experiences, and the multiplicity of family and work arrangements (e.g., number and age of dependants, stages of the lifespan, spouses, and dependants). They are also grounded in the family's collective consciousness and the collective culture of the organisation and family, which may minimise or enhance maladaptive behaviour (e.g., lowering work-family conflict and increasing work-family enrichment).

Turning our attention to the resilience process, starting from the left-hand side of the model, (see figure 5. 1) the predictors of work and family could be work and family demand. Health professionals like other employees are confronted by work and family demands, including changes in work rosters, longer working hours, and increasing workload (Mansell, Brough, & Cole 2006). Health professionals must also deal with stress caused poor staffing, dealing with death and dying, and the friction that can exist between doctors and nurses (Laschinger, Finegan, & Shamian 2001). In this model, they are referred to as the stressors or challenges that can cause a disruption in an individual's perceptions of normal functioning. When the individual is faced with demands from work and family, he/she appraises the situation first by the perceived severity of the

demands. Lazarus (1982) argued that the individual will make three primary appraisals based on his/her motivational relevance. The first appraisal identifies the demand as irrelevant, and therefore, it is disregarded as a threat. The second appraisal considers the demand positive and beneficial, and the third appraisal considers the demand harmful or a threat (Lazarus, 1991). Lazarus (1991) argued that if the individual has a personal stake in the encounter he/she will actively instigate the second appraisal to alleviate harm. The second appraisal involves estimating the perceived control over the demand and perceived control of emotions. This second appraisal includes the perceptions and availability of environmental and dispositional factors that can be used to change a harmful or threatening situation into a more positive situation.

These factors are used when a stressor is appraised to be controllable and a person has high self-efficacy and self-esteem. Therefore, the environmental and dispositional factors buffer the resilient effort. In addition, trait resilience, known as resiliency (Masten, 1994), moderates the impact of stress/conflict on the resilience effort/process, and resilience efforts are mediators of the effects of the stress/conflict generated by work and family wellbeing outcomes. When resilience is activated, it may lead to increased wellbeing (e.g., higher job and family satisfaction, better work-life balance, and decreased anxiety/depression and social dysfunction). The resilience transformational model shows that the resilience process is not a single cause and effect chain it is multidimensional.

Subsequently, an individual who believes that he/she is resilient has the dispositional and situational factors to overcome any adverse event (e.g., work→family conflict). According to the Conservation of Resources theory, individuals “will strive to protect, and build resources” (Hobfoll, 1989, p. 1) in order to achieve higher levels of satisfaction and psychological health. Resources

can be defined as “individual values, such as self-esteem, relationships, time, inner peace, money, and materialistic resources such as car, office space, or job title (e.g., doctor, surgeon). Resilience and work-life balance can be valuable resources for the individual. When individuals are faced with conflict (e.g., between work and family), resources are mobilised to prevent resource losses (McNall et al., 2009). These resources are perceived to be lost when attempting to regain an optimum balance between work and life, which, in turn, reduces job and family satisfaction and creates greater anxiety/depression and social dysfunction.

Indeed, based on the resilience process model the present study links work and family predictors to the concept of work and family wellbeing through the resilient process. The findings of the present study illustrate that some people’s resilience is a result of inner strength as example questions from the resilience measure are (e.g., “I usually manage one way or another”), determination (e.g., “I am determined”), and result in high self-esteem (“My belief in myself gets me through the hard times”), and these characteristics may mitigate the effects of work→family conflicts and produce or maintain a sense of wellbeing. Alternatively, in the case of work→family enrichment, people who are enriched by the process of positively dealing with stress or adverse situations become more resilient, which may increase their sense of wellbeing.

Summary

With the advent of positive psychology, there has been a shift from a focus on the negative aspects of health to a focus on the positive aspects of health. This emphasis has stimulated resilience and positive emotional research (e.g., resilience, happiness, hope, and quality of life). Although there has been an

increase in resilience research, researchers have not been able to agree about the definition of resilience, whether it is a trait or a state and how its impact in the lives of adults. In spite of this lack of agreement about a definition, resilience appears to be multidimensional, and information about how resilience is stimulated in people may enable individuals and organisations to create strategies to face everyday challenges. It is clear from the literature that resilience may serve as an important link between the predictors (e.g., work-family conflict and enrichment) and individual wellbeing and work-life balance).

This thesis will provide clearer evidence on the importance of fostering resilience in health professionals in enabling them to mitigate work and family conflict. The next chapter, (Chapter 6) focuses on the theoretical model and the hypotheses that were tested in the present study.

CHAPTER 6

THEORETICAL MODEL AND HYPOTHESES

Chapter Overview

This chapter presents the theoretical model and hypotheses of this study and is divided into two main sections. The first section presents the theoretical model that was used in this study. The second section details the hypotheses' direct effects and the mediation hypotheses. The direct effects are those of the work and family interface predictors on wellbeing variables (job and family satisfaction, anxiety/depression and social dysfunction), resilience and work-life balance. The mediation effects are those of resilience and work-life balance, in the relationship between work and family interface (predictors) and wellbeing variables.

Theoretical Model

As previously mentioned in Chapter 1 this thesis was part of an international project that was conducted to validate a newly developed work-life balance measure in two Western settings (i.e. Australia and New Zealand) and two non-Western settings (i.e. China and Hong Kong). The international project survey collected data from 20 variables and included demographics and household responsibilities from the healthcare workers. The selection of variables for this thesis was based upon a literature review of the work and family wellbeing topic and the resilience literature, and I subsequently identified specific gaps in the literature where research was deemed valuable to advance theory and practical applications. The theoretical model is presented in Figure 6.1.

The work and family predictors are on the left hand side of the model are the work and family predictors, followed in the centre of the model by the mediators (i.e. work-life balance and resilience), and the wellbeing variables (i.e. job and family satisfaction, anxiety/depression, and social dysfunction) are at the right hand side of the model. The variables used in this study have already been discussed in their relevant chapters - work and family predictors (WFC, FWC, WFE, FWE) and WLB in Chapter 3; resilience in Chapter 4; and wellbeing in Chapter 2. The importance of using them in this study and their predictors and outcomes was also discussed. Therefore, a brief synopsis of each hypothesis will be presented rather than repeating material from the earlier chapters.

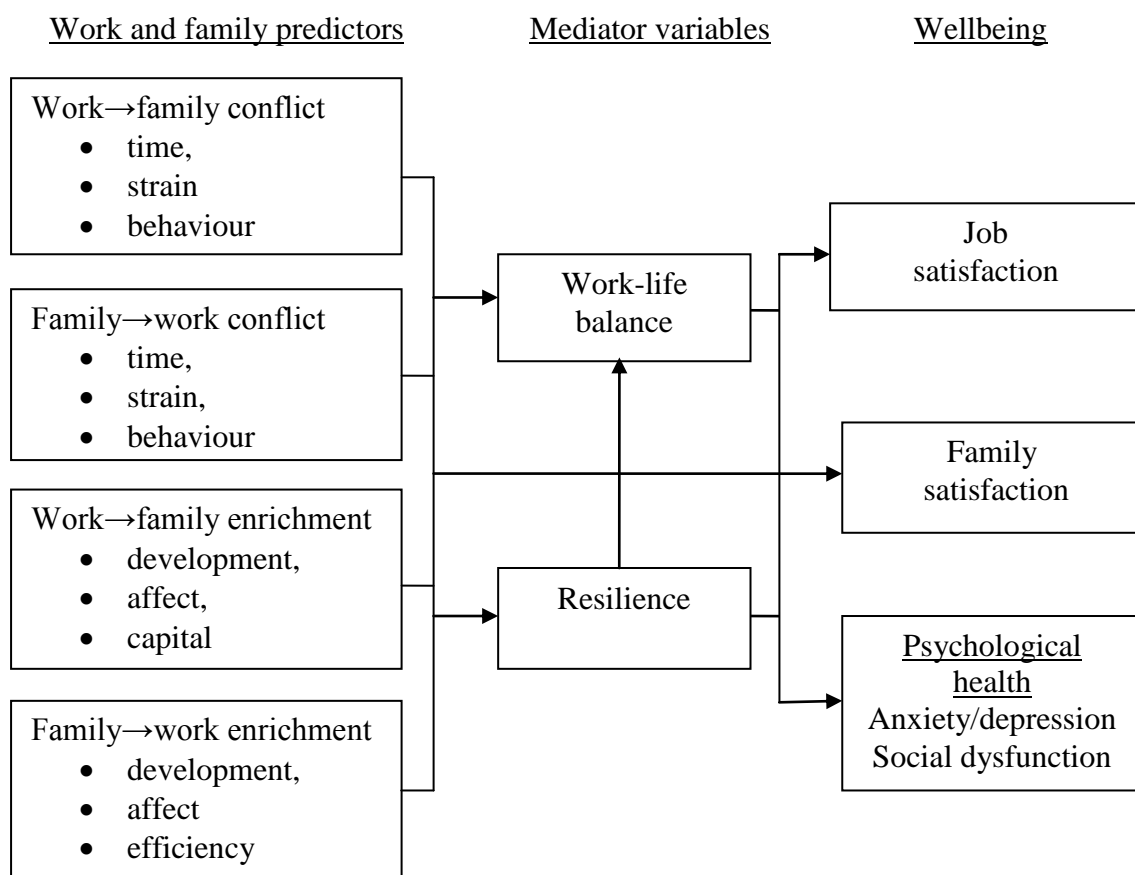


Figure 6.1. Work and family interface and wellbeing theoretical model

Hypotheses of the Study

In this section the hypotheses are presented based on the cross-sectional and longitudinal analyses. The direct relationship hypotheses will be presented first followed by the mediation hypotheses.

Work-family Conflict

Work→family conflict with job satisfaction

Many studies (Bass, Butler, Grzywacz & Linley 2008; Boles, Howard, & Donofrio 2001; Bruck et al., 2002; Chui, Man & Thayer, 1998; Haar et al., 2009) have consistently shown a negative association between work→family conflict and job satisfaction. The meta-analyses of Allen et al. (2000), and Kossek and Ozeki (1998) provide solid evidence with weighted mean correlations of -.23 and -.24 respectively. On the other hand, studies that have used the three dimensions of work→family conflict (i.e. time, strain and behaviour), have received less attention. Lambert, Pasupuleti, Cluse-Tolar, Jennings and Baker (2006), investigated the three dimensions and found time-based and behaviour-based conflicts were negatively related with job satisfaction. A sample of hospital employees (n = 160) was investigated by Bruck, Allen and Spector (2002), with limited significant findings for behaviour-based conflict only. It is mentioned at this point that not all work and family researchers have used similar measures. Some have preferred to use a global measure and some have used the three dimensional measure by Carlson et al., (2000). This was discussed in more detail in chapter 3. However, the majority does agree that work→family conflict and its separate dimensions have a negative relationship with job satisfaction.

In alignment with role theory, the expected relationship between work→family conflict and job satisfaction is that as work→family conflict

increases, job satisfaction decreases. In addition, by including a measure of work→family conflict and its three dimensions (i.e. time, strain and behaviour), the present study should provide a more precise understanding of the work→family conflict and job satisfaction relationship. It is predicted that work→family conflict (time, strain and behaviour) will be negatively related to job satisfaction at Times 1 and Times 2.

H1: Work→family conflict: (a) time, (b) strain, and (c) behaviour will be negatively correlated with job satisfaction at both Times 1 and 2.

Work→family conflict with family satisfaction

In the literature there have been few studies examining the relationship between WFC with family satisfaction. Some studies (Greenhaus & Kopelman, 1981; Staines & O'Connor, 1980) during the 1980s found a negative relationship between work→family conflict and family satisfaction. More recently, the review by Allen et al. (2000) suggests a low to medium correlation ranging between -.02 to -.27 from seven studies. The meta-analyses by Ford, Heinen and Langkamer (2006), with a sample of 8,301 participants, reported a significant negative relationship between workplace stressors (i.e. job stress, work support, work hours) and family satisfaction. As previously mentioned (see Chapter 4), Rice, Frone and McFarlin (1992) found a relationship between work-family conflict and life satisfaction. However, Moreno-Jimanez, et al. (2008) found no relationship between work→family and life satisfaction amongst healthcare workers (n = 128) in Spain. Empirical evidence that has directly measured the relationship between work→family conflict and family satisfaction is scant. Some studies have used different facets of family satisfaction, such as marital satisfaction, spouse satisfaction, marital and family role satisfaction, making it difficult to compare. In summary, only a few studies have measured work→family conflict and family

satisfaction. Therefore more research examining the three dimensions of work→family conflict (time, strain and behaviour) in association with family satisfaction would be beneficial. Such findings are based on the spill-over hypothesis which suggests that attitudes from one role carry over to another role (Fredriksen-Goldsen & Scharlach, 2001). Based on the above review it is predicted that work→family conflict (time, strain, and behaviour) will be negatively related to family satisfaction at Time 1 and Time 2.

H2: Work→family conflict: (a) time, (b) strain, and (c) behaviour will be negatively correlated with family satisfaction at both Times 1 and 2.

Work→family conflict with psychological health

Many studies have confirmed that work → family conflict increases psychological distress (see Eby et al., 2005; Smith-Major et al., 2002). The study by O'Driscoll, Poelmans, Spector, Kalliath, Allen, Cooper and Sanchez (2003) with managerial personnel (n = 355) in New Zealand, found that work to family interference was positively related to psychological strain. Similarly, the meta-analysis by Allen et al. (2000) of 13 studies (n = 4,481 participants) found an unweighted mean correlation between work → family conflict and general psychological strain ranging from $r = .17$ to $.57$. A more recent study by Gareis, Barnett, Ertel and Berkman (2009) found that as conflict between work and family increased feelings of ill health increased, including anxiety and depression.

In summary, from a review of the extant literature, it is expected that the health professionals who experience greater levels of work → family conflict are more likely to experience negatively with the two psychological health outcomes tested in this thesis (1) anxiety/depression and (2) social dysfunction at Time 1 and Time 2.

H3: Work→family conflict: (a) time, (b) strain, and (c) behaviour will be positively correlated with anxiety and depression at both Times 1 and 2.

H4: Work→family conflict: (a) time, (b) strain, and (c) behaviour will be positively correlated with social dysfunction at both Times 1 and 2.

Work-family Conflict with Resilience

As mentioned in chapter 5, empirical evidence for the importance of resilience in mitigating children's exposure to traumatic events is well documented (Masten & Reed, 2005). However, the literature on work-family conflict with resilience in workplace settings is scarce. It is predicted, based on previous research with adolescents and children, that as the health professional experiences high levels of work-family conflict (WFC and FWC) their resources (resilience) from one role are drained so that they cannot complete another role, thus reducing the resilient capacity in the individual. See chapter 5 for more detail. It is expected that work-family conflict will be negatively correlated with resilience at Time 1 and Time 2.

H5: Work→family conflict a) time, (b) strain and (c) behaviour will be negatively correlated with resilience at Time 1 and Time 2

H11: Family→work conflict (a) time, (b) strain and (c) behaviour will be negatively correlated with resilience at Time 1 and Time 2.

Work-family Conflict with Work-life Balance

As previously mentioned, (Frone, 2003) past research has tended to use validity evidence for fourfold taxonomy of work-life balance that comprises direction of influence (work→family vs family→work) and types of affect (work-family conflict vs work-family enrichment). Thus research with work-life balance as a single measure is scant.

Kalliath and Monroe (2009) conducted research that examined work-life balance and found that work→family conflict (i.e. time, strain and behaviour) and family→work conflict (i.e. time), were significantly and negatively related to work-life balance. These researchers found that work-family time-based conflict

was the strongest predictor of (reduced) work-family balance. Haar (in press) with a sample of 538 employees from 70 New Zealand organisations, found a relationship between both directions of work-family conflict (WFC and FWC) and work-life balance. Carlson et al., (2009) also found negative relationships between WFC and FWC and work-family balance. Based on the above review it is expected that both directions of work-family conflict (WFC and FWC) will be negatively related with work-life balance at Time 1 and 2.

H6: Work→family conflict a) time, (b) strain and (c) behaviour will be negatively correlated with work-life balance at Time 1 and Time 2

H12: Family→work conflict (a) time, (b) strain and (c) behaviour will be negatively correlated with work-life balance at Time 1 and Time 2.

Family→work conflict with job satisfaction

Family→work conflict has received less attention by work and family researchers and even less research has been given to the three dimensions of family→work conflict (time, strain, and behaviour). However, some studies (Ayree et al., 1999; Bruck et al., 2002; Carlson et al., 2000; Chiu et al., 1998; Grandey et al., 2005) have found significant negative effects for the cross-domain relationship (i.e. FWC with job satisfaction). Two meta-analyses deserve mentioning on the cross-domain relationships. Ford et al. (2007) examined the relationship between stressors in the work and family domains. Results suggested that variability in job satisfaction was forthcoming from the family role. Likewise, the meta-analyses by Kossek and Ozeki (1998) with 9 studies and population of 2,438 participants, found significant support for the FWC with job satisfaction relationship

Lapierre, Spector, Allen, Poelmans, Cooper, O'Driscoll, Sanchez, Brough and Kinnunen (2008), with a sample of managers from five western countries,

investigated the three dimensions of family → work conflict (time, strain and behaviour), and found significant negative effects with strain-based conflict and behaviour-based conflict but not time-based conflict with job satisfaction. However, Boles et al. (2001) reported time-based and strain-based conflict to be negative predictors of job satisfaction.

Not all studies have found a significant negative relationship. O'Driscoll et al., (2004), in their longitudinal study amongst 23 large organisations in New Zealand, investigated the direct effects and found that family-to-work interference was not associated with job satisfaction at both time points with a time lag of 6 months. Similarly, Frye and Breugh (2004) amongst a sample of employed university students (n = 135), and Wang, Lawler, and Shi (2011) with a sample of banking professionals (n = 281), failed to find any significant effects. Given these mixed results, further research examining the relationship between family→work conflict and job satisfaction is needed that examines the different dimensions (time, strain and behaviour). According to Cardenas et al. (2004), employees have limited time and energy to devote to the numerous domains in their lives. Fulfilment in one domain requires some relinquishment in another domain. It is this relinquishment, due to the limited time and energy, which can cause conflict (O'Driscoll, 1996). In summary, based on the review of both these variables, it is expected that family→work conflict (time, strain and behaviour) will be negatively correlated with job satisfaction at Time 1 and Time 2.

H7: Family→work conflict (a) time, (b) strain and (c) behaviour will be negatively correlated with job satisfaction at Time 1 and Time 2.

Family→work conflict with family satisfaction

In addition, the research between these two variables is limited. However, some studies (Carlson et al., 2000; Chiu et. al., 1998; Hill, 2005; Wayne et al.,

2004) have demonstrated that family→work conflict is negatively related to family satisfaction. Boyar and Mosley Jr (2007), with a sample of 124 employees, reported a standardised coefficient between work-to-family interference and job satisfaction of $-.26$. Likewise, a recent meta-analysis by Amstad, Meier, Fasel, Elfering, and Skemmer (2011) reported a weighted mean correlation of $r = -.21$, with a sample size of 6,737 participants, between family→work conflict and family satisfaction. Lapierre et al. (2008) analysed two dimensions of family→work conflict (time and strain) and reported significant effects, $.23$ and $.28$ (standardised path coefficients) respectively, with family satisfaction.

However, some studies have found no relationship between family→work conflict and family satisfaction. Frye, and Breugh (2004), with a sample of employed university students, and Ayree et al. (1999), with a sample of Hong Kong Chinese employed parents ($n = 243$), found no significant effects. Thus the effects of family→work conflict on family satisfaction warrant further exploration, although the recent meta-analysis (Amstad et al., 2011) does support a negative link between these variables. Therefore, this study explores the relationship between family→work conflict (time, strain and behaviour) with family satisfaction among health professionals, predicting a negative relationship at Time 1 and Time 2.

H8: Family→work conflict (a) time, (b) strain and (c) behaviour will be negatively correlated with family satisfaction at Time 1 and Time 2.

Family→work conflict and psychological health

Some studies (Beatty, 1996; Frone et al, 1992; Grandey & Cropanzano 1999; O'Driscoll et al., 1992) have found evidence of a relationship between family→work conflict and psychological health. The meta-analysis by Amstad et

al. (2011) found a positive association (weighted mean correlation) between family→work conflict and psychological strain ($r = .21$), depression ($r = .22$), anxiety ($r = .19$), and stress ($r = .39$). The longitudinal study by O'Driscoll, Brough and Kalliath (2004) reported positive effects for family-to-work interference on stress ($r = .18$ at both time points); similarly Chiu et al. (1998), and Grzywacz and Marks (2000), and Hill (2005), also found positive relationships of FWC with strain.

Few studies have examined the three dimensions (time, strain and behaviour) of family→work conflict with psychological health. Therefore, this research will add to the literature by predicting that family→work conflict (time, strain and behaviour) will be positively related with anxiety/depression and social dysfunction at Time 1 and 2.

H9: Family→work conflict (a) time, (b) strain and (c) behaviour will be positively correlated with anxiety and depression at Time 1 and Time 2.

H10: Family→work conflict (a) time, (b) strain and (c) behaviour will be positively correlated with social dysfunction at Time 1 and Time 2.

Work-family Enrichment

The cross-sectional direct effect hypotheses for work-family enrichment with the wellbeing variables, resilience and work-life balance will now be discussed.

Work→family enrichment with job satisfaction

Researchers are now recognising the positive effects that both work and family can have on each domain. Conservation of resources theory states that individuals involved in many roles simultaneously may offer resources that provide positive effects in each role (Hobfoll, 1989; 2011). The work→family enrichment literature generally points to a positive relationship between work→family enrichment and job satisfaction. The meta-analysis by McNall,

Nicklin and Masuda (2010) provides evidence of a moderate relationship ($r = .34$). Similarly, Balmforth and Gardner (2006) found evidence in New Zealand with a small sample ($n = 58$) of employees. Hanson, Hammer and Colton (2006), have reported that WFE, and in particular behaviour-based enrichment, was significantly related to job satisfaction. The limited amount of research available highlights that work→family enrichment will be positively related to job satisfaction.

H13: Work→family enrichment (a) development, (b) affect, and (c) capital will be positively correlated with job satisfaction at both Times 1 and 2.

Work→family enrichment with family satisfaction

Some studies have shown a positive relationship in the cross-domain relationships between WFE and family satisfaction (Hansen et al., 2006). In particular, Haar and Bardoel (2008) found a positive spill-over from the work to the family interface with 420 Australian public and private sector employees. On the other hand, some researchers (Boyar & Mosley, 2007; Wayne et al., 2004) have not found any relationship between WFE and family satisfaction although some have used a global measure of WFE. Thus, further investigation into the effects of WFE with family satisfaction is warranted with health professionals. It is expected that work→family enrichment will have a positive relationship with family satisfaction.

H14: Work→family enrichment (a) development, (b) affect, and (c) capital will be positively correlated with family satisfaction at both Times 1 and 2.

Work→family enrichment with psychological health

The meta-analyses by McNall, Nicklin and Masuda (2009) provide evidence of a negative relationship between both forms of work-family enrichment (WFE and FWE) with physical and mental health. Similarly,

Stoddard and Madsen (2007) found a positive relationship between both forms of work-family enrichment and mental-emotional health and physical health with a sample of 120 managers of a large retail business. Based on previous research findings, the additive effects of enrichment lead to enhanced wellbeing due to having a quality resource reservoir, which makes the individual better equipped to handle stressful situations (Hobfoll, 2002). Therefore it is predicted that work→family enrichment will be positively related to anxiety/depression and social dysfunction.

H15: Work→family enrichment (a) development, (b) affect, and (c) capital will be negatively correlated with anxiety/depression at both Times 1 and 2.

H16: Work→family enrichment (a) development, (b) affect, and (c) capital will be negatively correlated with social dysfunction at both Times 1 and 2.

Work-family Enrichment with Resilience

At time of writing, there is no empirical evidence on this relationship. However, it is expected that both forms of enrichment (WFE and FWE) will be positively related with resilience at both Time 1 and Time 2. The rationale follows the logic that work-family enrichment focuses on the positive interdependencies between the work and family domains. This synergistic effect occurs when experiences in one role are positively related to experiences and outcomes in another role (Greenhaus & Powell, 2006; Grzywacz & Marks, 2000) which contribute to positive emotions or affective states (Carlson, Ferguson, Kacmar, Grzywacz & Whitten, 2011) with greater psychological functioning (Grzywacz, 2000). In the resilience literature there is ample available evidence that suggests that positive emotions can foster resilience (e. g. Fredrickson, 2001; 2009; Ong, Bergeman, Bisconti & Wallace, 2006; Tugade & Fredrickson, 2004). Available evidence indicates that the enrichment effect produces positive

emotions thus building on the resilient capacity of the individual over time.

Therefore, it is expected that a positive relationship will be found.

H17: Work→family enrichment (a) development, (b) affect, and (c) capital will be positively correlated with resilience at both Time 1 and 2.

H23: Family→work enrichment (a) development, (b) affect, and (c) efficiency will be positively correlated with resilience at both Time 1 and 2.

Work-family Enrichment with Work-life Balance

Greenhaus and Powell (2006) argued that enrichment is gained when positive experiences in one role improve the quality of life in the other role. These additive experiences from work and family can be beneficial, with the opportunities of positive spill-over of emotions, attitudes and behaviours enhancing well-being (Greenhaus & Parasuraman, 1999; Greenhaus & Powell, 2006; Rothbard, 2001). According to this logic it is expected that the positive emotions, attitudes and behaviours will give rise to feelings of balance between work and life. In summary, theoretical and empirical work focused on work-family enrichment and its relationship with work-life balance has produced mixed results. Therefore, it is predicted that work-life balance and enrichment will be positively related.

H18: Work→family enrichment (a) development, (b) affect, and (c) capital will have a positive relationship with work-life balance at Time 1 and 2.

H24: Family→work enrichment (a) development, (b) affect, and (c) efficiency will have a positive relationship with work-life balance at Time 1 and 2.

Family→work enrichment with job satisfaction

Mixed results have been found for the relationship between family→work enrichment with job satisfaction. The research by van Steenbergen, Ellemers and Mooijart (2007), using a mixed method approach, found evidence of a positive relationship between family→work enrichment and job satisfaction with 750 Dutch employees. Similarly, Carlson et al (2006), Hanson, Hammer and Colton (2006), and McNall, Nicklin and Masuda (2010), found both dimensions WFE

and FWE were positively related to job satisfaction. However, no cross-domain effects were found by Wayne, Musica and Fleeson (2004), and Boyar and Mosely (2007). This leads to the next hypothesis.

H19: Family→work enrichment (a) development, (b) affect, and (c) efficiency will be positively correlated to job satisfaction at Time 1 and Time 2.

Family→work enrichment with family satisfaction

There are a few studies that have looked at this relationship. Hanson et al (2007) and Boyar and Mosley (2007) found evidence of a significant relationship between family→work enrichment and family satisfaction. Wiese and Salmela-Aro (2008) found a relationship between family-work enrichment and partnership satisfaction with 131 working adults. The limited amount of research that has been undertaken with these two variables has shown a within domain relationship, where FWE with family satisfaction are positively related, therefore the following hypotheses were developed.

H20: Family→work enrichment (a) development, (b) affect, and (c) efficiency will be positively correlated to family satisfaction at both Time 1 and Time 2.

Family→work enrichment with psychological health

There are a very few studies that investigate this relationship. However, Franche, Williams, Ibrahim, Grace, Mustard, Minore and Stewart (2006) found that a sample of health care workers who experienced high family→work enrichment had fewer depressive symptoms. Hanson et al (2006), with employees in a distribution centre, found a relationship between family→work enrichment and mental health. Hammer et al., (2005) conducted a longitudinal study and found that as employees expressed increased positive affect in the family domain they experienced increased positivity and therefore, decreased depressive outcomes at work. It is evident that further research is necessary to advance our understanding of this relationship.

- H21: Family→work enrichment (a) development, (b) affect, and (c) efficiency will be negatively correlated with anxiety/depression at both Time 1 and 2.
- H22: Family→work enrichment (a) development, (b) affect, and (c) efficiency will be negatively correlated with social dysfunction at both Time 1 and 2.

Longitudinal Hypotheses

It is also predicted that there will be longitudinal direct effects between the work and family predictors and the wellbeing variables, work-life balance and resilience. This research used the approach by Cole and Maxwell (2003) to determine the longitudinal relationships. The work and family predictor at Time 1 was correlated with the wellbeing variables, resilience and work-life balance at Time 2. This is explained in detail in chapter 10. Based on the above reviews and the same logic that was used for cross-sectional hypotheses are used for the following longitudinal hypotheses. Note that the following sets of hypotheses are especially large in number. This is due to the large number of predictors (12) and the particular dimensions within each of the work family interfaces (conflict and enrichment).

Work-family Conflict

Work→family conflict

- H25: Work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be negatively correlated with job satisfaction at Time 2.
- H26: Work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be negatively correlated with family satisfaction at Time 2.
- H27: Work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be positively correlated with anxiety/depression at Time 2.
- H28: Work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be positively correlated with social dysfunction at Time 2.
- H29: Work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be negatively correlated with resilience at Time 2.
- H30: Work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be negatively correlated with work-life balance at Time 2.

Family→work conflict

- H31: Family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be negatively correlated with job satisfaction at Time 2.
- H32: Family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be negatively correlated with family satisfaction at Time 2.

H33: Family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be positively correlated with anxiety/depression at Time 2.

H34: Family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be positively correlated with social dysfunction at Time 2.

H35: Family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be negatively correlated with resilience at Time 2.

H36: Family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 will be negatively correlated with work-life balance at Time 2.

Work-family Enrichment

Work→family enrichment

H37: Work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 will be positively correlated with job satisfaction at Time 2.

H38: Work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 will be positively correlated with family satisfaction, at Time 2.

H39: Work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 will be negatively correlated with anxiety/depression at Time 2.

H40: Work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 will be negatively correlated with social dysfunction at Time 2.

H41: Work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 will be positively correlated with resilience at Time 2.

H42: Work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 will be positively correlated with work-life balance at Time 2.

Family→work enrichment

H43: Family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 will be positively correlated with job satisfaction at Time 2.

H44: Family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 will be positively correlated with family satisfaction at Time 2.

H45: Family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 will be negatively correlated with anxiety/depression at Time 2.

H46: Family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 will be negatively correlated with social dysfunction at Time 2.

H47: Family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 will be positively correlated with resilience at Time 2.

H48: Family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 will be positively correlated with work-life balance at Time 2.

Mediation Hypotheses

Consistent with the work and family interface and wellbeing model in Figure 6.1 (see Chapter 6), the propositions were that resilience and work-life balance would mediate the relationship between the work and family predictors and wellbeing variables. The first mediational hypothesis examined the path from the work and family predictors (WFC, FWC, WFE, and FWE) to the wellbeing variables (job satisfaction, family satisfaction, anxiety/depression and social

dysfunction) through resilience and work-life balance as the mediators (see Figure 6.2.).

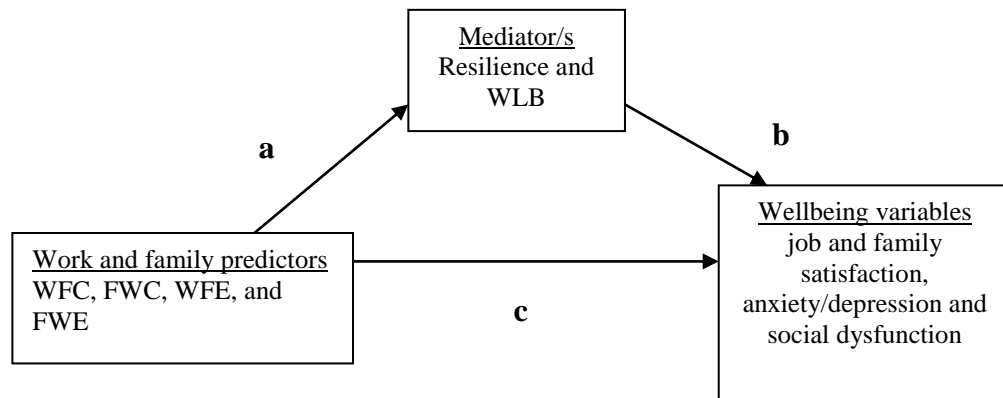


Figure 6.2. Resilience and work-life balance as mediators.

Note: WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; and WLB = work-life balance.

This research used the guidelines by Mathieu and Taylor (2006) in determining the type of mediation, which are explained in detail in chapter 8.

At time of writing (October, 2011) there is a limited amount of research that has used resilience and work-life balance as a mediator in such a work and family wellbeing model as being explored in this thesis. Thus this research is explorative in design and therefore the rationale for using resilience and work-life balance as mediators is discussed in detail in their relevant chapters (Chapter 5: Resilience, and Chapter 4: Work-life balance), however a brief explanation will be provided here.

Theoretical Framework and Hypotheses

The Conservation of Resources theory (Hobfoll, 1989) provides a useful framework for this research (Grandey & Cropanzano, 1999). This theory proposes that individuals will strive to hold on to dispositional and situational resources. Resources can be defined as anything that an individual values such as self esteem, relationships, time, inner peace, money and other materialistic

resources such as company car, office space or job title (e. g. doctor, surgeon). In this research, resilience and work-life balance are deemed to be valuable resources for the individual. When individuals are faced with conflict (work and family), resources are mobilised to limit resource losses (McNall, Nicklin & Masuda, 2009). Therefore, the theory is that work-family conflict (WFC and FWC) can lead to stress/strain because these resources (i. e., resilience and work-life balance) are perceived to be lost in attempting to regain optimum balance between work and life, and in turn decreases job and family satisfaction and incurs greater anxiety/depression and social dysfunction.

On the other hand, research on the positive aspects of work and family (e.g. work-family enrichment) has concluded that individuals balancing both domains may actually receive enriching positive rewards. The enrichment theory suggests that enrichment should increase feelings of work-life balance and increase resource capacity of resilience in individuals indirectly through the impact on attitudes and positive emotions, as well as directly because of resource gains having a tendency towards accumulation of resources over time. This in turn leads to increased job and family satisfaction, and incurs less anxiety/depression and social dysfunction. The first group of mediation hypotheses are with resilience as the mediator followed by work-life balance. As above, there are a large number of hypotheses presented here which simply reflect the large number of relationships tested.

Cross-sectional Mediation Hypotheses

Resilience

H49: Resilience will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour and job satisfaction at both Times 1 and 2.

H50: Resilience will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour and family satisfaction at both Times 1 and 2.

H51: Resilience will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour and anxiety depression at both Times 1 and 2.

H52: Resilience will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour and social dysfunction at both Times 1 and 2.
H53: Resilience will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour and work-life balance at both Times 1 and 2.
H54: Resilience will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour and job satisfaction at both Times 1 and 2.
H55: Resilience will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour and family satisfaction at both Times 1 and 2.
H56: Resilience will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour and anxiety/depression at both Times 1 and 2.
H57: Resilience will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour and social dysfunction at both Times 1 and 2.
H58: Resilience will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour and work-life balance at both Times 1 and 2.

H59: Resilience will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital and job satisfaction at Times 1 and 2.

H60: Resilience will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital and family satisfaction at Times 1 and 2.

H61: Resilience will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital and anxiety/depression at Times 1 and 2.

H62: Resilience will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital and social dysfunction at Times 1 and 2.

H63: Resilience will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital and work-life balance at Times 1 and 2.

H64: Resilience will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency and job satisfaction at Times 1 and 2.

H65: Resilience will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency and family satisfaction at Times 1 and 2.

H66: Resilience will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency and anxiety/depression at Times 1 and 2.

H67: Resilience will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency and social dysfunction at Times 1 and 2.

H68: Resilience will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency and work-life balance at Times 1 and 2.

Work-life Balance

H69: Work-life balance will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour and job satisfaction at both Times 1 and 2.

H70: Work-life balance will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour and family satisfaction at both Times 1 and 2.

H71: Work-life balance will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour and anxiety/depression at both Times 1 and 2.

H72: Work-life balance will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour and social dysfunction at both Times 1 and 2.

H73: Work-life balance will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour and job satisfaction at both Times 1 and Time 2.

H74: Work-life balance will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour and family satisfaction at both Times 1 and Time 2.

H75: Work-life balance will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour and anxiety/depression at both Times 1 and Time 2

H76: Work-life balance will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour and social dysfunction at both Times 1 and Time 2

H77: Work-life balance will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital and job satisfaction at both Times 1 and 2.

H78: Work-life balance will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital and family satisfaction at both Times 1 and 2.

H79: Work-life balance will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital and anxiety/depression at both Times 1 and 2.

H80: Work-life balance will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital and social dysfunction at both Times 1 and 2.

H81: Work-life balance will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) capital and job satisfaction at both Times 1 and 2

H82: Work-life balance will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) capital and family satisfaction at both Times 1 and 2

H83: Work-life balance will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) capital and anxiety/depression at both Times 1 and 2

H84: Work-life balance will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) capital and social dysfunction at both Times 1 and 2

Longitudinal Mediations

Additionally, the longitudinal mediations were tested using the procedure as outlined by Cole and Maxwell (2003). The procedure is explained in detail in chapter 10. In brief, the mediator (resilience and work-life balance) at Time 2 will

mediate the relationship between the work and family predictor (WFC, FWC, WFE, and FWE) at Time 1 and the wellbeing variables (job satisfaction, family satisfaction, anxiety/depression, and social dysfunction) at Time 2. The rationale for these hypotheses is the same as previously discussed. The following hypotheses were examined:

Resilience

H85: Resilience at Time 2 will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 and job satisfaction at Time 2.

H86: Resilience at Time 2 will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 and family satisfaction at Time 2.

H87: Resilience at Time 2 will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 and anxiety/depression at Time 2.

H88: Resilience at Time 2 will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 and social dysfunction at Time 2.

H89: Resilience at Time 2 will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 and job satisfaction at Time 2.

H90: Resilience at Time 2 will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 and family satisfaction at Time 2.

H91: Resilience at Time 2 will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 and anxiety/depression at Time 2.

H92: Resilience at Time 2 will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 and social dysfunction at Time 2.

H93: Resilience at Time 2 will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 and work-life balance at Time 2.

H94: Resilience at Time 2 will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 and job satisfaction at Time 2.

H95: Resilience at Time 2 will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 and family satisfaction at Time 2.

H96: Resilience at Time 2 will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 and anxiety/depression at Time 2.

H97: Resilience at Time 2 will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 and social dysfunction at Time 2.

H98: Resilience at Time 2 will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 and work-life balance at Time 2.

H99: Resilience at Time 2 will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 and job satisfaction, at Time 2.

H101: Resilience at Time 2 will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 and family satisfaction at Time 2.

H102: Resilience at Time 2 will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 and anxiety/depression at Time 2.

H103: Resilience at Time 2 will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 and social dysfunction at Time 2.

H104: Resilience at Time 2 will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 and work-life balance at Time 2.

Work-life Balance

H105: Work-life balance at Time 2 will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 and job satisfaction at Time 2.

H106: Work-life balance at Time 2 will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 and family satisfaction at Time 2.

H107: Work-life balance at Time 2 will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 and anxiety/depression at Time 2.

H108: Work-life balance at Time 2 will mediate the relationship between work→family conflict (a) time, (b) strain, and (c) behaviour at Time 1 and social dysfunction at Time 2.

H109: Work-life balance at Time 2 will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1 and job satisfaction at Time 2.

H110: Work-life balance at Time 2 will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1, and family satisfaction at Time 2.

H111: Work-life balance at Time 2 will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1, and anxiety/depression at Time 2.

H112: Work-life balance at Time 2 will mediate the relationship between family→work conflict (a) time, (b) strain, and (c) behaviour at Time 1, and social dysfunction at Time 2.

H113: Work-life balance at Time 2 will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 and job satisfaction at Time 2.

H114: Work-life balance at Time 2 will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 and family satisfaction at Time 2.

H115: Work-life balance at Time 2 will mediate the relationship between work→family enrichment: (a) development, (b) affect, and (c) capital at Time 1 and anxiety/depression at Time 2.

H116: Work-life balance at Time 2 will mediate the relationship between work→family enrichment (a) development, (b) affect, and (c) capital at Time 1 and social dysfunction at Time 2.

H117: Resilience at Time 2 will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 and job satisfaction, at Time 2.

H118: Work-life balance at Time 2 will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 and family satisfaction at Time 2.

H119: Work-life balance at Time 2 will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 and anxiety/depression at Time 2.

H120: Work-life balance at Time 2 will mediate the relationship between family→work enrichment (a) development, (b) affect, and (c) efficiency at Time 1 and social dysfunction at Time 2.

Summary

This chapter has explained the work and family interface and wellbeing model and hypotheses for this research. The theoretical model builds on developing resilience and work-life balance as mediators between work-family conflict, work-family enrichment and wellbeing variables (job satisfaction, family satisfaction, anxiety/depression, and social dysfunction). The next chapter (Chapter 7) explains the methodology used in this research.

