The Mediating Effects of Work-Life Balance Self-Efficacy on the Relationships between Work-Family Conflict and Job Satisfaction:

A Longitudinal Study

Xi Wen Chan

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Research School of Management

College of Business and Economics

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ABSTRACT

Due to evolving gender roles and the rise of non-traditional families, both men and women face the challenge of balancing work and family roles in Australia today. Coupled with intensifying work pressures and the declining quality of home and community life, the balancing act between work and family consequently leads to work-family conflict. Research has shown that work-family conflict is responsible for a variety of negative individual and organisational outcomes, including lowered job satisfaction. With the potential costs to organisations that lowered job satisfaction produces, this study sought to gain a deeper understanding of the relationship between work-family conflict and job satisfaction by investigating the role of self-efficacy in the management of pressures emanating from work and home. In doing so, the present study recognised the multi-dimensionality of work-family conflict by assessing time-based, strain-based, and behaviour-based work-to-family conflict (WFC), and time-based, strain-based, and behaviour-based family-to-work conflict (FWC).

Self-efficacy has become a significant topic of investigation within the work-family literature, primarily because self-efficacy beliefs are important aspects of human motivation and behaviour. Accordingly, self-efficacy determines if individuals are able to persist and cope with adversity and challenges, such as those relating to work-family conflict. Despite the importance of domain specificity with regards to self-efficacy, management scholars continue to treat self-efficacy as a generalised construct. Therefore, drawing on the Social Cognitive Theory (SCT) and work-life balance literature, the current research first sought

to empirically validate the newly-developed work-life balance self-efficacy (WLBSE) scale using confirmatory factor analysis (CFA) and structural equation modelling (SEM). WLBSE, a domain-specific self-efficacy construct, correspondingly refers to the belief individuals have in their own abilities to manage work and non-work responsibilities.

Having validated the five-item WLBSE scale, it was hypothesised that WLBSE beliefs would fully mediate the relationships between the six dimensions of work-family conflict and job satisfaction. In applying the theoretical framework of the SCT, specifically, the social-cognitive concept of self-efficacy, it is postulated that building a strong sense of WLBSE would reduce vulnerability to work-family conflict, which in turn leads to higher job satisfaction. That is to say, WLBSE is the explanatory variable that accounts substantively for the underlying causal nature of the work-family conflict–job satisfaction relationships.

The study adopted a longitudinal design, in which self-reported data were collected on two occasions 12 months apart through an online questionnaire. The initial sample consisted of 1,134 respondents from four organisations within Australia. After performing data screening, CFA and SEM were conducted to test the research hypotheses. CFA showed that there was better fit for an eight-factor than a four-factor or one-factor measurement model, the former of which comprised the six dimensions of work-family conflict, as well as the uni-dimensional WLBSE and job satisfaction constructs. Subsequent cross-sectional and longitudinal tests of the hypothesised structural model showed that the proposed model was
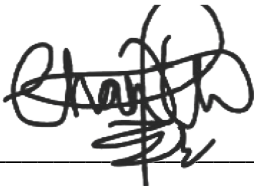
a good fit to the observed data, and WLBSE was shown to fully mediate the relationships between all three forms of WFC and job satisfaction.

By incorporating the multi-dimensionality of work-family conflict and validating the newly-developed WLBSE scale, the study sought to provide a general framework of the underlying cognitive mechanisms linking work-family conflict to job satisfaction. Theoretical implications of the findings for SCT are discussed. From a practical standpoint, the study offers empirical evidence that addressing work-family conflict through strengthening WLBSE can enhance job satisfaction. The limitations and directions for future research are discussed in the final chapter of this study.

Keywords: work-family conflict, work-to-family conflict, family-to-work conflict, work-life balance, self-efficacy, job satisfaction, mediation, scale validation

DECLARATION OF ORIGINALITY

I hereby declare that this submission is my work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person, no material which to a substantial extent has been accepted for the award of any other degree or diploma of a university or other institute of higher learning, except where due acknowledgement is made in the text. I also wish to acknowledge with thanks that the dataset used in this thesis was collected as part of an Australian Research Council (ARC) Discovery Project (DP0770109). The ethics approval for the project involving human participants was given by the Chair of the Humanities & Social Sciences Delegated Ethics Review Committee (DERC) on 10 April 2008 (refer to Appendix A).

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CHAPTER 1 – RESEARCH QUESTIONS AND THEORETICAL FRAMEWORK

1.1 Introduction

Managing work and family has been identified as a major source of time pressure and stress, and remains a challenge for individuals in Australia (Pocock, 2003). In light of recent trends within the work and family spheres, individuals are finding it even harder to strike a balance between the competing demands of both roles (Byron, 2005). An increase in the number of non-traditional (refer to Macklin [1980, p. 905] for definition) families such as dual-income families, single-parent families, and families with dependents (for example, young children and elderly), has given rise to new challenges and responsibilities within the family domain (Bianchi & Milkie, 2010; Higgins, Duxbury, & Lyons, 2010). The challenges and responsibilities are further complicated by rising affluence which has negatively impacted on the quality of home and community life, the lack of local resources and facilities, and the privatisation of working-class families (Guest, 2002).

Over in the workplace, the pressures of work have been intensifying in recent decades. Such a trend is largely attributed to rapid globalisation and technological advancements. Specifically, the former has led to large-scale corporate downsizings and organisational changes (Burke & Nelson, 1998), and the latter have enabled people to stay connected to work from anywhere at any time (Boswell & Olson-Buchanan, 2007; Higgins et al., 2010). Together, these social and economic developments have raised awareness and interest in understanding the work-family interface, as reflected in the extensive research on the relationships between various work and family constructs (*see* Frone, Yardley, & Markel,

1997; Griggs, Casper, & Eby, 2013; Grzywacz & Marks, 2000; Van Steenbergen & Ellemers, 2009), their associated antecedents (*see* Byron, 2005; Frone, Russell, & Cooper, 1992; Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011), and relevant outcomes (*see* Amstad, Meier, Fasel, Elfering, & Semmer, 2011; Frone et al., 1992; Van Steenbergen, Ellemers, & Mooijaart, 2007).

1.1.1 Work-family conflict

A major deterrent to employee job satisfaction and performance is stress associated with managing work and family demands (Higgins et al., 2010). This balancing act subsequently leads to work-family conflict (Geurts & Demerouti, 2003; Greenhaus & Beutell, 1985; Hammer, Allen, & Grigsby, 1997). Work-family conflict is a form of interrole conflict that occurs when pressures associated with membership in one role interferes with membership in another (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). In their seminal theoretical paper, Greenhaus and Beutell (1985, p. 77) defined the construct as "a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect". Researchers have since established that work-family conflict is bi-directional (Frone et al., 1992; Frone et al., 1997). Specifically, work-to-family conflict (WFC) is the extent to which participation in the family role is made more difficult by participation in the work role, while family-to-work conflict (FWC) refers to the extent to which participation in the work role is made more difficult by participation in the family role (Greenhaus & Beutell, p. 77).

Studies have found a moderately high correlation between WFC and FWC (Casper, Martin, Buffardi, & Erdwins, 2002; Greenhaus, Parasuraman, & Collins, 2001), but a strong correlation does not necessarily negate the separate function of both constructs (Mesmer-Magnus & Viswesvaran, 2005). In fact, researchers have shown that WFC and FWC are distinct constructs with their own antecedents and outcomes (Frone et al., 1992; Kossek & Ozeki, 1998; Netemeyer, Boles, & McMurrian, 1996). Correspondingly, both WFC and FWC should be investigated separately as each will require its own unique intervention (Byron, 2005; Mesmer-Magnus & Viswesvaran, 2005).

Greenhaus and Beutell (1985, p. 78) further identified three forms of conflict within WFC and FWC. Firstly, time-based conflict occurs when "time devoted to the requirements of one role makes it difficult to fulfill requirements of another"; secondly, behaviour-based conflict occurs when "specific behaviours required by one role make it difficult to fulfill the requirements of another"; and lastly, strain-based conflict occurs when "strain from participation in one role makes it difficult to fulfill requirements of another" (Greenhaus & Beutell, 1985, p. 78). To understand the complex nature of work-family conflict, the current study will account for its bi-directional nature and the three types of conflict. Correspondingly, a six-dimensional work-family conflict construct consisting of (1) time-based WFC, (2) time-based FWC, (3) strain-based WFC, (4) strain-based FWC, (5) behaviour-based WFC, and (6) behaviour-based FWC results:

Table 1.1. Six-dimensions of work-family conflict

		Direction of work-family conflict	
		WFC	FWC
Forms of work-family conflict	Time-based	(1) Time-based WFC	(2) Time-based FWC
	Behaviour-based	(3) Behaviour-based WFC	(4) Behaviour-based FWC
	Strain-based	(5) Strain-based WFC	(6) Strain-based FWC

1.1.2 Self-efficacy

A construct slowly gaining attention within the work-family literature is self-efficacy. Bandura (1977a, 1986, 1997) defined self-efficacy as the belief one has in one's own ability to organise and execute courses of action to attain required performance levels in specific tasks. Bandura (1986, p. 395) further proclaimed that "people who regard themselves as highly efficacious act, think, and feel differently from those who perceive themselves as inefficacious. They produce their own future, rather than simply foretell it." That is to say, self-efficacy beliefs determine individuals' willingness to initiate specific behaviours, as well as their persistence and emotional reactions when encountering difficulties and conflicts. Research has also shown that self-efficacy facilitates adjustments to stressful life events (*see* Chwalisz, Altmaier, & Russell, 1992), such that individuals become less vulnerable toward the stress and anxiety experienced (Torres & Solberg, 2001).

Because actions are formulated in thoughts, and people anticipate optimistic or pessimistic outcomes based on their level of self-efficacy (Schwarzer, Bäßler, Kwiatek, Schröder, & Zhang, 1997), self-efficacy beliefs are considered robust predictors of individuals' level of accomplishment. As a predictor, self-efficacy facilitates the formation of behavioural

intentions (Ajzen, 2002), the development of action plans, and the subsequent execution of action (Schwarzer & Fuchs, 1996). It is for these reasons that Bandura (1982, 1986, 2001) considered self-efficacy to be the key factor of the human agency, and an important mediator of behaviour and behavioural change (Bandura, 1977a).

A number of studies have since examined the relationships between self-efficacy and career choices (*see* Betz & Hackett, 1981; Lent, Brown, & Hackett, 2000), career development (*see* Hackett & Betz, 1981; Lent, 2005), job performance (*see* Judge, Jackson, Shaw, Scott, & Rich, 2007; Stajkovic & Luthans, 1998), and job satisfaction (*see* Abele & Spurk, 2009; Bradley & Roberts, 2004). Correspondingly, self-efficacy is increasingly manifested in various domains, such as academic self-efficacy (Multon, Brown, & Lent, 1991; Pajares, 1996; Schunk & Pajares, 2002), career self-efficacy (Betz, 2001, 2007), creative self-efficacy (Gong, Huang, & Farh, 2009; Tierney & Farmer, 2011), job-focused self-efficacy (Mathis & Brown, 2008; Schwoerer & May, 1996), parental self-efficacy (Jones & Prinz, 2005), social self-efficacy (Anderson & Betz, 2001), and technological self-efficacy (Compeau, Higgins, & Huff, 1999; McDonald & Siegall, 1992).

However, while self-efficacy has become an important topic among management scholars, Elias, Barney and Bishop (2013) indicated that the construct has not always been operationalised consistently. In fact, Schunk and Pajares (2009, p. 50) found that the mismeasurement of self-efficacy remains an issue in many studies, as researchers either struggle to establish a causal relationship between self-efficacy and the criterion variable(s), or evaluate the self-efficacy construct at the wrong level of specificity. Generalised self-

efficacy measures assess people's general confidence that they can succeed in situations and tasks without specifying the tasks or situations, while domain-specific self-efficacy relates to particular area(s) of functioning and reflects the task demands involved in those area(s) (Bandura, 1997, p. 42; Schunk & Pajares, 2009, p. 50). As individuals judge their capability depending on the particular domain of functioning, high self-efficacy in one domain does not necessarily guarantee high efficacy in another (Bandura, 1982, 2006). Correspondingly, domain-specific measures have been found to be significantly more explanatory and predictive than generalised assessments, especially when the criterion variables are related to specific contexts (Schwarzer, 1993).