CHAPTER 7

METHOD

Chapter Overview

This chapter details the methodology used in this research. Firstly the chapter will briefly introduce the three health care organisations involved in this research. Then it will outline the procedure used for (a) research design, (b) feedback to organisations involved in this research, (c) instrumentation and quantitative measures, (d) research sample, and (e) how the data were analysed. The Research and Ethics Committee of the Psychology Department at the University of Waikato provided ethical approval for this research.

Organisational Context

As previously mentioned, (see Chapter 1) the three organisations (Waikato District Health Board, Lakes District Health Board, and Toi Te Ora-Public Health) involved in this research are health service providers and based in New Zealand. In New Zealand there are 20 district health boards established to plan, fund and provide health and disability services to the population within their allocated districts. The District Health boards are governed and accountable to the Minister of Health and comprised of statutory boards. Each District Health board has a board of clinical governance that supports the chief executive officer, with the aim of achieving a high standard of clinical excellence (Waikato DHB, 2009).

Waikato District Health Board (Waikato DHB)

This health board was established in 2001 and employs approximately 4,800 staff and serves a population of 364,200 (Waikato DHB, 2009). Waikato DHB is the fifth largest District Health Board in New Zealand and its direct area

of responsibility covers almost 8% of New Zealand's land mass stretching from northern Coromandel to Mount Ruapehu in the south, and from the coast of Raglan in the west to Waihi on the east. The region embraces the base hospital (Waikato hospital) in Hamilton, and district hospitals at Thames, Tokoroa, Te Kuiti, Taumarunui, Te Awamutu and Morrinsville. The organisational structure of Waikato DHB is a matrix structure that runs through client-based services. The services provided are Mental Health & Addictions service, Hospital services, and Community Health services (Waikato DHB, 2009).

Lakes District Health Board (LDHB).

This health board was established in 2001 and employs approximately 1,250 staff and serves a population of approximately 102,000 people (LDHB, 2009). LDHB operates health care services (medical, surgery, women's and children health, care for the elderly, disability support, and mental health) to the Rotorua and Taupo district residents. In addition, LDHB provide community services in homes and operate a 24 hour laboratory and radiology service. A total of 32% of LDHB region are populated by Maori (indigenous peoples of New Zealand) (LDHB, 2009).

Toi Te Ora-Public Health

This organisation is a service offered by Bay of Plenty District Health Board and provides public health services and health promotion activities to there allocated districts. The organisation works closely with the community including schools and local Iwi (indigenous Maori families) in providing health protection services and designs programmes for health and wellbeing. The organisation

employs approximately 50 staff, with its main office in Tauranga and other offices situated at Whakatane and Rotorua (Toi Te Ora-Public Health, 2010).

RESEARCH DESIGN

Background

For this investigation a self report questionnaire was designed and included the predictors (work → family conflict, family→work conflict, work→family enrichment and family→work enrichment), two mediators (resilience and work-life balance) and four wellbeing variables (job satisfaction, family satisfaction, anxiety/depression, and social dysfunction). The objective was to identify the key variables that are significantly related to the wellbeing variables and to explore the mediating affects of resilience and work-life balance. The research was longitudinal over a two year timeframe, with two data collection points with a time-lag of 10-12 months.

Participants

All employees of the three health providers (Waikato DHB, Lakes DHB and Toi Te Ora-Public Health) were invited to participate in this study. Table 6.1 and Table 6. 2 show the total participants of questionnaire that were distributed within each organisation along with the percentage of questionnaires returned at Time 1 and Time 2 respectively.

At Time 1, 7,215 surveys and at Time 2, 7,133 surveys were distributed to all participants in the three organisations. The number of surveys returned were 1,626 at Time 1 and 1,199 at Time 2 represented a response rate of 22.54% and 16.81% respectively.

Table 7.1.
Number of Participants for Each Organisation at Time 1.

Name of organisation	Questionnaires distributed	Number of participants	R/rate/org.	Percentage
Waikato DHB	5,680	1,301	22.9%	80.01%
Lakes DHB	1,475	270	18.31%	16.61%
Toi Te Ora- Public Health	60	55	91.67%	3.38%
Total	7,215	1,626	22.4%	100%

Note: R/rate/org. = response rate per organisation; DHB = District Health Board

Table 7.2.
Number of Participants for Each Organisation at Time 2.

Name of organisation	Questionnaires distributed	Number of participants	R/rate/org.	Percentage
Waikato DHB	5,600	871	22.90%	72.65%
Lakes DHB	1,475	275	18.31%	22.94%
Toi Te-Ora Public Health	58	53	91.67%	4.41%
Total	7,133	1,199	16.81%	100%

Note: R/rate/org. = response rate per organisation; DHB = District Health Board

Sample Demographics

At Time 1 the employees' average age was 41 years, ranging from 20-72 years old. Females comprised 84% of the sample, while the remaining 16% were male. The average number of hours worked per week ranged from 20 to 65 hours with a mean of a 40 hour, 5 day working week. The majority of employees (52%) wanted to work less hours; while 44% wanted to work the same hours, and 4% wanted to work more hours.

At Time 2 (10-12 months time-lag) the sample demographics was similar with Time 1. The employees' average age was 43 years, ranging from 19-72 years old, and females comprised 85% of the workforce. The average number of hours worked per week ranged from 20- 60 hours with a mean being a 40 hour working week over 5 days. The majority of employees (48%) wanted to work the

same hours with 42% wanted to work less hours and 6% wanted to work more hours.

Instrument

As previously mentioned (introduction chapter) this research was part of a larger survey that was compiled for the Work-life balance project. The data were collected via a questionnaire made up of multiple questions. The questionnaire contained quantitative measures of work → family and family→work conflict; work→family and family→work enrichment; resilience; work-life balance; job and family satisfaction; anxiety/depression and social dysfunction.

The questionnaires were submitted to the human resource department manager at each organisation for their consideration and approval prior to distribution. All organisations were given the opportunity to include specific questions they wanted to include in the survey (e.g. Waikato DHB wanted participants to respond to their preferred communication method, e.g. staff meetings, intranet messages, and memos). A sample of the cover letter and questionnaire are presented in the Appendix A.

QUANTITATIVE MEASURES

As previously mentioned seventeen variables derived from the international work-life balance theoretical model were used, work→family, family→work conflict time, strain and behaviour), work→family, family→work enrichment (development, affect, capital/efficiency) work-life balance, job satisfaction, family satisfaction, psychological health (anxiety/depression and social dysfunction), and included one other variable, resilience. To analyse the internal consistency of the scales Cronbach alpha coefficients were computed for

each variable and the results are provided in the results chapter pertaining to Time 1 and Time 2 data collection phases. The analyses revealed that all the variables were over the Hair, Black, Babin, and Anderson (2010) recommended minimal internal consistency threshold of 0.65, suggesting that the scale scores are relatively reliable for respondents in this study. All composite scores on each variable were computed by taking the means across item responses for each person. In addition I performed Confirmatory Factor Analyses (CFA) on all measures used in this study. The results are provided in Chapter 7 (Time 1) and Chapter 8 (Time 2).

Work and Family Predictors

Work-family conflict was measured using the scale from Carlson et al. (2000). This measure was chosen because it examined three forms of conflict (time, strain and behaviour) for WFC and FWC and had three items per subscale (time, train and behaviour). Participants were asked to respond for WFC and FWC on a five-point scale ranging from 1 = strongly disagree to 5 = strongly agree. Participants were asked to think about the demands on their time and energy from both their job and family life commitments e.g. WFC (time) “the time I must devote to my job keeps me from participating equally in household responsibilities and activities” WFC (strain), “I am often so emotionally drained when I get home from work that it prevents me from contributing to my family life” and WFC (behaviour), “behaviour that is effective and necessary for me at work would be counterproductive at home”.

Turning our attention to FWC (time), “the time I spend with my family life often causes me to not spend time in activities at work that could be helpful in my career”, FWC (strain), “due to stress at home, I am often preoccupied with family

life matters at work”, and FWC (behaviour), the problem solving behaviours that work for meat home do not seem to be as useful at work”.

The results of the CFA confirmed that the three forms of WFC and FWC provided a better fit to the sample of health professionals. The results of the CFA will be discussed in Chapter 7 for Time 1 and Chapter 8 for Time 2. The Cronbach alpha’s for all three forms of WFC used in this study ranged from .78 to .89 at Time 1 and from .82 to .90 at Time 2. The Cronbach alpha’s for the FWC scale ranged from .75 to .89 at Time 1 and from .73 to .90 at Time 2.

Work-family enrichment was measured using the scales from Carlson et al. (2006). This measure was chosen because it measured the three forms of work→family enrichment (development, affect and capital) and family→work enrichment (development, affect, and efficiency) and had three items per each subscale (development, affect and capital/efficiency). Participants were asked to respond for WFE and FWE on a five-point scale ranging from 1 = strongly disagree to 5 = strongly agree. Some items included my involvement in my work WFE (development), “provides me with a sense of success and this helps me be a better family member” WFE (affect), “makes me feel happy and this helps me to be a better family member”, and WFE (capital), helps me feel personally fulfilled and this helps me to be a better worker”.

Some examples for the FWE scale are, “my involvement in my family” (development), “helps me acquire skills and this helps me to be a better worker”, FWE (affect), “puts me in a good mood and this helps me be a better worker”, and FWE (efficiency), “encourages me to use my work time in a focused manner and this helps me to be a better worker”. The results of the CFA confirmed that the three forms of WFE and FWE provided a better fit to the

sample of health professionals. The results of the CFA will be discussed in Chapter 7. The Cronbach alpha's for all three forms of WFE used in this study ranged from .89 to .93 at Time 1 and from .89 to .95 at Time 2. The Cronbach alpha's for the FWE scale ranged from .91 to .95 at Time 1 and from .96 to .97 at Time 2.

Mediator Variables

Resilience: A 10-item measure of psychological resilience was constructed by Neill & Dias (2001) which was adapted from Wagnild and Young's (1999) measure to determine the participants' ability to rebound after life's stressors and subsequently flourish. This measure asked participants to respond on a seven-point scale ranging from 1 = strongly disagree to 7 = strongly agree. An example item included "my belief in myself gets me through the hard times". The Cronbach alpha for the resilience scale used in this study was .84 at Time 1 and .84 at Time 2.

Work-life balance: A 4-item measure of work-life balance developed by Brough, Timms, O'Driscoll, Kalliath, Siu, Sit, & Lo (2009) was used in this study. The participants responded to the questions on a 7 point scale ranging from 0 = disagree completely to 6 = agree completely. The participants were asked to reflect over their work and non-work activities (non work included their regular activities outside of work such as family, friends, sports, study etc.), over the past 3 months and concluded that: "I carefully have a good balance between the time I spend at work and the time I have available for non-work activities" (item 1); "I have difficulty balancing my work and non-work activities" (item 2; reverse coded); "I feel that balance between my work demands and non-work activities is

currently about right” (item 3), and “overall, I believe that my work and non-work life are balanced” (item 4). The Cronbach alpha for the work-life balance scale used in this study was .87 at Time 1 and .86 at Time 2.

Wellbeing Variables

Job satisfaction was measured using a 3-item five-point Likert scale from Camman, Fichman, Jenkins and Klesh, (1983). The participants were asked how satisfied they were with their current job, using a response scale 1 = ‘strongly disagree’ to 5 = ‘strongly agree’

The items were: “in general I don’t like my job” (item 1, reverse coded), “all in all I am satisfied with my job” (item 2), “in general I like working here” (item 3). The Cronbach alpha for the job satisfaction scale used in this study was .80 at Time 1 and .70 at Time 2.

Family satisfaction: A 3-item scale from Edwards and Rothbard (1999) was used to measure family satisfaction. Participants were asked how satisfied they were with their family/home life on a seven-point scale ranging from 1 = ‘strongly disagree’ to 7 = ‘strongly agree’. The items were: “in general, I am satisfied with my family/home life” (item 1), “all in all, the family/home life I have is great” (item 2), and “my family/home life is very enjoyable” (item 3). The Cronbach alpha for the family satisfaction scale used in this study was .96 at Time 1 and .94 at Time 2.

Psychological health: To examine the respondent’s feelings about their physical and mental health in the past few weeks, the 12-item version of the General Health Questionnaire from Goldberg, (1972) was used. Response was by

circling the options provided on a four point scale (0 to 3). A total strain score was obtained by averaging responses across the twelve items. The GHQ-12 has shown evidence of utility and validity in measuring the actual levels of emotional distress (Hankins, 2008). However, in this study the one factor model produced a poor fit to the data. The CFA results showed that the two factor model (anxiety/depression and social dysfunction) by Kalliath, O'Driscoll, and Brough (2004) produced a good fit to the data. This will be discussed in more detail in Chapter 7.

Examples of the items used: "been thinking of yourself as a worthless person"? (anxiety and depression); and "been able to enjoy your normal day-to-day activities"? (social dysfunction). The Cronbach alpha's for the Kalliath, O'Driscoll and Brough (2004) anxiety/depression scale used in this study was .80 at Time 1 and .78 at Time 2. The Cronbach alpha for social dysfunction scale was .70 at Time 1 and .66 at Time 2.

Research Procedure

The three organisations (Waikato DHB, Lakes DHB and Toi Te Ora-Public Health) were organisations that were also involved in the work-life balance project. The main reason I chose the health professionals sample was because in New Zealand there is a limited amount of research in the health professional workforce. In addition, an independent samples t test analyses uncovered a significant difference between the health professionals' organisations and others involved in the overall work-life balance project.

The researcher initiated a meeting with the human resource managers of each of the three organisations, including the Board of Directors for Toi Te Ora-Public Health, to state the scope of the research and to define the benefits of

taking part of the longitudinal work-life balance project. From these meetings a timeframe for the research was agreed. Prior to the survey being distributed, the CEO's and human resource managers released internal statements to all employees indicating they were involved in the research and encouraging their employees' participation.

The survey was made available by hard copy. Attached to each hard copy survey was a stamped addressed envelope for the participants to send back to the researcher at the university. Survey hard copies were distributed through the usual communication channels of each organisation. For the longitudinal analyses, I matched each participant at Time 2 with Time 1. On each survey was a clear instruction on how to create their codeword, which was unique to each participant e.g.

How to create your codeword:-

The initials of your name e.g. If your name is **Derek Riley = dr**

Date of your birth e.g. if you were born on the 17th = **17**.

First 3 letters of the month of your birth e.g. If you were born in January = **Jan**

Your code word would then be: **dr/17/Jan**

Create your code word _____/ _____
/ _____

The initials of your name / date of your birth /first 3 letters of the
month of birth

Participation in this project was voluntary and the managers/CEO of each organisation with the researcher determined the timing of the survey at Time 1 and Time 2 to minimise the environmental effects that could distort the participants' responses.

Feedback to the Participants

Feedback to the organisation was given during and following the data collection phase stating the number of respondents who had completed the survey.

To motivate staff to complete the survey a flyer/newsletter was sent out to all employees via the internal communication system, encouraging them to participate in the study and highlighting the benefits. At the completion of the data collection phases, a detailed report was produced which consisted of demographic and aggregated scores of the business outcomes. The selection of variables to be reported was determined by the researcher in consultation with the CEO/Manager of each organisation, to tailor each report to the specific needs of the organisation. A sample copy of a report is presented in Appendix B. Approximately one month after the data collection, thank you flyers were posted on notice boards and messages were sent out through the organisations' intranet system. The promotional material was tailored to promote the importance of the participants' inclusion in this research and to motivate their participation for the Time 2 survey in 10-12 months time.

METHOD OF ANALYSES

This section presents the preparation of the data file for analyses and the method of analyses. Initially the data were entered onto Microsoft Excel (2003) data sheet then transferred to SPSS (Statistical package for the Social Sciences, version 14.0) for analyses. Firstly all negatively worded items were reversed scored, and then I cleaned the data (e. g. checking for outliers and normality checks).

Accuracy of Data File

A preliminary check on the data file, using descriptive statistics, was undertaken, ensuring the minimum and maximum values reflected the scale parameters and that the standard deviations seemed credible for each variable. I

also proof read the discrete (categorical) variables making sure they were correctly coded e. g. 0= male 1 = female, according to the code book

Missing Data

Missing data in research are a common occurrence and need to be carefully considered, as it proposes a threat to the validity of the research (O'Rourke, 2003). Examination of the data items of each construct was conducted to see if the missing data was random, or if it was particular variables that had problems with each participant. On the analyses of the data it appeared these cases were missing at random (MAR) and did not appear to be particular items, which may have been due to question sensitivity, or errors in entering data (Allison, 2003). Within person missing means substitution as an effective imputation of missing data was performed (Dodeen, 2003; Downey & King, 1998), to maximise statistical power and reduce biases in the regression coefficients and parameter estimates (Allison, 2003; Pigott, 2001).

Detecting Outliers

Checking the data for multivariate normality is essential in recognising the outlier cases as they can lead to Type 1 and Type 11 errors. In particular, outliers can affect the data distribution, e. g. means, standard deviations and correlations which lead to misleading results which do not represent a true reflection of the data set. A Mahalanobis Distance test (D^2) was performed using SPSS 14.0 Regression, as suggested by Tabanick and Fidell (2007) and Pallant (2007) to calculate any strange patterns or extreme high values across all constructs. The analyses provided each participant with a value which differentiated them from all other participants. To calculate outliers the comparison was made between the

Mahalanobis distance value (D^2) against the critical value using the chi square critical table. The χ^2 critical value was 32.91 at $p = 0.001$, resulting in the presence of 26 multivariate outlier cases for Time 1 and 20 cases were above the recommended threshold for Time 2. Transforming cases that are outliers is not a good practice (Tabanick and Fidell 1996), so these cases were deleted from the data files resulting in a sample size of 1,596 participants at Time 1. The combining of both data files (Time 1 and Time 2) for the Time 2 and longitudinal analyses was undertaken using the procedure as illustrated by Pallant (2007), resulting in 296 participants being matched between Time 1 and Time 2.

Normality of the Data Set

To assess the normal distribution of the data is essential to make deductions concerning multivariate analyses (Tabanick & Fidell, 2007). To define normality we can observe the kurtosis and skewness effects of the variables used. Kurtosis refers to the peakness (leptokurtic) or flatness (platykurtic) of the distribution against the normal distribution (mesokurtic) curve (Schumacker & Lomax, 2004). According to Pyzdeck (2003), and Kline (2005) if the skewness has a value of less than plus or minus 3.0 then the data is determined to be normally distributed. Negative skew refers to a distribution where most of the scores falls above the mean and vice versa for positive skew (Kline, 2005). The Kolmogorov-Smirnov kurtosis and skewness statistic was used to test the normality of the data and the results are presented in Chapter 7 (Time 1) and Chapter 8 (Time 2).

Some researchers (Byrne, 2010, Kline, 2005; Tabanick & Fidell, 1996) argue that with large samples the testing of skewness and kurtosis becomes less important. With large samples Tabanick and Fidell, (2007 p. 80) suggest it

becomes less relevant with samples greater than 200 participants for negative kurtosis and 100 participants for positive kurtosis and one needs to visually look at the ‘shape of the distribution’ using histograms and normal probability plots. I have presented the skewness and kurtosis values for the variables at Time 1 and Time 2 in chapter 7 (Time 1 results), and chapter 8 (Time 2 results).

Statistical Analyses

As previously mentioned, the data were analysed with Statistical Package for Social Sciences (SPSS, 14.0), means, standard deviations, descriptive statistics and correlations were performed using this programme. Confirmatory factor analyses and the mediation analyses were performed using Structural Equation Modelling via AMOS 16.0 (Byrne, 2010).

Confirmatory factor analyses (CFA) using Amos 16.0 were conducted on all constructs in this study to uncover the latent structure of all study variables. The job and family satisfaction measures only have three items for each variable, and failed to converge when the CFA was performed on these two variables. This is a common occurrence with variables less than four items per variable (Kline, 2005). For these two variables I performed an Exploratory Factor Analyses. The results of the CFA’s for all variables and EFA’s for job and family satisfaction are presented in chapter 7 (Time 1) and chapter 8 (Time 2).

The AMOS (Arbuckle, 2004) statistical programme uses “maximum-likelihood estimation to test the fit of a hypothesised model to the observed variance-covariance matrix” (Zuroff, Blatt, Sanislow, Bondi & Pilkonis, 1999, p. 80) to assess the validity and distinctness of the scales (Levine, 2005).

Structural Equation Modelling (SEM)

I employed structural equation modelling to test the mediation effects of resilience and work-life balance between the work and family interface and the wellbeing variables. The decision to use SEM was twofold. Firstly, the work and family wellbeing model is a complex model and has many paths, and therefore SEM is able to calculate estimations from the interdependent nature of the research variables. Secondly, with SEM, able to specify and test different complex path models and is considered to be a more rigorous method to test mediations compared to multiple regressions using SPSS (Kline, 2005; Schumacker & Lomax, 2004).

In this study I tested the fit of three structured nested models to compare the best fitting model with the health professional data. According to Kline (2005) this is an important step to determine different model variations considering different path relationships. The results of the three structured nested models are provided in chapter 7. If a model did not provide an acceptable fit to the health professional data I used the modification indices as a guide to undertake 'model trimming'. Model trimming is an acceptable practice amongst users of SEM (Hair et. al., 2010; Kline 2005) and involves deleting the non significant paths with the objective of getting a better fitting structural model to the data. To determine the model fit of the measurement and structural models I used chi-square (χ^2), and chi-square/df χ^2 / df indexes and the following fit indices: comparative fit index (CFI), root mean square error of approximation (RMSEA) and the standardised root mean squared residual (SRMR). The values associated with these indexes in determining model fit acceptability are provided in chapter 8. I also used the AIC and CAIC values when comparing different models (Byrne, 2010). Both of these address the issue of parsimony in the assessment of

model fit with the health professional data. The smallest AIC or CAIC value represents a better fit of the structural model (Byrne, 2010).

Longitudinal Analyses

The purpose of the longitudinal correlation analyses was to determine the relationship between all variables used in this study over the 2 year time frame. I designed a two-wave panel design was used to provide a comprehensive analysis of the work and family wellbeing model. The longitudinal correlation analysis was undertaken in SPSS 14.0 and Time 1 variables were correlated with Time 2. After this analysis I performed the longitudinal mediation analyses using structural equation modelling (SEM) to examine the mediation hypotheses. In this study I followed the autoregressive method as recommended by Cole and Maxwell, (2003) to examine the mediation hypotheses. The specific process I used is described in detail in chapter 10 (Longitudinal analyses).

CHAPTER 8

TIME 1 RESULTS

Chapter Overview

The aim of this study was to examine the relationships between work-family conflict, work-family enrichment (predictors) in the work and family domains, and the wellbeing variables (job and family satisfaction, and psychological health: anxiety/depression and social dysfunction). In addition, the study investigated the role that resilience and work-life balance plays in the model and the extent to which work-life balance and resilience mediate relationships between the work and family predictors and the wellbeing variables.

This chapter presents the results of the statistical analyses at Time 1, which are divided into three main sections: (1) confirmatory factor analyses, (2) descriptive analyses, and (3) mediation hypotheses testing using structural equation modelling.

Structural Equation Modelling (SEM)

Introduction

A distinct advantage of using SEM is that the hypothesized model can be statistically tested to determine fit or lack of fit of the models to the data set (Hair, et al. 2010). Furthermore, SEM analysis provides the ability to perform multiple regressions simultaneously, giving path coefficients for the direct and indirect effects of variables. The SEM approach is superior to standard regression where only one criterion variable can be tested at a time (Kline, 2005; Schumacker & Lomax, 2004) and can incorporate the use of multiple moderators and mediators if required (Byrne, 2010; Kline, 2005)

The measurement model is based on theory and tested with CFA to test the construct validity of the latent variables used in this study. Moreover, when the CFA is accomplished and all the measures are deemed valid and reliable, this provides a foundation for any theoretical hypothesis-testing through the structural model. Thus, the structural model examines the interrelationship between constructs simultaneously, rather than a piecemeal approach. Many researchers (e. g. Hair et al. 2010; Kline, 2005; Schumacker & Lomax 2004), agree that SEM involves a two step model-building approach and emphasize two distinct models (e.g. measurement model and structural model). Moreover, the rigor of the structural model estimates was determined by the validity and reliability of the measures used, confirmed through the CFA. Therefore, rigorous testing of the measurement instruments was undertaken to determine unidimensionality and involved a three step process. Firstly, all latent variables were individually tested, secondly, combinations of variables (e.g. work and family predictors; wellbeing variables) were examined and then the complete measurement model. The purpose of this systematic process facilitates in any modification that may be needed, and to determine that the variables possess internal and external consistency (Andersen, Gerbing, & Hunter, 1987; Garver & Mentzer, 1999). These results are presented throughout the CFA section of this chapter. At each step goodness of fit indices were generated and validity verification was undertaken.

The second step in the model-building approach involves analysing the structural model, which assesses the relationships between the latent variables. When the measurement and structural models, are combined (full structural model Byrne, 2010) they provide an overarching statistical model that can be used to

investigate ‘causal’ relations among all latent variables that are free of measurement error (Newman, Vance, & Moneyham 2010).

Confirmatory Factor Analyses (CFA)

A confirmatory factor analysis was carried out on the study variables using AMOS 16.0 (Byrne, 2010) to test the fit of the structural model. The AMOS programme uses maximum-likelihood estimation (MLE) to test the fit of a structural/hypothesized model to data, providing estimates of model fit.

The statistical estimates used to determine the factor structures of the measures and to determine model fit for the measurement and structural models were: chi-square (χ^2), and chi-square/df (χ^2 /df) and the following fit indices: comparative fit index (CFI), root mean square error of approximation (RMSEA) and standardised root mean squared residual (SRMR). Hu and Bentler (1999) proposed that cut-offs close to or below .08 for SRMR, at or above .95 for CFI and less than .06 for RMSEA indicate adequate fit. However, some researchers (e. g. Browne & Cudeck, 1993; MacCullum, Widaman, Zhang, & Hong, 1999) stated that the RMSEA values at or below .05 indicate good fit and values ranging from .08 to .1 indicate mediocre fit and above .1 a poor fit.

The fit measure most frequently used is the likelihood chi-square test (χ^2). However, some researchers (e.g. Byrne, 2010; Kline, 2005; Williams, Vandenberg, & Edwards, 2009) argued that this goodness of fit index should be interpreted with caution with large sample sizes. The rule of thumb for the χ^2 /df is that a value 2-3 is preferred, but between 2-5 is acceptable (Hair et al., 2010). Some researchers (e. g. Williams et al., 2009) tend to place more emphasis on the CFI, RMSEA, SRMR, and when comparing differing models the AIC and CAIC fit indices (Byrne, 2010). Both the AIC and CAIC values address the issue of

parsimony in the assessment of model fit with the data. The smallest value indicates a better fit of the hypothesised/structural model (Bryne, 2010).

In the work-family wellbeing model (see Chapter 6) there are eighteen latent variables. Individual confirmatory factor analyses were performed on these measures and various fit indices were generated to evaluate the fit of the model. Work→family conflict (WFC), family→work conflict (FWC), work→family enrichment (WFE), family→work enrichment (FWE), resilience, work-life balance (WLB), and job and family satisfaction were tested individually to determine their validity. The GHQ-12 was tested and compared as a one, two or three factor model to find the best fitting model with the present data.

In addition, examination of the output files generated from each CFA was analysed to ensure construct validity. This included examining the factor loadings, that they were statistically significant and in the predicted direction and had a minimum factor loading of 0.03 (Brown 2006). Furthermore, to ensure discriminant validity of the latent variables, the size of the factor correlations were examined in ensuring the values were less than 0.80, in ensuring multicollinearity between the variables was not an issue (Brown, 2006; Kline, 2005; Tabanick & Fidell, 2007)

Work and Family Predictors

Work-family conflict

Initially a one-factor model for WFC and FWC was tested to establish goodness of fit. Table 8.1 illustrates that the one-factor model produced poor fitting statistics for both WFC (RMSEA = .23, and CFI = .68) and FWC (RMSEA = .25, and CFI = .58). Thus, a three-factor model was tested, WFC (time, strain

and behaviour) and vice versa for family→work conflict, to find the best fitting model.

Table 8.1

Fit indices for Work-Family Conflict (time, strain, and behaviour).

Model	χ^2	d.f.	χ^2/df	RMSE A	CFI	SRMR	AIC	CAIC
WFC								
1-factor	2254.12	27	83.49	.23	.68	.16	2290.1	2404.9
3-factor	221.27	24	9.22	.06	.98	.03	100.9	234.8
FWC								
1-factor	2815.82	27	104.29	.25	.57	.16	2851.8	2966.6
3-factor	84.76	24	3.53	.04	.99	.03	126.8	260.7

Note: WFC = work→family conflict; FWC = family→work conflict. The 1-factor model for both WFC and FWC combined all dimensions into one-factor. The 3-factor models for both WFC and FWC included time based conflict as one-factor, strain based conflict as another factor and behaviour based conflict as the third-factor.

The results presented in Table 8.1 show that the three factor models for both WFC, and FWC, (time, strain, and behaviour) produced the best fit, (CFI = .98/.99; RMSEA .06/.04 and SRMR .03 for both). Both WFC and FWC showed a substantial decline in AIC and CAIC indices between a one-factor and three-factor model. Thus, the three-factor model was used in this study. The Cronbach alpha's will be presented later in this section.

Work-family enrichment

Table 8.2 presents the result for one-factor and three-factors to find the best fitting model. It was found that the one-factor models produced poor fit indices for both WFE (RMSEA = .31 and CFI .66) and FWE (RMSEA = .35 and CFI = .58). Thus, this model was deemed inadequate. The results presented in Table 8.2 show that the three-factor model for WFE (affect, capital and development) and FWE (affect, development and efficiency) by Carlson, Kacmar, Wayne, and Grzyacz (2006) fitted the data well (CFI = .98/.99; RMSEA .05/.04

and SRMR .03 / .01 respectively). A substantial reduction in AIC and CAIC indices was presented for both WFE and FWE between the one- and three-factor models. Therefore, the standardised factor loadings were examined and found that WFE (development) ranged from 0.80 to 0.93, WFE (affect) ranged from 0.87 to 0.94; and WFE (capital) from 0.84 to 0.94. Also the standardised factor loadings for FWE development from 0.87 to 0.91, FWE (affect) ranged from 0.90 to 0.97 and FWE (efficiency) ranged from 0.82 to 0.93. Thus, the three-factor model for WFE, (affect, development, and capital) and FWE (affect, development and efficiency) was retained for further analyses.

Table 8.2
Fit Indices for Work-Family Enrichment.

Model	χ^2/df	RMSEA	CFI	SRMR	AIC	CAIC
WFE						
1-factor	151.1	.31	.66	.09	4265.5	4373.9
3-factor	9.2	.05	.98	.03	263.3	397.2
FWE						
1-factor	195.2	.35	.58	.13	5499.5	5607.9
3-factor	2.9	.03	.99	.01	109.9	243.8

Note: WFE = work→family enrichment; FWE = family →work enrichment. 1-factor models, included combined all three factors into one factor. The 3-factor model, work→family enrichment (affect, development and capital) as three separate factors and similarly, the 3 factor family→work enrichment (affect, development and efficiency) as three separate factors.

Mediator variables

Resilience

The results of the CFA for the resilience measure did not fit the theoretical model and the results are displayed in Table 8. 3. In reviewing the modification indices it was evident that four questions from the resilience items loaded poorly. Therefore, these items were deleted one at a time and model fit was re-tested after each item was deleted. The questions were, item 1 ‘I usually manage one way or another’, item 7 ‘My belief in myself gets me through the hard times’ item 9

‘When I’m in a difficult situation, I can usually find my way out of it’ and item 10 ‘I have enough energy to do what I have to do’. The final fit statistics of the resilience variable are provided in Table 8.3 the revised model (model 2) showed an improvement and satisfactory levels of RMSEA (.047), CFI (.99) and an improvement in the χ^2/df (4.47). An examination of the standardised factor loadings found that the six-item measure ranged from 0.55 to 0.69 therefore, this model was retained for further analyses.

Table 8.3
Fit Indices for Resilience

Model	χ^2/df	RMSEA	CFI	SRMR	AIC	CAIC
1	9.6	.09	.90	.04	376.5	504.0
2	4.5	.05	.99	.02	64.3	140.8

Note: Model 1 = ten-item measure. Model 2 = six-item measure

Work-life balance (WLB)

The confirmatory factor analyses fit statistics for the work-life balance measure was $\chi^2/\text{df} = 4.44$, RMSEA .046, CFI = .998 and SRMR = .012. The standardised factor loadings for the work-life balance items ranged from 0.46 to 0.94. Thus, the analyses showed that the WLB scale was valid to measure work-life balance among health professionals.

Wellbeing Variables

Job satisfaction

In the CFA, the job satisfaction items failed to converge, as this scale had three items and as Kline (2005) argues such measures are more likely to be under-identified or fail to merge and thus, error estimates tend to be unreliable. In these cases a principal component exploratory factor analyses (EFA) was performed. The factor criterion level was set at 0.3 and the factor loadings are provided in

Table 8.4. Job satisfaction item 1 had a factor loading of .546; item 2, .807 item 3, .773 and percentage of variance extracted was 70.885. Thus, the job satisfaction measure was used in this study.

Table 8.4.

Factor matrix for job satisfaction

Item	Factor
J/S 1	.546
J/S 2	.807
J/S 3	.773

Note: J/S = job satisfaction.

Family satisfaction

Likewise, the family satisfaction measure has three items and failed to converge when performed the CFA on this measure. An EFA was performed and the factor loadings are presented in Table 8.5. Family satisfaction item 1 had a factor loading, .877; item 2 .916; and item 3 .900. The percentage of variance extracted was 89.763. Thus, the family satisfaction measure was used in this research.

Table 8.5

Factor Matrix for Family Satisfaction

Item	Factor
F/S 1	.877
F/S 2	.916
F/S 3	.900

Note: F/S = family satisfaction.

Psychological health:

The GHQ-12 is a widely used measure that has been validated in several languages and accesses the overall psychological wellbeing and psychological disorders. In the literature, there are many factor analytic studies to show that the GHQ-12 can be used as a one-two-and three-factor model. A one-factor model

has been promoted by Banks and Jackson (1982) and Winefield, Goldney, Winefield, and Tiggermann (1989). However, Kalliath, O'Driscoll, and Brough (2004) found support for a two-factor structure model containing four items reflecting social dysfunction, and four items reflecting anxiety and depression. Alternatively, Graetz (1991) has tested a three-factor model comprising, social dysfunction, anxiety and depression, and loss of confidence. The factor structure of the GHQ-12 is still under debate, therefore all three models were tested to find which factor structure was the most valid and reliable to use with the present sample. The results of the model comparison are presented in Table 8.6.

Table 8.6.

Fit Indices for the One-, Two- and Three-factor Model for GHQ-12.

Model	χ^2	df	χ^2/df	RMSEA	CFI	SRMR	AIC	CAIC
1-factor	763.0	54	14.13	.08	0.90	0.05	811.02	969.46
2-factor	129.7	26	4.83	.05	0.97	0.03	163.69	272.25
3-factor	425.6	51	8.35	.06	0.95	0.03	479.65	657.89

Note: 3-factor model included anxiety/depression as one-factor, social dysfunction as another factor and loss of confidence as the third-factor. The 2-factor model included anxiety/depression as one-factor and social dysfunction as the second factor. The 1-factor model combined all dimensions into one-factor.

The results revealed that a two-factor structure produced acceptable fit statistics with RMSEA = .05, CFI = .97, AIC = 163.69, CAIC = 272.25 and SRMR = .029. Considering the issue of parsimony, using the AIC and CAIC values, Byrne (2010) argues that the smaller values represent a better fit of the model. Thus, the 2-factor model AIC and CAIC values were better than the one- and three-factor models. Also, the standardised factor loadings were examined for the 2-factor model and were found to above the minimal threshold of 0.30 ranging from 0.45 to 0.75 for social dysfunction and 0.64 to 0.80 for anxiety and depression. The correlation between anxiety and depression and social

dysfunction (2-factor model) was 0.59 suggesting that the two latent constructs were distinct. Thus, the 2-factor model was retained for further analyses.

Further CFA testing

After the analyses of the individual psychometric measures were confirmed through the CFA the attention turned to testing the research instruments in combinations (Garver & Mentzer 1999). As mentioned previously the purpose of this process is to probe for unidimensionality issues that may arise due to the combining of the latent variables. The goodness of fit indices was examined to see if they were within the acceptable ranges, as were the modification indices. Moreover, the standardised factor loadings were reviewed to verify there were no significant changes in values from the prior testing of the individual measures.

Firstly, the combined work and family predictors (WFC, FWC, WFE, and FWE) three-factor models were tested and the goodness of fit indices is presented in Table 8.7. The results show that the χ^2/df is below the acceptable level of <3.0 and the RMSEA (0.03) and SRMR (0.02) are within the acceptable indices of 0.05 and 0.1 respectively. The 13-factor model includes the work-life balance variable and this to when added provides acceptable goodness of fit indices.

Table 8.7.

The Goodness of Fit Indices for the Work and Family Variables

Work and family predictors	χ^2	d.f.	χ^2/df	RMSEA	CFI	SRMR
12-factor	1332.28	528	2.52	.03	.98	.02
13-factor	1616.17	662	2.44	.03	.98	.02

Note: The 12-factor model included work→family conflict (time, strain and behaviour), family→work conflict (time, strain behaviour); work→family enrichment (development, affect, capital) and family→work enrichment (development, affect, and efficiency). The 13-factor model had all the above factors with the addition of work-life balance.

Also the combined wellbeing variables (job satisfaction, family satisfaction, social dysfunction, anxiety and depression) were analysed and the goodness of fit indices are presented in Table 8.8. The results show acceptable fit indices for these combined variables with indices, RMSEA = 0.04, CFI = 0.98 and SRMR = 0.03.

Table 8.8
Fit Indices for the Combined Wellbeing Variables

Well being variables	χ^2	d.f.	χ^2/df	RMSEA	CFI	SRMR
4 factor-variables	271.18	71	3.81	.04	.98	.03

Note: The 4-factor model included job satisfaction, family satisfaction, anxiety/depression and social dysfunction.

As mentioned previously, the output files generated from both these analyses were reviewed to ensure no cross loadings were evident.

Analyses of the Measurement Model

The next step was to evaluate the overall measurement model combining all the latent variables together. The measurement model fit indices were examined and are provided in Table 8.9. The overall model $\chi^2 = 3411.11$ with 1559 degrees of freedom and the χ^2/df (2.19) is below the recommended level of < 3.00 (Hair et al. 2010). Examining other fit indices, the CFI (.97) and the RMSEA (.03) are within the fit indices guidelines of .95 and .05 respectively. Also, the SRMR with a value of .03 provides further evidence of a good fitting model to the data. Thus, testing the psychometric measures using CFA determined validity of the model constructs to be used in this study.

Table.8.9.
Goodness of Fit Indices for the Measurement Model.

Index	Value
Chi-square (χ^2)	3397.71
Degrees of freedom (df)	1557.00
Chi-square/df (χ^2 /df)	2.18
Comparative fit index (CFI)	.97
Root mean squared error (RMSEA)	.03
Standardized root mean square residual (SRMR)	.03

Therefore, the next step was to determine the reliability of all latent variables and the results are provided in Table 8.10.

Table 8.10
Descriptive Statistics: Cronbach Alpha, Skewness and Kurtosis for all Variables at Time 1.

Name of Latent Variable	Cronbach Alpha	Skewness	Kurtosis
WFC time	.84	.10	-.64
WFC strain	.89	.09	-.69
WFC behaviour	.78	.11	-.24
FWC time	.75	.53	.03
FWC strain	.89	.90	1.06
FWC behaviour	.86	-.01	-.23
WFE development	.89	-.40	.51
WFE affect	.93	-.06	-.01
WFE capital	.92	-.52	.25
FWE development	.92	-.32	.40
FWE affect	.95	-.38	.30
FWE efficiency	.91	-.27	.21
J/S	.80	-.65	-.14
F/S	.96	-.76	-.33
A/D	.70	.41	2.41
S/D	.80	1.0	1.45
Resilience	.80	-.73	.48
WLB	.87	-.17	-.76

Note: WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety/depression; S/D = social dysfunction and WLB = work-life balance.

Cronbach's alpha was used to measure the internal consistency of responses. The Cronbach alpha coefficients were performed in SPSS 14.0 and the results for each latent variable are presented in Table 8.10.

All of the variables were over the recommended minimal internal consistency threshold of .65 (Hair, et al., 2010) and the majority of the variables were above the optimum value of .80 (Pallant, 2007). Thus, for this study all scale scores were relatively reliable. Moreover, the normality of the latent variables was tested using the skewness and kurtosis indices. Thus, skewness and kurtosis indexes did not exceed their threshold indexes. Skewness statistics above 3.0 and kurtosis values greater than 10.0 is perceived as problematic (Kline, 2005).