Additionally, Hennessy and Lent (2008) suggested that assessing self-efficacy as a domain-specific capability to manage conflicts between work and family roles (work-family conflict self-efficacy) is more relevant to understanding work-family conflict and its consequences than using generalised self-efficacy and within-role self-efficacy measures. Essentially, generalised self-efficacy tends to impact on its outcome variables indirectly, while within-role self-efficacy measures such as work self-efficacy, career self-efficacy, and family efficacy focus solely on the ability to perform within-role work and family behaviours (Hennessy & Lent, 2008). Therefore, work-family conflict self-efficacy, a domain-specific self-efficacy construct, is preferred to generalised and within-role self-efficacy because it relates to the "experience, management, and outcomes of work-family conflict" (Hennessy & Lent, 2008, p. 371).

1.1.2.1 Work-life balance self-efficacy (WLBSE)

In recent times, work-life balance has become a major focus on inquiry within the area of management. Due to Australia's current skill shortages and ageing workforce (Russell & Bowman, 2000, as cited in Guest, 2002), the concept has also received overwhelming attention from the Australian government, management, employee representatives, and the media (De Cieri, Holmes, Abbott, & Pettit, 2005). Consequently, more organisations are embracing work-life balance policies and practices to attract and retain valued employees, so as to sustain a competitive edge (De Cieri et al., 2005). When addressing employees' individual and workplace needs to foster work-life balance, organisations tend to focus on employee performance, feedback and goal-setting to gauge the effectiveness of their work-life balance initiatives (Tams, 2008). However, for individuals to feel satisfied with their jobs, achieve their goals and adapt to expectations of the organisation, Gregory and Milner (2009) and Hennessy and Lent (2008) asserted it is equally crucial for individuals to believe in their own ability to complete tasks and obtain their goals (in other words, self-efficacy).

Therefore, extending this construct to the work-family context, the current research will investigate WLBSE, a domain-specific self-efficacy construct. Kalliath and Brough (2008, p. 326) defined work-life balance as "the individual perception that work and non-work activities are compatible and promote growth in accordance with an individual's current life priorities". Correspondingly, WLBSE refers to the belief one has in one's own ability to achieve a balance between work and non-work responsibilities, as well as to persist and cope with the challenges posed by work and non-work demands. When individuals feel

pressured by the complexity of life, and experience conflict relating to their involvement in work, family, and the community, their overall performance at work and other personal and organisational outcomes are likely to deteriorate (Crooker, Smith, & Tabak, 2002).

1.1.3 Job satisfaction

A firm's human capital is vitally important for its sustained competitiveness (Crook, Todd, Combs, Woehr, & Ketchen, 2011), hence retaining talent remains at the top of the agenda for most organisations. Job attitudes, particularly job satisfaction, are key determinants of employee retention (Boswell, Boudreau, & Tichy, 2005). Prior to the interest in the job-satisfaction–employee retention relationship, organisational researchers had for the previous decades concentrated on the job satisfaction–job performance relationship, mainly because human resource practitioners and management believed job performance to be directly linked to organisational outcomes and success (Iaffaldano & Muchinsky, 1985).

Job satisfaction is defined as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976). Spector (1997, p. 2) described it as an attitudinal variable which measures the "extent to which people like or dislike their jobs". That is to say, job satisfaction assesses an individual's well-being in the work domain (Judge & Klinger, 2009). Most researchers (*see* Locke, 1976; Rice, Gentile, & McFarlin, 1991) recognise job satisfaction as comprising of, and represented by, various facets. However, while measuring the facets of job satisfaction may provide a clearer indication of the strengths and weaknesses of an organisation's policies in dealing with

employee job satisfaction (Saari & Judge, 2004), the facet approach to measuring job satisfaction makes three common assumptions that considerably weaken its content validity (Dalal, 2012). Facet job satisfaction postulates that: (1) all facets relevant to the job have been accounted for – that is to say, there are no errors of omission; (2) all facets of the job combine in a linear, additive manner when assessing overall job satisfaction; and (3) all facets contribute equally to overall job satisfaction (Dalal, 2012, p. 342). It follows that facet job satisfaction would become inaccurate if respondents place more emphasis on certain facets than others. Hence, job satisfaction is best measured by directly assessing global job satisfaction – that is, by asking employees to describe their job as a whole.

In addition to employee retention and job performance, job satisfaction has also been found to be a consistent predictor of work behaviours such as organisational citizenship (Organ & Ryan, 1995; Williams & Anderson, 1991), and withdrawal behaviours such as absenteeism (Ybema, Smulders, & Bongers, 2010) and turnover (Saari & Judge, 2004). Within the work-family interface, job satisfaction is often studied as a consequence of work-family conflict (*see* Allen, Herst, Bruck, & Sutton, 2000; Bruck, Allen, & Spector, 2002), and investigated in association with self-efficacy (*see* Caprara, Barbaranelli, Borgogni, & Steca, 2003; Judge & Bono, 2001), family satisfaction (*see* Beutell & Wittig-Berman, 1999; Frone, Russell, & Cooper, 1994), and life satisfaction (*see* Judge & Watanabe, 1993; Rain, Lane, & Steiner, 1991; Rode, 2004). In Australia, interest in the WFC–job satisfaction and FWC–job satisfaction relationships is driven by the pervasiveness of WFC and FWC among employees, which is, in turn, triggered by the widespread adoption of downsizing among corporations and increased familial responsibilities (Pocock, 2003).

1.2 Research questions

Despite the wealth of research on the work-family conflict–job satisfaction relationship, Russell and Bowman (2000) noted that few Australian companies have addressed the issue of work-family conflict to meet the changing workforce needs of employees. Coupled with the continuous evolvement of gender roles and the growth of non-traditional family structures within Australia (Wise, 2003), the boundaries between work and family are constantly shifting, and the relationships among the constructs – work-family conflict, self-efficacy, and job satisfaction – are dynamic and increasingly complex. Consequently, there is a need to keep up with the changes, since a gap in understanding the latest developments in the work-family interface will need to be filled.

Prior research on the work-family interface has largely concentrated on work-family conflict (Byron, 2005), primarily because it leads to a variety of negative work-related outcomes such as lowered job satisfaction (Bruck et al., 2002; Shockley & Singla, 2011), non-work related outcomes such as diminished well-being (Greenhaus, Allen, & Spector, 2006; Parasuraman & Simmers, 2001), and stress-related outcomes such as psychological strain (Grandey & Cropanzano, 1999; O'Driscoll, Poelmans, Spector, Kalliath, Allen, Cooper, & Sanchez, 2003). However, although many studies have investigated the bi-directional nature of work-family conflict, few have examined the three forms of conflict – strain-based, time-based, and behaviour-based conflict in detail (Carlson, Kacmar, & Williams, 2000; Bruck et al., 2002; Kaiser, Ringlstetter, Eikhof, & Pina e Cunha, 2011). Based on the established multi-dimensionality of work-family conflict (*see* Carlson et al.,

2000; Premeaux, Adkins, & Mossholder, 2007), the current research went a step further by studying how each dimension relates to WLBSE and job satisfaction.

Another purpose of this research was to contribute to the growing literature on work-life balance and self-efficacy by validating a measure of WLBSE against the backdrop of increased work-family conflict and lowered job satisfaction in Australia. Despite frequent mention of work-life issues within the organisational literature, there has not been much focus on non-work areas beyond the family domain (Keeney, Boyd, Sinha, Westring, & Ryan, 2013). Although reducing work-family conflict remains a valid concern, the organisational literature would benefit further by considering the diversity of individuals' pursuits beyond work, since work can potentially interfere with many non-work areas such as friendships, health, and the community.

Additionally, in a review of the work-family literature by Eby, Casper, Lockwood, Bordeaux and Brinley (2005), it was found that little emphasis has been placed on variables relating to the self. The authors thus stressed the importance of studying the work-family interface in relation to personal constructs such as personality, self-efficacy, and motivation. Moreover, while a number of studies have suggested that a third, mediating variable may shed light on the inconclusive results of the relationships among WFC, FWC, and job satisfaction (*see* Allen et al., 2000; Casper, Eby, Bordeaux, Lockwood, & Lambert, 2007; Kossek & Ozeki, 1998; Mesmer-Magnus & Viswesvaran, 2005), few scholars have attempted to investigate the relationships through analysing the influence of a mediator.

1.3 Theoretical framework and research model

Self-efficacy beliefs operate to reduce perceptions of and reactions to stress (Bandura, 1986). Therefore, the more individuals feel that they are able to successfully handle the demands entailed in their work and life roles, the less prone they are in experiencing role conflict. For example, Erdwins, Buffardi, Casper and O'Brien (2001) found that those with a stronger sense of self-efficacy in fulfilling the role requirements of an employee and a parent (or work-family conflict self-efficacy [*see* Cinamon, 2003; Hennessy, 2005; Hennessy & Lent, 2008]) tended to report less work-family conflict. However, at the same time, Erdwins et al. (2001) found that experiencing work-family conflict has the effect of diminishing a person's sense of being able to cope effectively with the demands of various work and family roles, which in turn reduces the level of job satisfaction (Bandura, 1997; Judge & Bono, 2001). On initial consideration, it does not appear that WLBSE would act as a mediating process between work-family conflict and job satisfaction.

Yet, the feedback mechanism of self-efficacy also suggests that it is possible for work-family conflict to positively impact on a person's sense of WLBSE, particularly if the person firmly believes in his own ability to manage work-family conflict, and have had prior experiences in dealing with work-family conflict (Hennessy & Lent, 2008). The theoretical underpinning of the feedback mechanism is that individuals with higher WLBSE are more likely to look forward to and succeed in managing work and family challenges. Following which, accomplishments in work and family domains will, in turn, increase WLBSE through a feedback loop which positively influences subsequent

performance, thereby further strengthening the individual's WLBSE beliefs (Raelin, Bailey, Hamann, Pendleton, Raelin, Reisberg, & Whitman, 2011; Zimmerman & Cleary, 2006). This is echoed by Bandura (1997) who stressed that prior accomplishments "build a robust belief in one's personal efficacy" (p. 80). Therefore, in spite of the negative impact of work-family conflict, it seems plausible that individuals who believe in their abilities to manage their work and family responsibilities are more likely to feel satisfied in their jobs. Therefore, it is postulated that WLBSE will mediate the work-family conflict–job satisfaction relationship. The hypothesised mediation model is shown in Figure 1.1.

Consistent with Carlson et al. (2000), the six antecedents – time-based WFC and FWC, strain-based WFC and FWC, and behaviour-based WFC and FWC – correspond to the six dimensions of work-family conflict. After validating the WLBSE scale, the construct was investigated as a mediator of the relationships between the antecedents and the criterion variable – job satisfaction. As a mediator, WLBSE is posited to be the explanatory variable that accounts substantively for the underlying causal nature of the work-family conflict–job satisfaction relationship (Mathieu & Taylor, 2006).

While mediation models have become commonplace in the work-family and organisational literature (Mathieu & Taylor, 2006), research on mediation continues to advance knowledge in these fields because researchers have previously concentrated on describing phenomena that influence outcomes, rather than rely on robust statistical tests of mediation to explain the effects antecedent variables have on their respective criterion variables (Wood, Goodman, Cook, & Beckman, 2008). Bandura (1986, p. 423) emphasised that

research is more credible when it is based on actual mediation than presumptive mediation, and indicated that while covariation increases confidence in theory development, it does not necessarily establish validity.

Figure 1.1. Hypothesised mediation model involving the six dimensions of work-family conflict, WLBSE, and job satisfaction
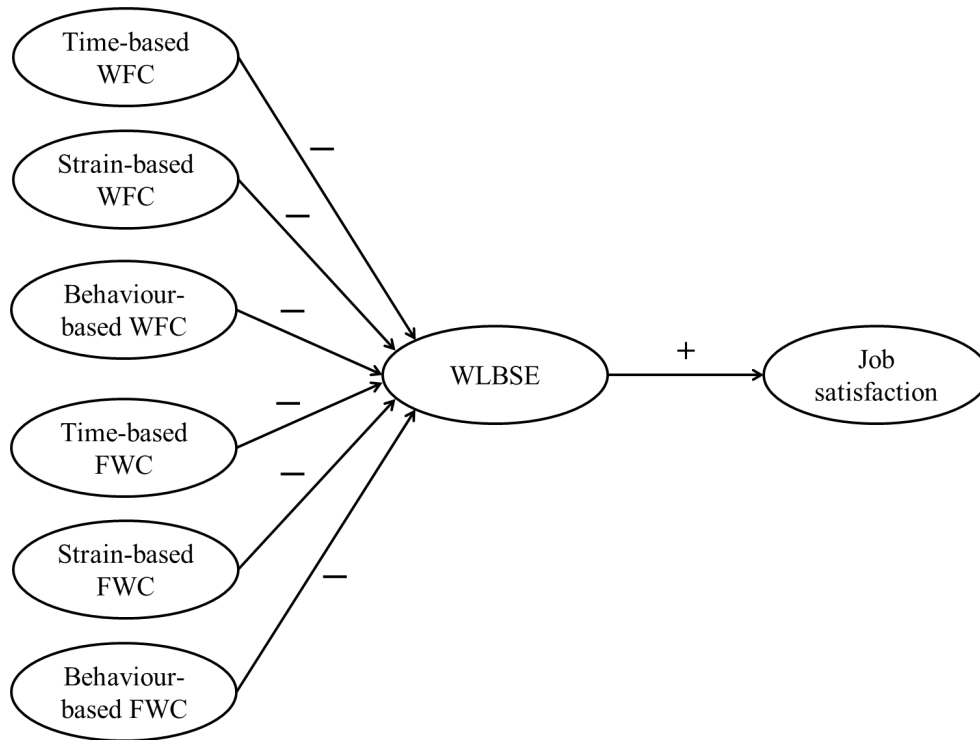
Notes: 1) (–) indicates a negative relationship between the variables; 2) (+) indicates a positive relationship between the variables.