In summary, this subsection has presented the results of the CFA of the psychometric measures used in this study and produced reliability and construct validity of the measurement model. It was found that the measures work→family conflict and family→work conflict had three factors each (time, strain and behaviour) whereas, work→family enrichment had three factors (development, affect and capital) and so did family→work enrichment (development, affect and efficiency). Moreover, one factor was established for work-life balance, job satisfaction, and family satisfaction. The measure for resilience was trimmed from a ten-item measure to a six-item measure with the GHQ-12 (psychological strain) comprising of two factors anxiety/depression, and social dysfunction. Hence, these measures through the CFA - reliability and normality testing in SPSS, have produced a satisfactory measurement model that can now form a theoretical foundation for assessing the structural model.

Analyses of the Structural Model.

The aim of testing the structural model using SEM was to evaluate the relationships between the latent variables in the work and family wellbeing model confirmed through the CFA.

An important next step is to analyse different model variations considering different path relationships and to compare fit indices (Kline, 2005). As Hair et al., (2010) and Kline (2005) recommend the criterion for any changes must be practical, meaningful, as well as theoretically driven. Three models were investigated to find the best fitting model to the health data and the results are provided for each model separately

Model 1 was a basic regression model with pathways from work and family predictors to the wellbeing variables including resilience and work-life balance as criterion variables.

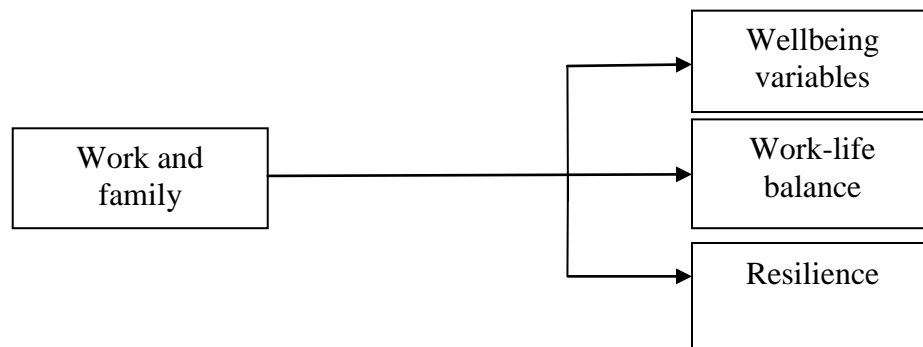


Figure 8.1. Model 1

Note: work and family predictors include work→family conflict, family→work conflict (time, strain and behaviour); work→family enrichment, and family→work enrichment (development, affect, and capital/efficiency). Wellbeing variables include job satisfaction, family satisfaction, anxiety/depression and social dysfunction. The variables are combined in this figure for illustration purposes only.

Model 1 is provided in Figure 8.1. Model 1 fit indices (see Table 8.11) show that ($\chi^2 = 3475.76$, df. = 1565, $\chi^2/\text{df} = 2.221$, RMSEA = .028, CFI = .97, AIC = 4005.7 and CAIC = 5695.54) the indices meet the recommended range.

Model 2 was a full mediation model, included pathways from the work and family predictors WFC and FWC (strain, time, and behaviour), WFE affect, capital and development) and FWE, (affect development and efficiency) to work-life balance and resilience as the mediators, then onto the wellbeing variables (job and family satisfaction, anxiety/depression and social dysfunction). Model 2 is provided in Figure 8.2.

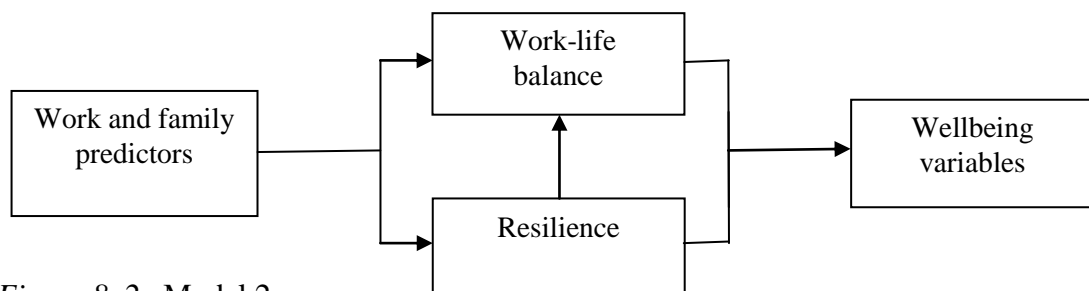


Figure 8. 2. Model 2

Note: work and family predictors include work→family conflict, family→work conflict (time, strain and behaviour); work→family enrichment, and family→work enrichment (development, affect, and capital/efficiency). Wellbeing variables include job satisfaction, family satisfaction, anxiety/depression and social dysfunction. The variables are combined in this figure for illustration purposes only.

A SEM analyses with the maximum likelihood method in AMOS 16.0 yielded the following fit indices for model 2: $\chi^2 = 4021.14$, $df. = 1607$, $\chi^2/df = 2.502$, RMSEA = .031, CFI = .96, AIC = 4467.14 and CAIC = 5889.10 again these fit statistics meet the required goodness of fit indices.

However, in Model 3 (figure 8.3.) an added direct pathway from the work and family variables directly to the four wellbeing variables was included to test for the direct relationships between the work and family variables (predictors) and the wellbeing variables.

With the addition of this path, the fit indices for Model 3 strengthened, having a lower χ^2/df (2.188), higher CFI (.970) lower RMSEA (.027) and SRMR (.029) in comparison to the two other models. In addition, the AIC (3953.11) and the CAIC (5681.14) showed a slight reduction in their indices. Overall this

indicated that model 3 was a superior fit to the data when compared to model 1 and model 2.

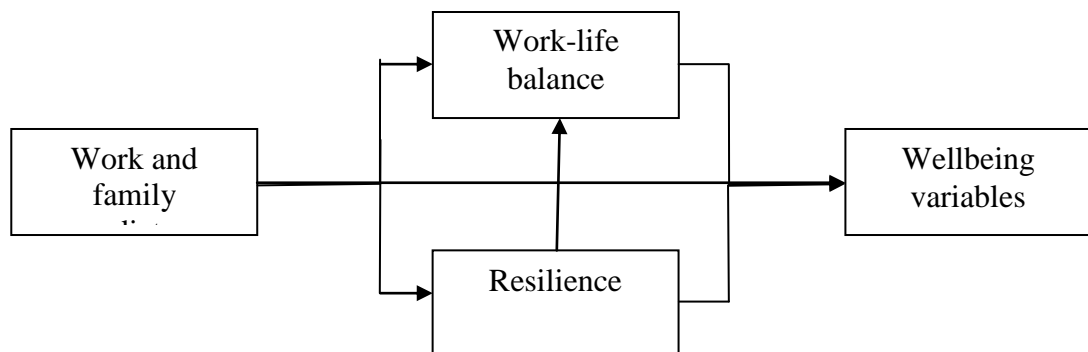


Figure 8.3. Model 3

Note: work and family predictors include work→family conflict, family→work conflict (time, strain and behaviour); work→family enrichment, and family→work enrichment (development, affect, and capital/efficiency). Wellbeing variables include job satisfaction, family satisfaction, anxiety/depression and social dysfunction. The variables are combined in this figure for illustration purposes only.

However, to analyse if there was a significant difference between the competing nested models, the three models were compared by computing a χ^2 difference test.

The chi-square difference test results are provided in Table 8.11 and show that model 3 is significantly different from model 2 ($\chi^2 = 547$, $\Delta df = 47$, $p < .001$) and from model 1 ($\chi^2 = 65$, $\Delta df = 6$, $p < .001$). Furthermore, model 2 is significantly different than model 1 ($\chi^2 = 482$, $\Delta df = 41$, $p < .001$). Thus a partial mediation model (model 3) provided the best fit with the health professional data and was used for further analyses.

Table 8. 11.
Model Fit Indices for Structural Nested Model Comparisons.

Model tested	Model Fit Indices										Model Differences			
	χ^2	df	χ^2/df	CFI	RMSEA	LO	HIGH	SRMR	AIC	CAIC	χ^2	Δdf	p	
Model 1	3475.76	1565	2.221	.969	.028	.026	.029	.034	4005.76	5695.54				
Model 2	3957.73	1606	2.464	.962	.030	.029	.031	.048	4405.73	5834.07	482	41	.001	(2 to 1)
Model 3	3411.11	1559	2.188	.970	.027	.026	.029	.031	3953.11	5681.14	65	6	.001	(3 to 1)
											547	47	.001	(3 to 2)
Note	Model 1 = Work and family predictors → combining the wellbeing variables (job and family satisfaction; anxiety/depression and social dysfunction), resilience, and work-life balance as criterion variables (see figure 8.1.). Model 2 = Work and family predictors → mediators (resilience, and work-life balance) → wellbeing variables (see figure 8.2.). Model 3 = Work and family predictors → mediators → wellbeing variables; also with direct path between work and family predictors and wellbeing variables (see figure 8.3).													

Descriptive Statistics: Means and Standard Deviations

Descriptive statistics for all variables, including means, and standard deviations are presented in Table 8. 12.

Table 8.12

Descriptive Statistics: Means and Standard Deviations.

Name of Latent Variable	Means	SD
WFC time (a)	2.78	1.00
WFC strain (a)	2.85	1.03
WFC behaviour(a)	2.44	.84.
FWC time (a)	2.10	.80
FWC strain (a)	1.83	.75
FWC behaviour (a)	2.47	.84
WFE development (a)	3.64	.73
WFE affect (a)	3.14	.79
WFE capital (a)	3.65	.77
FWE development (a)	3.68	.71
FWE affect (a)	3.78	.73
FWE efficiency (a)	3.54	.77
J/S (a)	3.96	.82
F/S (b)	6.12	.89
A/D (c)	.62	.56
S/D (c)	1.01	.34
Resilience (b)	5.90	.77
WLB (d)	3.43	.94

Note: SD = standard deviation; WFC = work→family conflict; FWC = family →work conflict; WFE = work→family enrichment; FWE = family→work enrichment; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety/depression; S/D = social dysfunction and WLB = work-life balance.

(a) 1 = strongly disagree, 5 = strongly agree; (b) 1 = strongly disagree, 7 = strongly agree; (c) 0-3 = higher the score the greater anxiety/depression and social dysfunction; (d) 0 = disagree completely, 6 = agree completely.

In relation to the work-family predictors, participants indicated low to moderate levels of work→family conflict (WFC). Mean scores were WFC (time 2.78, strain 2.85, and behaviour 2.44) and similarly the results with FWC (time 2.10, strain 1.83, behaviour 2.47).

Participants indicated moderate-high mean scores for WFE (development 3.64, affect 3.14, and capital 3.65) and FWE (development 3.68, affect 3.78 and efficiency at 3.54). On average, most respondents had perceptions of moderate to

high scores of work-life balance ($M = 3.43$) and a high score for resilience ($M = 5.90$). The response scale for work-family balance was 0-6 and for resilience on a scale ranging from 1-7 with mid-points being 3.0 and 4.0 respectively. In relation to the wellbeing variables, most participants indicated a moderate-high value for job satisfaction ($M = 3.96$) on a scale ranging, 1-5, and a high value for family satisfaction ($M = 5.96$) on scale ranging from 1 to 7 -high scores indicating higher satisfaction. Participants also reported low mean scores for anxiety and depression (.06) and social dysfunction (1.01). Responses were scored on a 4 point scale with higher scores representing higher levels of distress.

Correlations

The correlations between the variables were investigated using Pearson product-moment correlation coefficients and the analysis was undertaken in SPSS 14.0. The strength of the correlations was based on the recommendations of Cohen (1988), small $r = .10$ to $.29$; medium $r = .30$ to $.49$; and large $r = .50$ to 1.0 . The correlations are presented in Table 8.13 for all variables.

Correlates of Work-family Conflict

As predicted WFC (time) was negatively correlated with job satisfaction, ($r = -.23$), family satisfaction ($r = -.13$), resilience ($r = -.14$), work-life balance ($r = -.57$), and positively related with anxiety/depression ($r = .23$), and social dysfunction ($r = .19$). It was also found that, WFC (strain) was negatively correlated with job satisfaction ($r = -.33$), family satisfaction ($r = -.18$), resilience ($r = -.26$), work-life balance ($r = -.45$) and positively related with anxiety/depression ($r = .39$), and social dysfunction ($r = .29$).

Table 8.13.
Correlations between all variables at Time 1.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. WFC time																	
2. FWC time	.30*																
3. WFC strain	.54*	.26*															
4. FWC strain	.16*	.40*	.24*														
5. WFC beh.	.29*	.26*	.36*	.35*													
6. FWC beh.	.30*	.25*	.36*	.30*	.74*												
7. WFE dev.	-.09*	-.05	-.08	-.04	-.24*	-.22*											
8. FWE dev.	-.09	-.07	-.11*	-.03	-.19*	-.22*	.52										
9. WFE affect	-.23*	-.07	-.35*	-.07	-.23*	-.27*	.46*	.39*									
10. FWE affect	-.04	-.06	-.10*	-.18*	-.18*	-.17*	.35	.51*	.35*								
11. WFE capital	-.12*	-.02	-.20*	-.09	-.22*	-.22*	.54*	.45*	.66*	.39*							
12. FWE eff.	-.07*	.01	-.10*	-.07	-.17*	-.16*	.35*	.52*	.38*	.49*	.38*						
13. J/S	-.23*	-.15*	-.33*	-.15*	-.22*	-.23*	.26*	.19*	.44*	.17*	.44*	.18*					
14. F/S	-.13*	-.12*	-.18*	-.27*	-.22*	-.21*	.10*	.18*	.14*	.34*	.14*	.19*	.18*				
15. S/D	.19*	.10*	.29*	.12*	.14*	.17*	-.17*	-.16*	-.27*	-.19*	-.27*	-.17*	-.29*	-.26*			
16. A/D	.23*	.13*	.39*	.22*	.24*	.27*	-.14*	-.15*	-.28*	-.16*	-.27*	-.15*	-.37*	-.35*	.59*		
17. WLB	-.57*	-.15*	-.45*	-.11*	-.21*	-.22*	.13*	.15*	.28*	.10*	.18*	.15*	.29*	.22*	-.22*	-.29*	
18. Resilience	-.14*	-.16*	-.26*	-.24*	-.25*	-.28*	.22*	.28*	.31*	.27*	.31*	.27*	.28*	.36*	-.30*	-.42*	.25*

Note: N = 1598; * p< .05.

WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour; dev = development; eff = efficiency; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety/depression; S/D = social dysfunction. and WLB = work-life balance.

Also, WFC (behaviour) was negatively correlated with job satisfaction ($r = -.22$), family satisfaction ($r = -.22$), resilience ($r = -.25$), work-life balance ($r = -.21$) and positively related with anxiety/depression ($r = .24$) and social dysfunction ($r = .14$). Therefore, hypotheses H1 – H6 were supported.

Turning the attention to the correlation results with family→work conflict, FWC (time) was negatively correlated with job satisfaction, ($r = -.15$), family satisfaction ($r = -.12$), resilience ($r = -.16$), work-life balance ($r = -.15$), and positively related with anxiety/depression ($r = .13$) and social dysfunction ($r = .10$). It was also found that, FWC (strain) was negatively correlated with job satisfaction ($r = -.15$), family satisfaction ($r = -.27$), resilience ($r = -.24$), work-life balance ($r = -.11$) and positively related with anxiety/depression ($r = .22$), and social dysfunction ($r = .12$). In addition, FWC (behaviour) was negatively correlated with job satisfaction ($r = -.23$), family satisfaction ($r = -.21$), resilience ($r = -.28$), work-life balance ($r = -.22$) and positively related with anxiety/depression ($r = .27$), and social dysfunction ($r = .17$). Therefore, hypotheses H7 - H12 were supported at Time 1.

Correlates of Work-Family Enrichment

As predicted WFE (development) was positively correlated with job satisfaction, ($r = .26$), family satisfaction ($r = .10$), resilience ($r = .22$), work-life balance ($r = .13$), and negatively related with anxiety/depression ($r = -.14$), and social dysfunction ($r = -.17$). It was also found that, WFE (affect) was positively correlated with job satisfaction ($r = .44$), family satisfaction ($r = .14$), resilience ($r = .31$), work-life balance ($r = .28$) and negatively related with anxiety/depression ($r = -.28$), and social dysfunction ($r = -.27$).

Also, WFE (capital) was positively correlated with job satisfaction ($r = .44$), family satisfaction ($r = .14$), resilience ($r = .31$), work-life balance ($r = .18$), and negatively related with anxiety/depression ($r = -.27$), and social dysfunction ($r = -.27$). Therefore, hypotheses H13 – H18 were supported at Time 1.

Turning the attention to the correlation results with family → work enrichment; FWE (development) was positively correlated with job satisfaction, ($r = .19$), family satisfaction ($r = .18$), resilience ($r = .28$), work-life balance ($r = .15$), and negatively related with anxiety/depression ($r = -.15$), and social dysfunction ($r = -.16$). In addition, FWE (affect) was positively correlated with job satisfaction ($r = .17$), family satisfaction ($r = .34$), resilience ($r = .27$), work-life balance ($r = .10$) and negatively related with anxiety/depression ($r = -.16$), and social dysfunction ($r = -.19$). Also, FWE (efficiency) was positively correlated with job satisfaction ($r = .18$), family satisfaction ($r = .19$), resilience ($r = .27$), work-life balance ($r = .15$), and negatively related with anxiety/depression ($r = -.15$), and social dysfunction ($r = -.17$). Therefore, hypotheses H19 – H24 were supported for family→work enrichment at Time 1.

MEDIATION RELATIONSHIPS

Structural Equation Modelling, (AMOS 16.0) was used to test the mediation hypotheses. A SEM approach to mediation approach was the preferred methodology as it gives the added benefits of being able to estimate the relationships simultaneously between variables and they allow modelling of both measurement and structural relationships producing overall fit indices (Byrne, 2010; James, Mulaik & Brett 2006). In determining suitable model fit the chi-square to degrees of freedom (χ^2/df), the comparative fit index (CFI), the root mean square error of approximation (RMSEA), and the standardised root mean

square residual (SRMR) were used. A partial mediation model was tested for the mediation hypotheses as this was determined to be the best model fit to the health professional data (see Table 8.11).

Testing for Mediation Effects

To test for mediation effects this study followed a path estimate/coefficient approach and Figure 8.4 provides an illustration of the process that is required.

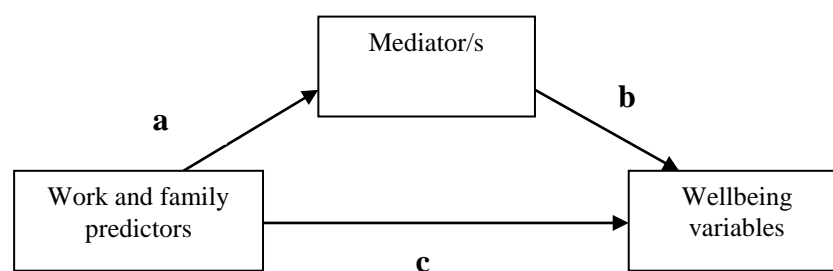


Figure 8.4. Partial mediation model

Note: Work and family predictors include work→family conflict, family→work conflict (time, strain and behaviour); work→family enrichment, and family→work enrichment (development, affect, and capital/efficiency). Mediators include resilience and work-life balance. Wellbeing variables include job and family satisfaction, anxiety/depression and social dysfunction. The variables are combined in this figure for illustration purposes only.

In partial mediation models there are both direct and indirect effects of work-family predictors on wellbeing variables. More specifically, there is a direct effect and an indirect effect of work and family predictors on wellbeing variables through the mediators (resilience and work-life balance). This study follows the guidelines of Mathieu and Taylor (2006) in determining the degree of mediation. In viewing figure 8. 4 if the direct effect (path c) and indirect effects, (path a and path b) are significant then a partial mediation is declared. On the other hand if the indirect path, (path a and path b) are significant but not the direct path (path c), it signifies a full mediation relationship. However, if either path a, or path b, are not significant no mediation is declared.

The direct, indirect and total effect statistics are produced for each mediation route as suggested by Klien, Fan and Preacher (2006). The direct effects are the standard coefficients for path c. The indirect effects are the multiplication of paths b and c, and the total effects are found by adding the direct and indirect effects together.

Analytical Strategy

This study used structural equation modelling (SEM), specifically, AMOS 16.0 to test the mediation hypotheses. A test of the overall work and family wellbeing model as illustrated in Chapter 6 would not allow to individually test the mediation hypotheses. This was due to the fact that AMOS does not report significance tests for multiple mediation effects. Therefore the model was divided into two sub-models as recommended by Klien, Fan, and Preacher (2006) which would allow testing of each mediator relationship separately to determine the different set of hypotheses. Model A represented resilience as the mediator and the other Model B represented work-life balance. Figures are presented in each of the following sections along with the sub-models fit indices.

Model A: Resilience as a Mediator

Model A yielded the following fit indices χ^2/df (2.24) which is below the recommended level of < 3 (Hair et al. 2010). Examining other fit indices, the CFI (.97) and the RMSEA (.03) are within the fit indices guidelines of .95 and .05 respectively. Also, the SRMR with a value of .04 provides further evidence of a good fitting model to the data. Model A resilience as the mediator is presented in figure 8.5.

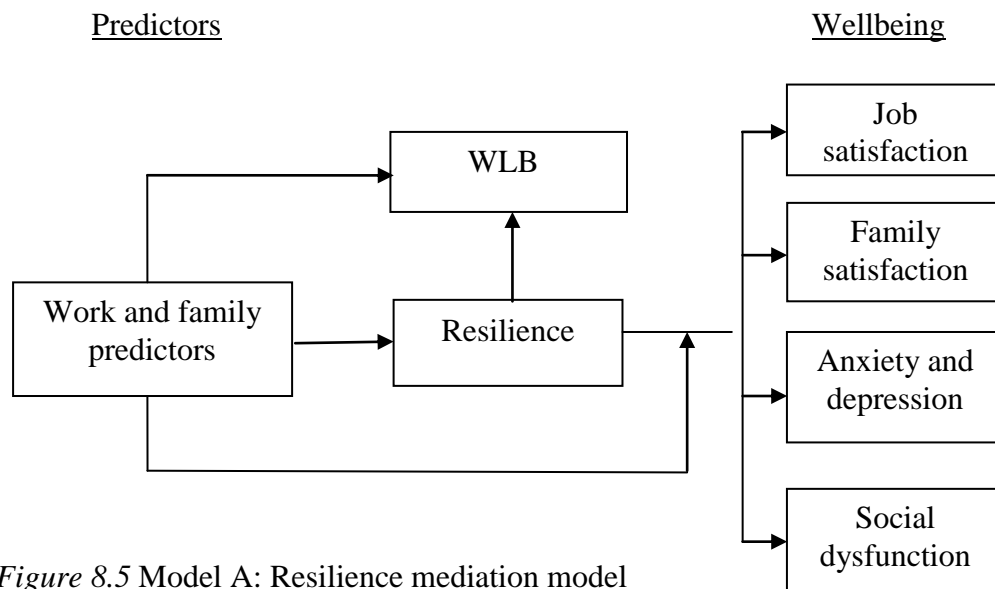


Figure 8.5 Model A: Resilience mediation model

Note: work and family predictors include work→family conflict, family→work conflict (time, strain and behaviour); work→family enrichment, and family→work enrichment (development, affect, and capital/efficiency). The variables are combined in this figure for illustration purposes only. WLB = work-life balance.

The main purpose of this analyses determined the direct, indirect and total mediation effects of resilience with work-family variables (work→family conflict, family→work conflict; work→family enrichment, and family→work enrichment) as the predictors and the wellbeing variables (job and family satisfaction, anxiety/depression and social dysfunction) and resilience at Time 1. Thus, the standardised parameter estimates for Model A at Time 1 are provided in Table 8.14.

In viewing Table 8.14 the following direct relationships were significant:

- WFC (time)→family satisfaction
- WFC (time and strain)→job satisfaction and work-life balance
- WFC (strain)→anxiety/depression
- WFC (strain and behaviour)→social dysfunction
- FWC (time)→social dysfunction and work-life balance.
- FWC (time and strain)→family satisfaction
- FWC (behaviour)→anxiety/depression and social dysfunction
- WFE (affect)→job satisfaction, and work-life balance

- WFE (capital)→anxiety/depression and social dysfunction
- FWE (development)→anxiety/depression
- FWE (affect)→family satisfaction

Table 8.14.

Standardised Estimates for Model A at Time 1.

Predictor	J/S	F/S	A/D	S/D	WLB	Res
WFC time	-.10*	-.10*	.04	.08	-.59*	-.10*
WFC strain	-.12*	-.02	.30*	.23*	-.10*	-.14*
WFC beh	-.04	-.07	.07	.16*	-.03	-.07
FWC time	-.03	-.09*	.07	.12*	-.12*	-.07
FWC strain	-.02	-.14*	.08	.05	.01	-.16*
FWC beh	.05	.02	.03	-.03	-.06	-.29*
WFE dev	.04	-.02	.01	-.03	.03	-.03
WFE affect	.22*	-.06	-.03	-.04	.08*	.05
WFE cap	.25*	-.07	-.09*	-.11*	-.03	.17*
FWE dev	-.07	-.03	-.08*	.04	-.02	.10*
FWE affect	-.03	.29*	-.04	-.06	.03	.06
FWE eff	-.01	-.01	.02	-.09	.03	.12*
Resilience	.13*	.35*	-.38*	-.26*	.16*	----

Note: N = 1598. * $p < 0.05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour; dev = development; cap = capital; eff = efficiency; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety/depression and S/D = social dysfunction; WLB = work-life balance; and Res = resilience.

In addition, (see Table 8.14) WFC (time and strain), FWC (strain and behaviour), WFE (capital) and FWE (development and efficiency) were significant with resilience and in turn resilience was significantly related with all of the wellbeing variables and work-life balance at Time 1.

The next analysis investigated the direct, indirect, and total effects of work-life balance between the predictors (work-family variables) and the wellbeing variables (job and family satisfaction, anxiety/depression and social dysfunction) to determine the type of mediation as suggested by Klien, Fan, and Preacher (2006). The direct, indirect and total effects statistics are presented in Table 8.15 for the mediation effects with job satisfaction.

Twelve mediation paths were tested and seven mediation paths were significant. The results found that resilience fully mediated the relationship

between family→work conflict (strain and behaviour) and family→work enrichment (development and efficiency) with job satisfaction. In addition resilience partially mediated the relationship between WFC (time and strain) and WFE (capital) with job satisfaction. Therefore, hypotheses 49a, 49b, 54b, 54c, 59c, 64a, and 64c were supported.

Table 8.15.

Model A: Mediation effects of Resilience, between Work and Family predictors and Job Satisfaction at Time 1.

Predictor→Mediator→J/S	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→Res→J/S	-.10*	-.02*	-.12	partial
WFC strain→Res→J/S	-.12*	-.02*	-.14	partial
WFC beh→Res→J/S	-.04	-.01	-.05	none
FWC time→Res→J/S	-.03	-.01	-.04	none
FWC strain→Res→J/S	-.02	-.02*	-.04	full
FWC beh→Res→J/S	.05	-.02*	.03	full
WFE dev→Res→J/S	.04	.00	.04	none
WFE affect→Res→J/S	.22*	.01	.23	none
WFE capital→Res→J/S	.25*	.04*	.29	partial
FWE dev→Res→J/S	-.07	.02*	-.05	full
FWE affect→Res→J/S	-.03	.01	-.02	none
FWE eff→Res→J/S	-.01	.02*	.01	full

Note: * $p < .05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour, dev = development; eff = efficiency; Res = resilience; and J/S = job satisfaction.

The next analyses involved testing the resilience mediation effects between the work and family predictors and family satisfaction. The results are presented in Table 8.16 and illustrated that resilience fully mediated the relationship between WFC (strain), FWC (behaviour), WFE (capital), FWE (development and efficiency), and family satisfaction. In addition, resilience partially mediated the relationship between WFC (time), FWC (strain) and family satisfaction, therefore supporting hypotheses 50a, 50b, 55b, 55c, 60c, 65a, and 65c.

Table 8.16.

Model A: Mediation effects of Resilience, between Work and Family predictors and Family Satisfaction at Time 1.

Predictor→Mediator→F/S	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→Res→F/S	-.10*	-.04*	-.14	partial
WFC strain→Res→F/S	-.02	-.05*	-.07	full
WFC beh→Res→F/S	-.07	-.05	-.12	none
FWC time→Res→F/S	-.09*	-.02	-.11	none
FWC strain→Res→F/S	-.14*	-.06*	-.20	partial
FWC beh→Res→F/S	.02	-.10*	-.08	full
WFE dev→Res→F/S	-.02	-.01	-.03	none
WFE affect→Res→F/S	-.06	.01	-.05	none
WFE capital→Res→F/S	-.07	.06*	-.01	full
FWE dev→Res→F/S	-.03	.04*	.01	full
FWE affect→Res→F/S	.29*	.02	.31	none
FWE eff→Res→F/S	-.01	.04*	.03	full

Note: * $p < .05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour, dev = development; eff = efficiency; Res = resilience and F/S = family satisfaction.

The next analyses involved testing the resilience mediation effects between the work and family predictors and anxiety/depression. The results are presented in Table 8.17.

Table 8.17.

Model A: Mediation effects of Resilience, between Work and Family predictors and Anxiety/depression at Time 1.

Predictor→Mediator→A/D	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→Res→A/D	.04	.04*	.08	full
WFC strain→Res→A/D	.30*	.05*	.35	partial
WFC beh→Res→A/D	.07	.07*	.14	full
FWC time→Res→A/D	.07	.03	.11	none
FWC strain→Res→A/D	.08	.06*	.14	full
FWC beh→Res→A/D	.03	.11*	.14	full
WFE dev→Res→A/D	.01	.01	.02	none
WFE affect→Res→A/D	-.03	-.02	-.05	none
WFE capital→Res→A/D	-.09*	-.07*	-.16	partial
FWE dev→Res→A/D	-.08*	-.04	-.12	none
FWE affect→Res→A/D	-.04	-.02	-.06	none
FWE eff→Res→A/D	.02	-.05	-.03	full

Note: * $p < .05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour, dev = development; eff = efficiency; Res = resilience; and A/D = anxiety/depression.

The results showed that full mediation was achieved with the relationship between WFC (time and behaviour), FWC (strain and behaviour), and anxiety/depression. Also resilience partially mediated between WFC (strain), WFE (capital) and anxiety/depression, supporting hypotheses 51a, 51b, 56b, 56c, 61c, 66a, and 66c.

Table 8.18 shows the next resilience mediation analyses between work and family predictors and social dysfunction.

Table 8.18.

Model B: Mediation effects of Resilience, between Work and Family predictors and Social Dysfunction at Time 1.

Predictor→Mediator→S/D	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→Res→S/D	.08	.03*	.11	full
WFC strain→Res→S/D	.23*	.04*	.27	partial
WFC beh→Res→S/D	.16*	.04	.20	none
FWC time→Res→S/D	.12*	.02	.12	none
FWC strain→Res→S/D	.05	.04*	.09	full
FWC beh→Res→S/D	-.03	.08*	.05	full
WFE dev→Res→S/D	-.03	.01	-.02	none
WFE affect→Res→S/D	-.04	-.01	-.05	none
WFE capital→Res→S/D	-.11*	-.04*	-.15	partial
FWE dev→Res→S/D	-.04	-.03*	-.07	full
FWE affect→Res→S/D	-.06	-.02	-.08	none
FWE eff→Res→S/D	-.06	-.03*	-.09	full

Note: * $p < .05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour, dev = development; eff = efficiency; Res = resilience, and S/D = social dysfunction

Of the twelve mediation routes tested with social dysfunction seven were significant. Resilience fully mediated the relationship between WFC (time), FWC (strain and behaviour), FWE (development and efficiency) and social dysfunction. In addition, resilience partially mediated between WFC (strain), WFE (capital) and social dysfunction, thus supporting hypotheses 52a, 52b, 57b, 57c, 62c, 67a, and 67c.

The final resilience mediation analyses for Time 1 were between the work and family predictors and work-life balance.

Table 8. 19.

Model A: Mediation effects of Resilience, between Work and Family predictors and Work-life Balance at Time 1.

Predictor→Mediator→WLB	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→Res→WLB	-.59*	-.02*	-.61	partial
WFC strain→Res→WLB	-.10*	-.02*	-.12	partial
WFC beh→Res→WLB	-.03	-.03	-.06	none
FWC time→Res→WLB	-.12*	-.01	-.13	none
FWC strain→Res→WLB	.01	-.03*	-.02	full
FWC beh→Res→WLB	-.06	-.05*	-.11	full
WFE dev→Res→WLB	.03	-.01	.02	none
WFE affect→Res→WLB	.08*	.01	.09	none
WFE capital→Res→WLB	-.03	.03*	.00	full
FWE dev→Res→WLB	-.02	.02*	.00	full
FWE affect→Res→WLB	.03	.01	.04	none
FWE eff→Res→WLB	.03	.02*	.05	full

Note: * $p < .05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour, dev = development; eff = efficiency; and WLB = work-life balance.

Overall, seven mediation routes were significant; out of a possible twelve (see Table 8.19). Resilience fully mediated the relationship between FWC (strain and behaviour), WFE (capital), FWE (development and efficiency) and work-life balance. Also, resilience partially mediated between WFC (time and strain) and work-life balance supporting hypotheses 53a, 53b, 58b, 58c, 63c, 68a, and 68c.

Model B: Work-Life Balance as a Mediator

The main purpose of these analyses was to determine the mediation effects of work-life balance between the work and family predictors (work→family conflict, family→work conflict; work→family enrichment, and family→work enrichment) and the wellbeing variables (job and family satisfaction, anxiety/depression and social dysfunction). Model B is provided in figure 8.6.

Predictors

Wellbeing

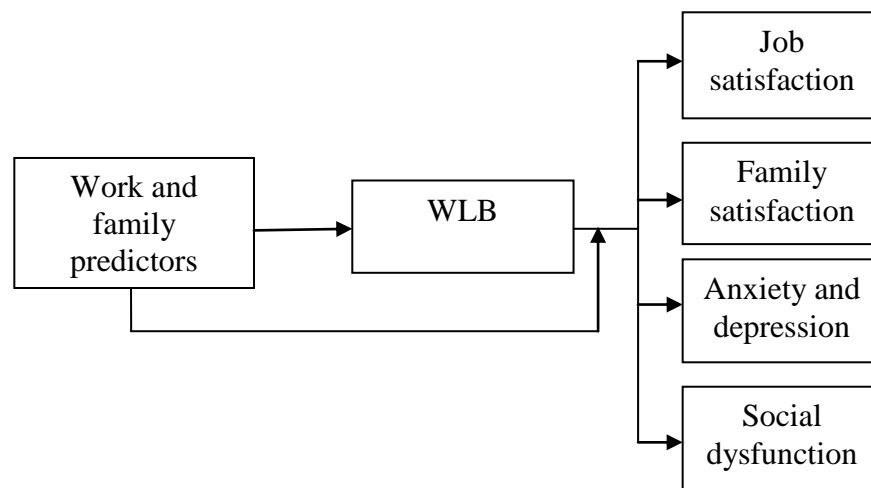


Figure 8.6. Model B: Work-life balance mediation model

Note: work and family predictors include work→family conflict, family→work conflict (time, strain and behaviour); work→family enrichment, and family→work enrichment (development, affect, and capital/efficiency). The variables are combined in this figure for illustration purposes only.

Model B yielded the following fit indices χ^2/df (2.17) which is below the recommended level of < 3 (Hair et al. 2010). Examining other fit indices, the CFI (.98) and the RMSEA (.03) are within the fit index guidelines of >.95 and <.05 respectively. Also, the SRMR with a value of .03 provides further evidence of a good fitting model to the data. The standardised parameter estimates for Model B direct relationships at Time 1 are provided in Table 8.20.

In viewing Table 8.20 the following direct relationships were significant:

- WFC (strain)→job satisfaction.
- WFC (strain and behaviour) → anxiety/depression and social dysfunction
- FWC (time)→social dysfunction.
- FWC (strain)→family satisfaction, anxiety/depression and social dysfunction
- FWC (behaviour)→anxiety/depression and social dysfunction.
- WFE (affect)→job satisfaction
- WFE (capital)→job satisfaction, anxiety/depression and social dysfunction

- FWE (affect)→family satisfaction

In addition, at Time 1, (see Table 8.20) WFC (time and strain), FWC (time) and WFE (affect) were significant with work-life balance and in turn WLB was significantly related with all of the wellbeing variables at Time 1.

Table 8.20.

Standardised Estimates for Model B at Time 1.

Predictor	J/S	F/S	A/D	S/D	WLB
WFC time	-.05	-.07	.12	-.03	-.57*
WFC strain	-.13*	-.06	.35*	.27*	-.12*
WFC beh	.03	-.08	.23*	.30*	.01
FWC time	-.07	.04	-.02	.09*	-.10*
FWC strain	-.04	-.20*	.15*	.10*	-.02
FWC beh	-.05	-.10	.31*	.30*	.04
WFE dev	.03	-.03	.02	-.03	.02
WFE affect	.20*	.07	-.02	-.03	.10*
WFE cap	.27*	-.01	-.16*	-.15*	-.01
FWE dev	-.06	-.01	.04	.05	-.01
FWE affect	-.03	.30*	-.05	-.07	.03
FWE eff	.01	.03	-.03	-.16*	.05
WLB	.19*	.20*	-.18*	-.11*	----

Note: N = 1598. * $p < 0.05$.

WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour; dev = development; cap = capital; eff = efficiency; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety and depression; S/D = social dysfunction; and WLB = work-life balance.

The next analysis investigated the direct, indirect, and total effects of work-life balance between the predictors (work and family) and the wellbeing variables (job and family satisfaction, social dysfunction, anxiety and depression) to determine the type of mediation. The direct, indirect and total effects statistics are presented in Table 8.21 and present the mediation effects with job satisfaction at Time 1.

Twelve mediation paths were tested with job satisfaction and only four mediation paths were significant. The results found that work-life balance fully mediated the relationship between WFC (time), and FWC (time) and family satisfaction. In addition, work-life balance partially mediated the relationship

between WFC (strain), WFE (affect) and job satisfaction supporting hypotheses

69a, 69b, 73a, and 77b.

Table 8.21.

Model B: Mediation effects of Work-life Balance between Work and Family predictors and Job Satisfaction at Time 1.

Predictor→Mediator→J/S	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→WLB→J/S	-.05	-.11*	-.16	full
WFC strain→WLB→J/S	-.13*	-.02*	-.15	partial
WFC beh→WLB→J/S	.03	.00	.03	none
FWC time→WLB→J/S	-.07	-.02*	-.09	full
FWC strain→WLB→J/S	-.04	.00	-.04	none
FWC beh→WLB→J/S	-.05	.01	-.04	none
WFE dev→WLB→J/S	.03	.00	.03	none
WFE affect→WLB→J/S	.20*	.02*	.22	partial
WFE capital→WLB→J/S	.27*	.00	.27	none
FWE dev→WLB→J/S	-.06	-.01	-.07	none
FWE affect→WLB→J/S	-.03	.01	-.02	none
FWE eff→WLB→J/S	.01	.01	.02	none

Note: * $p < .05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour, dev = development; eff = efficiency; and J/S = job satisfaction.

The next analyses involved testing the work-life balance mediation effects between the predictors and family satisfaction. The results are presented in Table 8.22. The results illustrated that work-life balance fully mediated the relationship between WFC (time and strain), FWC (time) and WFE (affect) with family satisfaction, supporting hypotheses 70a, 70b, 74a, and 78b at Time 1.

Table 8.23 shows the mediation effects of work-life balance between the work and family predictors and anxiety/depression.

Table 8.22.

Model B: Mediation effects of Work-life Balance, between Work and Family predictors and Family Satisfaction at Time 1.

Predictor→Mediator→F/S	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→WLB→F/S	-.07	-.11*	-.18	full
WFC strain→WLB→F/S	-.06	-.02*	-.08	full
WFC beh→WLB→F/S	-.08	.00	-.08	none
FWC time→WLB→F/S	.04	-.02*	.02	full
FWC strain→WLB→F/S	-.20*	.00	-.20	none
FWC beh→WLB→F/S	-.10	.01	-.09	none
WFE dev→WLB→F/S	-.03	.00	-.03	none
WFE affect→WLB→F/S	.07	.02*	.09	full
WFE capital→WLB→F/S	-.01	.00	-.01	none
FWE dev→WLB→F/S	-.01	.00	-.01	none
FWE affect→WLB→F/S	.30*	.01	.31	none
FWE eff→WLB→F/S	.03	.01	.04	none

Note: * $p < .05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour, dev = development; eff = efficiency; WLB = work-life balance; and F/S = family satisfaction.

Table 8.23.

Model B: Mediation effects of Work-life Balance, between Work and Family predictors and Anxiety/depression at Time 1.

Predictor→Mediator→A/D	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→WLB→A/D	.12	.10*	.22	full
WFC strain→WLB→A/D	.35*	.02*	.37	partial
WFC beh→WLB→A/D	.23*	.00	.23	none
FWC time→WLB→A/D	-.02	.02*	.00	full
FWC strain→WLB→A/D	.15*	.00	.15	none
FWC beh→WLB→A/D	.31*	-.01	.30	none
WFE dev→WLB→A/D	.02	.00	.02	none
WFE affect→WLB→A/D	-.02	-.02*	-.04	full
WFE capital→WLB→A/D	-.16*	.00	-.16	none
FWE dev→WLB→A/D	.04	.00	.04	none
FWE affect→WLB→A/D	-.05	-.01	-.06	none
FWE eff→WLB→A/D	-.03	-.01	-.04	none

Note: * $p < .05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour, dev = development; eff = efficiency; WLB = work-life balance; and A/D = anxiety/depression.

The results for the mediation effects of work-life balance between the work and family predictors and anxiety/depression showed (see Table 8.23) that work-life balance fully mediated the relationships between WFC (time), WFE (affect) and anxiety/depression. Partial mediation support were found between WFC (strain), FWC (time), and anxiety/depression confirming hypotheses 71a, 71b, 75a, and 79b.

The final mediation analyses for work-life balance at Time 1 are the mediation effects between the work and family predictors and social dysfunction.

Table 8.24.

Model B: Mediation effects of Work-life Balance, between Work and Family predictors and Social Dysfunction at Time 1.

Predictor→Mediator→S/D	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→WLB→S/D	-.03	.06*	.03	full
WFC strain→WLB→S/D	.27*	.02*	.29	partial
WFC beh.→WLB→S/D	.30*	.00	.30	none
FWC time →WLB→S/D	.09*	.02*	.11	partial
FWC strain→WLB→S/D	.10*	.00	.10	none
FWC beh.→WLB→S/D	.30*	.00	.30	none
WFE dev. →WLB→S/D	-.03	.00	-.03	none
WFE affect→WLB→S/D	-.03	-.02*	-.05	full
WFE cap→WLB→S/D	-.15*	.00	-.15	none
FWE dev. →WLB→S/D	.05	.00	.05	none
FWE affect→WLB→S/D	-.07	.00	-.07	none
FWE eff.→WLB→S/D	-.16*	-.01	-.17	none

Note: * $p < .05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour, dev = development; cap = capital; eff = efficiency; WLB = work-life balance; and S/D = social dysfunction

The results are provided in Table 8.24 and show that four hypotheses were supported out of a possible twelve. Work-life balance fully mediated the relationships between WFC (time), WFE (affect) and anxiety/depression. In addition, partial support were found between WFC (strain), FWC (time), and anxiety/depression confirming hypotheses 72a, 72b, 76a, and 80b.

Summary

In conclusion, this section has examined the correlations and found significant results for all correlation hypotheses. More importantly, this study has investigated the extent to which resilience and work-life balance mediated the relationship between the work and family predictors and the wellbeing variables. In sum, at Time 1 sixty (60) mediation paths were tested for resilience and thirty five (35) were significant, while, work-life balance forty eight (48) mediation paths were tested and twenty (20) were significant.

Consistent mediation support was found for both mediators WFC (time and strain) with all of the wellbeing variables. In addition resilience appeared to have a tendency toward family→work direction and included the enrichment variables in comparison to work-life balance mediations. Work-life balance differed with resilience in mediating between FWC (time), and WFE (affect) with all the wellbeing variables. Interestingly, resilience mediated the relationships between FWC (strain and behaviour) WFE (capital) FWE (development and efficiency), work-life balance and all four wellbeing variables. Further discussions of these results will be presented in Chapter 11.

CHAPTER 9

TIME 2 RESULTS

Chapter Overview

The aim of this chapter is to examine the cross-sectional relationships at Time 2, between the predictors in the work and family domains (conflict and enrichment) and the wellbeing criterion variables (job and family satisfaction, anxiety/depression, and social dysfunction). As previously mentioned, this study investigated the extent to which work-life balance and resilience mediated the relationship between the predictors and the wellbeing criterion variables. This chapter presents the results of the statistical analyses at Time 2, which are divided into three main sections: (1) confirmatory factor analyses, (2) descriptive analyses, and (3) mediation hypothesis testing.

Confirmatory Factor Analyses (CFA)

Confirmatory factor analyses were performed on all measures used in this study at Time 2 to ensure the validity of all measures. The goodness of fit indices that were used in Time 1 was adopted at Time 2 to assess each variable's validity. Table 9 1 provides the results and shows that work→family conflict (three-factor), family→work conflict (three-factor), work→family enrichment (three-factor) work-life balance, resilience, and psychological health (two-factor anxiety/depression; and social dysfunction) all these measures revealed acceptable fit indices. These measures used for Time 2 were identical to the measures used at Time 1. Thus, these measures were retained for further analyses.

Table 9.1 also shows that family → work enrichment three-factor model (development, affect and efficiency) failed to meet the recommended threshold indices, with RMSEA = .18. However, the CFI (>.95) and the SRMR (<.05) are acceptable goodness-of-fit indices for the family→work enrichment three-factor model (development, affect and efficiency) but the χ^2/df was 9.57 and the RMSEA indice was .18 which is above the recommended fit indices (Byrne 2010; Hu, & Bentler 1995, 1999). However, some researchers (Barrett, 2007; Fan & Sivo 2005; Marsh, Hau, & Wen 2004) argue that no single fit indices should be used to reject a measure. Therefore, with adequate CFI and SRMR the FWE measure was used in this study at Time 2.

Table 9.1.

Confirmatory Factor Analyses for Latent Variables at Time 2.

Model	χ^2	d.f.	χ^2/df	RMSEA	CFI	SRMR
WFC (3-factor)	46.13	24	1.92	.05	.98	.03
FWC (3-factor)	26.85	24	1.12	.02	.99	.02
WFE (3-factor)	60.79	24	2.53	.07	.98	.04
FWE (3-factor)	229.58	24	9.57	.18	.95	.05
WLB	.42	2	.21	.00	1.00	.01
Resilience	21.81	9	2.42	.07	.98	.03
Psyc. health (2-factor)	39.74	19	2.10	.06	.97	.04

Note: WFC = work-family conflict; FWC = family –work conflict. The 3-factor models for both WFC and FWC included time-based conflict as one-factor, strain-based conflict as another factor and behaviour-based conflict as the third-factor. WFE = work→family enrichment; FWE = family→work enrichment. The 3-factor model, work→family enrichment (affect, development and capital) as three separate factors and similarly, the 3-factor family →work enrichment (affect, development and efficiency) as three separate factors. Psyc health = psychological health. The psychological health 2-factor model included, one-factor, social dysfunction and one-factor anxiety and depression. WLB = work-life balance

Job satisfaction

In the CFA, the job satisfaction items failed to converge as in Time 1 therefore I performed a principal component exploratory factor analyses (EFA) in

SPSS version 14. The factor loading criterion level was set at 0.3 and the factor loadings are provided in Table 8.2. Job satisfaction individual items had adequate factor loadings and loaded onto one single factor, accounting for 63.7 percent of the variance. Thus, the job satisfaction measure was used in this study for Time 2.

Table 9.2.
Factor Matrix for Job Satisfaction.

Item	Factor
J/S 1	.54
J/S 2	.91
J/S 3	.89

Note: J/S = job satisfaction.

Family satisfaction:

Similar to job satisfaction, the family satisfaction measure has three items and failed to converge when performed the CFA on this measure at Time 2. An EFA was performed, factor criterion level was set at 0.3 and the factor loadings are provided in Table 8.3. Family satisfaction items had adequate factor loadings and loaded onto a single factor, accounting for 89.7 percent of the variance. Thus, the family satisfaction measure was used in this study for Time 2 analyses.

Table 9.3.
Factor Matrix for Family Satisfaction.

Item	Factor
F/S 1	.87
F/S 2	.91
F/S 3	.90

Note: F/S = family satisfaction.

Further CFA testing

After the psychometric measures were confirmed through the CFA the attention turned to testing the research instruments as combined variables (Garver & Mentzer 1999). As mentioned at Time 1, the purpose of this process is to probe for unidimensionality issues that may arise due to the combining of the latent variables. Garver and Mentzer (1999) argue this is an important step especially with complex models in ensuring the latent variables are unidimensional. Thus, goodness of fit indices were examined (see Table 8.4.) to see if they were within the acceptable ranges, as were the modification indices.

Table 9.4.

The Goodness of Fit Indices for the combined Work and Family, and Wellbeing Variables.

Model	χ^2	d.f.	χ^2/df	RMSEA	CFI	SRMR
Work-family (13-factor)	1077.79	662	1.63	.05	.96	.04
Wellbeing (4-factor)	95.84	71	1.35	.04	.99	.04

Note: The 13-factor model included work→family conflict (time, strain and behaviour), family→work conflict (time, strain behaviour); work→family enrichment (development, affect, capital) and family→work enrichment (development, affect, and efficiency) and work-life balance. The wellbeing 4-factor model included job satisfaction, family satisfaction, anxiety/depression and social dysfunction.

The standardised factor loadings were also reviewed to verify there were no significant changes in values from the prior testing of the individual measures.

Firstly, the combined work and family 13 factor model (work→family and family→work time, strain, and behaviour based conflicts) and work → family enrichment, (development, capital and affect), family → work enrichment, (development, affect and efficiency) and work-life balance were tested and the goodness of fit indices is presented in Table 9.4. The results show that the χ^2/df is below the acceptable level of <3.0, RMSEA (0.05), and SRMR (0.04) are well

within the acceptable indices of 0.05 and 0.1 respectively. Combined, the entire model provides acceptable goodness of fit indices, confirming these 13 dimensions are distinct.

The final analyses combined the well-being variables (job satisfaction, family satisfaction, social dysfunction, anxiety and depression) were analysed and the goodness of fit indices are also presented in Table 9.4. The results show acceptable fit indices for these combined variables with indices, RMSEA = 0.04, CFI = 0.98 and SRMR = 0.03. As previously mentioned the output files generated from both these analyses were reviewed to ensure no cross loadings were evident. The testing of the structural model is provided later in this chapter.

Descriptive Statistics

The next analyses were to calculate the descriptive statistics of all latent variables used at Time 2. Descriptive statistics for all variables, including means, standard deviations, skew, kurtosis, and Cronbach's alphas are presented in Table 9.5. In relation to the work-family variables, participants reported low to moderate levels of work→family conflict. Mean scores were time (M = 2.83), strain, (M= 2.92), and behaviour (M = 2.48) and family→work conflict (time 2.18; strain, 1.88; and behaviour, 2.48). Participants indicated moderate-high mean scores for work→family enrichment (development M = 3.52, affect M = 3.02, and capital M = 3.55) and family→work enrichment (development M = 3.60, affect M= 3.74 and efficiency at M = 3.47). On average, respondents had perceptions of moderate to high scores on work-life balance (M = 3.53) and a high score mean score for resilience (M = 5.88).

Participants indicated moderate-high job satisfaction ($M = 3.92$) on a scale ranging, 1-5, and high family satisfaction ($M = 5.90$) on a scale ranging 1-7. Participants also reported low mean scores for anxiety and depression (0.66) and social dysfunction (1.05).

Table 9.5.
Descriptive Statistics at Time 2.

Latent Variable	Mean	SD	Cronbach Alpha	Skewness	Kurtosis
WFC time, (a)	2.83	0.99	.84	-.06	-.79
WFC strain (a)	2.92	1.01	.90	-.03	-.70
WFC beh (a)	2.46	0.83	.82	-.10	-.67
FWC time, (a)	2.18	0.81	.73	.47	-.25
FWC strain (a)	1.88	0.81	.90	.89	.56
FWC beh (a)	2.48	0.82	.87	-.14	-.32
WFE dev (a)	3.52	0.76	.89	-.37	.73
WFE affect (a)	3.02	0.83	.95	-.28	.51
WFE capital (a)	3.55	0.84	.92	-.72	.57
FWE dev (a)	3.60	0.66	.97	-.23	.19
FWE affect (a)	3.74	0.72	.96	.01	-.42
FWE eff (a)	3.47	0.70	.96	.11	-.04
J/S (a)	3.92	0.82	.70	-.61	-.06
F/S (b)	5.90	0.99	.94	-.94	2.11
A/D (c)	0.66	0.53	.78	.91	.72
S/D (c)	1.04	0.32	.66	-.01	2.38
Resilience (b)	5.88	0.77	.84	-.86	1.40
WLB (d)	3.53	1.24	.86	-.22	-.55

Note: N = 296. WFC = work→family conflict; FWC = family→work conflict; beh = behaviour; dev = development; eff = efficiency; WLB = work-life balance; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety and depression; S/D = social dysfunction. (a) 1 = strongly disagree, 5 = strongly agree; (b) 1 = strongly disagree, 7 = strongly agree; (c) 0-3 = higher the score the greater anxiety/depression and social dysfunction; (d) 0 = disagree completely, 6 = agree completely.

Cronbach's alpha was used to measure the internal consistency of responses at Time 2. Majority of the variables were over the recommended minimal internal consistency threshold of .70 with the exception of social dysfunction at .66. The output file for the Cronbach alpha was analysed for this

variable and found that this measure would not have benefited by removing any particular item. If item 1 deleted Cronbach alpha would change to .65; item 2 .63, item 3 =.59, item 4 = .48. Therefore, this measure was retained as guided by Hair et al (2010) who argued that values .60 – .70 meet the bare minimum of acceptability. However, the majority of the variables were above the optimum value of .80 (Pallant, 2007). Thus, for this study all scale scores were relatively reliable. Moreover, as in Time 1, normality of the data was assessed by using the Kolmogorov-Smirnov test for skewness and kurtosis. The skewness and kurtosis values at Time 2 are presented in Table 8.5. Kline (2005) provides guidance on the skewness and kurtosis acceptable thresholds, <3.0 for skewness and <10.0 for kurtosis. Thus, in viewing Table 9.5 all measures have acceptable statistics.

Correlations

Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity (see Chapter 6 Method). The correlations between the variables were investigated using the Pearson product-moment correlation coefficient and the analysis was undertaken in SPSS 14.0. As in Time 1, any reference made to the strength of the correlations are based on the recommendations of Cohen (1988, p. 79-81), small $r = .10$ to $.29$; medium $r = .30$ to $.49$; and large $r = .50$ to 1.0 . The correlations among all variables are presented in Table 9.6.

Correlates of Work-Family Conflict

WFC (time) was negatively correlated with job satisfaction, ($r = -.19$), family satisfaction ($r = -.19$), resilience ($r = -.10$), work-life balance ($r = -.58$), and positively related with anxiety/depression ($r = .27$) and social dysfunction ($r = .14$).

Table 9.6.
Correlations between all variables used in this study at Time 2.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. WFC time																	
2. FWC time	.36*																
3. WFC strain	.47*	.26*															
4. FWC strain	.24*	.52*	.29*														
5. WFC beh.	.35*	.35*	.40*	.42*													
6. FWC beh.	.32*	.39*	.43*	.40*	.73*												
7. WFE dev.	-.05	-.02	-.16*	-.04	-.19*	-.18*											
8. FWE dev	-.07	.02	-.10*	-.04	-.18*	-.18*	.52*										
9. WFE affect	-.14*	-.04	-.35*	-.08	-.13*	-.21*	.52*	.17*									
10. FWE affect	-.11*	-.10*	-.15*	-.22*	-.17*	-.18*	.39*	.67*	.23*								
11. WFE cap	-.16*	-.01	-.28*	-.12*	-.13*	-.17*	.57*	.18*	.52*	.18*							
12. FWE eff	-.14*	.04	-.15*	-.10*	-.12*	-.12*	.42*	.60*	.13*	.51*	.44*						
13. J/S	-.19*	-.15*	-.37*	-.10*	-.14*	-.20*	.29*	.05	.31*	.06	.34*	.08					
14. F/S	-.19*	-.10*	-.14*	-.29*	-.24*	-.21*	.21*	.01	.14*	.09	.14*	.04	.13*				
15. S/D	.14*	.08	.23*	.08	.18*	.09	-.16*	-.17*	-.15*	-.06	-.15	-.13*	-.10*	-.12*			
16. A/D	.27*	.10*	.40*	.17*	.31*	.24*	-.14*	-.09	-.17*	-.03	-.15*	-.04	-.20*	-.28*	.57*		
17. WLB	-.58*	-.18*	-.50*	-.14*	-.28*	-.24*	.13*	.01	.20*	.07	.14*	.17*	.29*	.25*	-.26*	-.26*	
18. Resilience	-.10*	-.14*	-.19*	-.23*	-.28*	-.21*	.15*	.13*	.12*	.21*	.22*	.14*	.15*	.25*	-.30*	-.36*	.15*

Note: N = 296; *p < .05.

WFC = Work→family conflict; FWC = Family→work conflict; beh. = behaviour; devt = development; eff = efficiency; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety and depression; S/D = social dysfunction WLB = work-life balance;

It was also found that WFC (strain) was negatively correlated with job satisfaction ($r = -.37$), family satisfaction ($r = -.14$), resilience ($r = -.19$), work-life balance ($r = -.50$) and positively related with anxiety/depression ($r = .40$) and social dysfunction ($r = .23$). Also, WFC (behaviour) was negatively correlated with job satisfaction ($r = -.14$), family satisfaction ($r = -.24$), resilience ($r = -.28$), work-life balance ($r = -.28$), and positively related with anxiety/depression ($r = .31$), and social dysfunction ($r = .18$). Therefore, these results confirm hypotheses H1-H6.

Turning the attention to the hypotheses correlation results with family→work conflict, FWC (time) was negatively correlated with job satisfaction, ($r = -.15$), family satisfaction ($r = -.10$), resilience ($r = -.14$), work-life balance ($r = -.18$), and positively related with anxiety/depression ($r = .10$), but was not significantly related with social dysfunction ($r = .08$). It was also found that, FWC (strain) was negatively correlated with job satisfaction ($r = -.10$), family satisfaction ($r = -.29$), resilience ($r = -.23$), work-life balance ($r = -.14$) and positively related with anxiety/depression ($r = .17$) but not significant with social dysfunction ($r = -.01$). In addition, FWC (behaviour) was negatively correlated with job satisfaction ($r = -.20$), family satisfaction ($r = -.21$), resilience ($r = -.21$), work-life balance ($r = -.24$) and positively related with anxiety/depression ($r = .24$), but not significant with social dysfunction ($r = .09$). In sum, these results confirmed significance with H7-H9. In addition, support was found for H11 and H12 at Time 2.

Correlates of Work-Family Enrichment

As predicted WFE (development) was positively correlated with job satisfaction, ($r = .29$), family satisfaction ($r = .21$), resilience ($r = .15$), work-life balance ($r = .13$), and negatively related with anxiety/depression ($r = -.14$) and social dysfunction ($r = -.16$). It was also found that, WFE (affect) was positively correlated with job satisfaction ($r = .31$), family satisfaction ($r = .14$), resilience ($r = .12$), work-life balance ($r = .20$) and negatively related with anxiety/depression ($r = -.17$), and social dysfunction ($r = -.15$). Also, WFE (capital) was positively correlated with job satisfaction ($r = .34$), family satisfaction ($r = .14$), resilience ($r = .22$), work-life balance ($r = .14$) and negatively related with anxiety/depression ($r = -.15$) and social dysfunction ($r = -.15$). Therefore, these results confirmed hypotheses H13-18 at Time 2.

Turning the attention to the correlation results with family→ work enrichment: FWE (development) was significantly positively correlated with resilience ($r = .13$) but not job satisfaction, ($r = .05$), family satisfaction ($r = .01$), and work-life balance ($r = .01$). Also, FWE (development) was significant with social dysfunction ($r = -.17$) but not with work-life balance ($r = .01$) and anxiety/depression ($r = -.09$). FWE (affect) was positively correlated with resilience ($r = .21$) but not job satisfaction ($r = .06$), family satisfaction ($r = .09$), work-life balance ($r = .07$), anxiety/depression ($r = -.03$) and social dysfunction ($r = -.06$). Also, FWE (efficiency) was significantly correlated with social dysfunction ($r = -.13$), resilience ($r = .14$) and work-life balance ($r = .17$) but not job satisfaction ($r = .08$), family satisfaction ($r = .04$), and anxiety/depression ($r = -.04$). Therefore hypotheses H22a, H22c, H23, and H24c were supported at Time 2.

The correlation hypotheses for Time 2 showed mixed results in comparison to Time 1. For ease of reading Table 9.7 shows the significant correlations at Time 2 work and family predictors with wellbeing variables, including resilience and work-life balance.

Table 9.7.

Summary of Significant Correlation Hypotheses at Time 2.

Predictor	J/S	F/S	A/D	S/D	Res	WLB
WFC time	√	√	√	√	√	√
WFC strain	√	√	√	√	√	√
WFC behaviour	√	√	√	√	√	√
FWC time	√	√	√		√	√
FWC strain	√	√	√		√	√
FWC behaviour	√	√	√		√	√
WFE development	√	√	√	√	√	√
WFE affect	√	√	√	√	√	√
WFE capital	√	√	√	√	√	√
FWE development				√	√	
FWE affect					√	
FWE efficiency				√	√	√
Resilience	√	√	√	√	---	√
WLB	√	√	√	√	√	---

Note: N = 296. WFC = work→ family conflict; FWC = family→work conflict, WFE = work→family enrichment; FWE = family→work enrichment; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety/depression; S/D = social dysfunction; Res = resilience, WLB = work-life balance and √ (tick) indicates a significant relationship between the two variables.

MEDIATION RELATIONSHIPS

The mediation analyses at Time 2 followed the same process as Time 1. The mediations were divided into two models, as explained previously. Two mediation models were examined model resilience and model B work-life balance. In order to test the cross-sectional effects of both models, I report the direct, indirect and total effects for each of the hypotheses.

Model A: Resilience as a Mediator

The main purpose of this analyses was to determine the direct, indirect and total mediation effects of resilience with work and family predictors (work→family conflict, family→work conflict; work→family enrichment, and family→work enrichment) and the wellbeing variables (job and family satisfaction, anxiety/depression and social dysfunction) and work-life balance as the criterion variables at Time 2. Model A yielded the following fit indices χ^2/df (1.42) is below the recommended level of < 3 (Hair et al. 2010). Examining other fit indices, the CFI (.95) and the RMSEA (.04) are within the fit indices guidelines of .95 and .05 respectively. Also, the SRMR with a value of .06 provides further evidence of a good fitting model to the data. Thus, the standardised parameter estimates for Model A at Time 2 are provided in Table 9.8.

Table 9.8.
Standardised Estimates for Model A at Time 2.

Predictor	J/S	F/S	A/D.	S/D	WLB	Res
WFC time	-.12	-.19*	.18*	.07	-.51*	-.17*
WFC strain	-.32*	-.14*	.28*	.10	-.28*	-.13
WFC beh.	-.09	-.02	.03	.07	-.07	-.19*
FWC time	-.05	-.25*	.29*	.09	-.04	-.09
FWC strain	.01	-.25*	.11	.06	.05	-.07
FWC beh.	-.11	-.08	.06	.06	-.12	.05
WFE dev.	.26*	.22*	-.07	-.01	.07	.11
WFE affect	-.04	-.07	-.06	-.06	.06	.01
WFE cap	.21*	.09	-.04	-.04	.02	.08
FWE dev.	.09	.08	-.02	-.02	.05	.04
FWE affect	-.01	.21*	-.11	.04	.10	.10
FWE eff.	.17	-.05	-.11	-.07	-.01	.04
Resilience	.08	.21*	-.37*	-.35*	.22*	----

Note: N = 296. * p < 0.05. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour; dev = development; cap = capital; eff = efficiency; J/S = job satisfaction; F/S. = family satisfaction; A/D = anxiety and depression and S/D = social dysfunction; WLB = work-life balance; Res = resilience.

In viewing Table 9.8 the following direct relationships were significant for Model A:

- WFC (strain)→job satisfaction

- WFC (time and strain)→family satisfaction and anxiety/depression
- FWC (time and strain)→family satisfaction
- FWC (time)→anxiety/depression.
- WFE (development and capital)→job satisfaction
- WFE (development)→family satisfaction
- FWE(affect)→family satisfaction

In addition, (see Table 9.8) WFC time and behaviour were significant with resilience and in turn resilience was significant with family satisfaction, ($\beta = .21$) anxiety/depression ($\beta = -.37$), social dysfunction ($\beta = -.35$) and work-life balance ($\beta = .22$), but not job satisfaction ($\beta = .08$). According to Mathieu and Taylor (2006) a condition of mediation is that the mediator needs to be significant with the criterion variable. Therefore with the relationship between resilience and job satisfaction not being significant no further analyses was required with this wellbeing variable. The results of the direct, indirect, and total mediation effects for resilience with family satisfaction are presented in Table 9.9.

Table 9.9.

Model A: Mediation effects of Resilience, between Work and Family predictors and Family Satisfaction at Time 2.

Predictor→Mediator→F/S	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→Resilience→F/S	-.19*	-.04*	-.23	Partial
WFC strain→Resilience→F/S	-.14*	-.03	-.17	None
WFC beh.→Resilience→F/S	-.02	-.04*	-.06	Full
FWC time →Resilience→F/S	-.25*	-.02	-.27	None
FWC strain→Resilience→F/S	-.25*	-.02	-.27	None
FWC beh.→Resilience→F/S	-.08	.01	-.01	None
WFE dev. →Resilience→F/S	.22*	-.02	.20	None
WFE affect →Resilience→F/S	-.07	.00	-.07	None
WFE capital→Resilience→F/S	.09	.02	.11	None
FWE dev. →Resilience→F/S	.08	.01	.09	None
FWE affect→Resilience→F/S	.21*	.02	.23	None
FWE eff.→Resilience→F/S	-.05	.01	-.04	None

Note: * $p < 0.05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment. beh = behaviour; dev = development; eff = efficiency; F/S = family satisfaction.

The results show that resilience mediated the relationship between work→family conflict (behaviour), and family satisfaction. In addition, resilience partially mediated the relationship between work→family conflict (time) and family satisfaction. Therefore hypotheses H50a and H50c were supported at Time 2.

The next analyses tested the resilience direct, indirect and total effects predictors to anxiety and depression. Again, the results show that resilience mediated the relationship between work → family conflict (behaviour), and anxiety/depression. In addition, resilience partially mediated the relationship between work→family conflict (time) and anxiety/depression. The results are presented in Table 9.10 and show that hypotheses H51a and H51c were supported at Time 2.

Table 9.10.

Model A: Mediation effects of Resilience, between the Work and Family predictors and Anxiety/depression at Time 2.

Predictor→Mediator→A/D	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→Resilience→ A/D	.18*	.06*	.24	Partial
WFC strain→Resilience→ A/D	.28*	.05	.33	None
WFC beh.→Resilience→ A/D	.03	.07*	.10	Full
FWC time →Resilience→ A/D	.29*	.03	-.26	None
FWC strain→Resilience→ A/D	.11	.03	.14	None
FWC beh.→Resilience→ A/D	.06	.02	.08	None
WFE dev. →Resilience→ A/D	-.07	.04	-.03	None
WFE affect →Resilience→ A/D	-.06	.00	-.06	None
WFE capital→Resilience→ A/D	-.04	-.06	-.10	None
FWE dev. →Resilience→ A/D	-.02	-.02	-.04	None
FWE affect→Resilience→ A/D	-.11	-.04	-.15	None
FWE eff.→Resilience→ A/D	-.11	-.02	-.13	None

Note: * $p < 0.05$.

WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment. beh = behaviour, dev. = development; eff. = efficiency; A/D = anxiety and depression.

The next analysis tested the direct, indirect, and total mediation effects of resilience between the work→family variables and social dysfunction. The significant results indicated that of the 12 mediated routes examined that resilience fully mediated the relationship between work→family conflict (time and behaviour), and social dysfunction. The results are provided in Table 9.11 and show that two mediations were significant out of the possible twelve, thus supporting hypotheses H52a and H52c at Time 2.

Table 9.11.

Model A: Mediation effects of Resilience, between the Work and Family predictors and Social Dysfunction at Time 2.

Predictor→Mediator→S/D	Direct effect	Indirect effect	Total effect	Degree of mediation
WFC time→Resilience→S/D	.07	.06*	.13	Full
WFC strain→ Resilience→S/D	.10	.05	.15	None
WFC beh.→ Resilience→S/D	.07	.07*	.14	Full
FWC time → Resilience→S/D	.09	.03	.11	None
FWC strain→ Resilience→S/D	.06	.03	.09	None
FWC beh.→ Resilience→S/D	.06	-.02	.04	None
WFE dev. → Resilience→ S/D	-.01	.04	.03	None
WFE affect →Resilience→ S/D	-.06	.00	-.06	None
WFE capital→ Resilience→ S/D	-.04	-.03	-.07	None
FWE dev. → Resilience→ S/D	-.02	-.01	-.03	None
FWE affect→ Resilience→ S/D	.04	-.04	.00	None
FWE eff.→ Resilience →S/D	-.07	-.01	-.08	None

Note: * $p < 0.05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment. S/D = social dysfunction; beh = behaviour, dev. = development; and eff. = efficiency.

The final analysis for Model A at Time 2 tested the resilience mediation between the work→family variables and work-life balance. The significant results indicated that, of the 12 mediated routes examined, resilience partially mediated the relationship between work→family conflict (time), and fully mediated the relationship between work→family conflict (behaviour) and work-life balance. The results are provided in Table 9.12. Again only two out of the

possible twelve mediations were significant supporting hypotheses H53a and H53c at Time 2.

Table 9.12.

Model A: Mediation effects of Resilience, between the Work and Family predictors and Work-life Balance at Time 2.

Predictor→Mediator→ WLB	Direct effect	Indirect Effect	Total effect	Type of mediation
WFC time→Resilience→ WLB	-.51*	-.04*	-.56	Partial
WFC strain→ Resilience→ WLB	-.28*	-.03	-.31	None
WFC beh.→ Resilience→ WLB	-.07	-.04*	-.11	Full
FWC time → Resilience→ WLB	-.04	-.02	-.06	None
FWC strain→ Resilience→ WLB	.05	-.02	.03	None
FWC beh.→ Resilience→ WLB	-.12	.01	-.11	None
WFE dev. → Resilience→ WLB.	.07	-.02	.02	None
WFE affect →Resilience→ WLB	.06	.00	.06	None
WFE capital→ Resilience→ WLB	.02	.02	.04	None
FWE dev. → Resilience→ WLB	.05	.01	.07	None
FWE affect→ Resilience→ WLB	.10	.02	.12	None
FWE eff.→ Resilience→WLB	-.01	.01	.00	None

Note: * p < 0.05. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment. WLB = work-life balance; beh = behaviour, dev. = development; and eff. = efficiency.

In sum, the mediation test for resilience (Model A) at Time 2 indicated that resilience was a significant mediator with two predictors' WFC (time and behaviour) with three (3) of the wellbeing variables and work-life balance.

Model B: Work-life Balance as a Mediator

The main purpose of these analyses was to determine the mediation effects of work-life balance between the work and family predictors (work→family conflict, family→work conflict; work→family enrichment, and family→work enrichment) and the wellbeing variables (job and family satisfaction, anxiety/depression and social dysfunction). Model B yielded the following fit indices χ^2/df (1.42) is below the recommended level of < 3 (Hair et

al. 2010). Examining other fit indices, the CFI (.96) and the RMSEA (.04) are within the fit index guidelines of >.95 and <.05 respectively. Also, the SRMR with a value of .04 provides further evidence of a good fitting model to the data. The standardised parameter estimates for Model B direct relationships at Time 2 are provided in Table 9.13.

Table 9.13.
Standardised Estimates for Model B at Time 2.

Predictor	J/S	F/S	A/D	S/D	WLB
WFC time	-.08	-.01	.09	.13	-.50*
WFC strain	-.33*	-.11	.33*	.18*	-.28*
WFC beh.	-.13	-.13	.11*	.12*	-.10
FWC time	-.05	-.19*	.22*	.09	-.03
FWC strain	-.03	-.25*	.12	.11	.06
FWC beh.	-.05	.08	.13	.11	-.11
WFE dev.	.27*	.17	-.02	.07	.04
WFE affect	-.09	-.06	-.05	-.06	.06
WFE cap.	.23*	-.06	-.08	-.13	.02
FWE dev.	.11	.18*	-.05	-.07	.06
FWE affect	-.01	.18*	.08	.02	.09
FWE eff.	.10	-.02	.12	-.05	-.01
WLB	.06	.24*	-.05	-.20*	----

Note: N = 296. * p < 0.05. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour dev = development; cap = capital; eff = efficiency; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety and depression and S/D = social dysfunction; and WLB =work-life balance.

In viewing Table 9.13 the following direct relationships were significant:

- WFC (strain)→ job satisfaction.
- WFC (behaviour)→social dysfunction
- WFC (strain and behaviour)→anxiety/depression
- WFC (strain)→social dysfunction
- FWC (time, and strain)→family satisfaction.
- FWC (time)→anxiety/depression.
- WFE (development and capital)→job satisfaction.
- FWE (development and affect)→family satisfaction

In addition, at Time 2, (see Table 9.15) WFC (time and strain) were significant with work-life balance and in turn work-life balance was related with family satisfaction, and social dysfunction. The next analysis investigated the direct, indirect, and total effects of work-life balance between the predictors (work-family variables) and the wellbeing variables (job and family satisfaction, social dysfunction, anxiety and depression). However, as previously mentioned a condition of mediation is that the mediator needs to have a significant relationship with the criterion variable (Mathieu & Taylor 2006). Work-life balance was significant only with family satisfaction and social dysfunction. Therefore, the direct, indirect and total effects statistics are produced for these two wellbeing variables to determine the degree of mediation at Time 2. Table 9.14 present the mediation effects (direct, indirect and total effects) with family satisfaction.

Table 9.14.

Model B: Mediation effects of Work-life Balance between Work and Family predictors and Family Satisfaction at Time 2.

Predictor→Mediator→F/S	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→WLB→F/S	-.01	-.12*	-.13	Full
WFC strain→WLB→F/S	-.11	-.07*	-.18	Full
WFC beh.→WLB→F/S	-.13	-.02	-.15	None
FWC time →WLB→F/S	-.19*	-.01	-.20	None
FWC strain→WLB→F/S	-.25*	.01	-.24	None
FWC beh.→WLB→F/S	.08	-.03	.05	None
WFE dev. →WLB→F/S	.17	.01	.18	None
WFE affect →WLB→F/S	-.06	.01	-.05	None
WFE capital→WLB→F/S	-.06	.01	-.05	None
FWE dev. →WLB→F/S	.18*	.01	.19	None
FWE affect→WLB→F/S	.18*	-.02	.16	None
FWE eff.→WLB→F/S	-.02	.00	-.02	None

Note: * $p < 0.05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour, dev = development; eff = efficiency. F/S = family satisfaction.

Twelve mediation paths were tested and only two mediation paths were significant. The results found that work-family balance fully mediated the relationship between work→family conflict (time and strain) and family satisfaction supporting hypotheses H70a and 70b at Time 2.

The next analyses involved testing the work-life balance mediation effects between the predictors and social dysfunction. The results are presented in Table 9.15 and illustrated that work-life balance mediated the relationship between work→family conflict (time) and social dysfunction. In addition, work-life balance partially mediated the relationship between work→family conflict (strain) and social dysfunction. Therefore, hypotheses H72a and H72b were supported at Time 2.

Table 9.15.

Model B: Mediation effects of Work-life Balance, between Work and Family predictors and Social Dysfunction at Time 2.

Predictor→Mediator→S/D	Direct effect	Indirect effect	Total effect	Type of mediation
WFC time→WLB→ S/D.	.13	.10*	.23	full
WFC strain→ WLB→ S/D	.18*	.06*	.24	partial
WFC beh.→ WLB→ S/D	.12*	.02	.14	None
FWC time → WLB→ S/D	.09	.01	.10	None
FWC strain→ WLB→ S/D	.11	-.01	.10	None
FWC beh.→ WLB→ S/D	.11	.02	.13	None
WFE dev. → WLB→ S/D	.07	-.01	.06	None
WFE affect → WLB→ S/D	-.06	-.01	-.07	None
WFE capital→ WLB→ S/D	-.13	.00	-.13	None
FWE dev. → WLB→ S/D	-.07	-.01	-.08	None
FWE affect→ WLB→ S/D	.02	.02	.04	None
FWE eff.→ WLB→ S/D	-.05	.00	-.05	None

Note: * $p < 0.05$. WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour, dev = development; and eff = efficiency; WLB = work-life balance; S/D = social dysfunction.

Summary

In conclusion, this chapter has investigated the extent to which resilience and work-life balance mediated the relationship between the work and family predictors and the wellbeing variables at Time 2. The work-life wellbeing model was divided into two parts to analyse the mediation effects as identical with Time 1, (Model A: resilience and Model B: work-life balance mediation models). Overall little support was found with the mediation hypotheses for resilience and work-life balance at Time 2. The results for Model A (resilience) demonstrated of the sixty mediation routes tested only eight (8) were significant. As for work-life balance only four mediations effects were significant out of a possible 48 mediation routes tested. Hence, limited support was found for the mediation effects at Time 2. The implications and possible causes for the limited support will be examined in the discussion chapter (Chapter 11). In the following chapter (Chapter 10), the longitudinal mediation analyses will be presented.

CHAPTER 10

LONGITUDINAL ANALYSES

Chapter Overview

The main aim of this chapter is to examine the longitudinal mediation effects of resilience and work-life balance on relationships between the work and family predictors (conflict and enrichment) and the wellbeing criterion variables (job and family satisfaction, anxiety/depression, and social dysfunction). The chapter is divided into five main sections: (1) descriptive statistics, comparing (Time 1 and Time 2) means, (2) longitudinal correlation analyses, (3) analytical strategy to determine, (4) the longitudinal mediation effects of resilience between the work and family predictors and the wellbeing variables and (5) the longitudinal mediation effects of work-life balance, between the work and family predictors and the wellbeing variables.

Descriptive Statistics

The descriptive statistics, means, standard deviations, and t-tests at Time 1 and Time 2 are provided in Table 10.1. Paired-sample t-tests were conducted to show if there were any statistical differences between the Time 1 and Time 2 means.

The results indicated that WFE (development) and FWE (development) had significantly lower mean scores at Time 2 than at Time 1. Likewise, WFE (affect) and FWE (affect) also had significantly lower mean scores at Time 2 compared to Time 1. In addition, family satisfaction had a significantly decreased mean value at Time 2 when compared to Time 1. Work-life balance and

resilience also displayed significant changes. Work-life balance had a significantly higher mean value in Time 2 compared to Time 1. On the other hand, resilience showed the opposite effect with a significantly lower mean score at Time 2 than Time 1. Implication of these changes will be discussed in more detail in the discussion chapter (Chapter 11).

Table 10.1.

Mean, Standard Deviation and t-test at Time 1 and Time 2.

Latent variable/s	Mean Time 1	SD	Mean Time 2	SD	t-test
1. WFC time	2.92	0.93	2.83	0.99	1.55
2. FWC time	2.19	0.79	2.18	0.87	0.28
3. WFC strain	2.94	0.99	2.92	1.01	-0.28
4. FWC strain	1.89	0.74	1.88	0.81	0.20
5. WFC beh.	2.51	0.82	2.46	0.83	1.02
6. FWC beh.	2.51	0.80	2.48	0.82	0.53
7. WFE dev.	3.62	0.73	3.52	0.76	1.98*
8. FWE dev	3.70	0.66	3.60	0.66	1.53
9. WFE affect	3.20	0.79	3.02	0.83	2.77*
10. FWE affect	3.83	0.67	3.74	0.72	1.96
11. WFE cap	3.61	0.73	3.55	0.84	1.20
12. FWE eff	3.47	0.74	3.47	0.70	0.28
13. J/S	3.91	0.80	3.92	0.82	-0.19
14. F/S	6.11	0.86	5.90	0.99	3.67*
15. S/D	1.04	0.33	1.04	0.32	-0.06
16. A/D.	0.63	0.56	0.66	0.53	-0.58
17. Resilience	5.99	0.75	5.88	0.77	2.30*
18. WLB	3.30	0.95	3.53	1.24	3.47*

Note: N = 296. * p < 0.05. WFC = work→family conflict; FWC = family→work conflict; beh = behaviour; WFE = work→family enrichment; FEW = family→work enrichment; dev = development; cap = capital; eff = efficiency; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety/depression; S/D = social dysfunction; and WLB = work-life balance.

Longitudinal Correlations

Pearson's Product Moment longitudinal correlations are presented in Table

10. 2. The correlations were assessed by correlating all variables at Time 1 and Time 2.

Table 10.2.
Longitudinal correlations between all variables used in this study.