Applying the SCT in the context of the current research, significant, negative relationships between time-based, strain-based, and behaviour-based WFC, time-based, strain-based, and behaviour-based FWC, and job satisfaction are hypothesised to be fully mediated by WLBSE. A full mediation model is predicated on a significant overall causal relationship

leading from each of the six dimensions of work-family conflict to WLBSE, and from WLBSE to job satisfaction. Essentially, the SCT (*see* Bandura, 1997; Lent, Brown, & Hackett, 1994) provides a potentially useful unifying perspective from which to view the causal relationships between work-family conflict and WLBSE (that is, time-based, strain-based, and behaviour-based WFC/FWC → WLBSE), and WLBSE and job satisfaction (WLBSE → job satisfaction). The social cognitive concept of self-efficacy, which is a primary focus of the SCT, is crucial to understanding how individuals perceive and manage conflict between different roles. Each of the predictions within the hypothesised mediation model will be formally developed in the next chapter along with the relevant theoretical underpinnings.

1.4 Significance of research

While self-efficacy has been identified as an important concept in understanding the relationships between work-family constructs and their related outcomes, it is only recently that researchers have begun investigating self-efficacy within the work-family literature (Byron, 2005; Eby et al., 2005). In examining the hypothesised full mediation model, this research will address the gap in literature by incorporating a newly-developed domain-specific self-efficacy construct – WLBSE. The main purpose is to investigate the psychological mechanisms through which WLBSE will account for how the six dimensions of work-family conflict lead to job satisfaction. To validate the newly-developed scale, the current research examined the factor structure, reliability, and validity estimates of the WLBSE measure.

Because work-family research has been primarily driven by interest in work-family conflict (and thus the role conflict theory developed by Greenhaus and Beutell [1985] and Kahn et al. [1964]), the current research took up Byron's (2005, p. 192) recommendation that theorising involving work-family conflict should be advanced along with relevant work-related and non-work-related constructs. This is reasoned on the basis that an integrative model may be better able to capture the complexity of the work-family interface. Hence, by using the SCT's framework and WLBSE, the current study will offer insights into the cognitive processes that link work-family conflict to the attitudinal outcome – job satisfaction. Additionally, the SCT framework used in this research offers an intricate model, which includes both cognitive and contextual variables, and provides the theoretical mechanisms for understanding the impact of work- and family-related variables on job satisfaction.

Furthermore, while researchers have established the multi-dimensionality of work-family conflict, the current research goes a step further by investigating how each dimension relates to job satisfaction. From a practical standpoint, adopting a multi-dimensional approach to assessing work-family conflict is more beneficial than treating work-family conflict as a global construct, especially in light of the growing need to have specific interventions to reduce work-family conflict. As indicated by Eby et al. (2005), research on the multi-dimensional conceptualisation of work-family conflict would provide a finer-grained analysis of the work-family conflict–job satisfaction relationship.

Many work-family conflict and job satisfaction studies assume that work-family conflict precedes job satisfaction, yet studies on the work-family conflict–job satisfaction relationship have mostly been cross-sectional (Allen et al., 2000). Consequently, this study adopted a longitudinal approach, with the aim of providing deeper insights into the causal processes, which are not captured in the cross-sectional studies. In particular, Maxwell and Cole (2007) found that cross-sectional research was in general less robust than longitudinal research, mainly because of the biased parameter estimates and erroneous tests of hypotheses which cross-sectional studies rely upon. The present longitudinal research will contribute to examining the process of cognitive (WLBSE) and attitudinal (job satisfaction) development over time, potentially yielding fresher insights into the theoretical model.

Lastly, in studying and validating the WLBSE scale, the research goes beyond the work-family interface to the broader work-life conceptualisation. In particular, the current study responds to numerous calls by organisational researchers (*see* Bellavia & Frone, 2005; Carlson & Kacmar, 2000; Keeney et al., 2013) to broaden the notion of work-family conflict by accounting for non-work areas beyond family.

1.5 Organisation of chapters

The remainder of this thesis is organised into five chapters. Chapter 2 states the hypotheses for this thesis, which were developed based on the SCT, the theory of self-efficacy, and literature relating to work-family conflict, work-life balance, and job satisfaction. Chapter 3 empirically validates the newly developed WLBSE scale, while Chapters 4 and 5 proceed

to test the hypothesised cross-sectional and longitudinal mediation models respectively. Under Chapters 3, 4 and 5, the steps taken to conduct the statistical analyses were outlined, with each chapter specifying the study design, sample, procedure, measures, data analysis techniques, data analysis outcomes, and interpretations of the results. Chapter 6 discusses the key findings of the research outcomes, and draws attention to the theoretical and practical implications, as well as the limitations of the current research. This thesis ends with a recommendation of possible directions for future research and some concluding remarks.

CHAPTER 2 – LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

2.1 Work-family conflict and job satisfaction

2.1.1 Theoretical underpinnings of work-family conflict

The main theory underlying work-family conflict is the role strain theory. A key assumption of the role strain theory is that multiple relationships among diverse roles are a source of psychological stress and social instability (Sieber, 1974, p. 567). Role strain refers to the "felt difficulty in fulfilling role obligations" (Goode, 1960, p. 483), and arises when: (1) there are conflicting role demands; (2) individuals have performance expectations, which may not be in line with the assessment of others regarding their role performance; and (3) individuals accept roles that are beyond their capabilities (Sieber, 1974). This theory takes on a scarcity approach which postulates that societal structures consist of several roles, and individuals struggle to satisfy the demands of various roles owing to limited time, skills, and energy (Goode, 1960; Marks, 1977; Sieber, 1974). Therefore, they must constantly prioritise in order to fulfill the requirements of each role.

Most scholars focus on the mechanisms through which role strain can be avoided, managed or eliminated, as they regard role strain to be undesirable. Within the work-family interface, role strain is shown to result from interrole conflict, the latter of which is influenced by incompatible role responsibilities (Hirsch & Rapkin, 1986) and role expectations (Secord & Backman, 1964). High role strain has been shown to preclude both satisfaction and success

(Parelius, Parelius, & Ellis, 1974), and cause psychological distress (Barnett & Baruch, 1985; Sieber, 1974). In the case of working adults with dependents, role strain tends to result from high levels of conflicting work, home, and caregiving demands, which subsequently leads to increased psychological stress (Thoits, 2010; Voydanoff & Donnelly, 1999). In summary, both theoretical and empirical literature provide strong basis for arguing that multiple roles tend to create role strain, and the strain experienced subsequently reduces well-being.

An extension of the role strain theory is the conservation of resources (COR) theory, which is currently the dominant theory used by researchers to address work-family conflict (Grandey & Cropanzano, 1999; Hobfoll, 1989). The COR theory postulates that stress arises when there is an apparent threat of loss, or an actual loss of resources. Hobfoll and Kay (2000, p. 519) defined resources as "objects, personal characteristics, conditions, or energies that are valued by the individual or that serve as the means for attainment of other objects, personal characteristics, conditions, or energies". Accordingly, there are four resource categories: (1) objects refer to resources that are valued because of their physical nature, scarcity, and cost (for example, home, food, and clothes); (2) personal characteristics are resources that build stress resistance (for example, self-esteem and social competence); (3) conditions are resources that assist in obtaining other resources or are outcomes that individuals value (for example, marriage, tenure, and financial stability); and (4) energies refer to resources such as time, knowledge, and money, and are valued because they can be exchanged for other resources (Hobfoll & Kay, 2000, pp. 520–521).

When applied to work-family conflict, the COR model proposes that the conflict leads to psychological stress and distress because resources are lost in trying to balance between work and family (Grandey & Cropanzano, 1999, p. 352). This in turn leads to lowered job satisfaction, anxiety, and intent to turnover (Grandey & Cropanzano, 1999, as cited in Thompson, 2002). The underlying mechanism is that when individuals experience more conflict in one domain, there are fewer resources available to fulfill one's role in another domain. Therefore, experiencing high levels of conflict at work will result in fewer resources available for family responsibilities, and vice versa. Grandey and Cropanzano (1999) further suggested that individual difference variables – for example, self-concept, self-efficacy, and self-esteem – are possible mediators and moderators of the relationship between work-family conflict and stress. Hobfoll (2001) also added that because resources are used to prevent resource loss, initial resource losses would render people more vulnerable to future losses. It follows that individuals who lack resources in their work, family, or other personal domains are more prone to additional loss of resources, since all resources are intercorrelated in some way (Demerouti, Bakker, & Bulters, 2004).

2.1.2 Theoretical underpinnings of job satisfaction

Locke (1969) proposed that "job satisfaction and dissatisfaction are a function of the perceived relationship between what one wants from one's job and what one perceives it as offering or entailing" (p. 316). Locke (1976) expanded and refined his definition of job satisfaction, and suggested that "job satisfaction results from the appraisal of one's job as attaining or allowing the attainment of one's important job values, providing that these

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values are congruent with or help to fulfill one's basic needs" (p. 1319). He also stressed that job satisfaction is not determined solely by the job or the individual, but by the relationship between the individual and the job (p. 319). That is to say, the prediction of job satisfaction is an interactive process between the individual and his environment (subsequently known as person-environment fit [*see* Kristof-Brown & Guay, 2011] or person-job fit [*see* Edwards, 1991]).

Building on Locke's (1976) definition, Hulin and Judge (2003) summarised job satisfaction as an attitudinal construct that is formed by a tripartite conceptualisation of cognitive, affective, and behavioural components. Essentially, the cognitive aspect refers to people's evaluations of various facets of their jobs; the affective component refers to individuals' emotional reactions to their jobs; and the behavioural aspect refers to people's actions relating to their work (Hulin & Judge, 2003). Spector (1997, p. 2), who also recognised the attitudinal perspective of job satisfaction, suggested that the construct can either be conceptualised as "a related constellation of attitudes about various aspects or facets of the job" (facet or composite approach) or "a global feeling about the job" (global approach). Global job satisfaction and facet/composite job satisfaction should be treated as two distinct constructs as research has shown that there are low correlations between the two measures (Scarpello & Campbell, 1983).

To date, because there is no single agreed upon definition of job satisfaction, and no widely accepted theory to explain the construct, there is consequently no general consensus about the best way to assess job satisfaction (Wanous, Reichers, & Hudy, 1997). The global

approach measures job satisfaction based on an individual's overall affective reaction to the job – that is, the overall or "bottom line" attitude is the focus of inquiry (Spector, 1997). In contrast, the facet approach examines the pattern of attitudes a person holds regarding various facets of the job such as co-workers, job conditions, nature of the work itself, policies and procedures, pay, and supervision (Locke, 1976; Rice et al., 1991; Spector, 1997). To measure job satisfaction accurately, one should have a good conceptual understanding of job satisfaction, and decide which other factors the construct will be assessed with (Spector, 1997).

2.1.3 Relationship between work-family conflict and job satisfaction

The construct – work-family conflict – has been central to the development of work-family research (Eby et al., 2005), and widely studied as an antecedent to job satisfaction (Allen et al., 2000; Grandey, Cordeiro, & Crouter, 2005; Kossek & Ozeki, 1998). Despite the extensive research on the work-family conflict–job satisfaction relationship, research outcomes relating to the relationships between WFC and job satisfaction, and FWC and job satisfaction have largely been inconclusive (Allen et al., 2000; Bruck et al., 2002; Mesmer-Magnus & Viswesvaran, 2005). In general, studies have reported a negative correlation between WFC and job satisfaction, but mixed results regarding the relationship between FWC and job satisfaction (Grandey et al., 2005).