Time 1	Time 2																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. WFC time	.47*	.25*	.27*	.14*	.20*	.19*	.01	-.01	-.06	-.06	.02	-.03	-.07	-.13*	-.01	.08	-.32*	.02
2. FWC time	.22*	.40*	.16*	.16*	.19*	.15*	.11*	.07	.06	-.05	.07	.08	-.02	.01	.02	.01	-.05	-.04
3. WFC strain	.25*	.19*	.39*	.13*	.22*	.28*	.03	.01	-.13*	-.04	-.01	.02	-.11*	-.07	.01	.16*	-.30*	-.09
4. FWC strain	.06	.28*	.11*	.35*	.12*	.16*	.02	-.02	.05	-.06	.05	-.04	-.01	-.15*	-.02	.02	.03	-.02
5. WFC beh.	.19*	.19*	.19*	.14*	.35*	.40*	-.06	-.05	-.10*	-.03	-.06	-.03	-.12*	-.10*	-.03	.02	-.13*	-.05
6. FWC beh.	.15*	.19*	.18*	.15*	.36*	.42*	-.02	-.01	-.04	.04	-.01	.03	-.08	-.08	-.03	.11*	-.09	-.02
7. WFE dev.	-.11*	-.15*	-.18*	-.08	-.24*	-.30*	.32*	.23*	.18*	.19*	.27*	.15*	.16*	.08	-.13*	-.07	.10*	.13*
8. FWE dev	-.12*	-.06	-.01	-.06	-.22*	-.22*	.27*	.41*	.06	.31*	.13*	.29*	.10*	.23*	-.05	-.03	.14*	.14*
9. WFE affect	-.20*	-.20*	-.30*	-.08	-.13*	-.19*	.23*	.14*	.25*	.08	.21*	.11*	.22*	.05	-.03	-.06	.21*	.09
10. FWE affect	-.09	-.01	-.04	-.09	-.08	-.13*	.10*	.20*	.08	.39*	.14*	.17*	.03	.23*	-.14*	-.07	.08	.11*
11. WFE cap	-.10*	-.11*	-.26*	-.06	-.15*	-.19*	.29*	.19*	.27*	.20*	.34*	.14*	.30*	.10*	-.10*	-.12*	.15*	.17*
12. FWE eff	-.03	.06	-.04	.01	-.03	-.08	.10*	.25*	.10*	.19*	.13*	.33*	-.02	.13*	-.04	-.01	.12*	.05
13. J/S	-.24*	-.21*	-.26*	-.09	-.09	-.13*	.12*	.03	.06	.05	.12*	.04	.37*	.13*	-.04	-.12*	.24*	.11*
14. F/S	-.10*	-.07	-.02	-.10*	-.20*	-.20*	.04	.10*	.03	.19*	.01	.12*	.07	.36*	-.08	.10*	.07	.17*
15. S/D	.18*	.07	.11*	.07	.15*	.11*	-.06	-.03	.01	-.11*	-.06	-.07	-.12*	-.27*	.31*	.16*	-.16*	-.05
16. A/D	.16*	.16*	.19*	.15*	.23*	.23*	-.05	.02	-.01	-.03	-.08	.04	-.14*	-.17*	.07	.33*	-.13*	-.15*
17. WLB	-.44*	-.24*	-.27*	-.17*	-.21*	-.20*	-.01	-.01	.08	.07	-.01	.05	.13*	.22*	-.10*	-.28*	.45*	.16*
18. Resilience	-.12*	-.22*	-.13*	-.17*	-.23*	-.24*	.09	.10*	.08	.13*	.15*	.17*	.10*	.13*	-.19*	-.19*	.17*	.50*

Note: N = 296; *p < .05.

WFC = work→family conflict; FWC = family→work conflict; beh. = behaviour; devt = development; WFE = work→family enrichment; FWE = family→work enrichment; cap = capital; J/S = job satisfaction; F/S = family satisfaction; S/D = social dysfunction; A/D = Anxiety and depression; WLB = work-life balance.

Most of the correlations between the variables were relatively low and in the expected direction.

Longitudinal: Correlates of Work-Family Conflict

It was found that WFC (time) at Time 1 was significantly negatively correlated with family satisfaction ($r = -.13$) and work-life balance ($r = -.32$) at Time 2 but not job satisfaction ($r = -.07$), anxiety/depression ($r = .08$), social dysfunction ($r = -.01$), and resilience ($r = .02$). Also, WFC (strain) at Time 1 was significantly related with job satisfaction ($r = -.11$), anxiety/depression ($r = .16$), and work-life balance ($r = -.30$) at Time 2 but not family satisfaction ($r = -.07$), social dysfunction ($r = .01$), and resilience ($r = -.09$). In addition, WFC (behaviour) at Time 1 was significant related with job satisfaction ($r = -.12$), family satisfaction ($r = -.10$), and work-life balance ($r = -.13$), but not anxiety/depression ($r = .02$), social dysfunction ($r = -.03$), and resilience ($r = -.05$), therefore, hypotheses H25b, 25c, 26a, 26c, 27b and H30 were supported.

Turning to family→work conflict, the only significant findings were FWC (strain) at Time 1 with family satisfaction ($r = -.15$) at Time 2, and FWC (behaviour) at Time 1 with anxiety/depression ($r = .11$) at Time 2, thus supporting hypotheses 32b, and 33c.

Longitudinal: Correlates of Work-Family Enrichment

It was found that WFE (development) at Time 1 was significantly correlated with job satisfaction ($r = .16$), social dysfunction ($r = -.13$), resilience ($r = .13$), and work-life balance ($r = .10$) but not family satisfaction ($r = .08$), and anxiety/depression ($r = -.07$) at Time 2. In addition, WFE (affect) at Time 1 was

significant with job satisfaction ($r = .22$), and work-life balance ($r = .21$), but not family satisfaction ($r = .05$), social dysfunction ($r = -.03$), anxiety/depression ($r = -.06$), and resilience ($r = .09$) at Time 2, therefore hypotheses H37, H38c, H39c, H40a, H40c, H41a, H41c, and H42 were supported.

Turning the attention to family→work enrichment; FWE (development) at time 1 was significantly correlated with job satisfaction ($r = .10$), family satisfaction ($r = .23$), anxiety/depression ($r = -.12$), social dysfunction ($r = -.10$), resilience ($r = .14$), and work-life balance ($r = .14$), but not social dysfunction ($r = -.05$) and anxiety/depression ($r = -.03$) at Time 2. Also, FWE (affect) at Time 1 was significant with family satisfaction ($r = .23$), social dysfunction ($r = -.14$), and resilience ($r = .11$), but not job satisfaction ($r = .03$), anxiety/depression ($r = -.07$), and work life balance ($r = .08$) at Time 2. FWE (efficiency) at Time 1 was significant with family satisfaction ($r = .13$), and work-life balance ($r = .12$), but not job satisfaction ($r = -.02$), anxiety/depression ($r = -.01$), social dysfunction ($r = -.04$) and resilience ($r = .05$), therefore hypotheses H43a, H44, 46b, 47a, 47b, 48a, and 48c were supported.

LONGITUDINAL: MEDIATION RELATIONSHIPS

The purpose of this analysis was to test for longitudinal mediation effects of resilience and work-life balance between the work and family predictors and the wellbeing variables. Structural equation modelling was conducted using AMOS 16 to verify the longitudinal mediation hypotheses. In order to test the longitudinal mediation effects with two time waves, these analyses followed the autoregressive model (see Figure 10.1) as recommended by MacKinnon (1994) and Cole and Maxwell (2003).

In this model the wellbeing variables at Time 2 were predicted by the work and family variables and the wellbeing variables at Time 1, together with the mediators (resilience and work-life balance) at Time 2 (Cole & Maxwell, 2003). Based on the recommendation of Cole and Maxwell (2003) for a two-wave panel design study, the analyses examined the relationship between the work and family variables at Time 1 and the mediators (resilience and work-life balance) at Time 2 (Path A) prior to the wellbeing variables at Time 2 (Path B).

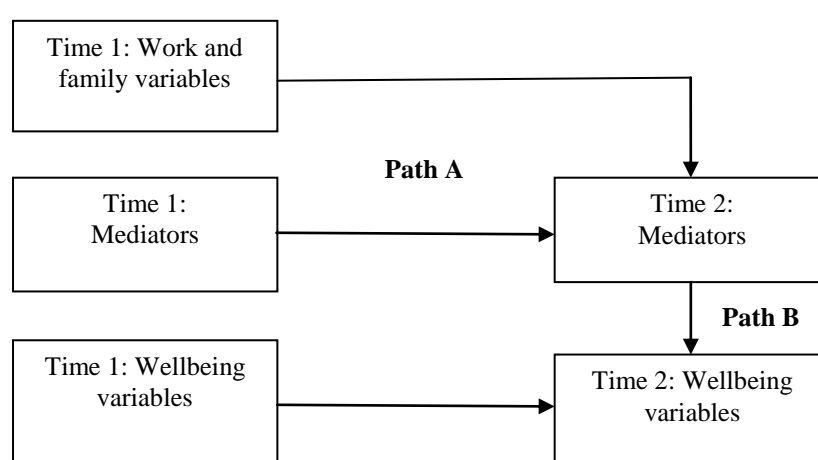


Figure 10.1. Longitudinal autoregressive mediation model.

Cole and Maxwell argued that calculating path A and path B are sufficient to determine mediation effects. To avoid contamination and inflated causal path estimates, Time 1 mediators and Time 1 wellbeing variables were controlled for as recommended by Cole & Maxwell (2003).

As mentioned in Chapter 9, AMOS does not provide significance tests for multiple mediators. Therefore, following the recommendation of Klien, Fan, and Preacher (2006), the hypothesised model was divided into two parts. Model A tested the resilience model and Model B tested the work-life balance model in performing the longitudinal mediation effects between work and family predictors and the wellbeing variables.

Model A: Longitudinal Mediation effects of Resilience

The main purpose of this analysis was to determine the longitudinal mediation effects of T2 resilience between T1 WFC and T1 FWC (time, strain and behaviour), T1 WFE and T1 FWE, (development, affect, and capital/efficiency) as the predictors and the wellbeing variables, (T2 job satisfaction, T2 family satisfaction, T2 anxiety/depression and T2 social dysfunction). The longitudinal resilience mediation model (Model A) is provided in Figure 10.2. Time 1 resilience and Time 1 wellbeing variables were controlled to avoid any potential contaminating effect of the T1 mediator on the T2 mediator and also the T1 wellbeing variables on the T2 wellbeing variables. This is shown clearly in figure 10.2.

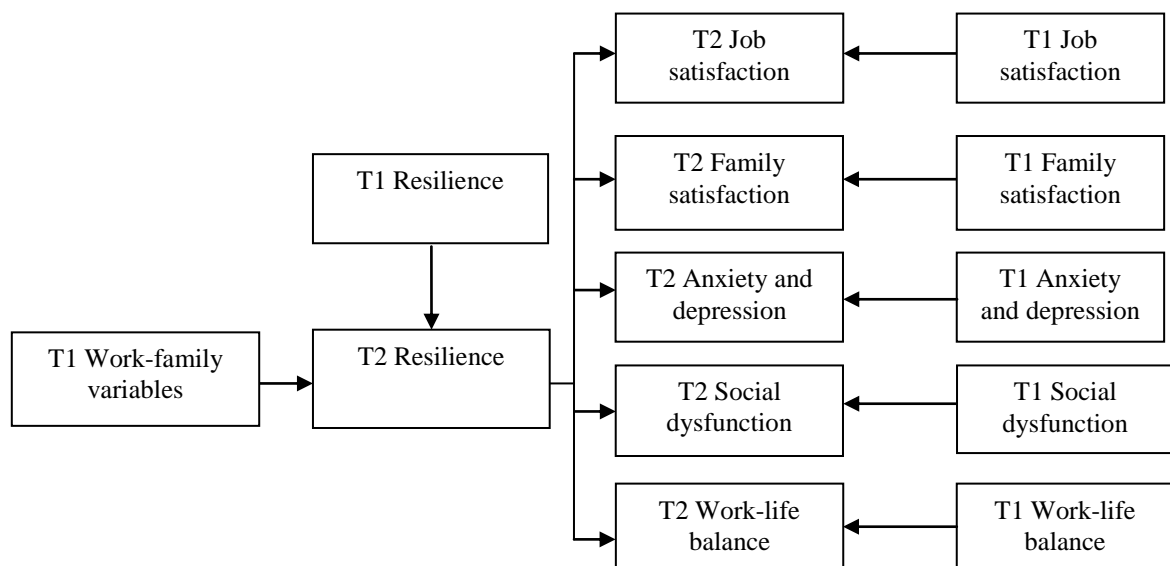


Figure 10.2. Model A: Longitudinal mediation effects of resilience

Note: Work-family variables consisted: work→family conflict (time, strain and behaviour); family→work conflict (time, strain, and behaviour); work→family enrichment (development, affect, and capital); and family→work enrichment (development, affect and efficiency). These are condensed in the above model for illustration purposes. The actual model includes all three dimensions separately. T1 = Time 1; and T2 = Time 2.

Model A yielded χ^2/df (1.46) which is below the recommended level of < 3 (Hair et al. 2010). Examining other fit indices, CFI (.92) RMSEA (.04) are within the fit guidelines of .90-.95 and .05-.08 respectively. Also, the SRMR with a value

of .07 provides further evidence of a good fitting model to the data. Therefore, Model A was used in this study to test the longitudinal resilience mediation effects between predictors and the wellbeing variables. Table 10.3 shows that no work and family predictor at Time 1 was significant with Time 2 resilience.

Table 10.3.

Model A: Longitudinal Mediation effects, T1 Work and Family predictors to T2 Resilience.

T1 Predictor	T2 Resilience.
WFC time	.04
WFC strain	-.12
WFC beh.	-.11
FWC time	-.04
FWC strain	-.12
FWC beh.	-.02
WFE dev.	-.01
WFE affect	.14
WFE capital	.12
FWE dev.	.04
FWE affect	.04
FWE eff.	.09

Note: N = 296. * p < 0.05.

WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour dev = development; eff = efficiency. T1 = Time 1; and T2 = Time 2.

In addition, the longitudinal mediation relationships between T2 resilience and the T2 wellbeing variables and T2 work-life balance were significant (see Table 10.4). However, a condition of mediation is that work and family predictor has to be significant with resilience (Mathieu & Taylor 2006) thus; no longitudinal mediation effects were found with resilience over time.

Table 10.4.

Model A: Longitudinal Correlation effects of T2 Resilience with T2 Wellbeing Variables.

Mediator	T2 J/S	T2 F/S	T2 A/D	T2 S/D	T2 WLB
T2 Resilience	.10*	.24*	-.40*	-.42*	.17*

Note: N = 296. * p < 0.05. J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety/depression; S/D = social dysfunction; WLB = work-life balance; and T2 = Time 2.

Model B: Longitudinal Mediation effects of Work-life Balance.

The main purpose of this analysis was to determine the longitudinal mediation effects of work-life balance between T1 work-family conflict (time, strain and behaviour), T1 work-family enrichment, (development, affect, capital/efficiency) as the predictors and the wellbeing variables, T2 job satisfaction, T2 family satisfaction, T2 anxiety/depression and T2 social dysfunction over time. The longitudinal work-life balance mediation model (Model B) is provided in Figure 10.3.

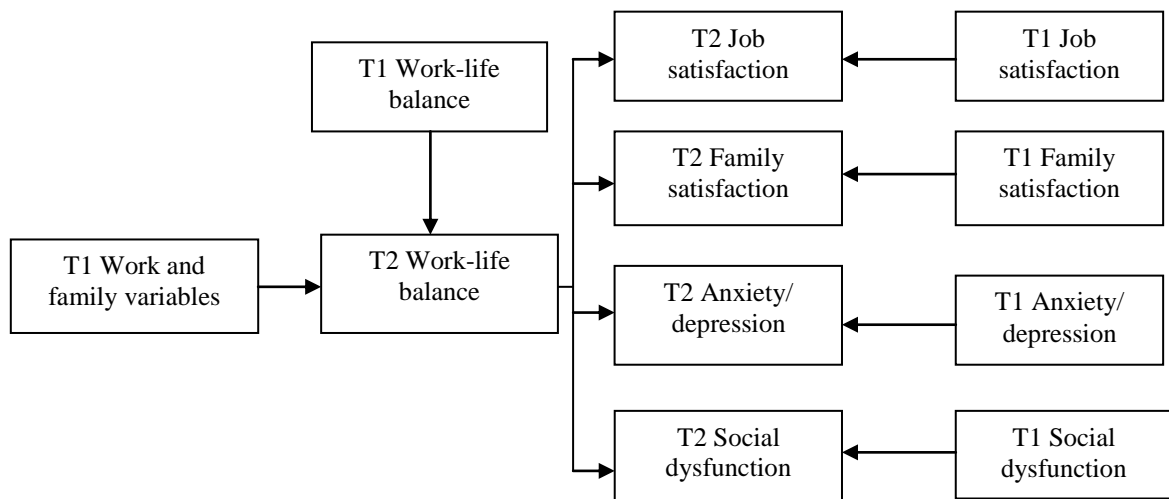


Figure 10.3. Model B: Longitudinal mediation effects of work-life balance

Note: Work and family variables (predictors) consisted of work→family conflict (time, strain and behaviour); family→work conflict (time, strain, and behaviour); work→family enrichment (development, affect, and capital); and family→work enrichment (development, affect and efficiency). These are condensed in the above model for illustration purposes. The actual model includes all three dimensions separately. T1 = Time 1; and T2 = Time 2.

Work-life balance and the wellbeing variables were controlled at Time 1 to avoid any potential contaminating effect of the T1 mediator on the T2 mediator and also the T1 wellbeing variables on the T2 wellbeing variables.

Model B yielded χ^2/df (1.35) which is below the recommended level of < 3 (Hair et al. 2010). Examining other fit indices, the CFI (.95) and the RMSEA (.04) are within the fit indices guidelines of >.95 and <.05 respectively. Also, the SRMR

with a value of .05 provides further evidence of a good fitting model to the data. Thus, Model A provided an adequate model fit to the health professional data.

The direct, indirect and total mediation effects of T2 work-life balance were examined to determine the longitudinal mediation effects over time. In viewing Table 10.5 the standardised coefficients showed that Time 1 work→family conflict (strain) was only the work and family predictor related to work-life balance at Time 2.

Table 10.5.

Model B: Longitudinal Mediation effects of T1 Work and Family predictors to T2 Work-life Balance.

T1 Predictor	T2 WLB.
WFC time	-.24*
WFC strain	-.18
WFC beh.	-.13
FWC time	-.06
FWC strain	-.12
FWC beh.	-.10
WFE dev.	-.02
WFE affect	.05
WFE cap.	.01
FWE dev.	.15
FWE affect	-.05
FWE eff.	-.01

Note: N = 296; * p < 0.05.

WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; beh = behaviour; dev = development; eff = efficiency; WLB = work-life balance; T1 = Time 1; and T2 = Time 2.

In addition, in viewing table 10.6, T2 work-life balance was significantly related to T2 job satisfaction, T2 family satisfaction, T2 anxiety/depression, and T2 social dysfunction.

Table 10.6.

Model B: Longitudinal Correlational effects of T2 Work-life Balance with T2 Wellbeing Variables.

Mediator	T2 J/S	T2 F/S	T2 A/D	T2 S/D
T2 WLB	.16*	.19*	-.31*	-.32*

Note: N = 296. * p < 0.05.

WLB = work-life balance; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety/depression and S/D = social dysfunction; and T2 = Time 2.

As previously mentioned a precondition of mediation as outlined by Mathieu and Taylor (2006) is that the work and family predictor has to be significant with the mediator. Therefore the only work and family predictor that continued for further analyses was WFC (strain) to all of the wellbeing variables.

The next analysis involved providing the mediation direct, indirect, and total effects statistics (see Table 10.7).

Table 10.7.

Model B: Longitudinal Mediation effects of T2 Work-life Balance between T1 Work→Family Conflict (time) and T2 Wellbeing Variables.

T1 Pred→T2 Med→ T2 wellbeing	Direct	Indirect effect	Total effect	Type of mediation
WFC time→WLB→J/S	-.12*	-.04*	-.16	Partial
WFC time→WLB→F/S	-.22*	-.05*	-.27	Partial
WFC time→WLB→A/D	.13*	.07*	.20	Partial
WFC time →WLB→S/D	.10*	.08*	.18	Partial

Note: N = 296. * p < 0.05.

T1 = Time 1; T2 = Time 2; Pred = predictor; Med = mediator; WFC = work→family conflict; WLB = work-life balance; J/S = job satisfaction, F/S = family satisfaction; A/D = anxiety/depression; and S/D = social dysfunction.

In viewing Table 10.7 the direct effects between T1 work→family conflict (strain) and T2 job satisfaction ($\beta = -.12$), T2 family satisfaction ($\beta = -.22$), T2 anxiety/depression ($\beta = .13$), and T2 social dysfunction ($\beta = .10$) yielded significant results over time. In addition, the indirect effects work→family conflict (strain) and job satisfaction ($\beta = -.04$), family satisfaction ($\beta = -.05$), anxiety/depression ($\beta = .07$), and social dysfunction ($\beta = .08$) also yielded significant results, thus partial

mediation was confirmed for work-life balance between WFC (time) and job satisfaction, family satisfaction, anxiety/depression, and social dysfunction thus supporting hypotheses H105a, 106a, 107a, and 108a.

Summary

In conclusion, this chapter has investigated and presented the longitudinal mediation effects of work-life balance and resilience between work-family conflict (time, strain, and behaviour), work-family enrichment (development affect, capital/efficiency) and the wellbeing variables (job satisfaction, family satisfaction, anxiety/depression and social dysfunction). Minimal longitudinal mediation support was found for work-life balance and no support was found for resilience. However, there was support for work-life balance partially mediating the effects of work→family conflict (time) on all the wellbeing variables, while, resilience did not function as a longitudinal mediator over the 10-12 month timeframe. In general terms, both work-life balance and resilience were significant direct predictors of wellbeing variables after controlling for Time 1 effects.

The implications and possible explanations of the findings will be discussed in Chapter 11, along with the limitations of the study, conclusions, recommendations for future research, and practical and theoretical implications of the results.

CHAPTER 11

DISCUSSION AND CONCLUSIONS

Chapter Overview

The present study was designed to investigate a complex model of wellbeing that explores the work-family interface using a group of health professionals from three organisations in New Zealand. In today's rapidly changing organisational environment where labour is transient, it is essential for healthcare organisations to retain a skilled, motivated, happy workforce in order to meet the public's healthcare needs. Given the importance of healthcare in today's society and the problems associated with attracting and retaining a healthcare workforce in New Zealand and other Western countries, it is necessary to understand what is important to healthcare workers and how to enhance their wellbeing.

The influence of resilience and work-life balance on a group of healthcare professionals' sense of wellbeing and the potential mediation effects of these factors between work and family variables and wellbeing were explored in this study. A quantitative method was used to answer the following research question:

- Do levels of resilience and work-life balance mediate between work-family predictors and wellbeing (cross-sectional and longitudinal)?

To examine this question, a work and family model was developed based on conflict and enrichment (Greenhaus & Beutel, 1985; Greenhaus & Powell, 2006). The model has six dimensions of work-family conflict: (a) WFC (time, strain, and behaviour) and (b) FWC (time, strain, and behaviour). It also has six dimensions of work-family enrichment: (a) WFE (development, affect, and capital) and (b) FWE (development, affect, and efficiency). Therefore, the present study examined the negative and positive aspects of the work-family interface in response to calls for

more fine-grained analyses of the work and family interface (see Eby et al., 2005). The model suggested that resilience and work-life balance would mediate between the work and family interface and wellbeing (i.e., job satisfaction, family satisfaction, anxiety/depression, and social dysfunction), and a sample of healthcare professionals were used to examine the reliability and validity of this model. The research question in this study is important because in the present work environment health professionals face increased work and family demands that are largely influenced by long work hours and staff shortages (see chapter 1). The increased work demands are added to the need to juggle family demands and find balance between work and life, which is an important step toward wellbeing. Little research, however, has examined the role played by resilience and work-life balance in a work and family interface model. The findings of this present research address these issues.

At Time 1 (T1) and Time 2 (T2), confirmatory factor analyses (CFA) using AMOS provided acceptable fit statistics and confirmed the factor structure of all the latent variables used in this study. All variables achieved acceptable levels of reliability. This study measured psychological health with the GHQ-12 scale (Goldberg & Williams, 1988) and established that the scale had two factors (i.e., anxiety/depression and social dysfunction), which supports Kalliath, O'Driscoll, and Brough's (2004) findings. In addition, the structural models at T1, T2, and longitudinally produced acceptable fit statistics and made it possible to empirically calculate the mediation hypotheses.

Table 11.1 provides a summary of the correlation findings and illustrates, overall, that work-family conflict is detrimental to wellbeing and work-family enrichment is beneficial.

Table 11.1.
Summary of correlations for Time 1 and Time 2.

Predictors	Time 1						Time 2					
	J/S	F/S	A/D	S/D	WLB	Res	J/S	F/S	A/D	S/D	WLB	Res
WFC time	√	√	√	√	√	√	√	√	√	√	√	√
WFC strain	√	√	√	√	√	√	√	√	√	√	√	√
WFC behaviour	√	√	√	√	√	√	√	√	√	√	√	√
FWC time	√	√	√		√	√	√	√	√		√	√
FWC strain	√	√	√	√	√	√		√	√		√	√
FWC behaviour	√	√	√	√	√	√	√	√	√		√	√
WFE development	√	√	√	√	√	√	√	√	√	√	√	√
WFE affect	√	√	√	√	√	√	√	√	√	√	√	√
WFE capital	√	√	√	√	√	√	√	√	√		√	√
FWE development	√	√	√	√	√	√				√	√	√
FWE affect	√	√	√	√	√	√			√		√	√
FWE efficiency	√	√	√	√	√	√		√		√	√	√
Resilience	√	√	√	√	√	---	√	√	√	√	√	---
WLB	√	√	√	√	---	√	√	√	√	√	---	√

Note. $N = 1,598$ participants at Time 1 and 296 participants at Time 2. √ indicates the relationship is significant at $p = .05$.

WFC = work→family conflict; FWC = family→work conflict; WFE = work→family enrichment; FWE = family→work enrichment; WLB = work-life balance;

Res = resilience; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety/depression; and S/D = social dysfunction.

In addition, resilience and work-life balance (the potential mediators) are shown to be important variables as a result of their significant relationship with the majority of all variables at T1 and T2. Consequently, their inclusion in a work and family model appears warranted. In addition, all the significant correlations were in the expected direction, although the majority were in the low-to-medium range (Cohen, 1988).

As previously mentioned, the structural model was subdivided into two parts: (a) model A for resilience and (b) model B for work-life balance. Overall, the dimensions of conflict predicted wellbeing in the expected detrimental way and dimensions of enrichment predicted wellbeing. However, these results were not uniform across all dimensions and outcomes (see chapters 8 and 9). Although the majority of the variables were significantly correlated, only a few of the conflict and enrichment dimensions predicted each of the wellbeing variables in the structural models. Broadly speaking, 3 out of a possible 6 paths towards job satisfaction were significant predictors for model A (resilience) at T1 and T2, with 2 out of 6 for model B (work-life balance). All of these significant predictors came from the work-to-family direction, which supports previous literature (Bass, Butler, Grzywacz, & Linney, 2008; Brough, O'Driscoll, & Kalliath, 2005; Frone, 2003). For example, Frone (2003) argued that domain-specific work dimensions are more likely to predict job satisfaction than family satisfaction.

The present study was designed to test the structural model and mediation effects of resilience and work-life balance between the work and family interface and the wellbeing variables, and the results showed that resilience and work-life balance influenced the wellbeing variables and mediated the effects of work and family interface. Indeed, at T1, 35 of the 60 mediation hypotheses were supported

for resilience and 20 out of 48 mediation hypotheses for work-life balance, which indicates the importance of including resilience and work-life balance in a wellbeing model. Interestingly, support was found at both time points for resilience as a predictor of work-life balance, which suggests that organisational managers should help healthcare workers build resilience in order to achieve greater work-life balance. More important, resilience is a developmental construct that can be taught (Rolf & Johnson, 1999; Seligman, 2011). However, at T2, there was less support for the hypotheses, and the findings illustrated that the cross-sectional results at T1 and T2 are inconsistent. The possible reasons for this inconsistency are discussed later in this chapter.

The two-wave panel design was a strength of the present study because the effects were tested twice, and it produced information about the mediation model and resilience after a 10- to 12-month time lag. There was minimal longitudinal support for the mediation model, and there was no longitudinal support for resilience. However, work-life balance mediated the relationship between WFC (time) and all of the wellbeing variables longitudinally. The possible reasons for the minimal longitudinal support are discussed later in this chapter.

Overall, the present research adds to the current literature by providing support for the inclusion of resilience and work-life balance in a work and family interface and wellbeing model. In addition, this present research provides empirical support for using a direct measure of work-life balance and extends Frone's (2003) conceptualization. The results of the present study showed that the two variables (i.e., resilience and work-life balance) are important factors to consider for mitigating conflict and enriching work and family roles and promoting health professionals' wellbeing.

The rest of this chapter contains discussions about the theoretical and methodological implications, practical implications, strengths and limitations of the research, and recommendations for future research. There is a discussion about some of the issues concerning the design of the study and discussions about the cross-sectional findings and mediation relationships at T1, T2, and longitudinally.

Research Design

The present study was conducted using a two-wave panel method, and the mediation hypotheses were cross-sectionally and longitudinally tested. The participants in this study were health professionals who worked for two district health boards and one healthcare provider in New Zealand. Self-reports were collected at two points in time (T1 and T2), and there was a 10- to 12-month time lag between T1 and T2. The self-report surveys were used to collect data for 18 latent variables, and there were responses from 1,598 participants at T1 and 296 participants at T2 (who matched with T1 participants). The strengths and limitations of the research design are discussed in more detail later in this chapter.

CROSS-SECTIONAL FINDINGS

The cross-sectional findings are discussed in the following order: (a) relationships between work and family predictors (i.e., work-family conflict and work-family enrichment) and wellbeing variables and work and family predictors and mediators (i.e., resilience and work-life balance) and (b) relationships between mediators and wellbeing variables.

Relationships between Work and Family predictors and Wellbeing

Work-family conflict

On the conflict side of the work and family interface, T1 and T2 results showed that work-family conflict (i.e., time, strain, and behaviour) is negatively correlated to satisfaction (job and family) and positively related to psychological health outcomes. The T1 and T2 results showed stronger correlations to the wellbeing variables (e.g., anxiety/depression and social dysfunction) and work-life balance for WFC than for FWC. It is important to highlight this difference because it acknowledges that WFC and FWC are distinct variables and need to be assessed separately. Previous researchers (Ayree et al., 1999; Gutek et al., 1991; Howard, Donofrio, & Boles, 2004; Karatepe & Kilic, 2007; Netemeyer et al., 1996) have argued that individuals experience higher levels of WFC than FWC, and Frone et al. (1997) argued that people report three times as many incidents in the work domain than in the family domain. This higher rate of conflict could occur because work boundaries are less permeable than family boundaries, and as mentioned in chapter 4, family members are expected to be more flexible in their demands.

Overall, the findings for the structural models were strong, and the results showed that conflict was detrimental to both satisfaction and psychological health at T1 and to lesser extent at T2. Generally, the structural models supported within-domain relationships, for example, WFC with job satisfaction and FWC with family satisfaction. Therefore, the cross-sectional results (see Table 11.1) and the structural models (see chapters 8 and 9) supported previous research (see Allen et al., 2000; Kalliath & Munroe, 2010). Interestingly, WFC (behaviour) and FWC (behaviour) were significantly related to psychological health (i.e.,

anxiety/depression and social dysfunction), overall, in the work-life balance structural model (model B) at T1 and T2. This result shows the importance of including work-family behaviour-based conflict in the present research and the need for interventions that specifically target this form of conflict. This is discussed in more detail later in this chapter.

Research (New Zealand Nurses Organisation, 2009) also pointed out that health professionals often experience long work hours and heavy workloads while juggling work and family responsibilities, and the results of the present study suggested these work and family demands may have had a negative impact on the participants' sense of wellbeing. Overall, the most prominent feature was the pervasive nature of WFC (time and strain) with some of the wellbeing variables in the structural models. This finding provides empirical evidence for the prevalence of WFC among health professionals and its detrimental impact on their wellbeing.

Health professionals not only are susceptible to long work hours and increased workloads, but they are also subject to increased pressures associated with their profession. For example, nurses and doctors are on the frontline of the medical profession and provide hands-on care to patients on a daily basis. They need to be vigilant because there is always the possibility they will be infected by the diseases (e.g., generalised skin infections, HIV/Aids, and hepatitis B and C) they encounter on a regular basis (Mayo & Duncan 2004). Acute and critical care nurses are at the forefront of disease surveillance (O'Connell, Menuet, & Foster, 2002), with nurses and doctors in emergency departments being subject to physical and verbal abuse from patients when attempting to offer treatment. According to Mayo and Duncan (2004), the fear of disciplinary action for neglect of duty with patients and medication errors are at the forefront of nurses'

concerns. Indeed, nurses are responsible for administering drugs to patients, and research (Mayo & Duncan 2004) has found that nurses are terrified of making drug errors. When added to increased workloads, longer work hours, fatigue, and tension among staff (e.g., between doctors and nurses), these occupation-related factors can have a detrimental effect on the wellbeing of healthcare professions over time. Individually, these factors may seem minor; however, these potential daily stressors may create persistent irritations, frustrations, and overloads and have a more immediate effect on the health and wellbeing of health professionals.

COR (Hobfoll, 1989, 2001, 2011) may be relevant for understanding the pervasive nature of WFC and how it relates to wellbeing in this workforce. COR suggests people will “strive to retain, protect and build resources, and what is threatening to them is the potential or actual loss of these valued resources” (Hobfoll, 1989, p. 1). The threat or potential loss of resources leads to a negative state of being, and these resources can be anything individuals value: (a) emotional and cognitive states, including self-esteem, optimism, self-mastery, and resiliency; (b) objects, for example, socioeconomic status and housing; and (c) energies, such as time, money, skills, and knowledge. As such, COR emphasises that it is of paramount importance to interrupt or use intensive management of loss cycles to regain wellbeing, and the findings of the present study support this view.

The results of the present study showed that conflict creates loss cycles in which people lose resources, and if individuals do not offset the loss of resources, the loss cycle gains momentum and reduces wellbeing. In this cycle, fewer resources are available to meet subsequent demands, and there is a self-perpetuating cycle of depleting resources. As a result, there is reduced satisfaction

and reduced psychological health. These findings are important because they highlight the need for managers to help healthcare professionals manage and maintain the resources needed to ensure wellbeing.

Empirical research (Major, Klein, & Erhart, 2002) explored the relationship between work-family conflict and psychological health and suggested that increased levels of work-family conflict are associated with increased psychological distress. In addition, the meta-analyses by Allen et al. (2000) found a positive relationship between WFC and psychological strain, which suggests that work demands flow into the family domain and influence employees' participation in home life, which, in turn, creates psychological strain. This is supported by the results of the present study.

The relationship between work-family conflict and satisfaction has also been investigated, and many studies (Bass et al., 2008; Bruck et al., 2002; Haar et al., 2009) have found a negative relationship between the work and family interface and satisfaction. The present research, however, is different because it investigated the three forms of conflict (i.e., time, strain, and behaviour) and both directions (i.e., WFC and FWC) in order to design effective interventions that target a specific form and direction of work-family conflict. This is important because the correlations showed all conflict dimensions were significantly related, which highlights the importance of seldom-tested work and family dimensions such as behaviour-based conflict. As previously mentioned in the work-life balance structural models (T1 and T2), there was a significant relationship between WFC (behaviour) and diminished psychological health and FWC (behaviour) and diminished psychological health.

Work-family enrichment

On the enrichment side of the work-family interface, the results of the present study showed that WFE (development, affect, and capital) and FWE were positively correlated to job and family satisfaction and negatively correlated to anxiety/depression and social dysfunction at T1. FWE had fewer correlational relationships at T2.

The results also provided evidence that work-family enrichment and work-family conflict can occur simultaneously and reinforces calls to examine both enrichment and conflict simultaneously (Frone, 2003). Despite the constraints of a difficult environment filled with the possibility of work and family conflict, the health profession enriches some areas of health professionals' work life. Perhaps this finding can be attributed to health professionals' self-identity created by caring for and healing sick people. According to Bartunek (2011), health professionals are socialised to identify with their professional work role. Therefore, personal gratification derived from being involved in a profession that is enriching and meaningful promotes their individual wellbeing. This finding that health professionals are gratified by their work is a common assumption.

Turning to the structural models, overall, there were few significant findings. Interestingly, however, WFE (capital and affect) was significant in both models at T1 and T2 with some of the wellbeing variables. As previously mentioned, WFE focuses on the positive interdependencies between the work and family domains. This synergistic effect occurs when experiences in one role are positively related to experiences and outcomes in another role (Greenhaus & Powell, 2006). Specifically, according to Stoddard and Madsen (2007), WFE (capital) "occurs when involvement in work promotes levels of psycho-social

resources such as a sense of security, confidence, accomplishment, or self-fulfilment that helps the individual be a better family member,” and WFE (affect) “is defined as a positive emotional state or attitude which results when involvement in work helps the individual be a better family member” (p. 4). As previously mentioned, it is possible that health professionals experience positive effects because they believe their work benefits people (Bartunek, 2011), and this belief creates a positive emotional state of being. These benefits include bonding, companionship, and greater wellbeing, and this helps them to identify strongly with their profession. This identity is generated from feelings of personal fulfilment, having a sense of accomplishment, and feeling successful, which enriches the lives of health professionals.

In addition, this research found support in the structural models for within-domain relationships: for example, WFE (affect and capital) with job satisfaction and FWE (affect) with family satisfaction. Therefore, this research did not support the meta-analytic review by McNall, Nicklin, and Masuda (2010), who found cross-sectional support for across-domain relationships: for example, WFE with job satisfaction and FWE with family satisfaction. Other researchers (Carlson et al., 2009; Haar & Bardoel, 2008) also failed to find support for this relationship. For example, Haar and Bardoel (2008) found that family-work enrichment was positively related to family satisfaction, while work-family enrichment was not a significant predictor.

In sum, the present study provides evidence of within-domain relationships, which is a major contribution to the work and family enrichment literature. It is a shift in perception to include work-family enrichment with work-family conflict in a work and family interface model. Instead of looking at the

world through the dull, incomplete lens of problems and deficits, life is seen from a more balanced perspective. However, more research is needed to test the enrichment hypotheses because the work and family interface model is a new measure and there is little known about enrichment's relationship to other constructs.

Relationships between Work-family predictors and Mediator Variables

Resilience

Overall, there were significant findings among the work-family predictors at T1 and T2. Resilience clearly showed low-to-medium correlations across all predictors (WFC, FWC, WFE, and FWE; see chapters 8 and 9). The magnitudes of the correlations were similar between the work and family dimensions of conflict and enrichment.

More importantly, in the resilience structural models (model A), there was a similar pattern of significant findings at T1 but not T2. These findings showed that regardless of where the source of conflict or enrichment may originate (i.e., work to family or vice versa) health professionals may have a resilient resource loss or gain from higher conflict or enrichment, respectively. For the first time, there is evidence that work-family conflict drains the resilience capacity of health professionals, which supports one of the principles of COR. According to Hobfoll (1989, 2001), inter-role conflict between work and family leads to stress because health professionals are continually juggling work and family roles and negative emotions drain energy, motivation, and resilience. In addition, there is evidence that the beneficial effects of work-family enrichment help build resilience in health professionals.

The results of the present research support, for the first time, the idea that work and family enrichment occurs when the synergistic effect in one role is positively experienced in another role (Greenhaus & Powell, 2006), which, in turn, contributes to positive emotions or affective states (Carlson et al., 2011) and increased psychological functioning (Grzywacz et al., 2000). In the resilience literature, there are numerous associations between positive emotions/affect and fostering resilience (Fredrickson, 2001). Therefore, the present study adds to the literature by providing evidence of the association between work-family conflict and enrichment with resilience.

Work-life balance

Table 11.1 shows that work-life balance, in general, was significantly correlated to all the work-family variables at T1 and T2. This study confirmed the assumption that high WFC is negatively associated with work-life balance, an area that Frone (2003) noted required further study. Again, the magnitude of the correlation of WFC (time, strain, and behaviour) variables with work-life balance was clearly higher than the correlation of FWC (time, strain, and behaviour) variables, and this finding supports Frone's (2003) contention that WFC has stronger effects on outcomes overall.

The finding in the work-life balance structural model (model B) that WFC (time and strain) had a consistent relationship with work-life balance at T1 and T2 was one of the important discoveries in the present research. This finding suggests time pressures and strain, perhaps as a result of organisational factors such as heavy workloads, high work expectations, and staff shortages, impact health professionals' ability to effectively meet their family responsibilities, which

leads to lower work-life balance. This finding supports Kalliath and Monroe's (2009) finding that WFC (time, strain and behaviour) reduced work-life balance.

Relationships between Mediators (Resilience and Work-life Balance) and Wellbeing Variables

The cross-sectional relationships between the mediators (i.e., resilience and work-life balance) and wellbeing variables shown in Table 11.1 reveal that resilience and work-life balance were significantly correlated to all the wellbeing variables at T1 and T2. More important, this finding was also confirmed in the structural models (model A and B).

As previously mentioned (see chapter 3), some work-family researchers have used Frone's (2003) fourfold taxonomy of work-life balance. This research moves beyond that approach and directly evaluated a subjective measure of work-life balance. Although there is limited research that has examined work-life balance, many researchers (Beutell, 2006, 2007, 2010a; Beutell & Wittig-Berman, 2008; Byron, 2005; Carlson et al., 2006; Friedmann & Greenhaus, 2000; Greenhaus & Powell, 2006) agreed that having a balanced approach to work and family is beneficial to wellbeing. Overall, the two variables (i.e., resilience and work-life balance) are important factors to consider when designing strategies to promote the wellbeing of health professionals.

Resilience

According to COR (Hobfoll, 1989, 2001), resource investment strategies are used to enrich people's resource pool. This then serves the individual as a protection mechanism for future losses and enhances psychosocial resources such

as self-esteem, self-efficacy, resilience, and work-life balance. The net gains of the resources produce positive emotions and, in turn, enhanced wellbeing. Therefore, the results of the present study, both correlational (see Table 11.1) and using structural equation modelling, confirmed that health professionals who have a resource reservoir of resilience are more likely to have greater wellbeing.

Recently, a study by Matos, Neughotz, Griffith, and Fitzpatrick (2010) found a relationship between resilience and job satisfaction in a group of psychiatric nurses, which provides evidence that individuals who are resilient are more likely to have higher satisfaction. SEM was used in the present study and confirmed that a high resilience capacity in individuals yields greater wellbeing through higher satisfaction (i.e., job and family) and higher psychological health (i.e., diminished anxiety/depression and social dysfunction). This finding adds substantially to the literature because there is little evidence for the influence of resilience on wellbeing variables in organisational settings, and it answers the call from Luthans (2002b) to include resilience research in organisational settings.

Work-life balance

The correlations (see Table 11.1) and structural model (model B, see chapter 8 and 9) results supported the view that a balanced interaction between work and family increases job and family satisfaction, which supports the findings of Edwards and Routhbard (2000) and Grzywacz et al. (2002). Greenhaus et al. (2003) found that work-life balance was related to satisfaction between roles. Intuitively, one would expect that individuals who believe their work and non-work life are balanced would have increased satisfaction and reduced anxiety/depression and social dysfunction. Interestingly, Kofodimos (1993)

suggested it is the balance between roles that reduces stress/strain and leads to increased satisfaction. Some work and family researchers (Barnett & Gareis, 2006; Marks & MacDermid, 1996; Ruderman et al., 2002) argued that multiple roles, from a role enhancement perspective, increase satisfaction, self-esteem, and self-acceptance and have an empowering effect on people's self-identity and, as a result, create a greater sense of wellbeing.

In sum, the results of the present study confirmed the view that health professionals who have high work-life balance are more likely to have higher satisfaction (i.e., job and family) and lower anxiety/depression and social dysfunction.

MEDIATION RELATIONSHIPS

The following sections contain discussions about the cross-sectional (i.e., T1 and T2) and longitudinal mediation relationships for resilience and the cross-sectional (i.e., T1 and T2) and longitudinal mediation relationships for work-life balance.

Cross-sectional Mediation

Resilience

The mediation analyses tested the effects of resilience as a mediator between the work and family predictors (i.e., work-family conflict and work-family enrichment) and the wellbeing variables (i.e., job satisfaction and family satisfaction and anxiety/depression and social dysfunction) and work-life balance. The results are shown in Table 11.2.

Table 11.2.
Summary of Resilience Mediation Results at Time 1 and Time 2.

Predictor	Time 1					Time 2				
	J/S	F/S	A/D	S/D	WLB	J/S	F/S	A/D	S/D	WLB
WFC time	√	√	√	√	√		√	√	√	√
WFC strain	√	√	√	√	√					
WFC beh							√	√	√	√
FWC time										
FWC strain	√	√	√	√	√					
FWC beh	√	√	√	√	√					
WFE dev										
WFE affect										
WFE cap	√	√	√	√	√					
FWE dev	√	√	√	√	√					
FWE affect										
FWE eff	√	√	√	√	√					

Note. √ signifies that resilience mediated the relationship between the two variables. WFC = work→family conflict; FWC = family →work conflict; WFE = work→family enrichment; FWE = family→work enrichment; st = strain; beh = behaviour; dev = development; aff = affect; cap = capital; eff = efficiency; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety and depression; S/D = social dysfunction; and WLB = work-life balance.

In the cross-sectional analyses, 34 mediational analyses at T1 and eight mediational analyses at T2 out of a possible 60 mediation paths were significant (see Table 11.2). As noted in Table 11.2, there were fewer significant relationships at T2 than at T1. This will be discussed in more detail later in this section.

Work-family conflict

In brief, resilience mediated the effects of the strain and time variables of WFC at T1, the time and behaviour variables of WFC at T2, and the strain and behaviour variables of FWC at T1 but not at T2, which suggests that resilient people are able to recover from stressful conflict and increase wellbeing and work-life balance. This indicates that some of the relationships between the conflict and wellbeing variables, including work-life balance, are mediated by resilience. This finding is consistent with COR (Hobfoll, 1989) because resilience

appears to be a valuable resource that can be used to limit resource losses (McNall et al., 2010). For the first time, evidence has been found that supports the idea that work and family factors and resilience are effective resources that minimise the effects of a loss cycle, particularly for WFC (time and strain).

In addition, this research provided evidence that resilience was a mediator for across-domain relationships. Interestingly, resilience mediations at T1 showed no preference for within-domain or cross-domain relationships because all the findings were significant with job and family satisfaction, which supports the spill over hypotheses.

Indeed, this finding agrees with results from the meta-analysis conducted by Ford, Heinen, and Langkamer (2007), who found a significant number of workplace antecedents, influenced work-family conflict and family satisfaction and a number of family antecedents influenced family-work conflict and job satisfaction. Again, this finding challenges Frone's assertion that conflict from one domain will mainly influence same-domain outcomes (e.g., work-family conflict will influence job satisfaction).

At T2, however, resilience mediated between WFC (time and strain) and did show a preference for cross-domain relationship with family satisfaction. This highlights that further research is needed to investigate whether resilience as a mediator influences within-domain, across-domain, or both relationships.

Work-family enrichment

According to COR, individuals with higher levels of enrichment would be more likely to increase their resilience capacity, and this would lead to greater satisfaction and psychological health. The results of the present study showed

that resilience as an individual resource mediated the relationship between WFE (capital) and FWE (development and efficiency) at T1 with all the wellbeing variables and work-life balance. These results appear to be consistent with gain spirals in COR (Hobfoll, 1989, 2001, 2011), and they suggest positive interdependencies between work and family domains can provide additive effects on resilience. This relationship creates positive emotions and states that foster increasing spirals of resilience that lead to enhanced wellbeing. The results of Fredrickson's (2009) study supported the assumption that positive emotions build psychological and social resources and, in turn, promote wellbeing. Individuals who have an arsenal of quality resources (e.g., support from family and/or supervisor and high levels of self-esteem and self-efficacy) are able to draw on these resources to meet challenges and protect themselves from future losses.

T1 and T2 findings for enrichment, however, were inconsistent because there were no significant findings at T2. To explain this, we can turn again to the COR theory. Hobfoll (1989, 2001) argued that loss spirals take precedence over gain spirals, and loss cycles are frequent and gain momentum when there is a loss spiral. The loss spirals demand a sudden input of resources to halt their continued, pervasive downward spiral. As previously mentioned the degree of the loss spiral is subjective and influenced by the breadth and depth of people's resources. In contrast, the momentum of gain spirals (i.e., enrichment) is slower and weaker and less able to maintain momentum over time. It requires considerable effort and environmental resources for the initial gain spiral to be activated and have an impact on the pervasive nature of resource losses. If the individual's resource reservoir is limited or depleted, then it is more difficult to break the grip of negative thoughts and activate gain spirals. The results of the

present study suggested that the pervasive nature of conflict overpowers enrichment, and WFC (time and strain) are more domineering constructs.

Issues Associated with Resilience

Despite these findings, there were few significant mediation findings for resilience at T2. In the present research, several strategies were used to investigate the reasons why resilience supported 45 mediation hypotheses at T1 compared to only 8 of a possible 60 at T2.

It is possible that the difference in sample size between T1 ($n = 1,598$) and T2 ($n = 296$) had a significant effect on the results. However, the 296 participants who completed the survey at T2 were identified, and Time 1 survey data were recalculated with just these participants. The results were similar to the results for the 1,598 participants at T1 after this adjustment.

The demographics were analyzed to see if there was a substantial change in the demographics between T1 and T2 participants. For example, at T1, the employees' average age was 41 years, ranging from 20 to 72 years old. Females comprised 84% of the sample, while the remaining 16% were males. At T2 (i.e., a 10- to 12-month time lag), the sample demographics were similar to T1. The employees' average age was 43 years, ranging from 19 to 72 years old, and females comprised 85% of the sample.

As previously mentioned, the HR departments of the three organisations (i.e., Waikato DHB, Lakes DHB, and Toi Te Ora-Public Health) who were involved in the present study were asked if any of their departments had been restructured or undergone major changes between T1 and T2. They were unaware of any significant changes in structure of their organisations.

Key researchers who conduct resilience research (i.e., Bruce Avolio, Michele Tugade, Kathryn McEwen, and the Resilience Institute) were personally contacted and asked to examine the present study's findings about resilience and its relationship with other constructs. Their opinions and comments are included within the following discussion.

In addition, the results of the present study were presented at a number of national and international conferences in the hopes of encouraging comment and feedback. For example, the findings were presented at the World Congress in Positive Psychology, Philadelphia (2009, 2011), New Zealand Positive Psychology Conference, Auckland (2011), and Industrial and Organisational Psychology Conference, Brisbane (2011), and I was open to comments from attendees, who I hoped would provide me with more understanding about the nature of resilience and work-life balance.

These strategies and conversations with other resilience researchers provided possible reasons why there were limited effects at T2 (i.e., 8 mediation hypotheses supported out of a possible 60 and no support for the longitudinal hypotheses). These reasons are discussed in the following sections: (a) resilience as a complex construct, (b) risk and protective factors, (c) work and family stressors with resilience, (d) methodological issues, (e) resilience as a state or trait, and (f) self-will, motivation, and drive.

Resilience as a complex construct

Resilience is a complex concept, and people have different levels of resilience at different points in time (see McEwen, 2011; Masten, O'Dougherty, & Wright, 2010). In the work and family domains, there are ongoing interplays

between situational demands and the individuals' situational and dispositional resources. People's thought-action repertoire of resources is constantly in a state of change. Researchers examining the resilience construct have suggested that resilience changes over time, and it is an open process involving a dynamic interplay between individual capacities and situational resources. Some researchers (e.g., Bonanno, 2005; Cowen, 1991; Hobfoll, 2002; Rutter, 1999; Werner, 1995) have found that resilience involves a number of coherent, synergistic factors that interact with risk and protective factors. As such, this might have influenced the findings because many variables are interdependent and woven together. Indeed, Masten and Obradovic (2006) strongly argued that "resilience is a family of concepts, not a single trait or process—many attributes and processes are involved which include many pathways to resilience" (p. 22).

Risk and protective resources

The risk and protective resources have been explained in more detail in chapter 5; however, they are briefly mentioned here to help explain why the present study may have found minimal support for the mediation effect of resilience. These psychosocial resources are reiterated again because an independent *t* test confirmed there was a significant reduction in mean resilience values ($T1 = 5.99$ and $T2 = 5.88$).

As mentioned, the expression of resilience is influenced by context, the quality and quantity of stressors, and individual dispositional and situational aspects, such as self-efficacy, self-esteem (Turner, Norman, & Zunz, 1995), positivity, hope, cognitive appraisal of the event, cognitive load, sense of commitment, appraisal of situational meaning (Collins, 2007), optimism,

spirituality, close relationships (Masten & Reed, 2005), and perceived social support from family, friends, spouse, supervisor, and work colleagues (Aspinwall & Tedeschi, 2010). In particular, according to COR, social support is a pivotal resource because it is the principal vehicle for obtaining resources that are not possessed by self. It is basic to the development of self-esteem and a sense of identity (Hobfoll, Banerjee, & Britton, 1994). According to Helgeson and Lopez (2010), social support and the social environment facilitate the preservation of basic resources, and receiving support during stressful situations increases wellbeing.

As mentioned by Hobfoll (1989), the ability of individuals to respond to stressful events is determined by the accessibility and availability of their resource networks. Davey, Eaker, and Walters (2003) stated these resources function in tandem as part of the resilience process during stressful and adverse events. These resources can be weighted, however, and the individual may assign different values to each resource, and specific resources (called valued resources in COR) may play a larger role in the resilience process. As a result, an employee may assign more value to a specific member in a social network than another member (e.g., co-worker or spouse). Therefore, if this high-valued relationship or resource is limited, weakened, or even withdrawn, then the individual's ability to ignite a resilient response may be limited or weakened, and resilience may not act as a mediator. The significant reduction in mean resilience values between T1 and T2 suggested that the withdrawn of a protective resource (e.g., social support) at T2 may have affected the ability for resilience to mediate between the work-family interface and wellbeing variables at T2.

Work and family stressors with resilience

The adversity level of events being analysed may explain the difference in findings at T1 and T2. As previously discussed (see chapter 5), Masten (1994) stated that

psychosocial adversities are psychosocial stressors. A stressor is an event or experience that can be expected to cause stress in many people, with the potential for interfering with normal functioning. Psychological stress is the experience of an imbalance between the demands impinging on the person and actual or perceived resources available to meet challenges, an imbalance that at some level disrupts the quality of functioning of the person. (p. 6)

Masten (1994) also argued that adversities vary along a continuum that includes severe trauma at one end: for example, experiences with hurricanes, floods, war, and torture. Experiences associated with divorce, death of a spouse and so forth are further down the continuum, and everyday stressors, such as disagreements with spouse, unexpected day care facility interruptions, and malfunctioning computers, are at the lower end of the continuum.

According to Masten (1994), stressors vary in their acuteness at their start and have different time spans. Norris, Tracy, and Galea (2009) examined resilience and its longitudinal trajectories of response to stress with participants who were exposed to the 1999 floods in Mexico ($n = 561$) and the September 11 terrorist attacks in New York ($n = 1267$). The researchers found that the participants still had patterns of psychological distress from 1 to 3.5 years after the event. In contrast, resilience and vulnerability to daily stressors have received less

attention, and at the time of writing, there was no evidence that resilience was being used in a work and family interface wellbeing model.

It is possible that the findings at T1 and T2 were an accurate assessment of the situation at that particular moment and reflected the nature of the relationship. Further research is needed to understand individuals' vulnerability to daily stressors and the impact that an enriching work and family interface has on the resilience capacity of individuals. Acuteness and length of sustainability are aspects that need further research in order to understand the dynamic interplay between resilience and enrichment. A different methodology for examining work and family and resilience is discussed later in this chapter.

Methodological issues

The time lag used in the present study (i.e., 10 to 12 months) may have affected the results at T2. Research by Sui et al. (2009) with healthcare workers in Hong Kong and Mainland China found that individuals with high levels of resiliency reported higher job satisfaction, increased work-life balance, and better quality of life 6 months later, and the means, standard deviations, and Cronbach alpha's of the main variables were stable over time. The greater the time lags between data collection points, the more chances of variability in the difference of results. A lot can happen in the lives of health professionals over a 10- to 12-month time frame (e.g., divorce, death of spouse etc.). Therefore, a shorter time lag may have produced a more stable variation of results. In addition, a three-wave panel design also may have corrected some of the variations in the results. If a three-wave design was used with a shorter time lag, then a more precise pattern of fluctuations may have illustrated more clearly any outlier results.

Further research with different time lags and three-wave panel designs would add to the resilience literature, and it would enable stronger predictions to be made about the resilience process. The methodological issues and alternative designs for future resilience studies are discussed later in this chapter.

Resilience as a state or trait

Some researchers (Avey, Luthans, & Mhatre, 2008; Hong & O’Neil, 2001; Luthans, Avolio, Avey, & Norman, 2007) suggested that resilience is more state-like and changeable and varies over time. Spielberger (1972, 1975, 1983) stated that personality states can be present at any moment in time and at different levels of intensity, whereas personality traits are relatively enduring over time and remain at a consistent level. Specifically, personality states share the same content domain as their corresponding personality traits, but they pertain to how a person is at a specific moment rather than how that person is in general (Huang & Ryan, 2011).

However, Luthans et al. (2007) characterised states and traits on a continuum according to their degree of stability, open to change and development. They defined *state* as “relatively malleable and open to development” (p. 544). The constructs could include not only efficacy, hope, resilience, and optimism, but positive constructs such as wisdom, wellbeing, gratitude, forgiveness, and courage could have “state-like properties as well” (Luthans et al., 2007, p. 544). According to researchers (Luthans, et al., 2007), resilience tends to be more state-like and fluctuates over time.

A number of researchers have examined specific variables that contain both state-like and trait-like characteristics: (a) anger (Kroner & Reddon, 1992);

(b) curiosity and positive and negative affect (Kashdan & Roberts, 2004); (c) anxiety (Oei, Evans, & Crook, 1990; Spielberger, 1972, 1975, 1983); (d) guilt (Kugler & Jones, 1992); (e) hope (Snyder et al., 1991, 1997); and (f) coping (Endler, Kantor, & Parker, 1994; O'Driscoll, Brough, & Kalliath, 2009). O'Driscoll et al. (2009) pointed out some important characteristics of state-based coping that may be relevant for resilience:

State-based coping reflects more accurately the transactional definition of coping as being a dynamic process, continually evolving until the stressor is made benign and psychological well-being is restored. State-based coping thus allows for numerous coping responses to be employed at each specific time. Some of these coping responses may be novel to the individual whilst some of these coping behaviours may have been previously employed (trait-like) coping responses. The important point is that a *specific situation* determines the individual appraisal (and coping response) of this stressor at this explicit point in time. State-based coping, therefore, depends wholly on the situation, for example: whether the stressor is novel, particularly important at this point in time, is a sudden unexpected trauma, or whether the individual is particularly vulnerable due to circumstantial changes in health, *social support* (italics added), finances etc. (p. 253)

In a similar vein, Kumpfer (1999) argued that resilience is not a phenomenon where one is either resilient or not, but resilience encompasses a transactional process between the person and his or her environment that creates the atmosphere for the resilience process *to occur if required* (italics added).

Therefore, based on the arguments of O'Driscoll et al., (2009) and Kumpfer (1999), it is possible that the health professionals in the present study had no need to activate a resilience response at T2. As has been noted, the mean for resilience decreased between T1 and T2, and the mean increased between T1 and T2 for work-life balance. Both changes between time periods were significantly different. It is possible that the health professionals had higher feelings of balance in their lives and there was no reason for them to display a resilience response at T2. Again, this was a common response from resilience researchers about the longitudinal results.

In summary, despite the recent attention to resilience, there is little consensus among researchers, clinicians, and evaluators about what resilience truly encompasses and its characteristics when individuals are faced with conflict and adversity in the workplace. What is beginning to emerge is that resilience is related to adaptability rather than stability that is, bouncing back from harm as opposed to immunity from harmful, adverse, or stressful situations (Norris, Tracy, & Galea, 2009). Further exploratory research is needed to gain clarity. There are some suggestions later in this chapter about how to uncover health professionals' experiences of being resilient and having balance between work and family.

Self-will, motivation, and drive

It is important to recognise that there are multiple pathways through which resilience and positive/negative phenomena may influence people's wellbeing. It is also important to understand that every stressful situation faced by an individual is different, and the person must choose to activate the resilience response mechanisms in conjunction with a reliable resource reservoir. According to

Luecken and Gress (2010), “individuals may demonstrate resilience in some domains but not others or at some time periods, but not others” (p. 249). Lazarus and Folkman’s (1984) transactional model of stress and coping suggests that people have a choice about how to respond to stressful events, and this choice depends on the outcome of the response. According to the expectancy theory (Vroom, 1965), the outcomes of a cognitive appraisal differ with each event and depend on people’s motivational strategy and the availability and support of their resource reservoir (Hobfoll, 1989, 2011); therefore, the resource reservoir acts as a driver towards the resilience response. It is possible that different motivational strategies may be at play across time and could have affected the results in the present study. Aspects of self-will and drive are not specifically covered in the COR theory. Although the COR theory is regarded as a motivational theory, self-will appears to be missing from the theory.

Summary

The present study has made significant contributions to the work and family, wellbeing, and resilience literature by incorporating resilience in the wellbeing model. In the resilience chapter (chapter 5), there was a discussion about the interventions that can be used by organisations, researchers, and practitioners to help people build resilience, and they include motivation to secure, protect, and gain resources in order to protect against future losses (Hobfoll, 1989, 2001). Individuals who are resource rich in terms of the breadth and depth of resources will be more capable of withstanding future stressful situations and sustaining states of wellbeing. Managers can provide training that helps people develop self-esteem, personal mastery, and self-confidence and

provide information about how to reduce stress. At the organisation level, they can provide effective workplace support (e.g., supervisor support) for health professionals. The specific strategies that could be used will be discussed in more detail later in this chapter.

Cross-sectional Mediation:

Work-Life Balance

The mediation analyses tested the effects of work-life balance as a mediator between the predictors (i.e., WFC, FWC, WFE, and FWE) and wellbeing variables (i.e., job/family satisfaction, anxiety/depression, and social dysfunction). The cross-sectional analyses found 20 significant mediations at T1 and four significant mediations at T2 (see Table 11.3) out of a possible 48 mediation paths. In general, at T1, work-life balance mediated the relationship between WFC (strain and time) and FWC (time) and the wellbeing variables.

In addition, work-life balance mediated the relationship between WFE (affect) and job/family satisfaction and anxiety/depression. At T2, work-life balance mediated the relationship between WFC (strain and time) and family satisfaction and social dysfunction. Overall, work-life balance appeared to be a more stable construct at T1, T2, and over time than resilience. The reason for this may be that the time lag between the data collection points suited work-life balance better than resilience.

Table 11.3.

Summary of Work-Life Balance Mediation Results at Time 1 and Time 2.

Predictor	Time 1				Time 2			
	J/S	F/S	A/D	S/D	J/S	F/S	A/D	S/D
WFC time	√	√	√	√		√		√
WFC strain	√	√	√	√		√		√
WFC beh								
FWC time	√	√	√	√				
FWC strain								
FWC beh	√	√	√	√				
WFE dev								
WFE affect	√	√	√	√				
WFE capital								
FWE dev								
FWE affect								
FWE eff								

Note. √ signifies that work-life balance mediated the relationship between the two variables.

Pred = predictor; WFC = work→family conflict; FWC = family→work conflict; beh = behaviour; WFE = work→family enrichment; FWE = family→work enrichment; dev = development; eff = efficiency; J/S = job satisfaction; F/S = family satisfaction; A/D = anxiety and depression; S/D = social dysfunction; and WLB = work-life balance.

One of the main findings of this research was that work-life balance mediated the relationship between WFC (time and strain) and the wellbeing variables at T1 and only with family satisfaction and social dysfunction at T2. While previous research has substantiated these results, work-life balance has been typically operationalised as an absence of work-family conflict or low work-family conflict and high work-family enrichment (Frone, 2003; Lu, Sui, Spector, & Shi, 2009) and not as an additional subjective construct. As the results showed, work-life balance mediated the influence of WFC (time and strain) on wellbeing at T1, and this is one of the few studies to obtain this finding.

As mentioned previously, health professionals, like other professionals, are confronted by work and family demands, including changes in work rosters,

long work hours, and increased workload (Mansell, Brough, & Cole, 2006). Health professionals must also handle the stress associated with death and dying and the friction that may exist between doctors and nurses. They also spend a large amount of their time in face-to-face contact with their patients who are sick and need constant care. In addition, they must work to support themselves (Laschinger, Finegan, & Shamian 2001). For some health professionals, in addition to higher workloads, the demands of the job have increased as a result of technology that makes it possible to contact these workers at a moment's notice, and this technology has blurred the boundaries between work and home. For example, an on-call surgeon can be called and expected to respond immediately. These changes have had a considerable impact on health professionals' resources (e.g., time, work-life balance, and resilience).

In the work and family literature, Poelmans, O'Driscoll, and Beham (2005) pointed out that number of hours devoted to work and schedule inflexibility, role overload and lack of autonomy, number and ages of children at home, and changes in a spouse's occupation or a change in family responsibilities can trigger tension and frustration and increase work-family conflict. These factors can create stress and resource loss and, as a result, have a negative effect on health professionals' emotional and physical wellbeing.

In response to the perceptions of work and family demands and strict time-lines and work schedules, health professionals make an appraisal of the situation. If they find these demands taxing, then health professionals may experience a negative state that leads to an increasing downward spiral of decreased self-esteem and self-efficacy, less coping and problem-solving skills, and negative behaviours (Fredrickson, 2009; Gorgievski & Hobfoll, 2008; Hobfoll, 1989,

2001). This type of reasoning might have influenced the results of the present study.

These results provided further evidence that if the downward spiral is left unchecked health professionals may become more overwhelmed and feel pressured by time, and ultimately, they may experience increased stress and pressure. This situation could lead to anxiety and deteriorating emotional, physical, and social effects, lower satisfaction with work and home, and increased social dysfunction and depression.

Therefore, if health professionals have limited psychological and social support and coping resources, then they may be more prone to work-family strain and time-based conflict, which reduces feelings of balance between work and life and decreases wellbeing (Grandey & Cropanzano, 1999; Greenhaus & Beutell, 1985; Voydanoff, 1987). As such, their personal resources of work-life balance and resilience may be influenced differently over time, and perhaps the longitudinal results highlighted these fluctuations and different effects over a 10- to 12-month period.

Issues Associated with Work-life Balance

Work-life balance, like resilience, is a complex issue and involves many dispositional and situational variables. It involves financial issues, gender roles, career paths, time management, cultural conditioning, and many other factors. Every health professional has his or her own method for achieving a balance between work and life, and they may use different management styles to meet the multi-faceted demands of life. Health professionals may believe devoting an equal amount of time to work and family will achieve work-life balance, or they

may see this balance as the psychological involvement and commitment to work and other life roles. Moreover, some health professionals may judge work-life balance by the amount of satisfaction they receive from work and life. Work-life balance, however, is influenced by so many factors it may be only an illusion. Therefore, while a subjective measure of work-life balance was tested and found to be influential, the results of the present study do not necessarily represent the potentially wide range of nuances happening between employees' work and non-work (life) roles.

After each data collection point, a report of the data was prepared for each organisation participating in the present study (see Appendix B for an example) and presented to the board of directors, HR staff, and staff members. The discussion with staff members centred on the difficulties health professionals face trying to achieve work-life balance in their life. Some staff members mentioned that they were at a stage in their life (mainly baby boomers born between 1946 and 1964 who comprised 40% of the sample at T2) in which they wanted to do something meaningful with their life, but they felt trapped because they had to pay the mortgage and look after the needs of their children. Despite the feelings of dissonance, health professionals may have been willing to sacrifice feelings of work-life balance. As argued by Poelmans, Kalliath, and Brough (2008), "people are willing and capable of tolerating imbalance and disharmony for prolonged periods of time, in order to serve their children" (p. 229), and these factors might have had an effect on the work-life balance mediation results over time. That is, these factors may have affected the results because the health professionals in the present study had accepted that work-life balance was something that was not possible at this stage in their life.

Another plausible explanation could be that the health professional workforce is in a constant state of change and comprised of different cultural identities. In fact, ethnic, cultural, and religious diversity are salient characteristics of the health professional workforce in New Zealand. According to Badkar and Tuya (2010), the Asian cohort is the fastest growing group to find employment in New Zealand. This situation was noted by Callister, Badkar, and Didham (2008), who argued that a substantial number of doctors who migrate to New Zealand move from Asian and African countries. These immigrants have their own cultural norms, ideals, values, and assumptions and may have different conceptualisations of work-life balance. A growing amount of research is finding that Western (e.g., individualistic ideologies) and Eastern (e.g., collectivistic ideologies) countries have different ideas about work and family interactions, including work-family conflict and work-family enrichment (see Aycan et al., 2004; Spector et al., 2007; Yang, 2005). Therefore, these factors may have had an impact on the results obtained in the present study: for example, working parents sacrificing their own work-life balance for their children. While the present study sought to test resilience and work-life balance as mediators, future studies might draw on these confounding effects (e.g., cultural background) for conducting more finer-grained analyses.

In addition, the measure used in this study for work-life balance was subjective, and it could have influenced the results of the present study. The health professionals were asked about their perception of having balance between work and non-work activities. According to Poelmans et al. (2008), work-life balance is a provisional state and subject to change. It is possible that, like resilience, feelings of work-life balance fluctuate. It is important to remember

that work-life balance is a continual process, not a static achievement, and it involves juggling work and family responsibilities.

If it is conceptualised as a state, then it is open to change and development similar to resilience. Feelings of balance take place every day, even hour to hour, as the daily lives of the health professionals unfold and they face new challenges. As a result, they can experience positive and negative thoughts, emotions, and feelings. This may explain the different results about work-life balance and other variables obtained at T1 and T2. Other methodological approaches that may be more appropriate for capturing health professionals' state of work-life balance will be discussed in more detail later in this chapter.

Longitudinal:

Work-life balance as a mediator

Longitudinal mediation analyses were conducted to test whether T2 work-life balance mediated the relationship between the T1 work-family interface variables and T2 wellbeing variables. In previous cross-sectional research, time-based conflict was found to be the most common form of work-family conflict, and it was explained by the scarcity hypothesis. However, for the first time, there is longitudinal evidence that work-life balance mediates the influence of WFC (time) on wellbeing outcomes. This result showed that the loss of time associated with juggling work and family responsibilities had a profound effect on the health professionals' wellbeing over time. This finding suggests that organisational factors such as demand on time at work, including inflexible rosters, may result in less time available for fulfilling family responsibilities. In line with COR, health

professionals who spend more time and energy meeting their work responsibilities have less time and resources for family needs.

As previously mentioned, the New Zealand healthcare workforce has difficulty retaining junior doctor graduates when they have completed their internship. The doctors who do stay in New Zealand are electing to move away from elective surgery because surgical careers are associated with long hours, little sleep, and strained relationships with senior personnel (Du, Sathanathan, Naden, & Child, 2009). In addition, junior doctors in generation Y are placing more value on lifestyle and family than previous generations. According to Du et al. (2009), better working conditions are required to attract new doctors to a surgical career, including more time for family, friends, sports, relaxation, cultural events, and hobbies. According to Poelmans et al. (2005), to accommodate this demand, most work-family policies are directed at reducing time-based conflict by making work schedules more flexible.

On the survey used in the present study, health professionals were asked about work-family policies and their use. This was not part of the main analyses; however, it is included here only to explore this particular WFC (time) relationship. The survey listed 13 policies, and the participants were asked how their organisations help them achieve work-life balance:

Listed below are benefits that organizations can offer to help employees balance their work/nonwork lives. For each benefit listed, please check the appropriate box indicating whether or not the benefit is currently offered and whether or not use it if it is offered.

The response scale included the following: 1 = Not offered but I don't need it; 2 = Not offered but I could use it; 3 = Offered but not used; and 4 = Offered and I use it.

Many participants noted that flexitime (i.e., choice in starting and ending time) and compressed work week (e.g., four 10-hour days) were not offered by their organisation but they could use that option (see Table 11.4).

Table 11.4

Results for Work-Life Policies, Flexitime, and Compressed Working Week for Each Organisation Across Time

Organisation	Flexitime		Compressed working week	
	Time 1	Time 2	Time 1	Time 2
Waikato DHB	586 (45%)	339 (43%)	571 (44%)	332 (43%)
Lakes DHB	115 (43%)	113 (42%)	111 (42%)	93 (34%)
Toi Te Ora-Public Health	15 (27%)	9 (19%)	36 (66%)	15 (32%)

Note. DHB = District Health Board.

Overall, the results for the DHBs shown in Table 11.4 revealed a fair amount of similarity between T1 and T2: 42% to 45% of participants wanted flexitime, whereas 32% to 44% of participants wanted a compressed working week. Note, however, only 19% to 27% of the Toi Te Ora-Public Health participants wanted flexitime at T1 and T2 ($n = 50$ participants), and 32% to 66% wanted a compressed working week.

The results of the present study showed health professionals' wellbeing can be improved and time-based conflicts can be reduced using flexitime and a compressed working week. Managers of health professionals can help improve workers' psychological health by providing flexibility in work schedules, variation in work hours, and worker participation in scheduling rosters. In particular, the ability to plan and structure their non-work time would help workers integrate work and non-work roles (Hill et al., 2008; Kossek, Lautsch, & Eaton, 2005).

THEORETICAL AND METHODOLOGICAL IMPLICATIONS

The present study tested a complex theoretical model using cross-sectional and longitudinal analyses. Although there was little support for the mediating hypotheses at T2 and longitudinally, the results are still theoretically meaningful. In 2006, Greenhaus and Powell challenged work and family researchers to produce new methodologies, develop new measures, and continue exploring work and family theories. Several researchers (e.g., Bardoel, De Cieri, & Mayson, 2008; Carlson et al., 2009; Joplin, Schaffer, Francesco, & Lau, 2003) stressed the importance of providing a measure that directly measures balance. The present study answered the call for a new measure using a theoretically-based and psychometrically sound measure to determine work-life balance in the lives of a group of health professionals in New Zealand. This new measure provided good CFA fit indices at T1 and T2 and provided good alpha reliability indices. Furthermore, the present study used structural equation modelling and found work-life balance was distinct and differentiated from other work-family dimensions of conflict and enrichment and provided new theoretical knowledge about this construct.

As mentioned previously, some researchers (e.g., Frone, 2003) have implied work-life balance by the absence of conflict and the presence of enrichment rather than viewing it as a distinct construct. The present study, however, validated a subjective evaluation of balance between work and family and found this evaluation was distinct for conflict and enrichment and provided additional influence on wellbeing outcomes over and above conflict and

enrichment. As such, this thesis provides a substantive and consistent critique of Frone's assertion.

The present study used a bidirectional approach to both work-family conflict and work-family enrichment. The results of this study showed that longitudinally work-life balance mediated the relationship between WFC (time) and the wellbeing variables (i.e., job satisfaction, family satisfaction, anxiety/depression, and social dysfunction), which supports the COR theory. As previously mentioned, this theory suggests that individuals are likely to experience less work→family time-based conflict when they have greater balance between their work and life (in essence a resource), and this balance produces greater satisfaction with job and family and lowers anxiety/depression and social dysfunction. The use of a bidirectional approach to work-family and family-work conflict and enrichment and multi-dimensional measures of conflict (i.e., time, strain, and behaviour) and enrichment (i.e., development, affect, and capital/efficiency) is a response to work-family researchers (see Frone, 2003) who have suggested the need to examine these constructs and their relationship to wellbeing simultaneously in a work and family model.

The present study examined the work-family interface to the wellbeing process and investigated the influence of resilience and work-life balance on work-family conflict and enrichment and their relationship to wellbeing. MacKinnon and Dwyer (1993) argued that mediation analyses are useful for researchers seeking to identify the critical components of an intervention. The findings of the current research might help identify a sequence of events that may help health professionals identify strategic intervention points. This information

may also help researchers determine where to place additional complementary variables in the model and improve interventions.

The present study also found that direct short-term relationships were more evident than long-term effects. For example, the results from cross-sectional analyses of the work-family conflict variables were consistently correlated to resilience, but the longitudinal analyses found no significant relationship. In addition, WFC variables and work-life balance had an immediate effect, but no effect was found over time. Regarding the mediation effects, substantial effects were found at T1 but not at T2 or longitudinally.

The present study also was able to investigate whether work and family predictors have an influence on the wellbeing variables over time. The time lag was set by the health providers at an arbitrary 10 to 12 months. As mentioned, existing theoretical literature provides no guidance about the appropriate time lag for the effects between variables and the effect of time on the relationships among variables. The use of potential state-like constructs such as resilience and a subjective measure of work-life balance in a wellbeing model make it more critical to find the correct time lag to advance theory and practice. It is possible that using a time lag of 6 months or less may provide further insight into the nature of resilience and work-life balance longitudinally.

PRACTICAL IMPLICATIONS

The results of the present study have several practical implications for personnel researchers, behavioural scientists, management practitioners, and organisations. As mentioned in the introduction, human resource managers in the healthcare industry are facing a crisis and need to determine how to increase the

wellbeing of healthcare professionals because the wellbeing of employees has become a determining factor for organisational sustainability, growth, and success. This is a complex issue that is influenced by factors such as demographics and technology.

In chapter 3, the demographic factors that affect the work-family interface were identified: (a) increasing proportion of women in the workforce; (b) dual income households; (c) single-parent families; (d) increase in the proportion of senior citizens; and (e) increase in eldercare. To design effective policies and interventions, managers need to take these diverse demographic characteristics into consideration. In addition, the development of technology has made it possible to contact healthcare professionals 24/7, and this has caused work to creep into family life. As a result of these and other factors (e.g., work conditions), managers are faced with a difficult task of establishing policies and interventions that promote wellbeing for all their employees who are trying to manage the complexities of work and family roles.

The results of the present research confirmed that while work-family conflict and work-family enrichment have direct effects on resilience and work-life balance and wellbeing outcomes there are also mediation effects. That is, resilience and work-life balance operate as processes for the transmission of the conflict and enrichment experienced by health professionals. The results also showed positive and negative spill over across domains. These observations are important because they show that there many ways for organisations and health professionals to promote work and family wellbeing: (a) reduction of work-family conflict; (b) increase in work-family enrichment; (c) increase in resilience capacity; and (d) increase in work-life balance.

The initiatives discussed below focus on promoting psychological wellbeing at the organisational, family, and individual levels; however, there is some overlap between the levels because they are not separate entities. The initiatives mentioned are based on COR (Hobfoll, 1989) and the idea that organisations, families, and individuals who have a high resource reservoir are able to withstand future stressful events and rebound and gain resources when confronted with crises compared to people with less resources (Holohan & Moos, 1990). Building on COR (Hobfoll, 1989), the purpose of this research was to examine the joint effects of two personal resources (i.e., resilience and work-life balance) on work-family conflict and enrichment. The use of these two resources may enable managers to design effective interventions for health professionals.

Initiatives at the Organisational Level

The results of the present study showed that work-life balance mediated the relationship between WFC (time) and wellbeing over time. As previously mentioned, the roles of work and family compete for healthcare professionals' time. Time spent at work means less time spent with family. Number of hours, inflexible schedule, and shift work are types of work pressures that have been associated with WFC (time) (Greenhaus & Beutell, 1985), and these pressures appear to cause an imbalance between work and family.

Some organisations have used work-family policies, sometimes referred to family-friendly policies (Allen et al., 2001) or work-life balance policies (Maybery, 2006), to increase work-life balance and decrease work-family conflict with varying success. Brough and her colleagues (2005) pointed out that the use of flexible work hours is the most common option used by organisations to

manage work-life balance. Some authors (Anderson et al., 2002; Batt & Valcour, 2003; Haar, 2008; Haar & Spell, 2005; Madsen, 2003) have found an association between family-friendly policies (e.g., flexitime, telecommuting, and dependent care) and reduced work-family conflict. Similarly, Youngcourt and Huffman (2005) found that family-friendly policies moderated the relationship between work stress and WFC. Although, previous research seems to suggest that family-friendly policies help employees balance work and family demands, some work and family scholars suggested other important factors need to be considered to make these policies successful. The barriers to their use, such as employees feel there is some stigma or career penalty, supervisors, managers, or the organisational culture discourage their use, or there is an economic impact in the form of reduced hours, may stop employees from taking advantage of these policies (Mayberry, 2006). In order for these policies to be successful, organisation needs to break down these barriers and actively promote the use of these policies.

In addition, the literature suggested there are a number of strategies (situational and dispositional) human resource managers can use to promote resilient capacities in their workforce. Denhardt and Denhardt (2010) noted that workers are more prone to resilient behaviours when the organisational culture consists of collaboration, togetherness, and a sense of caring. Therefore, these authors argued that organisations can develop a culture founded on the wellbeing of employees by promoting interpersonal relationships that encourage learning, growth, innovation, and creativity.

The resilient research (see Helgeson & Lopez, 2010) outlined the benefits associated with having a social environment that provides a supportive network

that promotes adaptation to stressful situations (Zautra et al., 2010), resilience, and less conflict (e.g., between work-family). Sergerstrom, Smith, and Eisenlohr-Moul (2011) argued that it is the quality of the relationship (e.g., warm, friendly, caring, and supportive) that is the determining factor, and support from managers, supervisors, and colleagues is important for buffering the negative effects of work-related stressors. Therefore, a workplace environment that fosters supportive relationships between doctors, nurses, and other medical staff should be encouraged.