For example, Kossek and Ozeki (1998) and Netemeyer et al. (1996) found both WFC and FWC to be negatively related to job satisfaction. Similarly, Allen et al. (2000) ascertained

that WFC is negatively correlated with job satisfaction. With regards to the FWC–job satisfaction relationship, while Namasivayam and Mount (2004) found FWC to be positively related to job satisfaction, Karatepe and Sokmen (2006) found FWC to be negatively related to job satisfaction. Conversely, Qiu and Yan (2010) did not find any significant correlation between FWC and job satisfaction. To this effect, it has been suggested that most studies have not examined the multi-dimensionality of work-family conflict in detail. In fact, Casper et al. (2007) and Mesmer-Magnus and Viswesvaran (2005) have indicated that many organisational and work-family researchers continue to use the global measure of work-family conflict without considering its bi-directional nature and the three forms of conflict.

Another area of contention regarding the work-family conflict–job satisfaction relationship has to do with domain specificity and source attribution (*see* Shockley & Singla, 2011) of the WFC and FWC constructs. The domain specificity approach to WFC and FWC postulates that family stressors are antecedents of FWC, which in turn affects job satisfaction; likewise, job stressors are considered antecedents of WFC, which in turn affects family satisfaction (Frone et al., 1992; Frone et al., 1997). On the other hand, the source attribution perspective suggests that when individuals experience WFC, this may subsequently lead to decreased performance in the receiving family domain, but individuals attribute blame to the work domain which happened to be the source of the conflict (Shockley & Singla, 2011, p. 864). Similarly, when experiencing FWC, the individual is likely to attribute blame to the family role because his family involvement or related stressors have caused the conflict to occur.

Although researchers (*see* Bruck et al., 2002; Kossek & Ozeki, 1998) have found that WFC correlates more with job satisfaction than FWC, Frone et al. (1992) and Frone et al. (1997) found that WFC predicted family-related stress, while FWC predicted work-related stress. This result is confirmed by McElwain, Korabik and Resin (2005), whose integrative model of work-family conflict indicated that WFC led to lower levels of family satisfaction, and FWC led to lower levels of job satisfaction. Judge, Boudreau and Bretz (1994), however, reported that both WFC and FWC had similar correlations with job satisfaction. Despite the inconclusive results, researchers tend to agree that work stressors are more likely to increase feelings of WFC, while family stressors are more likely to impact feelings of FWC. The work-family literature also suggests that WFC is a better predictor of various job outcomes, and FWC is a better predictor of attitudes about the family (Bruck et al., 2002; Grandey et al., 2005).

Research on WFC remains more prevalent than FWC (Amstad et al., 2011; Zhao, Settles, & Sheng, 2011), mainly because WFC is more likely to occur than FWC (Parasuraman & Greenhaus, 2002). This has led to several researchers considering only FWC in their studies (*see* Bagger & Li, 2012; Hoobler, Wayne, & Lemmon, 2009; Witt & Carlson, 2006). In light of the recent focus on FWC, and the implications that both WFC and FWC may have on job-related outcomes (such as job satisfaction), the current research will examine both WFC and FWC. Fundamentally, regardless of the direction of causation, when one domain is incompatible with the other domain, the result is conflict and increased stress on the individual.

With respect to the forms of conflict, research has typically focused on time-based and strain-based WFC (Carlson et al., 2000; Greenhaus, 1988; Griggs et al., 2013). Strain-based WFC was found to be more strongly and consistently correlated with potential outcomes than time-based WFC (Kaiser et al., 2011). Most research outcomes were consistent in showing that there are significant, negative correlations between all three forms of WFC and job satisfaction, but results relating to the relationships between all three forms of FWC and job satisfaction tend to be inconsistent and on the whole weaker than those between WFC and job satisfaction.

2.2 The role of self-efficacy

Self-efficacy influences almost every aspect of a person's life – it affects the decisions he makes, his level of motivation, his resilience and persistence in the face of adversity, and the level of success he ultimately attains (Bandura, 1986). Highly efficacious individuals have been shown to set more specific and challenging goals (*see* Komarraju & Nadler, 2013; Locke & Latham, 1990; Schunk & Mullen, 2012), work harder (*see* Komarraju & Nadler, 2013; Sitzmann & Ely, 2011), persevere longer (*see* Chen, Gully, & Eden, 2004; Pintrich & Garcia, 1991), have higher levels of well-being (*see* Judge & Bono, 2001; Sitzmann & Ely, 2011; Sonnentag, 2002), and achieve more than their peers (*see* Moritz, Feltz, Fahrbach, & Mack, 2000; Stajkovic & Luthans, 1998). Contrastingly, individuals with a low sense of self-efficacy often suffer from depression (*see* Atkins, 2010; Kavanagh, 1992) and anxiety (*see* Bandura, 1988; Meece, Wigfield, & Eccles, 1990), which are further accompanied by low self-esteem and pessimism (Pajares, 1997; Schwarzer et al., 1997).

They slacken their efforts in the face of difficulties, lose confidence after experiencing failures, and attribute poor performance to a lack of ability (Zimmerman, 2000). Consequently, they take longer to recover and become less committed to their goals (Schwarzer & Fuchs, 1996).

2.2.1 Theoretical underpinnings of self-efficacy

Fortunately, an individual's level of self-efficacy can be altered (Bandura, 1993; Gist & Mitchell, 1992). A key assumption underlying the SCT is that personal determinants, such as self-efficacy, do not exist unconsciously within individuals (Bandura, 1993). Individuals can consciously change and build a stronger sense of self-efficacy. According to Gist and Mitchell (1992), it is the attributions about the causes of performance outcomes that differentiate individuals with high and low self-efficacy. When successful, individuals with high and low self-efficacy attribute the achievement to their abilities; however, when unsuccessful, individuals with high self-efficacy attribute failure to insufficient effort, while those with low self-efficacy attribute failure to the lack of ability (Brees, Mackey, & Martinko, 2013; Silver, Mitchell, & Gist, 1995). Following the failure of the first attempt, Gist and Mitchell (1992, p. 202) warned that a low sense of self-efficacy can set off a downward spiral of lower performance with subsequent attempts at the same task. This results in even lower self-efficacy (Bandura, 1997), prompting a cycle which may be hard to reverse. In this context, self-efficacy beliefs help foster precisely the outcome one expects, which may perpetuate a negative self-fulfilling prophecy (Pajares & Schunk, 2005).

The SCT takes on an agentic view of individuals as "self-organising, proactive, self-reflective, and self-regulatory" people, rather than as reactive beings controlled by environmental factors or inner impulses (Bandura, 1999, p. 193). An extension of the social learning theory (*see* Bandura, 1977b), the SCT emphasises the role that cognition plays in influencing individuals' capabilities to perform behaviours. The social learning theory, on the other hand, focuses on the influence of environmental factors in the development of human behaviour. Bandura's (1977a, 1986) SCT is rooted in a view of human agency in which individuals proactively engage in personal development and create outcomes through their own actions. A key assumption underlying human agency is that individuals possess self-beliefs that enable them to exercise control over their thoughts, feelings, and actions (Bandura, 1986, p. 25). In other words, individuals are contributors to their life circumstances, and are capable of influencing their own cognitive functioning (Bandura, 2005b, p. 1). Hence, to examine how human behaviour is influenced by environmental factors, it is equally important to understand human cognition.

Having established the importance of the human agency and the cognitive processes within the SCT, it follows that social and environmental factors such as economic circumstance, socioeconomic status, education background, and family structure will not affect human behaviour directly. Instead, these factors affect behaviour to the extent that they influence people's self-efficacy beliefs, personal standards, emotions, and other self-regulatory influences. Bandura (1997, p. 2) contended that "people's level of motivation, affective states, and actions are based more on what they believe than on what is objectively true". In other words, behaviour is better predicted by beliefs about one's capability, than by what

one is actually capable of accomplishing, since self-efficacy beliefs help determine how individuals use the knowledge and skills they possess (Pajares, 1997).

Self-efficacy is built through experience, the latter of which is based on individuals' cognitive processes, social competencies, linguistic skills, and physical capabilities (Bandura, 1982, 1994). According to Bandura, Adams, Hardy and Howells (1980), when individuals are faced with an issue at hand, they will first reflect on and assess their capabilities, and subsequently regulate their choices and expend efforts based on their self-assessed capabilities. This makes both the SCT and the theory of self-efficacy particularly applicable to the work-family interface (Cinamon, 2006). In line with Bandura's SCT, because self-efficacy beliefs can be changed by taking into account the situation, task, or prior experiences of the individual (Bandura, 1977; Bresó, Schaufeli, & Salanova, 2011; Gist & Mitchell, 1992), organisations can potentially adopt self-efficacy-based interventions to enhance their employees' job satisfaction and overall well-being.

The current research thus seeks to investigate how WLBSE relates to both work-family conflict and job satisfaction. To be more specific, the present study postulates that work-family conflict relates significantly to job satisfaction directly through WLBSE. This is in line with theory (*see* Bandura, 1997, 1982) and empirical findings (*see* Elias et al., 2013; Restubog, Florentino, & Garcia, 2010) which have stressed the importance of domain-specific self-efficacy as an underlying mechanism by which a relationship exists between contextual (or domain) variables and career-related or job-related outcomes. In this context, the social cognitive concept of WLBSE is highly likely to be relevant to understanding how

people perceive and manage work-family conflict, since family is the predominant domain in the non-work (or life) sphere (Middleton, 2008, p. 211). Researchers such as Mathis and Brown (2008) and Wang, Lawler and Shi (2010) have shown that the relationships between WFC and job satisfaction, and FWC and job satisfaction, were mediated by job-related self-efficacy. Correspondingly, it is also possible that individuals with strong self-efficacy beliefs about their ability to manage work and non-work responsibilities will, in turn, experience less work-family conflict, less interrole-related stress, and more satisfaction in both their work and family roles.

2.2.2 Relationship between work-family conflict and WLBSE

There is a strong theoretical basis to consider a relationship between work-family conflict and WLBSE. Drawing on Goode's (1960) scarcity hypothesis which posits that individuals have a limited amount of time and energy, both WFC and FWC may lower individuals' self-belief in their ability to manage their work and non-work responsibilities. In the case of WFC, people will expend more time and energy in fulfilling work demands, leaving them with fewer resources to meet family duties. With inadequate resources available for family, this may weaken individuals' abilities to fulfill their family duties, thus affecting their competence in managing work-life conflict.

The impact of WFC and FWC on self-efficacy has been explored by many studies, with most findings being that work-family conflict and self-efficacy have a significant, negative relationship with one another. For instance, Netemeyer et al. (1996) found significant,

negative correlations between WFC, FWC, and generalised self-efficacy. Additionally, Erdwins et al. (2001) found significant, negative correlations between work-family conflict and both parental and job self-efficacy. Recent studies carried out by Hennessy and Lent (2008) and Westring and Ryan (2011) have also found similar relationships between work-family conflict and generalised or domain-specific self-efficacy.

2.2.3 Relationship between WLBSE and job satisfaction

Many studies have since established strong relationships between domain-specific self-efficacy constructs and various work-related outcomes. For instance, Abele and Spurk (2009) reported that occupational self-efficacy had a positive impact on career satisfaction in the long-term, Tierney and Farmer (2011) found creative self-efficacy to be associated with an enhanced sense of employee capacity for creative work, and Jin, Watkins and Yuen (2009) found career decision self-efficacy to be a robust predictor of vocational commitment. Taken together, it is likely that people's level of job satisfaction may be influenced by their sense of WLBSE, since individuals with high WLBSE are more confident in managing their work and non-work responsibilities.

Recent studies by Judge et al. (2007), Mathis and Brown (2008), and Wang et al. (2010) have also examined the role of self-efficacy on the relationship between work-family conflict and job satisfaction. Building on these research findings, the current study seeks to examine the mediating role of WLBSE in relation to the six dimensions of work-family conflict and job satisfaction. More specifically, because WLBSE determines whether the

individual is able to handle the responsibilities of work and non-work roles, it is postulated that higher levels of WLBSE will reduce the negative impact of WFC and FWC, thereby enhancing job satisfaction.

2.3 Hypotheses

2.3.1 Study 1 - WLBSE scale validation study

Drawing on the SCT (Bandura, 1986, 1989, 2001), the theory of self-efficacy (Bandura, 1977a, 1978, 1982, 1986), and Kalliath and Brough's (2008) definition of work-life balance, a newly developed five-item WLBSE scale was first assessed based on Bandura's (2005a) "Guide for Constructing Self-Efficacy Scales" (refer to Appendices B and C). The scale sought to assess how confident respondents were in achieving certain work- and non-work goals, and was developed based on the centrality of efficacy beliefs in people's lives. A sound assessment and validation of this construct is thus crucial to understanding and predicting human behaviour, the latter of which has long been a focus on inquiry among researchers.