Initiatives at the Family Level

A family resilience framework would be especially welcomed in the present constant state of flux faced by families. As previously argued, the family configuration is more complex than in the past, and most families encounter obstacles, or stressors, either individually or collectively that change the dynamics of the family. However, families are strengthened by the shared belief in their ability to overcome obstacles. Being solution-focused in challenging conditions can have a very positive effect on productivity and the wellbeing of the family unit (Bandura, 1994). Therefore, offering resilience as a strength-based strategy and building protective factors while minimising environmental risks may help increase the wellbeing of the family unit (Black & Lobo, 2008).

Even with reliable work-family arrangements, conflict can arise from episodic events such as deadlines at work and the sudden illness of children. These types of experiences may be viewed and processed differently (e.g., as a result of different personalities of family members and their individual and collective resource reservoirs), but in spite of differences, the collective strength

of families' resources (e.g., cohesion and ability to adapt to work- and family-related demands) are vital for work-family integration (Voydanoff, 2007).

Initiatives at the Individual Level

As previously mentioned, COR (Hobfoll, 1989) emphasizes that healthcare professionals seek to maintain, protect, and acquire resources, and when under stress, they strive to minimise losses by drawing on their dispositional resources or calling on their situational resources. According to Hobfoll (1989), healthcare professionals can mitigate a threat or conflict by reframing the event as a challenge. MacDermid and Harvey (2006) argued that health professionals need to appraise demands such as heavy workloads and unpredictable schedules and realise they can cope because of the breadth and depth of their resources (Hobfoll, 1989).

Interventions based on increasing healthcare professionals' personal resources would increase satisfaction and work-life balance (Greenblatt, 2002). Specifically, COR scholars (e.g., Alarcon, Edwards, & Menke, 2011; Hobfoll, 1989; Hobfoll & Shirom, 2000) stated that a social support network (e.g., supervisor and colleagues) is one of the major resources healthcare professionals need to reduce the negative effects of work-related stressors, minimise resource losses, and experience an increase in positive emotions, which lead to resilience (Fredrickson, 2009), increased work-life balance, and, in turn, greater wellbeing. Therefore, a workplace that fosters supportive work interactions needs to be encouraged.

At the individual-dispositional level, managers need to be aware that there are a number of responses (e.g., spiritual, cognitive, behavioural, emotional, and

physical) that can provide opportunities for increasing resilience in their employees (Kumpfer, 1999). It is beyond the scope of this thesis to delve into all these factors; however, capacity-building interventions have been advocated by resilience researchers who have identified specific skills for the enhancement of resilience and wellbeing (Fredrickson, 2009). These characteristics have been mainly focused on providing the individual with increased emotional (e.g., emotional regulation and cognitive flexibility and reframing) and management skills, interpersonal and social skills, personal mastery, academic and job skills, planning and life skills, and increased problem-solving abilities (Kaplan, 1999; Kent & Davis, 2010).

The results of the present study highlighted the important role work-life balance plays in mitigating conflict, specifically WFC (time), and increasing individual wellbeing over time. Therefore, managers need to provide human resource initiatives that will enhance their employees' beliefs and feelings about balance between their work and family life. Specifically, flexitime allows health professionals to be flexible in their work arrangements (e.g., to accommodate child-caring arrangements). The healthcare professionals who participated in the present study said this would help them mitigate work-family time-based conflict.

Although this study showed limited relationships between work-family conflict (behaviour) and outcomes (i.e., job satisfaction), this does not necessarily mean that it does not exist or that it has no impact on the health professionals, especially as it did correlate significantly and detrimentally to wellbeing outcomes. If WFC or FWC (behaviour) does occur, it might not necessarily affect the health professionals' job satisfaction, but it may still negatively influence other aspects of the job (Lambert et al., 2006), such as relationships with other

work colleagues. However, the present study found a significant relationship between work-family conflict (behaviour) and diminished psychological health. Therefore, interventions based on mitigating behaviour-based conflict could be used to teach healthcare professionals how to shift behaviours in various situations. Specifically, health professionals need to show empathy to family members, but at work, they need to remain professionally objective and not become personally involved with patients and their illnesses. According to Bruck, Allen, and Spector (2002), training centred on interpersonal flexibility and communication strategies in different roles may help to alter health professionals' behaviour and promote their wellbeing.

STRENGTHS OF THE RESEARCH

The present study had a number of strengths, including the complexity of the theoretical model and the New Zealand setting for the study. In New Zealand, longitudinal research with the variables used in this research is extremely limited, so this research partly fills this void. More important, this research provided information about the mediating effects of resilience and work-life balance on work and family dimensions of wellbeing and these mediators are under-researched in the current literature. As previously mentioned, this study used WFC (strain, time, and behaviour), FWC (strain, time, and behaviour), WFE (development, affect, and capital), and FWE (development, affect, and efficiency) as independent constructs with their own dimensions and cross-domain effects on job and family satisfaction, anxiety/depression, and social dysfunction. These dimensions are not commonly tested comprehensively in the work-family research.

Many work-family researchers (e.g., Frone et al., 1992; Guerts & Sonnetag, 2006; Gutek et al., 1991; Netemeyer et al., 1996) argued that work-family research should examine processes not only in the work domain (WFC), but also in the family domain (FWC), and this research should be longitudinal. Consequently, the present study took a more integrative, dynamic view of the work-family interface and placed equal emphasis on work-family conflict and work-family enrichment and their cross-domain impact on wellbeing. This approach is important because the interdependent links between work and family are complex, and an understanding of these dynamic integrative systems and their effect on workers' health is essential for maintaining an efficient and effective healthcare workforce.

Until recently, most work-family research focussed on the negative factors (anxiety/depression and social dysfunction) that affect people's health and wellbeing. The present study used a balanced psychological approach: That is, it included conflict and enrichment as the predictors and satisfaction and anxiety/depression and social dysfunction as the wellbeing outcomes in order to provide a more comprehensive view of the factors that can affect work and family wellbeing. In particular, resilience and work-life balance were used in a model as promotive factors that can have a positive effect on wellbeing in the workplace. Positive models that accentuate a balanced perspective provide a holistic approach to understanding the complexities associated with employee wellbeing that is lacking in disease and deficit-based models.

The present study built on existing knowledge about work-life balance and resilience and their role as mediators between work-family variables and wellbeing variables. However, it is extremely rare for studies to examine these

two variables (i.e., resilience and work-life balance); therefore, the present study adds to the knowledge about the relationships between the work-family interface and employee wellbeing.

Some researchers (e.g., Virick et al., 2007) have proposed that an absence of work-family conflict and an emphasis on the use of family-friendly workplace policies determine work-life balance. The present study found that the relationship between employee wellbeing and factors such a work-life balance and resilience is complex, and it adds to the literature by showing how these factors affect people over time and across domains (i.e., work and family).

LIMITATIONS OF THE RESEARCH

The present study had several limitations. The results of this study may be limited because the data were obtained by self-report; therefore, responses may have been influenced by common method variance. This may artificially inflate relationships between the latent variables and bias the results concerning associations (Avolio, Yammarino, & Bass, 1991). However, a number of the scales used in the present study had different response formats to help minimise consistency bias (Lapierre & Allen 2006; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Furthermore, some researchers (e.g., Barling, Rogers, & Kelloway, 1995; Doty & Glick, 1998; Spector, 2006) suggested that the problem of common method variance may be over-rated. In addition, Doty and Glick (1998) argued that a longitudinal design mitigates the risks associated with common method variance. Further support is provided by Kenny (2008), who argued that the use of structural equation modelling minimises the effects of common method variance. The present study, therefore, used different response

formats (Lapierre & Allen 2006; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003) and structural equation modelling to reduce the potential influence of common method variance.

The results of the present study were also limited because the data were obtained from healthcare professionals who work for two district healthcare boards and one service healthcare provider in New Zealand. As a result, it may not be possible to generalise the findings and apply them to other organisations. Despite this limitation, for the most part, the findings may be relevant to similar occupations and professions in similar organisations and may be applicable to larger groups of employees. Clearly, future research should be conducted with different groups of employees in order to determine if the present study's findings are applicable to different groups of workers.

This study was longitudinal, and the results were limited by the attrition that occurred between data collection at T1 and T2. While 22.5% of the healthcare professionals invited to participate in the present study responded at T1, only 18.6% of these participants matched the healthcare professionals who responded at T2. As a result, the participants at T2 may not represent the participants at T1, and this limited response rate could have affected the statistical power of the results. In particular, this limitation may have affected the results when the correlations were marginally below the significant threshold. However, the lower optimal sample size cannot explain all the differential relationships that were obtained in this research.

The time-lag between T1 and T2 may also be a limitation of the present study. As previously mentioned, the time lag used in longitudinal studies may affect the results. This is particularly important in mediation analyses because it

takes time to see the effect of mediation, but a time lag that is too long may measure the effect of mediation when this effect has started to fade. Therefore, the time lag can be critically important. Although some researchers (e.g., Cole & Maxwell, 2003; Collins & Graham, 2002; Maxwell & Cole, 2007) pointed out the importance of choosing the correct time lag, there are no current theoretical or empirical recommendations to guide researchers (Sanchez & Viswesvaran, 2002; Selig & Preacher, 2009). In the present study, a 10- to 12-month time lag was considered long enough to identify the relationships among the variables; however, it is possible that a different time lag could have produced different results. Therefore, based on the current findings, future studies should consider investigating the use of different time lags (e.g., 3 months or 6 months) to determine if the present study's results are valid and determine whether these results hold or are more easily determined by a shorter time lag.

The results of the present study may also be limited because only one-way causal effects were tested in the longitudinal analyses. De Lange, Taris, Kompier, Houtman, and Bongers (2004) examined normal, reversed, and reciprocal relationships with a four-wave panel design and found that the reverse causation effects are generally weaker than the normal causal relationship. In addition, it was not the aim of the present study to test reverse causal relationships. Further research should test reverse cross-lagged causal relationships with a less complex model.

The results of the present study may also be limited because data were only collected at two points in time. It is acknowledged that having three data points (i.e., three-wave panel design) would have resulted in a superior estimation of the mediation effects over time (Barnett & Brennan, 1997; Huang, Hammer,

Neal, & Perrin, 2004; Taris & Kompier, 2006) and may have provided a different result. However, Cole and Maxwell (2003) and Zapf, Dormann, and Frese (1996) argued that the two-wave panel design is still superior to a cross-sectional design. In addition, given the constraints on conducting longitudinal research, a three-wave study approach was not feasible in a reasonable timeframe.

RECOMMENDATIONS FOR FUTURE RESEARCH

Although the present study contributed to the knowledge about employee wellbeing by testing a comprehensive model with participants in New Zealand, more information about work and family wellbeing processes is needed, and future research should continue to develop empirical theory in order to keep pace with people's ever changing lives. It is important for future research to examine how resilience and work-life balance develop over time. It is also important to understand the daily subjective fluctuations of an individual's resilience and work-life balance capacities during a normal day at work and examine their relationship to work and family demands, anxiety, stress, and job and family satisfaction. This information could help demonstrate how resilience may build on another positive construct (e.g., work-life balance) and positively influence job and family satisfaction. With this in mind, suitable (and extended) research designs and methods need to be considered.

It may be necessary to use other techniques to obtain data about the processes and dynamic nature of resilience and work-life balance over time. Although researchers have conducted many studies that examined work and family in the antecedents and consequences of work-family conflict, there is still a

lack of information about the processes through which conflict, enrichment, and work-life balance evolve in the work and family domains and their effects on wellbeing outcomes. Many aspects of these processes are complex, and involve multiple actors and their individual lives. Therefore, to understand conflict, enrichment, work-life balance, and resilience processes, it may be helpful to conceptualise them as fluctuating daily according to daily encounters with people and across situations (e.g., work and family life). This involves recognising that these concepts are complex and can be stable (e.g., trait-resiliency) and dynamic and changing (e.g., state-resilience). It is necessary to move away from the use of one or two snapshots in time to infer the degree of conflict, enrichment, resilience, and balance over time.

It is difficult to identify suitable time lags to determine longitudinal causal relationships, but the use of experience sampling methodology (ESM) may be an approach that helps advance work and family research. ESM “allows for a longitudinal examination of the nature and causality directionality among the constructs investigated” (Uy, Foo, & Aguinis, 2010, p. 31). This methodology is used to record participants’ thoughts, feelings, moods, behaviours, and motivational self-appraisals at different times and across different situations throughout individuals’ everyday activities in their natural environment (Stone & Shiffmann, 1994). This approach would be useful for highlighting the duration and strength of episodic conflict (e.g., work-family conflict or enrichment), feelings of balance and satisfaction (e.g., job and family), and levels of strain individuals may experience during the day.

A daily process approach would greatly advance the understanding of resilience and work-life balance and the daily context in which these factors arise

and what situations influence them. Information about daily experiences may enable researchers to capture the flow of these experiences in within-individual relationships and between-people relationships (Davidsson & Wiklund, 2001). This would provide a deeper level of information because the results are not in retrospect, and they are not subject to the memory bias and aggregation effects that may impair the validation of the information.

There has been an abundance of research that has examined work-family conflict; however, little is known about work-family conflict as a process. According to Greenblatt (2002), “many work/life conflicts arise within and between people who feel or know they cannot physically, psychologically, cognitively, or socially manage all the demands placed on them” (p. 180). ESM could reveal the perceptions and cognitive appraisals made about the demands and identify what strategies were used, if any, to minimise the conflict. In addition, there are a myriad of situational and contextual factors that contribute to the episodic events that occur each day but are not remembered, yet all of these factors are, to some degree, involved in the overall assessment of the stressful situation.

According to COR (Hobfoll, 1989, 2001), stress is caused by the combined effect of subjective perceptions of an event as taxing or exceeding available resources. The information obtained by identifying the actual processes in situ as well as an individual’s perceptions of stressors could help managers and other people design interventions that could minimise negative affect and mitigate work-family conflict.

In the present study, it is possible that the use of qualitative research methods, such as interviews and diaries, may have added to the strength of the

results by providing a more in-depth understanding of the processes involved in the work-family wellbeing model. In particular, between T1 and T2, significant differences were found between some of the means (e.g., resilience decreased and work-life balance increased). Qualitative data may have been able to explain these differences (Patton, 2002) and reveal some of the more subtle aspects of people's daily work and family life.

Future research should replicate and investigate in greater depth the model presented in this research. In this study, resilience was used as a mediator between the work-family and family-work (i.e., conflict and enrichment) and wellbeing outcomes (i.e., job and family satisfaction, anxiety/depression, and social dysfunction). Future research should include resilience as a state and trait in order to obtain more information about the relationship between resilience and wellbeing. In addition, future research should investigate the emotional process (e.g., perception, attention, interpretation, and recall) (Rusting, 1998) that triggers a resilience response. Gathering data during an episodic event may yield quality information about resilience and work-life balance and their relationship with other variables and help unravel the mystery that surrounds response mechanisms and their functions. In addition, it may be advantageous to use resilience as a moderator between the work and family interface and wellbeing. There was an initial investigation into using resilience as a moderator in the present study, but it provided limited results.

OVERALL CONCLUSION

The present study makes several important contributions to the work and family wellbeing literature by identifying the nature and extent of work-family

conflict and work-family enrichment experienced by healthcare professionals and the impact this has on their wellbeing. In particular, this study provides cross-sectional evidence that healthcare professionals experience work-family conflict that may contribute to high levels of anxiety/depression and social dysfunction and low levels of job and family satisfaction, resilience, and work-life balance.

The present study also found evidence that resilience and work-life balance may contribute to work→family enrichment; however, for family→work enrichment, the results were less conclusive. While the findings in this study add to the body of knowledge about work and family wellbeing, the results clearly show that we know more about the consequences of work-family conflict than we do about the consequences of work-family enrichment, which suggests the need for more empirical research that examines the individual characteristics that enable healthcare professionals, and employees in general, to integrate their work and family lives.

This research has provided a base for exploring resilience and work-life balance in a wellbeing model and found evidence for the cross-sectional mediation effects of resilience and work-life balance. Although there was limited evidence for the mediating effect of resilience and work-life balance over time, the longitudinal findings suggested that strategies to reduce health professionals' time-based conflict experiences may increase their wellbeing.

To conclude, this research adds new knowledge about the impact of work and family, wellbeing, and the role of resilience and work-life balance in New Zealand settings, and it provides evidence that resilience and work-life balance are complex and multi-dimensional phenomena. It is also apparent from this study that more research is needed that examines resilience in organisational settings.

Given that work-life balance can now be measured directly, it is also recommended that future research should investigate its antecedents and consequences in order to advance theory and practice. The findings in this research provide information that will be useful to organisations, personnel researchers, behavioural scientists, and management practitioners.

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APPENDIX A

- **Work-Life Balance Survey**

Welcome to the Work-Life Balance Project Time 1 Survey



PROJECT INFORMATION SHEET

Time 1



Dear Staff Member,

I am a student at the University of Waikato and conducting a project for the completion of my PhD in Organisational Psychology.

The enclosed survey is part one of a three year international research project that aims to gather information about people's experiences of combining work and non-work (lifestyle) aspects of their lives.

I would like to encourage you to participate in the first phase of this research as your participation is important to the success of this project. It will provide the manager/s of your organization valued information on work-life balance and work attitudes associated to your job. So please complete the survey, make a difference and help make your organisation a better place to work. Your participation in this survey is voluntary.

All data will be coded and **No personally identifiable information will be released at any stage.** The survey will be summarized into a report of the main findings and you will receive a copy of this report. All data collected during the research will be securely stored to protect your anonymity.

This research occurs under the direction of the Psychology Department, University of Waikato Ethical Guidelines and as such, your withdrawal from this research at any stage is permissible and will incur no penalty whatsoever.

The survey will take you approx. 25 minutes to complete then place your completed questionnaire in the stamped addressed envelope provided. By completing and returning the survey you are consenting to participate in the research.

.If you would like further information about this project, or have problems completing this questionnaire please contact me.

Thank you for taking the time to complete this survey

Work-Life Balance

Waikato District Health Board Confidential Survey Time 1

The aim of this survey is to find out which work and life demands influence, work performance and family outcomes, as well as identify which work-life policies are of most value to employers and employees.

Remember that no personally identifiable information will be collected on the survey (other than general demographic and work role information). All participation is voluntary and entirely confidential.

If this is the first time you have filled out this survey in order to ensure that your responses can be matched over time, you will need to create a codeword.

How to create your codeword:-

The initials of your name e.g. If your name is **Derek Riley** = **dr**

Date of your birth e.g. if you were born on the 17th = **17**.

First 3 letters of the month of your birth e.g. If you were born in January = **jan**

Your code word would then be: **dr/17/jan**

Create your code word

_____/_____/_____
The initials of your name / date of your birth /first 3 letters of the month of birth

It is important you remember your code word for next time you fill out this survey

If you get married during the three year term of this project please use your maiden name

Thank you for your participation.

Work Family Conflict

The following items ask you to think about the demands on your time and energy from both your job and your family/life commitments. Use the response scale below to answer the question.

1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly agree

Please tick your response	Strongly disagree					Strongly agree				
	1	2	3	4	5	1	2	3	4	5
1. My work keeps me from my family/life activities more than I would like.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The time I must devote to my job keeps me from participating equally in household responsibilities and activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I have to miss family/life activities due to the amount of time I must spend on work responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The time I spend on family/life responsibilities often interferes with my work responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The time I spend with my family/life often causes me to not spend time in activities at work that could be helpful to my career.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I have to miss work activities due to the amount of time I must spend on family/life responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. When I get home from work I am often too frazzled to participate in family/life activities/responsibilities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I am often so emotionally drained when I get home from work that it prevents me from contributing to my family/life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Due to stress at home, I am often preoccupied with family/life matters at work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Because I am often stressed from family/life responsibilities, I have a hard time concentrating on my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Tension and anxiety from my family life often weakens my ability to do my job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. The problem-solving behaviours I use in my job are not effective in resolving problems at home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Behaviour that is effective and necessary for me at work would be counter-productive at home.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. The behaviours I perform that make me effective at work do not help me to be a better parent and spouse.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. The behaviours that work for me at home do not seem to be effective at work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Behaviour that is effective and necessary for me at home would be counter-productive at work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. The problem solving behaviours that work for me at home do not seem to be as useful at work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Work-Family Demands

These questions evaluate the demands that your work and family make on you. Please use the response scale below to answer the questions.

Please tick your response	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	1	2	3	4	5
1. My job requires all of my attention.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I feel like I have a lot of work demand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I feel like I have a lot to do at work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. My work requires a lot from me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I am given a lot of work to do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I have to work hard on family-related activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. My family requires all of my attention.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I feel like I have a lot of family demand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I have a lot of responsibility in my family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Work Engagement

The following statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, tick the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you felt it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

0 = Never

1 = Almost never

2 = Rarely

3 = Sometimes

4 = Often

5 = Very often

6 = Always

Please tick your response	Never							Always	
	0	1	2	3	4	5	6		
1. At my work, I feel bursting with energy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2. At my job, I feel strong and vigorous.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3. I am enthusiastic about my job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4. My job inspires me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5. When I get up in the morning, I feel like going to work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6. I feel happy when I am working intensely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
7. I am proud of the work that I do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Work Engagement Continued

The following statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, tick the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you felt it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

0 = Never 1 = Almost never 2 = Rarely 3 = Sometimes
4 = Often 5 = Very often 6 = Always

Please tick your response	0	1	2	3	4	5	6
8. I am immersed in my work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I get carried away when I am working.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Work-Family Enrichment

These questions ask you to think about the positive side of balancing work and family commitments. Use the response scale below to answer the question.

1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly agree

Please tick your response	Strongly disagree					Strongly agree				
	1	2	3	4	5	1	2	3	4	5
My involvement in my work:										
1. Helps me to understand different viewpoints and this helps me to be a better family member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Helps me to gain knowledge and this helps me to be a better family member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Helps me acquire skills and this helps me to be a better family member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Puts me in a good mood and this helps me to be a better family member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Makes me feel happy and this helps me to be a better family member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Makes me cheerful and this helps me to be a better family member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Helps me feel personally fulfilled and this helps me to be a better family member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Provides me with a sense of accomplishment and this helps me be a better family member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Provides me with a sense of success and this helps me to be a better family member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Work-Family Enrichment continued

These questions ask you to think about the positive side of balancing work and family commitments. Use the response scale below to answer the question.

1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly agree

Please tick your response	1	2	3	4	5
My involvement in my family:					
10. Helps me gain knowledge and this helps me to be a better worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Helps me acquire skills and this helps me to be a better worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Helps me expand my knowledge of new things and this helps me to be a better worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Puts me in a good mood and this helps me to be a better worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Makes me feel happy and this helps me to be a better worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Makes me cheerful and this helps me to be a better worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Requires me to avoid wasting time at work and this helps me to be a better worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Encourages me to use my work time in a focused manner and this helps me to be a better worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Causes me to be more focused at work and this helps me to be a better worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Work Control

Tick one of the six categories for each statement as it applies to you.

1. Very inaccurate 2. Mostly inaccurate 3. Slightly inaccurate
 4. Slightly accurate 5. Mostly accurate 6. Very accurate

Please tick your response	Very Inaccurate Very accurate					
	1	2	3	4	5	6
1. You decide on your own how to go about doing the work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The job gives you a chance to use your personal initiative or judgment in carrying out the work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Your job gives you considerable opportunity for independence and freedom in how you do the work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Work-Family Organizational Policies

Listed below are benefits that organizations can offer to help employees balance their work/non-work lives. For each benefit listed, please check the appropriate box indicating whether or not the benefit is currently offered and whether or not you use it if it is offered.

Please tick your response	Not offered but I don't need it	Not offered but I could use it	Offered but not used	Offered and I use it
	1	2	3	4
1. Flexitime (choice in starting and ending time)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Compressed work week (e.g., four 10 hour days)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Telecommuting (i.e. working from home).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Part-time work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. On-site child-care centre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Subsidized local child-care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Child-care information/referral services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Paid maternity leave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Paid paternity leave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Elder care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Work-Life Balance

Use the response scale below to answer the question.

0 = Disagree completely 1 = Disagree 2 = Rarely agree 3 = Neutral
4 = Agree 5 = Often agree 6 = Agree completely

When I reflect over my work and non-work activities (non-work includes your regular activities outside of work such as family, friends, sports, study etc), over the past 3 months, I conclude that:

Please tick your response	Disagree Completely						Agree Completely
	0	1	2	3	4	5	6
1. I currently have a good balance between the time I spend at work and the time I have available for non-work activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I have difficulty balancing my work and non-work activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I feel that the balance between my work demands and non-work activities is currently about right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Overall, I believe that my work and non-work life are balanced.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Work and Family Support

These questions ask about the support you receive from other people about work-related problems. Using the response scale below indicate how you were provided with the following support during the past 3 months?

1. Never
4. Often

2. Very Occasionally
5. Very often

3. Sometimes
6. All the time

Please tick your response	Never						All the time
	1	2	3	4	5	6	
How often did you get the following support from your supervisor ?							
1. helpful information or advice?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. sympathetic understanding and concern?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. clear and helpful feedback?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. practical assistance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
How often did you get the following support from your colleagues ?							
5. helpful information or advice?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. sympathetic understanding and concern?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. clear and helpful feedback?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. practical assistance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
How often did you get the following support from your Family ?							
9. helpful information or advice?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. sympathetic understanding and concern?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
11. clear and helpful feedback?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
12. practical assistance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
How often did you get the following support from your friends ?							
13. helpful information or advice?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
14. sympathetic understanding and concern?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
15. clear and helpful feedback?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
16. practical assistance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Job Performance

1. On a scale of 0 to 10 where 0 is the worst job performance anyone could have at your job and 10 is the performance of a top worker, how would you rate the usual performance of **most** workers in a job similar to yours?

Worst											Top
0	1	2	3	4	5	6	7	8	9	10	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2. Using the same 0 to 10 scale, how would you rate your **usual** job performance over the past 6 months?

Worst											Top
0	1	2	3	4	5	6	7	8	9	10	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

3. Using the same 0 to 10 scale, how would you rate your **overall** performance on the days you worked during the past 4 weeks?

Worst											Top
0	1	2	3	4	5	6	7	8	9	10	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Absenteeism

1. Thinking back over the past four (4) months, approximately how many days have you been absent? (Excluding recreational and annual leave)	Please state: _____ (days)
---	----------------------------

Turnover Intentions

This question asks you about your intentions to leave your organisation. Use the response scale below to answer the question.

1 = Not at all 2 = Rarely 3 = Sometimes 4 = Often 5 = A great deal

Please tick your response	Not at all					A great deal				
	1	2	3	4	5	1	2	3	4	5
1. How often have you seriously considered leaving your current job in the past 6 months?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. How likely are you to leave your job in the next 6 months?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. How often do you actively look for jobs outside your present organisation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Family Satisfaction

The following items ask you to reflect on how satisfied you are with your family/home life. Use the response scale below to answer the question.

1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree
4 = Neutral 5 = Slightly agree 6 = Moderately agree 7 = Strongly agree

Please tick your response	Strongly disagree Strongly agree						
	1	2	3	4	5	6	7
1. In general, I am satisfied with my family/home life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. All in all, the family/home life I have is great	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. My family/home life is very enjoyable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Job Satisfaction

These questions ask how satisfied you are with your current job. Use the response scale below to answer the question.

1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly agree

Please tick your response	Strongly disagree Strongly agree				
	1	2	3	4	5
1. In general I don't like my job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. All in all I am satisfied with my job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. In general I like working here	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Organisational Culture

Use the response scale below to answer the question.

1 = Totally disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Totally agree

Please tick your response	Totally disagree Totally agree				
	1	2	3	4	5
1. Managers in this organization are generally considerate towards the private life of employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. In this organization, people are sympathetic towards care responsibilities of employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. In this organization it is considered important that, beyond their work, employees have sufficient time left for their private life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. This organization is supportive of employees who want to switch to less demanding jobs for private reasons.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. To get ahead at this organization, employees are expected to work overtime on a regular basis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Organisational Culture continued

Use the response scale below to answer the question.

1 = Totally disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Totally agree

Please tick your response	Totally disagree			Totally agree	
	1	2	3	4	5
6. In order to be taken seriously in this organization, employees should work long days and be available all of the time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. In this organization, employees are expected to put their job before their private life when necessary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Employees who (temporarily) reduce their working hours for private reasons are considered less ambitious in this organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. To turn down a promotion for private reasons will harm one's career progress in this organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Employees who (temporarily) reduce their working hours for private reasons are less likely to advance their career in this organization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. In this organization, it is more acceptable for women to (temporarily) reduce their working hours for private reasons than for men	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Family Control

Please indicate the extent that each of the statements below reflects how you feel about your family life.

1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree
4 = Neutral 5 = Slightly agree 6 = Moderately agree 7 = Strongly agree

Please tick your response	Strongly disagree				Strongly agree		
	1	2	3	4	5	6	7
1. There is really no way I can solve some of the problems I have in my family life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Sometimes, I feel that I'm being pushed around in my family life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I have little control over the things that happen to me in my family life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I can do just about anything I really set my mind to in my family life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I often feel helpless in dealing with the problems in my family life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. What happens to me in my family life in the future mostly depends on me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. There is little I can do to change many of the important things in my family life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Culture

Please indicate the extent that each statement below reflects how you feel about your family life and tick the appropriate response.

1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree
4 = Neither agree or disagree 5 = Slightly agree 6 = Moderately agree 7 = Strongly agree

Please tick your response	Strongly disagree				Strongly agree		
	1	2	3	4	5	6	7
1. I would rather depend on myself than others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I rely on myself most of the time, I rarely rely on others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I often do my own thing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. My personal identity, independent of others, is very important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. If a co-worker gets a prize, I would feel proud.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The wellbeing of my co-workers is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. To me, pleasure is spending time with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I feel good when I cooperate with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Health

These questions ask you about your physical and mental health. Please circle your answer.
Have you recently experienced the following during the past few weeks?

Please circle your response				
1. been able to concentrate on whatever you are doing?	<i>Better than usual</i>	<i>Same as usual</i>	<i>Less than usual</i>	<i>Much less than usual</i>
2. been losing confidence in yourself?	<i>Not at all</i>	<i>No more than usual</i>	<i>Rather more than usual</i>	<i>Much more than usual</i>
3. felt that you were playing a useful part in things?	<i>More so than usual</i>	<i>Same as usual</i>	<i>Less useful than usual</i>	<i>Much less useful</i>
4. lost much sleep over worry?	<i>Not at all</i>	<i>No more than usual</i>	<i>Rather more than usual</i>	<i>Much more than usual</i>
5. felt capable of making decisions about things?	<i>More so than usual</i>	<i>Same as usual</i>	<i>Less so than usual</i>	<i>Much less capable</i>
6. felt constantly under strain?	<i>Not at all</i>	<i>No more than usual</i>	<i>Rather more than usual</i>	<i>Much more than usual</i>

Health continued

These questions ask you about your physical and mental health. Please circle your answer.
Have you recently experienced the following during the past few weeks?

Please circle your response				
7. been able to face up to your problems?	<i>More so than usual</i>	<i>Same as usual</i>	<i>Less able than usual</i>	<i>Much less able</i>
8. felt that you couldn't overcome your difficulties?	<i>Not at all</i>	<i>No more than usual</i>	<i>Rather more than usual</i>	<i>Much more than usual</i>
9. been able to enjoy your normal day-to-day activities?	<i>More so than usual</i>	<i>Same as usual</i>	<i>Less so than usual</i>	<i>Much less than usual</i>
10. been feeling unhappy and depressed?	<i>Not at all</i>	<i>No more than usual</i>	<i>Rather more than usual</i>	<i>Much more than usual</i>
11. been feeling reasonably happy all things considered?	<i>More so than usual</i>	<i>About same as usual</i>	<i>Less so than usual</i>	<i>Much less than usual</i>
12. been thinking of yourself as a worthless person?	<i>Not at all</i>	<i>No more than usual</i>	<i>Rather more than usual</i>	<i>Much more than usual</i>

Health continued

Over the past 6 months, how often have you experienced each of the following symptoms?

Please tick your response.	Less than once per month or never	Once or twice per month	Once or twice per week	Once or twice per day	Several times per day
1. An upset stomach or nausea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. A backache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Trouble sleeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Headache	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Acid indigestion or heartburn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Eye strain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Diarrhoea	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Stomach cramps (Not menstrual)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Constipation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Ringing in the ears	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Loss of appetite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Dizziness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Tiredness or fatigue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Resilience

Please read the following statements and tick the appropriate response.

1 = Strongly disagree 2 = Moderately disagree 3 = Slightly disagree
4 = Neutral 5 = Slightly agree 6 = Moderately agree 7 = Strongly agree

Please tick your response	Strongly disagree Strongly agree						
	1	2	3	4	5	6	7
1. I usually manage one way or another.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I feel proud that I have accomplished things in life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I usually take things in stride.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I am friends with myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I am determined.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I keep interested in things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. My belief in myself gets me through hard times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. My life has meaning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. When I'm in a difficult situation, I can usually find my way out of it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I have enough energy to do what I have to do.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Happiness

For each of the following statements and/or questions, please circle the point on the scale that you feel is most appropriate in describing you.

1. In general, I consider myself:

1.	2.	3.	4.	5.	6.	7.
not a very happy person			neutral			a very happy person

2. Compared to most of my peers, I consider myself:

1.	2.	3.	4.	5.	6.	7.
less happy			neutral			more happy

1. 2. 3. 4. 5. 6. 7.

not at all

neutral

a great
deal

1. 2. 3. 4. 5. 6. 7.

not at all

neutral

a great
deal

Involvement with my Family:

Please indicate the extent that each of the following statements reflects how you feel about your family.

1 = Strongly disagree

2 = Moderately disagree

3 = *Slightly disagree*

4 = Neutral

5 = *Slightly agree*

6 = Moderately agree

7 = Strongly agree

[illegible]

Demographics

Please tick the most appropriate box or write your answer in the space provided.

1. Are you male or female?	<input type="checkbox"/> Male	<input type="checkbox"/> Female
2. How old are you?	Please state: _____ (years)	
3. What is your current marital status?	<input type="checkbox"/> Single/never married <input type="checkbox"/> Married/cohabitating	<input type="checkbox"/> Divorced/separated <input type="checkbox"/> Widowed
4. Do you live alone or with other people?	Please circle your response below. 1. Live alone, with no children or other adults 2. Live with own children but no other adults 3. Live with other adults e.g. family, friends but no children 4. Live with other adults and with own children.	
5. If married/cohabitating, does your spouse/partner work outside the home?	<input type="checkbox"/> Yes full-time <input type="checkbox"/> Yes part-time <input type="checkbox"/> No	
6. What is your highest grade or academic level completed?	<input type="checkbox"/> Secondary education <input type="checkbox"/> Diploma	<input type="checkbox"/> University/College degree <input type="checkbox"/> Postgraduate degree
7. How long have you worked for this company?	Please state: _____ (years)	
8. What is your job role/title?	Please state: _____	
9. What organizational department do you work in		
10. Please indicate what group your occupation belongs to	1. <input type="checkbox"/> Managers 2. <input type="checkbox"/> Professionals 3. <input type="checkbox"/> Technicians and associate professions 4. <input type="checkbox"/> Clerical support workers 5. <input type="checkbox"/> Service and sales workers. 6. <input type="checkbox"/> Skilled agricultural, forestry and fisheries workers. 7. <input type="checkbox"/> Craft and related trades workers. 8. <input type="checkbox"/> Plant and machine operators, and assemblers. 9. <input type="checkbox"/> Manual workers. 0. <input type="checkbox"/> Armed forces occupations	
11. What is your nationality ethnic background	Please state: _____	

Working week and household responsibilities

Please tick the most appropriate box or write your answer in the space provided.

1. How many hours do you normally work in a typical week?	Please state: _____(hours per week).		
2. How many days per week do you work in a typical week?	Please state: _____ (days per week)		
3. How is your work classified?	<input type="checkbox"/> Full time	<input type="checkbox"/> Part time	<input type="checkbox"/> Shift <input type="checkbox"/> Casual
4. Would you prefer to work more, less or the same hours as you currently work?	<input type="checkbox"/> More <input type="checkbox"/> Same <input type="checkbox"/> Less <input type="checkbox"/> Not sure/NA.		
5. If you answered 'more' or 'less' to the above question, how many actual hours would you prefer to work in a typical week?	preferred hours per week _____		
6. What is the relative importance to you of your work and non-work activities?	1. <input type="checkbox"/> Work much more than non-work activities. 2. <input type="checkbox"/> Work somewhat more than non-work activities. 3. <input type="checkbox"/> Work and non-work activities equally. 4. <input type="checkbox"/> Non-work activities somewhat more than work. 5. <input type="checkbox"/> Non-work activities much more than work.		
7. How many hours do you spend in a typical week looking after dependants?	Please state: _____ (hours per week)		
8. How many hours do you spend in a typical week on housework?	Please state: _____ (hours per week)		
9. What is the number and age of the dependants you care for in your home? (children, parents, other e.g. disabled adults)	Children Number Age/s	Children Number Age/s	Children Number Age/s
10. I receive domestic help (paid or unpaid) at home with household tasks (care of children, household work etc.	1. <input type="checkbox"/> Not at all. 2. <input type="checkbox"/> Some of the time. 3. <input type="checkbox"/> Fairly often 4. <input type="checkbox"/> Most of the time. 5. <input type="checkbox"/> All of the time.		

Any comments you would like to make:

**Thank you for taking the time to complete this questionnaire.
Every response is important and will be included in this research**

Please place the completed survey in the freepost envelope and post to us.

Thank you

APPENDIX B

- **Sample of Organisational Report**

Note: All organisations involved in the Work-Life Balance Project in New Zealand had feedback on their T1, T2, and T3 results. This document was the report that was presented to XXXX District Health Board at Time 1.

Work Life Balance Project

Interim Report of Time One results from a research collaboration between XXXXX District Health Board and University of Waikato



Derek Riley
and
Michael O'Driscoll

Department of Psychology
University of Waikato

Overview

This report details the interim research results of the work-life balance project being conducted by the University of Waikato and the XXXX District Health Board. This first report contains data collected during phase one of the project. The research will also identify which work-life policies and the preferred method of communication that are of most value to the employees of your organisation.

Method

The researcher Derek Riley attended meetings with the Human Resource representatives where he introduced the WLB Project. All the employees of XXXX District Health Board were encouraged to participate in the research, to ensure that the findings are representative of all employees. The surveys were made available by hard copy with a stamped self addressed envelope provided for delivery to the researcher. One thousand three hundred and one (1,301) employees responded to the questionnaire.

Results Discussion

Due to the high sample size the correlations analyses presented in this report have used the guidelines adopted by Cohen (1998, pp. 79-81). Medium correlation $r = .30 - .49$. and large $r = .50 - 1.0$.

Employee Demographics

The employees' average age was 44 years, ranging from 20 to 64 years. Males comprised 15% (200) of the workforce, while the remaining 84% (1,091) were female. The average number of hours worked per week being a 40 hour week and the majority of respondents, 62% indicated they work a 5 day working week. The majority of employees, 56% (696) wanted to work the same hours while 38% (472) wanted to work fewer hours and 6% (75) more hours.

Work-Family Policies Availability and Usage

In this research employees were asked to indicate work-family policies that could help employees balance their work-non work lives. They were asked which policies were available and whether they had used them or not and if they were not available whether they could use them or didn't need them. The findings are detailed below in figure 1.

	Not offered but I don't need it	Not offered but I could use it	Offered but not used	Offered and I use it
Flexitime (choice in starting and ending time)	273	586	107	313
Compressed work week (e.g., four 10 hour days)	454	571	123	129
Telecommuting	791	259	63	84
Part-time work	425	173	288	394
On-site child-care centre	827	140	282	10
Subsidized local child-care	884	182	154	10
Child-care information/referral services	871	152	178	6
Paid maternity leave	457	43	631	105
Paid paternity leave	580	70	511	31
Elder care	888	173	129	8
Paid adoption leave	871	37	253	4
Special leave (e.g. compassionate, cultural).	245	190	540	267
Purchased leave	610	242	171	80

Particular interest is shown in having a compressed working week, the opportunity of telecommuting and purchased leave.

For the purpose of this report the distribution of scores for the variables are presented across all sections/department at XXXX DHB.

Communication

High quality frequent communication is an essential component to manage task interdependencies and to build effective relationships. The results of the communication section of the survey are provided in figures 2 and 3.

	Very poorly	Somewhat	Neutral	Mostly	Very well
The organisation keeps me well informed about:					
1. Major changes that are coming up	131	352	158	520	133
2. Opportunities for my own improvement	251	300	270	371	100
3. Successes and innovations within the organisation	108	295	226	496	165

Figure 2 illustrates that if we collapse the response scale “mostly and “very well” together the organisation effectively communicates the successes and innovation within the organisation. However “opportunities for my own improvement” appears to be limiting with 251 participants rating this as “very poorly”.