The WLBSE scale validation consisted of two studies: (a) Study 1A tested the psychometric structure of the WLBSE measure; and (b) Study 1B tested the criterion-related validity of the WLBSE measure with an antecedent variable (job demands) and four outcome variables (turnover intentions, psychological strain – anxiety/depression, job satisfaction, and family satisfaction). The antecedent and outcome variables for Study 1B were chosen because they formed part of the larger work-life interface nomological

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network (*see* Crede, Chernyshenko, Stark, Dalal, & Bashshur, 2007; Grawitch, Maloney, Barber, & Mooshegian, 2013). Specifically, Study 1B tested the following two research hypotheses – Hypothesis 1 was tested using a cross-sectional study, while Hypothesis 2 was tested using a longitudinal study:

> *Hypothesis 1. The WLBSE measure will exhibit significant negative cross-sectional relationships with job demands, turnover intentions, and psychological strain – anxiety/depression, and significant positive cross-sectional relationships with job satisfaction and family satisfaction.*

> *Hypothesis 2. The WLBSE measure will demonstrate significant negative relationships over time with turnover intentions and psychological strain – anxiety/depression, and significant positive relationships over time with job satisfaction and family satisfaction.*

2.3.2 Study 2 – Cross-sectional mediation study

Based on theoretical framework presented in Figure 1.1, as well as the extensive discussion regarding the potential mediating effects of WLBSE on the negative relationships between the multi-dimensional work-family conflict and job satisfaction, this study also offers the following hypotheses:

> *Hypothesis 3a. WLBSE will mediate the negative relationship between time-based WFC and job satisfaction.*

Hypothesis 3b. WLBSE will mediate the negative relationship between strain-based WFC and job satisfaction.

Hypothesis 3c. WLBSE will mediate the negative relationship between behaviour-based WFC and job satisfaction.

Hypothesis 3d. WLBSE will mediate the negative relationship between time-based FWC and job satisfaction.

Hypothesis 3e. WLBSE will mediate the negative relationship between strain-based FWC and job satisfaction.

Hypothesis 3f. WLBSE will mediate the negative relationship between behaviour-based FWC and job satisfaction.

2.3.3 Study 3 – Longitudinal mediation study

There are two primary motivations for carrying out the longitudinal study along with the cross-sectional study. Firstly, in Study 2, each questionnaire was completed by a respondent at a single point in time, which makes the cross-sectional study particularly vulnerable to common method variance or CMV (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Several studies (most notably, Cote and Buckley [1987] and Ostroff, Kinicki, and Clark [2002]) have found that CMV accounts for close to 30% of the total variance in most social science questionnaires. Consequently, longitudinal surveys are conducted to address CMV because temporal separation of events will reduce the cognitive accessibility of responses to antecedents collected at the earlier time, which in turn reduces the probability that earlier responses will influence subsequent responses to criterion variables (Hawk &

Aldag, 1990; Podsakoff et al., 2003; Podsakoff & Organ, 1986). Secondly, longitudinal data has also been shown to possess superior causal inferential ability over cross-sectional data (Cole & Maxwell, 2003), which allows for more valid conclusions to be made with regards to the hypothesised mediation model and the relationships within it.

Therefore, a longitudinal study (Study 3) with the same constructs in Study 2 was conducted to test the hypothesised causal model, yielding the following hypotheses:

Hypothesis 4a. WLBSE will mediate the negative relationship between time-based WFC and job satisfaction over time.

Hypothesis 4b. WLBSE will mediate the negative relationship between strain-based WFC and job satisfaction over time.

Hypothesis 4c. WLBSE will mediate the negative relationship between behaviour-based WFC and job satisfaction over time.

Hypothesis 4d. WLBSE will mediate the negative relationship between time-based FWC and job satisfaction over time.

Hypothesis 4e. WLBSE will mediate the negative relationship between strain-based FWC and job satisfaction over time.

Hypothesis 4f. WLBSE will mediate the negative relationship between behaviour-based FWC and job satisfaction over time.

2.4 Control variables

Researchers implement controls in research designs to eliminate threats to valid inferences (Cook & Campbell, 1979, as cited in Atinc, Simmering, & Kroll, 2012, p. 1), and to minimise the impact of spurious results which may undermine the explanatory power of their research models (Kish, 1959; Pedhazur & Schmelkin, 1991; as cited in Atinc et al., 2012, p. 1). To establish that the six work-family conflict constructs and WLBSE are the sole cause of the observed effect in job satisfaction, the following control variables were also considered in the data analyses of the current research. These seven control variables were included because the organisational literature has shown that they may influence individuals' level of job satisfaction. The control (or demographic) variables were only included in subsequent statistical analyses when they were deemed to have a significant impact on the dependent variable(s) or if there were strong reasons justifying the need for them to be controlled in the analyses (*see* Becker, 2005; Williams, Vandenberg, & Edwards, 2009). Specifically, if the introduction of the control variable(s) does not alter the relationships among the variables of interest, the non-spuriousness of the relationships is further strengthened.

2.4.1 Gender

In a longitudinal study conducted by Grandey et al. (2005), it was found that work-family conflict did not predict changes in job satisfaction for men, but the same construct predicted changes in job satisfaction for women. When considering the bi-directionality of work-family conflict, Ergeneli, Ilsev and Karapinar (2010), Kossek and Ozeki (1998), and Wang

et al. (2010) found a much stronger relationship between WFC and job satisfaction for women than for men. It is reasoned that despite the evolvement of traditional gender roles, when faced with work-family conflict, women are still more likely to spend more time than men at home fulfilling their household duties. Hence, women may feel more frustrated with WFC because it threatens their role in the family, and subsequently makes them feel dissatisfied with their work.

In assessing gender differences on job satisfaction alone, the results have been mixed. Bedeian, Burke and Moffett (1988) found no significant differences between men and women on their levels of job satisfaction, but Clark (1997) and Hodson (1989) found women to be happier at work than men were, citing lower expectations as the reason why women were more satisfied in their jobs. On the other hand, McElwain et al. (2005) found no gender effects on the level of job satisfaction. Given that gender has been shown to affect job satisfaction both directly and indirectly, it is thus included as a control variable in the current study.

2.4.2 Age

It is generally believed that job satisfaction increases with age, but Clark, Oswald and Warr (1996) provided evidence that a U-shaped relationship exists between age and job satisfaction – that is, job satisfaction was found to decline from a moderate level in the early years of employment, and then increase steadily to retirement. DeSantis and Durst (1996) argued that the U-shaped relationship could be due to: (1) job turnover, since

employees who are unsatisfied with their work tend to leave their positions early for more satisfying employment; or (2) older employees having more realistic expectations about their jobs and a stronger sense of achievement than younger employees. However, Bernal, Snyder and McDaniel (1998) and Jung, Moon and Hahm (2007) found that job satisfaction and age were correlated inversely, explaining that older workers tend to feel burnt out and lose interest in their jobs as they become used to the nature of their work. Because age has a dynamic relationship with job satisfaction, it will be included as a control variable in this study as well.

2.4.3 Tenure

Tenure has been found to account for a significant proportion of unique variance in job satisfaction (Hoath, Schneider, & Starr, 1998). Bedeian, Ferris and Kacmar (1992) also found tenure to be a more consistent and stable predictor of job satisfaction than chronological age. Brush, Moch and Pooyan (1987) and Williams and Hazer (1986) have found both age and tenure to be positively correlated with job satisfaction. However, Theodossiou and Zangelidis (2009) suggested that job satisfaction is U-shaped with respect to job tenure. Similar to age, it is shown that job satisfaction declines up to a particular length of tenure, and gradually rises as individuals with longer tenure become increasingly satisfied with their job. Again, because tenure is shown to have an effect on job satisfaction, it will be included as a control variable in this study.

2.4.4 Number of hours worked per week

Research is quite consistent in showing that job satisfaction is negatively related to working hours. For instance, Gray, Qu, Stanton and Weston (2004) found that fathers' job satisfaction decreased as the number of hours worked increased beyond the standard working week. Additionally, Kirkcaldy, Trimpop and Cooper (1997) found that physicians who worked longer experienced more job-related stress and job dissatisfaction than their counterparts who worked lesser over a 12-month period. However, Cabrita and Perista (2006) provided evidence of a significant, positive relationship between working hours and job satisfaction among people working in Denmark and Portugal. In both countries, people who worked more hours were more satisfied with their work than those who worked lesser hours. Similarly, because working hours is shown to affect job satisfaction in different ways, it has been included as a control variable in the current research.

2.4.5 Marital status

Empirical evidence suggests that marital status is directly associated with job satisfaction, although the nature of the relationship between job satisfaction and marital status is not consistent in the literature. For example, Williamson (1996) indicated that the effect of marital status on job satisfaction is not significant, while Kuo and Chen (2004) found marital status to be highly related to job satisfaction among IT personnel working in Taiwan. In particular, Kuo and Chen (2004) found that married employees experienced higher levels of job satisfaction than single employees, possibly because individuals who are married were more likely to receive family and social support, which helped to mediate

job stress, thereby improving job satisfaction. In contrast, a study conducted by Cimete, Gencalp and Keskin (2003) revealed that the mean job satisfaction of divorced and widowed nurses was significantly higher than that of single and married nurses. As marital status appears to affect job satisfaction directly, it will also be included as a control variable in this research.

2.4.6 Number of dependents

Hodson (1989), Loscocco (1990), and Raju (2006, p. 296) did not find any association between the number of dependents and job satisfaction, but Nielsen and Smyth (2008) showed that the number of dependent children had an influence on Chinese employees' job satisfaction because the responsibility of taking care of the children emphasised the need for job stability and work-family balance. In addition, it has been found that individuals with dual (work and family) roles who have to care for dependents tend to have lower levels of job satisfaction (Fleming, Kifle, & Kler, 2013; Hanson & Sloane, 1992). Therefore, given that it is possible that the number of dependents might have an impact on the level of job satisfaction, the dependent status has also been included as a control variable.

2.4.7 Education level

Fabra and Camisón (2009) proposed that individuals with higher levels of formal education tended to be more satisfied with their jobs, primarily because they were more likely to gain access to jobs with features that provided them with higher levels of job satisfaction.

However, Albert and Davia (2005) indicated that education might also increase expectations about salary and job features, and in the event that the expectations are not met, this disappointment will become a source of job dissatisfaction. In their study, Bender and Heywood (2006) confirmed that additional education resulted in lower job satisfaction. Yet, in another study by Ross and Reskin (1992), it was suggested that even though the well-educated are more likely to have control over work, people, and money, the total effect of their education on job satisfaction is null. In light of the compelling albeit inconclusive evidence, education will also be included as a control variable in the present study.

The survey questions designed to gather responses for the purposes of Study 1, Study 2, and Study 3 are shown in Appendices B and C. Questions relating to the above demographic (or control) variables were also included in the surveys. Age and tenure were measured in years, while the number of dependents (children, parents, and other disabled adults) was measured in whole numbers. For gender, males were coded with 0, and females were coded with 1. For marital status, responses which indicated that the participants were single or not married were coded with 0, those who were divorced or separated were coded with 1, and those who were married and co-habiting were coded with 2. Lastly, for education level, responses which indicated that the participants' highest level of education was at the secondary level were coded with 1, 2 at the TAFE or diploma level, 3 at the university or college level, and 4 at the postgraduate level.

CHAPTER 3 – STUDY 1: VALIDATION OF THE WORK-LIFE BALANCE SELF-EFFICACY (WLBSE) SCALE

3.1 Study 1A – Testing the psychometric structure of the WLBSE measure

Study 1A tested the psychometric structure of the WLBSE measure. Specifically, the aim of Study 1A was to show that the WLBSE scale will demonstrate acceptable psychometric characteristics such as good fit to the observed data, internal reliability, and construct validity.

3.1.1 Method

Data was collected using an online questionnaire. Online questionnaires have gained considerable popularity in academic research due to their flexibility, speed, and relatively low costs (Evans & Mathur, 2005). Furthermore, for the purposes of ensuring accuracy in data transcription, setting a timeframe to complete the study, and collecting data from a geographically distributed sample, the online questionnaire approach is highly appropriate for use in this research. Gosling, Vazire, Srivastava and John (2004) also provided strong evidence in support of internet administration of self-report measures, since the online questionnaire sought to assess people's level of WLBSE.

3.1.2 Participants

The sample consisted of 36.0% males (n = 372), and 63.1% females (n = 652), and their ages ranged from 17.0 to 71.0 years, with an average age of 41.4 years (SD = 11.0 years).

A majority (70.8%, n = 732) of the respondents were married or cohabiting, 19.5% (n = 202) were single or never married, and the remaining 8.3% (n = 86) were divorced, separated, or widowed. The average length of time with the organisation (or tenure) was 8.0 years (SD = 7.9 years), and around 66.7% (n = 690) of the respondents had either a university or a postgraduate qualification. The respondents spent an average of 39.3 hours (SD = 10.6 hours) working per week. Of the entire sample, 45.3% (n = 468) had no children, and 42.0% (n = 434) had at least one child or more. Lastly, most of the respondents (77.5%, n = 801) did not live with their parents (see Appendix E).

3.1.3 Procedure

The sample used in this Chapter (Study 1A and Study 1B), Chapter 4 (Study 2), and Chapter 5 (Study 3), consisted of respondents from four organisations – namely, a university, two public sector organisations, and one private sector organisation. The multiple sources of data helped to ensure that there was representation from a fairly diverse range of industries, and minimised CMV to a certain extent (Podsakoff et al., 2003). The researchers first contacted the organisations to request for access to the employees, to explain the purpose of conducting the investigation, and to describe the way the study will be organised and executed. Having obtained permission from the relevant authorities within the organisations, the researchers proceeded to electronically send an invitation with a link to the online questionnaire entitled "Work-Life Balance Survey" (refer to Appendix B for a sample of the survey). The online invitation also explained the purpose of the research, and contained instructions which facilitated the completion and subsequent submission of the

online questionnaire. To reduce non-response error, electronic mails were sent to the employees twice, two weeks and four weeks after the first electronic mail was sent, to remind interested participants to complete the questionnaire if they have not done so.

The researchers sought informed consent from the respondents prior to carrying out the survey, and allowed respondents who felt uncomfortable to withdraw at any point in time throughout the study, even after they have completed the online questionnaire. Additionally, the present study was undertaken with the approval of the Australian National University Human Research Ethics Committee (HREC), which operates in accordance with the National Statement on Ethical Conduct in Human Research (2007).

3.1.4 Measures

Work-life balance self-efficacy (WLBSE). WLBSE was measured using a five-item scale adapted from Bandura's (2005a) "Guide for Constructing Self-Efficacy Scales". The work-life balance self-efficacy measure is presented in full in Appendix B. The respondents were asked to respond to five items by reflecting on their work and non-work activities. The five items were: (1) "How confident are you in changing your lifestyle to achieve a good work-life balance?"; (2) "How confident are you in finding out how to balance work and life?"; (3) "How confident are you in achieving your ideal work-life balance?"; (4) "How confident are you in implementing strategies to achieve work-life balance?"; and (5) "How confident are you in inventing ways to balance your work and life?" Each item had a scale ranging from 0 (cannot do at all) to 100 (highly certain can do), and higher scores meant

that respondents were more likely to believe in their own abilities to cope with work-life challenges. The internal consistency for the scale in Study 1A was .95 for WLBSE.

In addition, the demographic variables – gender, age, tenure, number of hours worked per week, marital status, number of dependents, and education level – were all included in the survey. Specifically, for the number of dependents, respondents were asked to indicate whether they currently had responsibilities to care for dependent children, parents, or any other individuals.

3.1.5 Data analysis

Throughout the thesis, data screening was conducted using "Statistical Package for the Social Sciences" or SPSS (version 21.0, SPSS Inc., Chicago, IL). Correlational analysis, confirmatory factor analysis (CFA) and structural equation modelling (SEM) were carried out using "Analysis of Moment Structures" or AMOS (version 21.0, SPSS Inc., Chicago, IL; Arbuckle & Wothke, 1999).

Of the 1,134 cases, 50 cases (4.4% of sample) were deleted using listwise deletion due to the presence of missing values. Little's (1988) missing completely at random (MCAR) test obtained for the data resulted in a chi-square = 479.25 (df = 527; $p < .93$), which indicated that the data was indeed MCAR because the p value was not significant at the .05 level. Therefore, using listwise deletion to exclude cases with missing values was appropriate since it would not introduce any bias into the parameter estimates. Also, given that there

were few missing values and the sample size was fairly large, the resulting inflated standard errors and lower significance level will not greatly reduce the statistical power and precision of the parameter estimates (Acock, 2005).

The data were subsequently screened for outliers. Outliers are cases that have extreme values relative to other cases observed within the same dataset (Mason, Gunst, & Hess, 2003). Univariate outliers are cases which have an extreme value for a single variable, while multivariate outliers refer to cases that have an extreme combination of values for a number of variables. In Study 1A, there were no univariate outliers, but the test for multivariate outliers using Mahalanobis distance indicated that there were 50 multivariate outliers. Based on the chi-square distribution, with 25 items (and therefore 25 independent variables) in the hypothesised model, and at a critical cutpoint of .001, any cases with a Mahalanobis distance greater than 52.620 will be deemed as multivariate outliers. Following which, all 50 cases were excluded from the study as they were found to significantly reduce the multivariate normality and overall fit of the hypothesised model. This yielded a final sample size of 1,034 cases.

The five-item WLBSE measure was subsequently tested for the validity of its factorial structure using CFA. Based on Byrne's (2001) recommendation, CFA was conducted within the framework of SEM using AMOS as it is proven to be among the most rigorous methodological approach which tests the dimensionality and fit of a factor model. CFA is appropriate for this research because there is strong theory underlying the WLBSE measure, thus allowing researchers to specify an exact factor model prior to data analysis (Williams,

1995). Several fit indices were used in the SEM analyses to assess the adequacy of the measurement and structural models – namely, Standardised Root Mean Square Residual (SRMR), Goodness-of-Fit Index (GFI), Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), Parsimony Comparative Fit Index (PCFI), and Root Mean Square Error of Approximation (RMSEA) – along with the chi-square statistic. Values for the GFI, TLI, CFI, and PCFI are between 0 and 1, with values closer to 1 representing a good-fitting model. Additionally, a value of .08 or less for RMSEA and a value of .05 or less for SRMR are indicative of good fit.

3.1.6 Results

The final model of the WLBSE measure (as shown in Figure 3.1) represented an excellent fit to the data (refer to Table 3.2 for the CFA results).

Figure 3.1. Model C – Final model of the WLBSE measure
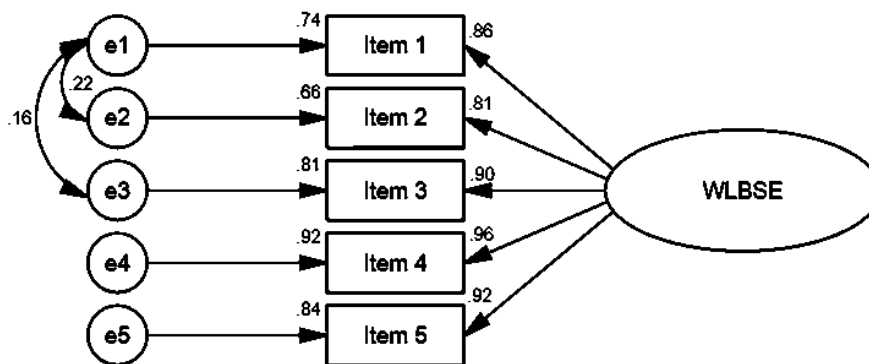
Notes: 1) Values to the left of the manifest variables represent squared multiple correlations (R^2); 2) Values to the right of the manifest variables represent standardised factor loadings (β).

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Table 3.2. Scale validation – CFA results of the WLBSE measure

Model	χ^2	df	p-value	χ^2/df	SRMR	GFI	TLI	CFI	PCFI	RMSEA
A. One Factor	67.78	5	.00	13.56	.01	.97	.98	.99	.49	.11
B. One Factor (e1 & e2)	30.78	4	.00	7.69	.01	.99	.99	1.00	.40	.08
C. One Factor (e1 & e2; e1 & e3)	11.70	3	.00	3.90	.01	1.00	1.00	1.00	.30	.05

Notes: 1) N = 1,034; 2) df = degrees of freedom; 3) SRMR = Standardised Root Mean Square Residual; 4) GFI = Goodness-Of-Fit Index; 5) TLI = Tucker-Lewis Index; 6) CFI = Comparative Fit Index; 7) PCFI = Parsimony Comparative Fit Index; 8) RMSEA = Root Mean Square Error of Approximation.

Model C, which is also the final adjusted model of the WLBSE measure, had GFI, TLI, and CFI estimates which exceeded .99, a SRMR estimate which was less than .05, and a RMSEA which was less than .08, all of which were indicative of good fit. Model C was derived after performing some model adjustments through correlating the errors e1 and e2, and e1 and e3, which enabled the RMSEA estimate to fall within the acceptable range at .05 (refer to Appendix F for more details regarding the modification from the initial model to the final model of the WLBSE scale). All five items accounted for acceptable proportions of the overall variance, as each item had a squared multiple correlation (R^2) that is greater than .49. The internal reliability (or Cronbach's alpha) estimates for the WLBSE measure were also acceptable, ranging from .81 to .96 for the five items (see Figure 3.1).

3.1.7 Discussion

The analyses validated the five-item, one-dimensional WLBSE measure in an independent sample consisting of responses from four different organisations. Specifically, each of the five items accounted for acceptable levels of variance in the latent construct WLBSE, and the measure produced a high level of internal reliability. The psychometric structure of this new measure was thus found to be acceptable. Coupled with the fairly large sample size of 1,034 responses, CFA provided evidence for the robust psychometric properties of the WLBSE measure. Study 1B was subsequently conducted to further analyse and test the validity of the WLBSE measure.

3.2 Study 1B – Testing the criterion-related validity of the WLBSE measure

Study 1B tested the criterion-related validity of the WLBSE measure with an antecedent variable (job demands) and four outcome variables (turnover intentions, psychological strain – anxiety/depression, job satisfaction, and family satisfaction). Specifically, Study 1B consisted of a cross-sectional study and a longitudinal study for two main purposes: (1) to examine and compare the results of the cross-sectional and longitudinal findings; and (2) to test the hypothesised mediation model over time. The cross-sectional study and longitudinal study are represented in Figure 3.2 and Figure 3.3 respectively.

Figure 3.2. Hypothesised cross-sectional SEM of WLBSE scale validation study
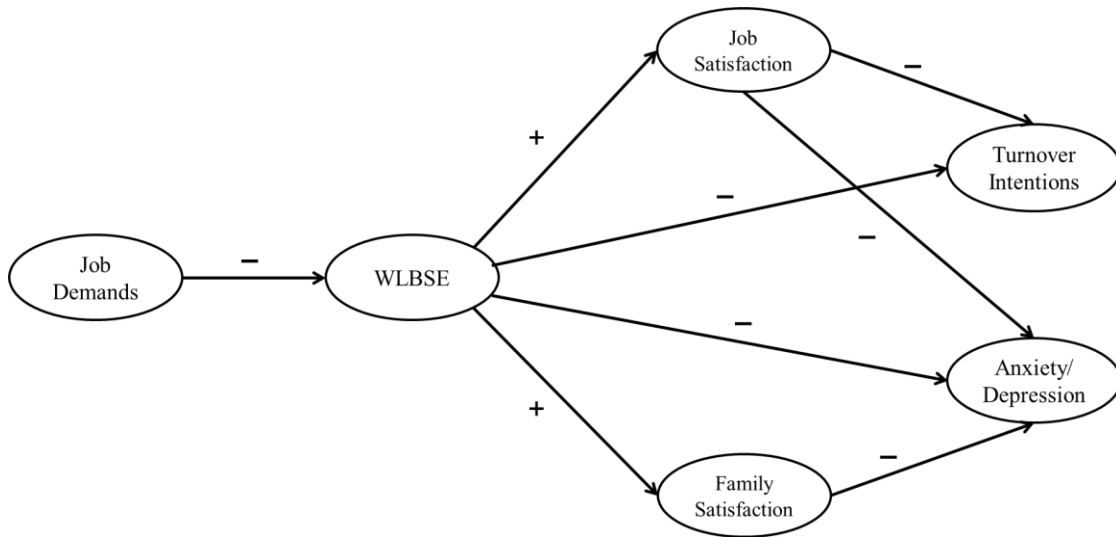
Note: Figure 3.2 depicts Hypothesis 1, which postulates that WLBSE will exhibit significant negative cross-sectional relationships with job demands, turnover intentions, and psychological strain – anxiety/depression, and significant positive cross-sectional relationships with job satisfaction and family satisfaction.