Figure 3 outlines that the preferred method to kept the participants updated in what is happening in the organisation is by manger/team leader, ‘mostly preferred’ (566) and highly preferred (325) and by team meetings ‘mostly preferred’ (585) and ‘highly preferred’ (282). The least preferred method is by the Pulse, ‘not preferred’ (435).

	Not preferred	Sometimes Preferred	Neutral	Mostly preferred	Highly preferred
1. My manager/ team leader	64	142	177	566	325
2. Staff meetings	75	136	200	585	282
3. Espresso	269	158	433	285	103
4. Intranet	171	152	257	433	251
5. The Pulse	435	141	474	125	35
6. Internal memos	218	199	341	388	116
7. Posters	335	221	413	223	62
8. Notice boards	363	185	386	259	73
9. Staff forums	252	183	395	306	121

Figure 3. Preferred method of communication

Work-Life Balance

Work-life balance refers to an employee's perception that work and non-work activities are compatible with individual's current life priorities. The respondents were asked to consider their work and non work activities over the past 3 months. The mean was 3.7 on a 7 point scale ranging from 0 = low work-life balance and 6 indicative of high levels of work-life balance. More than half, 807 participants (62%) agreed that they had satisfactory levels of work-life balance, however 406 of the 1,297 employees indicated that their level of work-life balance was unsatisfactory. The results are provided below (figure 4).

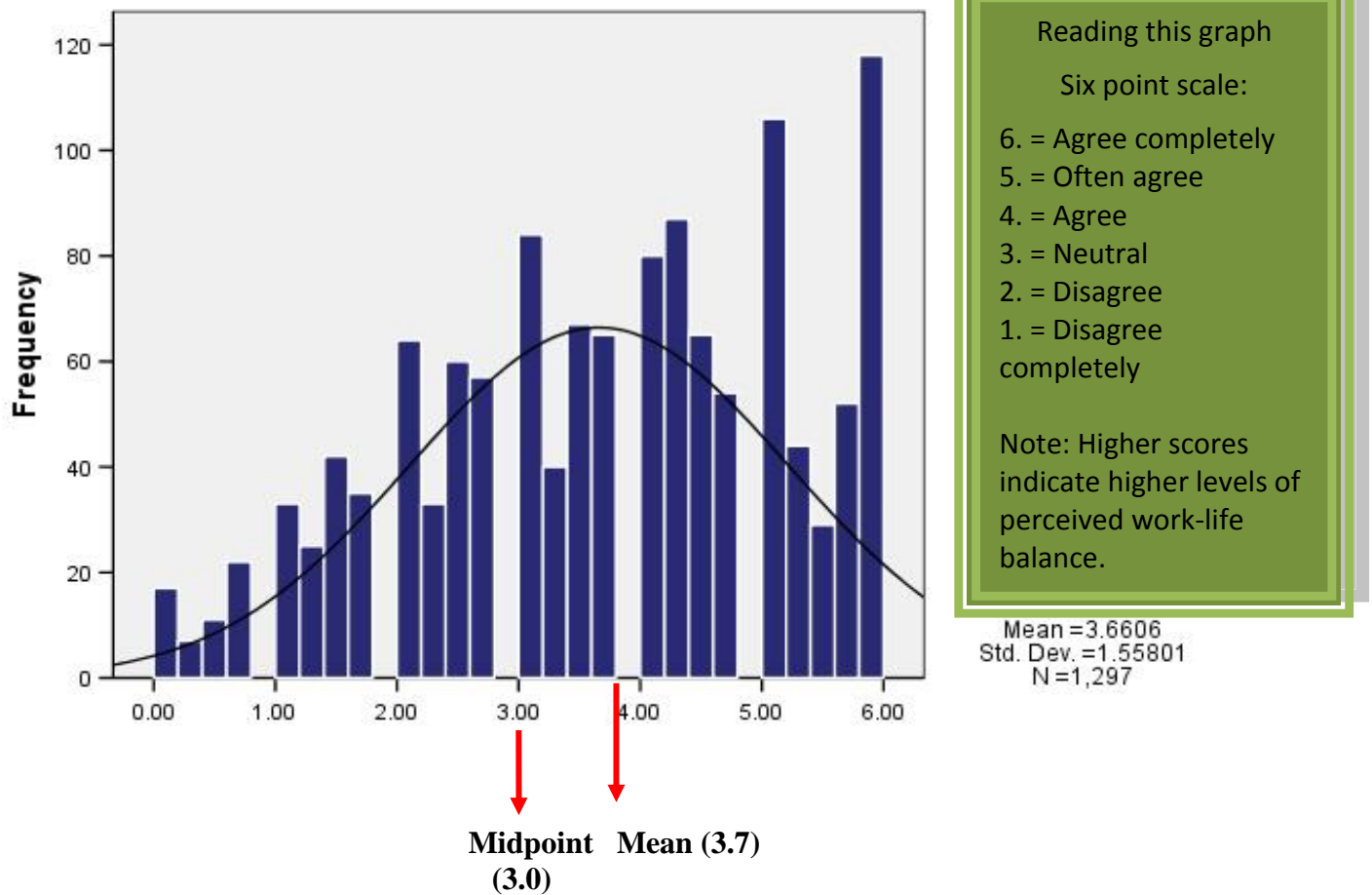


Figure 4. The midpoint and mean scores for work-life balance

Job Satisfaction

Job satisfaction is a subjective emotional experience. Work is such a large part of an employee's life and is represented by a belief that employees who are satisfied with their work experiences and environment will stay longer, will attend work regularly and perform at an optimum level. Respondents were asked to rate their levels of satisfaction on a 5 point scale with 1 indicating low levels of job satisfaction. The respondents of this survey indicated a mean score of 4.0 suggesting moderate to high levels of job satisfaction on average. 82% (1068) of the respondents indicated moderate to high levels of job satisfaction, which were above the midpoint score of 3.0, see figure 5 below.

In this sample job satisfaction was highly correlated to work engagement, and turnover intentions. Medium correlations were found for work-family

conflict, work-family facilitation, work-life balance, supervisor support, organisational culture, and stress/strain.

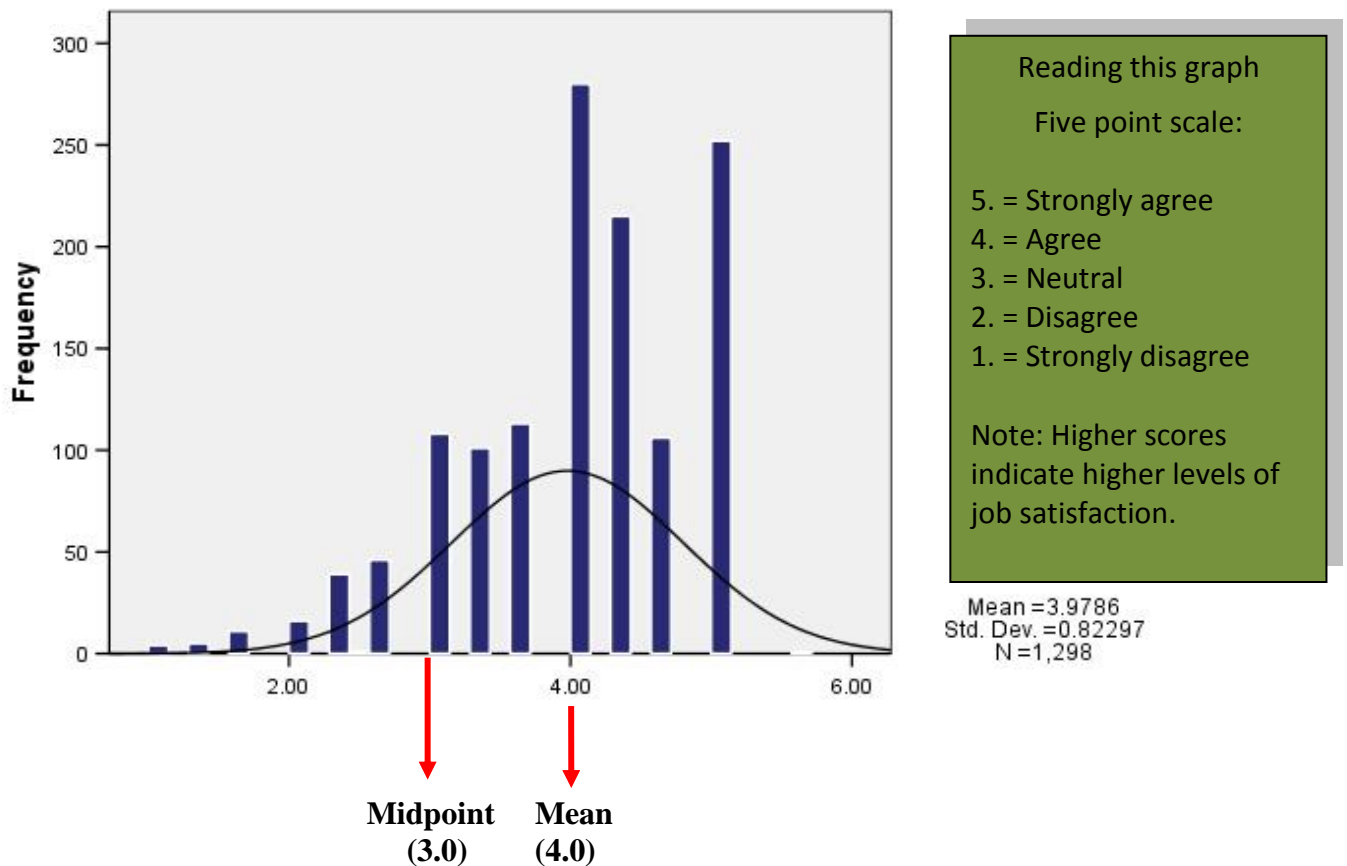
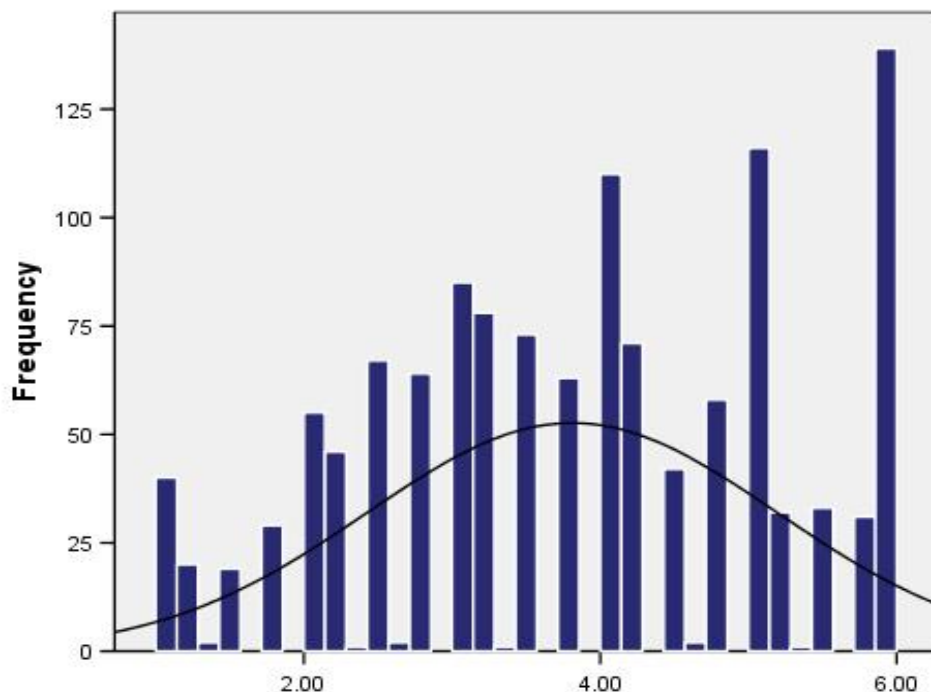


Figure 5. The midpoint and mean scores for job satisfaction.

Supervisor Support

Supervisors play an important role in structuring the work environment and providing accurate and timely information and feedback to employees. The supervisor provides employees with expressions of emotional concern, practical assistance, and information support. Research has found that the attitude of supervisors to be one of the key determinant of work-life practice and outcomes. The participants were asked about the support they received from their supervisors about work-related problems, during the past 3 months. 81 (6.3%) participants perceived that they 'never' received supervisor support, 198 (15.5%) participants, 'very occasionally', 302 (24%) 'sometimes', 286 (22%) 'often', 242 (19%) participants 'very often' and 170 (13%) 'all the time'.



Reading this graph
Six point scale:

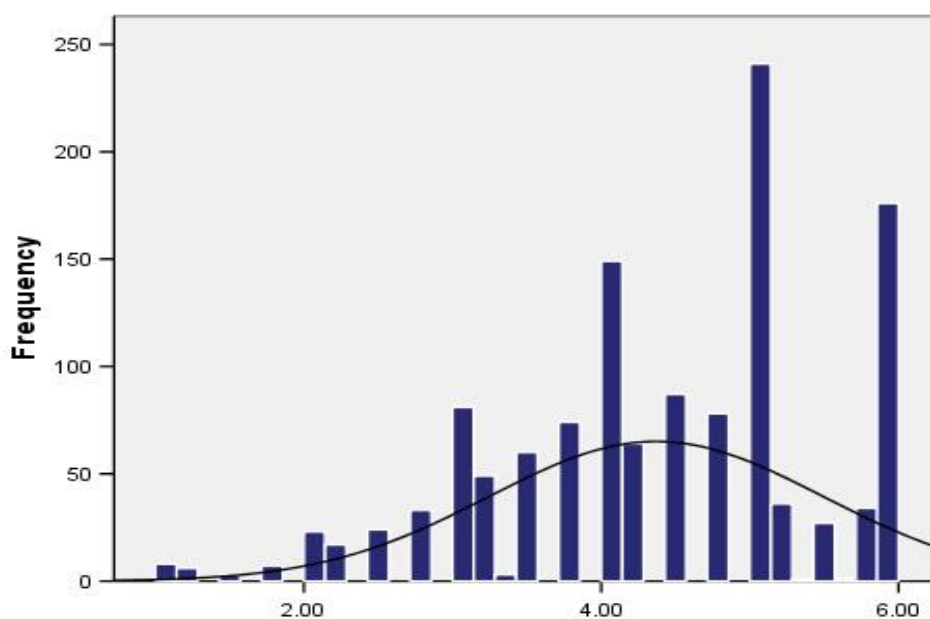
6. = All the time
5. = Very often
4. = Often
3. = Sometimes
2. = Very occasionally
1. = Never
Note: Higher scores indicate higher levels of perceived supervisor support

Mean = 3.8108
Std. Dev. = 1.38576
N = 1,280

Figure 6. The scores for supervisor support ranging from 1 = 'never' to 6 'all the time'. In this study supervisor support had a medium correlation with organisational culture, turnover intentions, and colleague support

Colleague Support

The participants were asked about the support they received from their colleagues about work-related problems, during the past 3 months.



Reading this graph
Six point scale:

6. = All the time
5. = Very often
4. = Often
3. = Sometimes
2. = Very occasionally
1. = Never
Note: Higher scores indicate higher levels of perceived colleague support

Mean = 4.3697
Std. Dev. = 1.12309
N = 1,282

Figure 7. The scores for colleague support ranging from 1 = 'never' to 6 'all the time'.

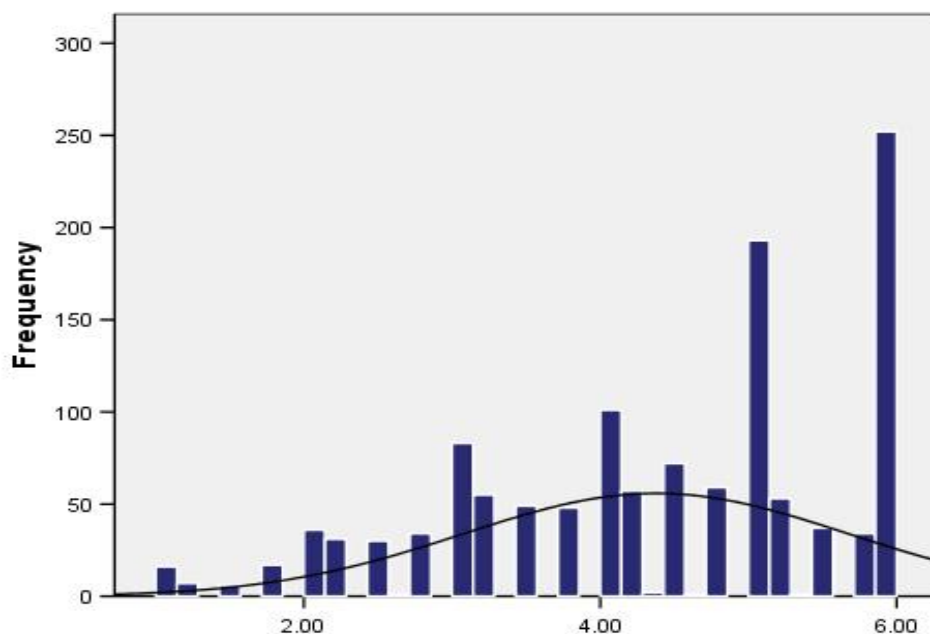
17 (13%) of all the participants surveyed perceived that they ‘never’ received colleague support. 71 (5.6%) ‘very occasionally’; 226 (17.6%) ‘sometimes’; 374 (29.2%) ‘often’; 383 (29.8%) ‘very often’; and 211 (16.5%) ‘all the time’.

In this study, colleague support had a medium correlation to friend support.

Family Support

The participants were asked about the support they received from their family about work-related problems, during the past 3 months. The participants were asked how often they got support from their family member/s in e.g. practical assistance, clear and helpful feedback, helpful information or advice and sympathetic understanding and concern. 29 (2.3%) of the participants indicated they ‘never’ receive support from their family member. 114 (8.9%) ‘very occasionally’; 22 (1.7%) ‘sometimes’; 280 (22%) ‘often’, 344 (27%) ‘very often’; and 286 (22%) ‘all the time’.

Family support was highly correlated with friend support and medium correlated with family satisfaction and family control.



Reading this graph
Six point scale:

- 6. = All the time
- 5. = Very often
- 4. = Often
- 3. = Sometimes
- 2. = Very occasionally
- 1. = Never

Note: Higher scores indicate higher levels of perceived family support

Mean = 4.3758
Std. Dev. = 1.30191
N = 1,275

Turnover Intentions

Turnover intentions have been included in many studies that investigate work-life balance. In this research turnover intention was assessed with 3 items on a scale ranging from 1 to 5, with the higher score representing high levels to leave the organisation.

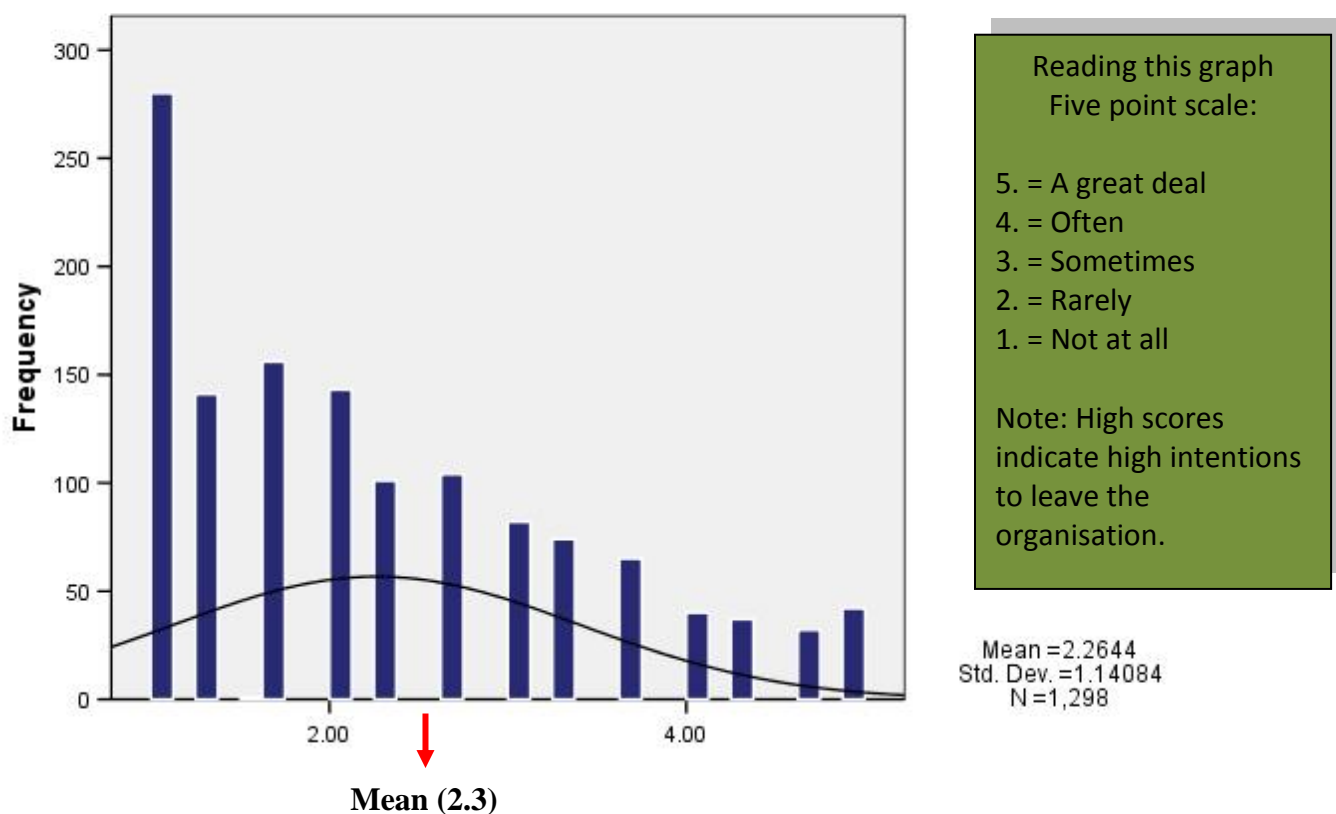


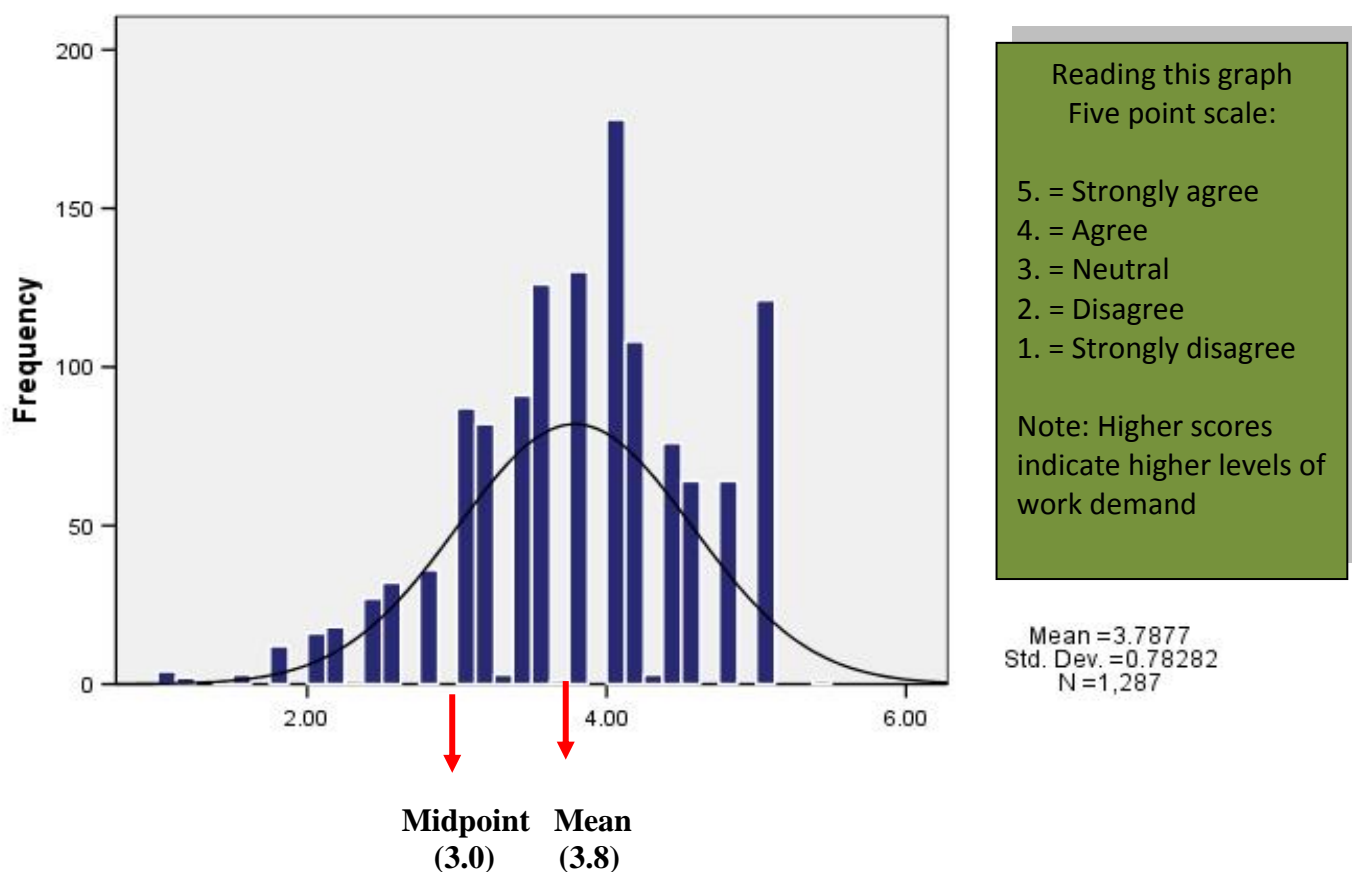
Figure 9. The mean score for turnover intentions

The mean score was a relatively low 2.3, suggesting that on average employees were not thinking of leaving XXXX District Health Board. However 142 (11%) of the participants indicated that ‘often’ had intentions to leave and 74 (5.7%) ‘all the time’. In this study turnover intention was highly correlated to job satisfaction, and a medium correlation with work engagement, work- family facilitation, work-life balance, supervisor support, organisational culture, and stress/strain.

Work Demand

Perceived pressure from multiple demands of work and family within a fixed timeframe has been a strong predictor of work-life balance, which may result in psychological strain. Work demand is defined as an employee’s

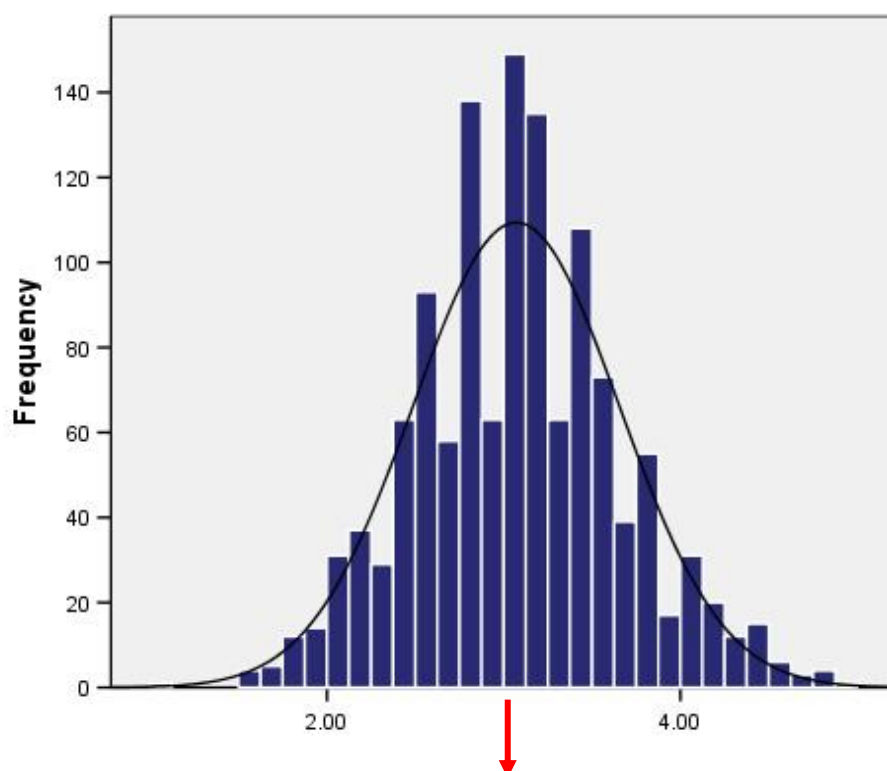
perception regarding demand levels within the work domain. Respondents were asked to indicate if their work required a lot of their attention and if they felt they experienced high levels of work demand. Each item used a 5 point scale, where 1 = indicating low levels of job demand, and 5 = indicating high work demand. The majority of respondents indicated high levels of work demand, sample mean of 3.8. 1,048 (81%) of the respondents indicating above the scale midpoint of 3.0.



Organisational Culture

Employees who perceived that the organisational culture was responsive to work-family issues were more likely to use work-life policies than those employees who perceived work-home culture as less supportive. Respondents in this sample reported how much they agreed with on a 5 point scale ranging from 1 = totally disagree to 5 = totally agree. This indicates that the higher the score equates to higher perceptions of organisation culture in this organisation. 196 (15%) of the participant indicated a non supportive organisation culture suggesting their managers and organisation could do more. 691 (63%) indicated a

neutral response with 276 (21%) participants indicating a high supporting culture. The mean of the sample was 3.1.



Reading this graph
Five point scale:

- 5. = Totally agree
- 4. = Agree
- 3. = Neutral
- 2. = Disagree
- 1. = Totally disagree

Note: Higher scores indicate higher levels of perceived organisational culture.

Mean = 3.0706
Std. Dev. = 0.58303
N = 1,279

Scale midpoint (3.0) and mean (3.1)

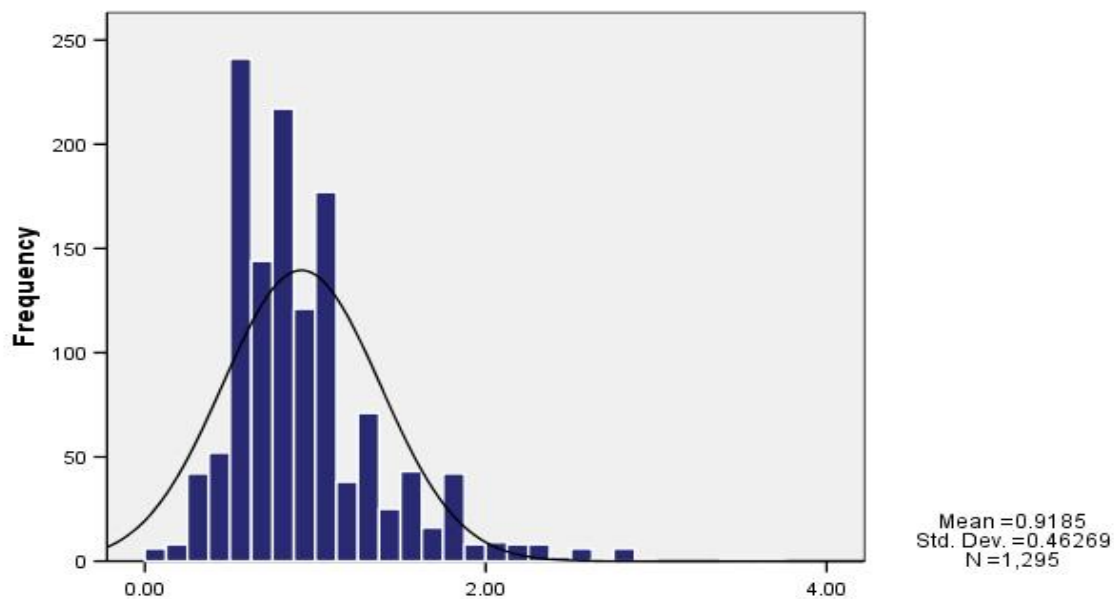
Two questions were inserted at the request of XXXX DHB in this part of the survey and they are presented below.

	Totally disagree	Disagree	Neutral	Agree	Totally Agree
I am clear about the different responsibilities that make up my role	27	77	161	642	353
My manager is fair and reasonable	73	126	255	508	303

Stress/Strain

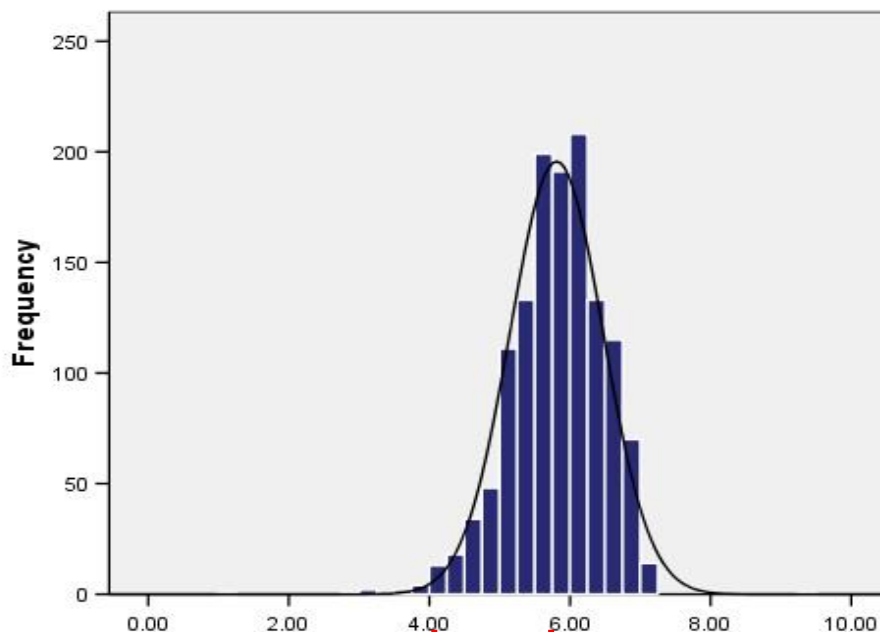
The 12 point questionnaire has been widely used in research and measures psychological health. Scores above 4 are considered to be cause for concern.

The mean was 0.91 indicating low levels of psychological strain. The majority of the participants falling between the scores of 0 – 2.



Resilience

In today's economic climate of continual change and turmoil resiliency of employees is an important aspect for continued organisational sustainability. Individual resilience is a multifaceted concept and as been described as skills and characteristics to overcome challenges that have a stressful impact on everyday life. The resilient individual calls upon his/her biological and psychological intrinsic resources, resulting in personal growth, expanded personal capabilities and well-being



Reading this graph
Seven point scale
7. = Strongly agree
6. = Moderately agree.
5. = Slightly agree
4. = Neutral
3. = Slightly disagree
2. Moderately disagree
1. = Strongly disagree

Note: - Higher scores indicate higher levels of resilience

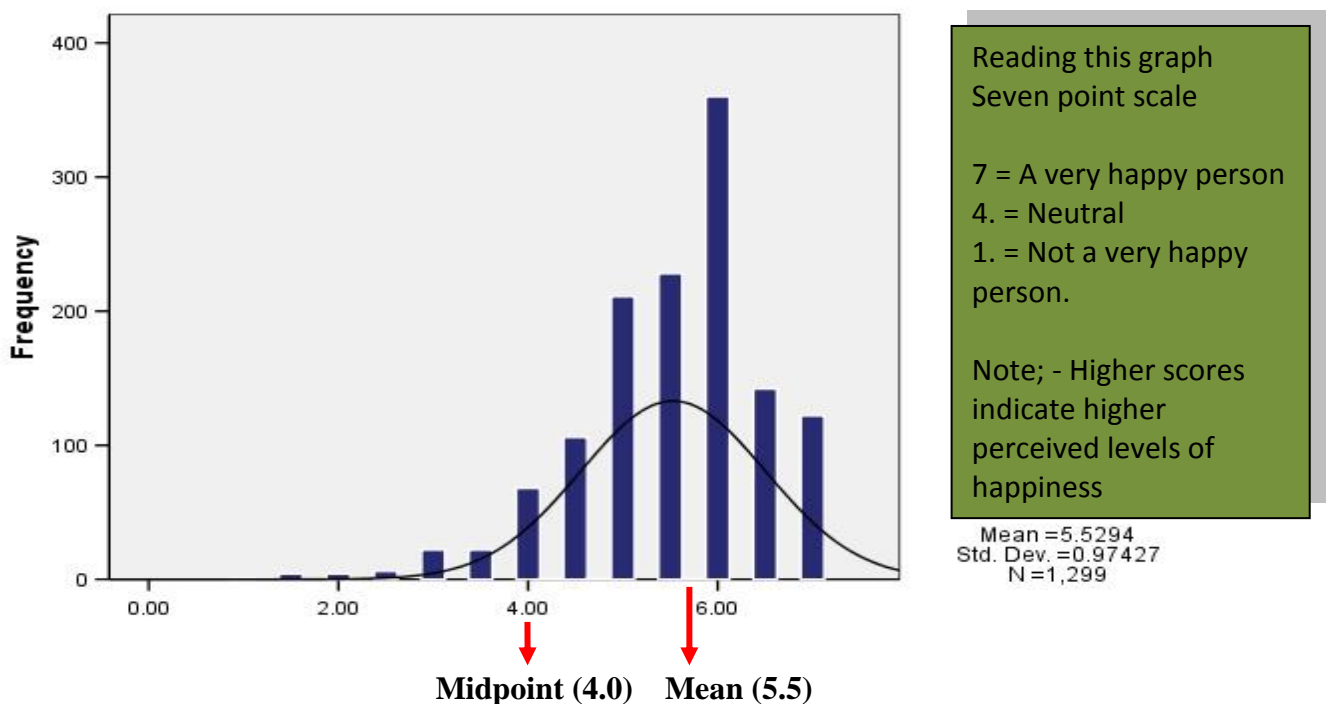
Midpoint (4.0) Mean (5.8)

In this research resilience had a moderate correlation with family-work conflict, work engagement, work to family and family to work facilitation, family satisfaction, family control, psychological stress/strain, and happiness.

Happiness

In the past, attention to happiness in the workplace has received little attention from researchers and managers of organisations. New research is showing that positive emotions such as happiness have beneficial effects ranging from better health, developing effective relationships and achieving personal goals. However, new research is needed to find casual relationships in workplace settings.

In this study happiness was measured on a 4 item, 7 point scale. The majority of the participants, 1,240 (95.5%) indicated that they considered themselves ‘a happy person’.



In this research happiness had a moderate correlation with work-family and family- work conflict, work engagement, work to family and family to work facilitation, work-life balance, job and family satisfaction, family control, psychological stress/strain, and resilience.

Comments made by respondents

In this section respondents were asked to comment on any aspects of their work environment that would enhance their work-life balance. A number of participants noted that a major obstacle to achieving work-life balance and wellbeing was the high volume of work demand and expectations they felt were placed on them to perform their job. The key themes received were centred mainly on their work demands and expectations.

'I do enjoy the work that I do, and the people I work with, but feel that my current salary does not match my workload, responsibilities or past experience, and that manager does not recognise or appreciate this'.

Inflexible hours – *"my hours are strictly 8.30am to 5pm on the occasions where I have asked to start at 8am to ensure everything is in place for that particular days clinic I have had to provide numerous explanations, and made to feel like I was ripping off the system".*

"on previous occasion when I required 1 hr for personal business I was required to take it as leave without pay, given the hours I am required to work any personal business I need to attend is difficult. I am not allowed to make up time as others within the office are".

"this is an area where more flexible hours would work well for both the area requirements and employee".

"I have good systems in place and do manage my workload well most of the time. I am customer focused and always try to meet our patient needs. I have devised and implemented several quality improvements. my immediate colleagues, and some visiting specialists have commented on the good job that I do. the other staff within our office have said that they would not like have my job because of the workload, responsibilities and pressure. I have only taken 3 hrs sick leave in the 9 months of employment. I always start on time and often leave late. we have been told we will not be paid overtime".

I believe that notions of 'loyalty' have become very one sided. we are expected to step-up when there are shortage/busy times, but the organisation shows/acknowledges no return loyalty. what was a 'calling' almost, has become a 'job' as I accept management are not concerned with individuals.

Some participants made comment to the pressure they feel are placed on them to perform their job, with less resources and expectation they will do more for less reward. The comments above were indicative of the work pressures that the employees feel they are under.

However, not all is negative the majority of employees surveyed in this research commented that 'love' their work and 'life'.

“I love my job just as much as I did 45 years ago! It provides challenge, job satisfaction, variety and opportunity for on-going training”.

These comments tell us that XXXX District Health Board is effective the most areas in creating a work environment where most participants feel satisfied and which they feel is personally rewarding.

Final Comments

A more detailed report will be produced at the end of the data collection phases that compares with data from other New Zealand organisations participating in this research project. We would like to thank XXXX District Health Board HR Department for collaborating with this research project and to all staff members who completed this survey.

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