Figure 3.3. Hypothesised longitudinal SEM of WLBSE scale validation study
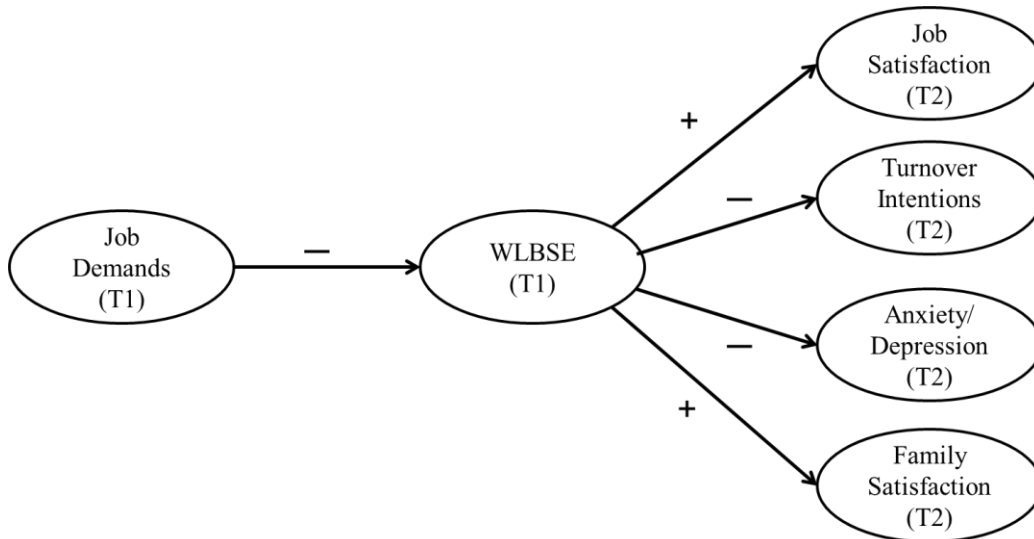
Note: Figure 3.3 depicts Hypothesis 2, which postulates that WLBSE will demonstrate significant negative relationships over time with turnover intentions and psychological strain – anxiety/depression, and significant positive relationships over time with job satisfaction and family satisfaction.

3.2.1 Method

Study 1B consisted of two samples – Time 1 (T1) sample and Time 2 (T2) sample. T1 sample is similar to the sample used in Study 1A, and was collected 12 months prior to the collection of T2 data. Of the 1,034 respondents in T1 sample, 98 (9.5%) respondents provided responses to the same set of questions at T2. That is to say, 9.5% (n = 98) of T1 respondents could be matched as providing responses to both T1 and T2 questionnaires. Despite the sharp drop in response rate between T1 and T2, researchers such as Chan (1998) have noted that it is not uncommon to see the response rate drop by 50% or more between the first and last measurement period of a longitudinal study. In addition, there were no missing values for the variables job demands, WLBSE, turnover intentions, psychological strain – anxiety/depression, job satisfaction, and family satisfaction in all 98 cases – rendering them useful for statistical analysis. The final sample size of the T2 data was 97 cases, as one case was found to be a univariate outlier.

3.2.2 Participants

The sample consisted of 36.1% males (n = 35), and 62.9% females (n = 61), and their ages ranged from 24.0 to 66.0 years, with an average age of 41.6 years (SD = 10.3 years). A majority (75.3%, n = 73) of the respondents were married or cohabiting, 14.4% (n = 14) were single or never married, and the remaining 9.3% (n = 9) were divorced, separated, or widowed. The average length of time with the organisation (or tenure) was 8.8 years (SD = 7.2 years), and around 73.2% (n = 71) of the respondents had either a university or a postgraduate qualification. The respondents spent an average of 38.6 hours (SD = 10.1

hours) working per week. Of the entire sample, 47.4% (n = 46) had no children, and 46.4% (n = 45) had at least one child or more. Lastly, most of the respondents (86.6%, n = 84) did not live with their parents. Although the sample size of the longitudinal study was much smaller than that of the cross-sectional study, the demographic characteristics of the respondents in both samples did not differ markedly.

3.2.3 Measures

As noted earlier, the antecedent and outcome variables for Study 1B were chosen because they formed part of the larger work-life interface nomological network (*see* Grawitch et al., 2013).

Job demands. The antecedent was measuring using Boyar, Carr, Mosley and Carson's (2007) five-item measure. Two examples of the items were "My work demands a lot from me" and "I feel like I have a lot to do at work". Respondents expressed their agreement with the items on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores represent higher job demands. The internal consistency for the scale at T1 was .91 and .92 at T2.

Turnover intentions. The outcome variable was measured using a three-item scale developed and validated by Brough and Frame (2004). Two examples of the items were "How likely are you to leave your job in the next 6 months?" and "How often do you actively look for jobs outside your present organisation?". Items were measured on a

frequency scale that ranged from 1 (not at all) to 5 (a great deal). Higher scores indicate higher turnover intentions. The internal consistency for the scale at T1 was .86 and .81 at T2.

Psychological strain – anxiety/depression. The six-item measure was adapted from the twelve-item version of the General Health Questionnaire (GHQ; Goldberg, 1972), the latter of which is often utilised as a composite measure of psychological strain. Psychological strain – anxiety/depression was preferred to psychological strain – social dysfunction because recent studies have found anxiety/depression to be more relevant to the work-family interface, since significant relationships have been established between the construct and work-family conflict, family satisfaction, job demands, job attitudes, and turnover (*see* Panatik, Shah, & Rahman, 2012). Items related to anxiety/depression were worded negatively, and two examples of the items were "Have you recently been feeling unhappy or depressed?" and "Have you recently lost much sleep over worry?". Responses were recorded on a frequency scale from 0 (not at all) to 3 (much more than usual). Higher scores represent higher levels of psychological strain – anxiety/depression. The internal consistency for the scale at T1 was .90 and .88 at T2.

Job satisfaction. The construct was measured using three items adapted by Camman, Fichman, Jenkins, and Klesh (1983) from the Michigan Organisational Assessment Questionnaire (Seashore, Lawler, Mirvis, & Cammann, 1982). The scale provided an overall measure assessing the degree to which respondents were happy and satisfied with their jobs, and whether they enjoyed their work. Two examples of the items were "In

general, I don't like my job" and "In general, I like working here" (refer to Appendix D). For the purpose of CFA and SEM, responses to item 1 of job satisfaction were recoded inversely because it was negatively phrased in comparison to the other two items. Responses to the items were measured on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The internal consistency for the scale in the present study was .87 at T1 and T2.

Family satisfaction. Family satisfaction was assessed with three items from the scale developed by Edwards and Rothbard (1999). Two examples of the items were "In general, I am satisfied with my family/home life" and "My family/home life is very enjoyable". Responses were recorded on a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicate higher levels of family satisfaction. The internal consistency for the scale in the present study was .97 at T1 and .98 at T2.

Similar to Study 1A, the demographic variables – gender, age, tenure, number of hours worked per week, marital status, number of dependents, and education level – were all included in the survey. Although some demographic variables (namely, gender, age, marital status, level of education, tenure, hours worked per week, and number of children) showed significant correlations with two of the criterion variables – psychological strain – anxiety/depression and family satisfaction, they were not included in the final hypothesised cross-sectional and longitudinal model. This is because, after controlling for the demographic variables while running SEM, none of them were shown to have a significant impact on job satisfaction. This was done in line with research by Becker (2005) and

Williams et al. (2009) which warned against controlling for variables that were not correlated with the dependent variable since doing so will greatly reduce the explanatory power of the structural model.

3.2.4 Procedure

Likewise, the procedure that was used to carry out Study 1B was exactly similar to the procedure used to conduct Study 1A, except in T2 respondents logged into the online questionnaire using a unique password provided to them earlier in T1, which helped the researchers to match their identities in T1 and T2.

As with Study 1A, the data analyses were carried out using SPSS and AMOS. T1 sample had previously been screened for missing data in Study 1A, and the T2 sample did not have any missing values for the variables of interest. The longitudinal analysis matched T2 data to the same T1 respondents who responded to the online questionnaire at both Time 1 and Time 2. All unmatched cases were deleted, and outliers excluded, yielding a final sample size of 97. In the current study, SEM was used to validate the WLBSE measure in the work-life interface nomological network, mainly because SEM is widely acknowledged to be a powerful tool for validating psychological measures such as self-efficacy (Byrne, 1998). Two tests were being carried out – first, cross-sectional SEM was conducted on T1 data (see Figure 3.4); second, longitudinal SEM was conducted on T1 and T2 data (see Figure 3.5).

3.2.5 Data analysis and results

Correlational analyses (refer to Appendix J, Table 3.4) provided initial support for Hypothesis 1. Specifically, WLBSE was significantly and negatively correlated with job demands (r = -.31), turnover intentions (r = -.21), and psychological strain – anxiety/depression (r = -.46). Additionally, WLBSE was significantly and positively correlated with job satisfaction (r = .35) and family satisfaction (r = .34). The correlations were both statistically significant and in the expected directions, indicating that Hypothesis 1 is likely to be fully supported.

3.2.5.1 Cross-sectional SEM

The standardised parameter estimates were tested for significance with 95% confidence intervals calculated using the bias-corrected bootstrap method (5,000 samples, as recommended by Hayes [2009]) due to the significance of skewness and kurtosis in the T1 data. All but one parameter estimates were statistically significant at p < .001. Therefore, consistent with hypothesis 1, the majority of associations between WLBSE and the latent variables were statistically significant in the expected directions. That is to say, WLBSE was significantly and negatively related to job demands and psychological strain – anxiety/depression, and significantly and positively related to job satisfaction and family satisfaction. WLBSE, however, was not shown to be significantly correlated with turnover intentions. Nevertheless, the goodness-of-fit indices (refer to Table 3.5) indicate that the SEM model was a good fit to the data, with most of the statistics falling within the acceptable thresholds. Hence, Hypothesis 1, which postulated that WLBSE will exhibit

significant negative cross-sectional relationships with job demands, turnover intentions, and psychological strain – anxiety/depression, and significant positive cross-sectional relationships with job satisfaction and family satisfaction, was partially supported.

Figure 3.4. Cross-sectional SEM of WLBSE scale validation study
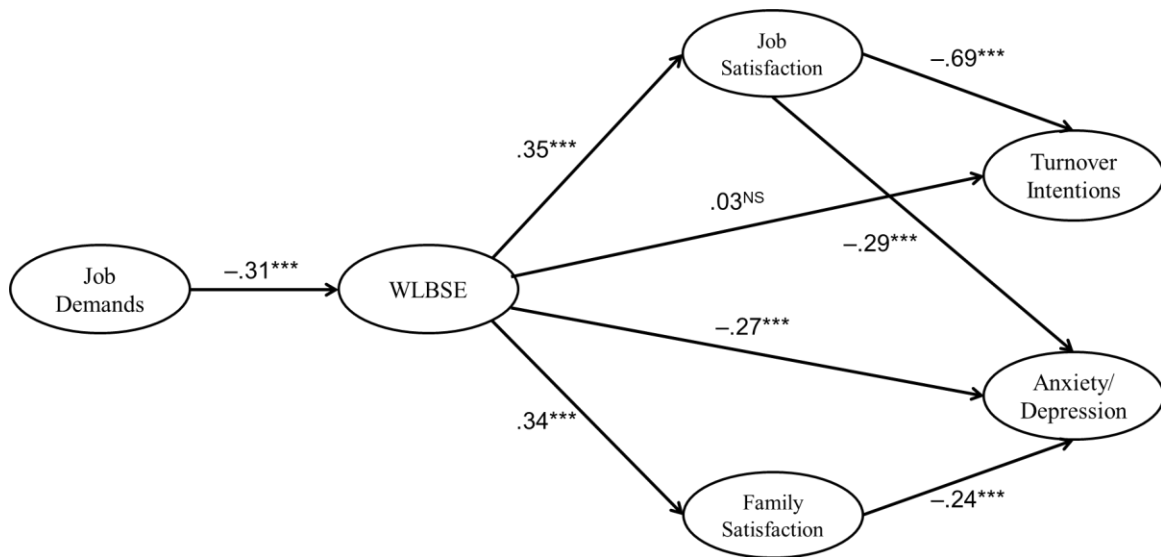
Notes: 1) Values represent standardised regression weights; 2) Loadings are significant if indicated with *** (p = < .001), ** (p = < .01), or * (p = < .05); 3) Loadings are not significant when indicated with NS (p > = .05).

Table 3.5. Scale validation – Cross-sectional SEM goodness-of-fit statistics

Model	χ^2	df	p-value	χ^2/df	GFI	TLI	CFI	PCFI	SRMR	RMSEA
Cross-sectional	741.70	242	.00	3.07	.94	.97	.98	.86	.05	.05

Notes: 1) N = 1,034; 2) df = degrees of freedom; 3) GFI = Goodness-Of-Fit Index; 4) TLI = Tucker-Lewis Index; 5) CFI = Comparative Fit Index; 6) PCFI = Parsimony Comparative Fit Index; 7) SRMR = Standardised Root Mean Square Residual; 8) RMSEA = Root Mean Square Error of Approximation

3.2.5.2 Longitudinal SEM

For the purpose of providing a more robust validation of the WLBSE measure, and to examine potential causal relationships, as well as the ability of WLBSE to predict various criterion variables over time, the researcher conducted longitudinal SEM on both T1 and T2 data. This time, WLBSE did not mediate the relationships between job demands and turnover intentions, and job demands and family satisfaction. As shown in Figure 3.5, the paths leading from WLBSE to turnover intentions and WLBSE to family satisfaction were not statistically significant.

Figure 3.5. Longitudinal SEM of WLBSE scale validation study (Full mediation)
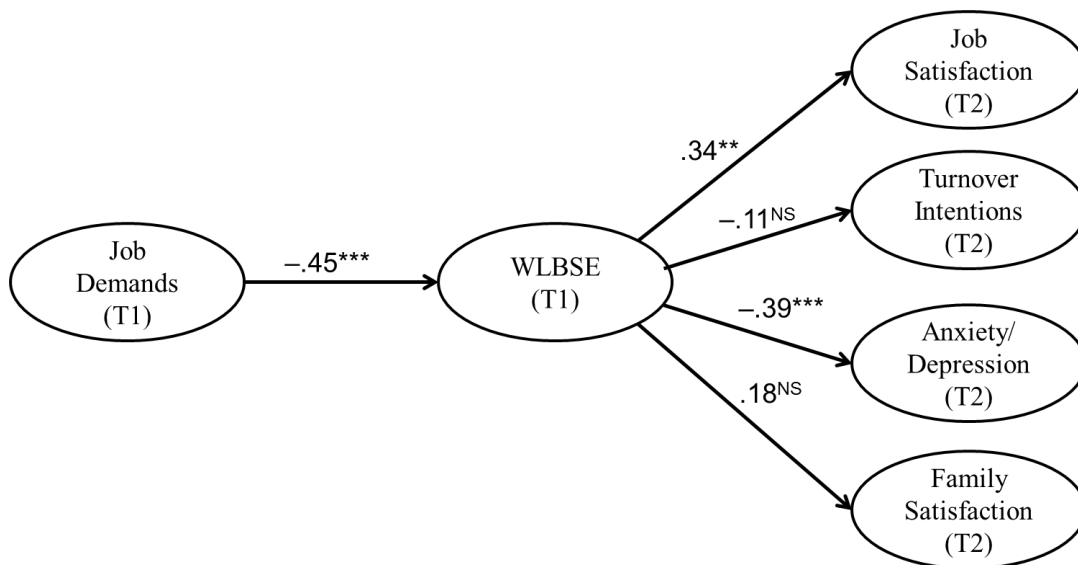
Notes: 1) Values represent standardised regression weights; 2) Loadings are significant if indicated with *** (p = < .001), ** (p = < .01), or * (p = < .05); 3) Loadings are not significant when indicated with NS (p > = .05).

Consistent with Anderson and Gerbing's (1988) recommendation, two models were subsequently compared − the longitudinal full mediation model which has already been

tested (see Figure 3.5) and the longitudinal partial mediation model (see Figure 3.6). The researcher proceeded to re-run the hypothesised full mediation model with the job demands–turnover intentions and job demands–family satisfaction paths freed, yielding a partial mediation model (see Figure 3.6). Again, both the indirect and direct paths leading from job demands to turnover intentions, and job demands to family satisfaction were not significant. These findings suggest that WLBSE did not partially mediate both relationships as well. Similar to Hypothesis 1, Hypothesis 2, which postulated that WLBSE will demonstrate significant negative relationships over time with turnover intentions and psychological strain – anxiety/depression, and significant positive relationships over time with job satisfaction and family satisfaction, was only partially supported.

Table 3.6. Scale validation – Longitudinal SEM goodness-of-fit statistics

Model	χ^2	df	p-value	χ^2/df	GFI	TLI	CFI	PCFI	SRMR	RMSEA
Longitudinal – (Full Mediation)	416.23	268	.00	1.55	.75	.92	.93	.83	.12	.08
Longitudinal (Partial Mediation)	413.95	266	.00	1.56	.75	.92	.93	.82	.12	.08

Notes: 1) N = 97; 2) df = degrees of freedom; 3) GFI = Goodness-Of-Fit Index; 4) TLI = Tucker-Lewis Index; 5) CFI = Comparative Fit Index; 6) PCFI = Parsimony Comparative Fit Index; 7) SRMR = Standardised Root Mean Square Residual; 8) RMSEA = Root Mean Square Error of Approximation

Figure 3.6. Longitudinal SEM of WLBSE scale validation study (Partial mediation)
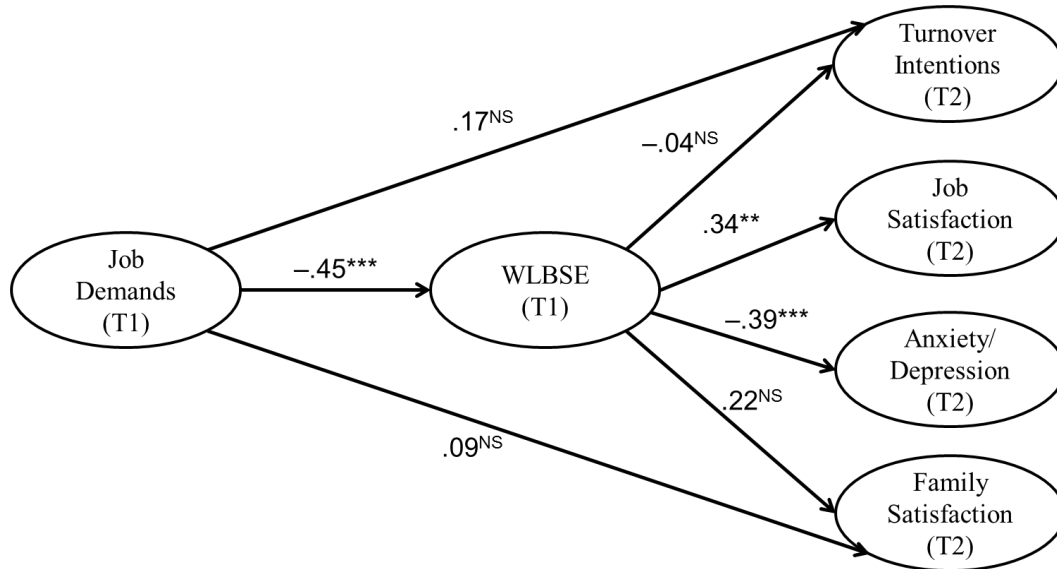
Notes: 1) Values represent standardised regression weights; 2) Loadings are significant if indicated with *** ($p = < .001$), ** ($p = < .01$), or * ($p = < .05$); 3) Loadings are not significant when indicated with NS ($p > = .05$).

3.2.6 Discussion

While the fit indices of the longitudinal SEM were acceptable, they were in general weaker in strength as compared to the cross-sectional SEM results. The cross-sectional SEM test rendered close to full support for Hypothesis 1, while the longitudinal SEM partially supported Hypothesis 2. The above analyses demonstrated that the WLBSE did have significant associations in the expected directions with the recognised antecedent and four recognised outcome variables. However, its predictive validity over time will require further substantiation, given that WLBSE was only significantly correlated with two out of the four outcome variables that were examined in the study. Nevertheless, the testing of longitudinal relationships within a fairly large sample is noteworthy, and certainly lends

support to causal relationships between WLBSE, job demands, job satisfaction, and psychological strain – anxiety/depression.

The current research achieved its aim of validating the WLBSE scale, given that the measure had significant relationships with a nomological network of job-related, family-related, and psychological variables in the hypothesised directions. Additionally, the measure was found to be psychometrically sound over time, as it mediated the relationships between job demands and job satisfaction, and job demands and psychological strain – anxiety/depression at both T1 and T2. That is to say, changes in self-efficacy corresponded with similar changes in both of the outcome variables. Consequently, the structural validity and predictive ability of the new WLBSE scale was considered satisfactory. While the use of partial and full mediation usually emphasises the importance of an intervening variable in explaining the overall effect (Preacher & Kelley, 2011), the outcomes of both partial and full mediation in this study also contributed to theory building as they point to the existence of potential mechanisms that may not have been considered, but should ideally be examined and tested (Rucker, Preacher, Tormala, & Petty, 2011). The present research is also consistent with other studies (*see* Day & Silverman, 1989) in showing that the domain-specific self-efficacy measure, WLBSE, is a strong predictor of the job-related outcome – job satisfaction.

3.2.7 Research Limitations

The dropout rate for survey responses in the longitudinal SEM study was particularly high, which resulted in a much smaller than anticipated matched T1 and T2 data set (n = 97). This is likely due to recent cost-cutting measures across organisations in Australia, in light of the slowing world economy which has resulted in hard times for most Australian businesses. During economic slowdowns, it is not uncommon for firms to cut back on initiatives which help improve employees' well-being, and this further leads to more difficulties for researchers to enter organisations to collect data. Additionally, because the questionnaires were completed by the respondents at their own time, this research was highly reliant on self-reported data, which may lead to issues relating to CMV and consistency bias. Lastly, other variables within the work-life interface nomological network could also be included in future research, since WLBSE did not predict family satisfaction and turnover intentions over time in the current study. Exploring how WLBSE relates to other constructs will also contribute to the understanding of WLBSE, and help facilitate better understanding of the positive mediating effects of WLBSE in intervention efforts.

3.2.8 Conclusion

Based on the results of the study and drawing on the theory of self-efficacy, examining WLBSE as well as the consequences of changes in people's level of WLBSE does appear to be promising for both research and practice. The current research has provided validation for the newly-developed one-dimensional WLBSE scale, which can be included in future studies, particularly those centred around the work-life interface and self-efficacy.

CHAPTER 4 – STUDY 2: CROSS-SECTIONAL MEDIATION STUDY

Having empirically validated the WLBSE measure, the study proceeded to test the hypothesised mediation model using SEM. In each SEM analysis, based on the two-step procedure developed by Anderson and Gerbing (1988), a measurement model with the latent variables was first estimated using CFA to determine the model's discriminant validity, followed by the test of the hypothesised structural model.

4.1 Method

In the first step, a measurement model, which relates the observed responses to the latent variables (time-based WFC and FWC, strain-based WFC and FWC, behaviour-based WFC and FWC, WLBSE, and job satisfaction), was estimated. After establishing model fit, the hypothesised mediation (or structural) model, which specifies relations among latent variables, was then fitted to the observed data. SEM was chosen over other methods to analyse the mediation effects because it is posited that WLBSE will fully mediate the six hypothesised relationships. Hopwood (2007) and James, Mulaik and Brett (2006) reasoned that when full mediation is expected, SEM is among the most appropriate methods of data analysis. Additionally, SEM allows the investigation of several hypothesised relationships to take place simultaneously. Furthermore, when considering the absolute minimum sample size to conduct SEM, Kline (2005) suggested that researchers should only be concerned when a study's sample size falls below 100. Similar to the previous studies, the data analyses were conducted using SPSS and AMOS.

4.2 Participants

A sample of the online survey questions for Study 2 is shown in Appendix C. Similar to Study 1A and Study 1B, the same steps and precautions were used when approaching firms, conducting the online questionnaire, and gathering the responses from participants. The same demographic variables – namely, gender, age, tenure, number of hours worked per week, marital status, number of dependents, and education level – were also included in the survey.

The sample consisted of 36.7% males (n = 372), and 62.4% females (n = 633), and their ages ranged from 17.0 to 71.0 years, with an average age of 41.3 years (SD = 11.1 years). A majority (71.1%, n = 721) of the respondents were married or cohabiting, 19.5% (n = 198) were single or never married, and the remaining 9.4% (n = 95) were divorced, separated, or widowed. The average length of time with the organisation (or tenure) was 8.0 years (SD = 7.9 years), and around 67.1% (n = 680) of the respondents had either a university or a postgraduate qualification. The respondents spent an average of 39.3 hours (SD = 10.7 hours) working per week. Of the entire sample, 45.2% (n = 458) had no children, and 42.1% (n = 427) had at least one child or more. Lastly, most of the respondents (77.0%, n = 781) did not live with their parents.

4.3 Procedure

The initial sample of 1,134 cases was first screened for missing values, outliers, and violations of normality. Little's (1988) MCAR test obtained for the data resulted in a chi-

square $=$ 726.00 (df $=$ 682; p $<$ .12), which indicated that the data was indeed MCAR because the p value was not significant at the .05 level. Therefore, using listwise deletion to exclude cases with missing values was appropriate since it would not introduce any bias into the parameter estimates. Of the 1,134 cases, 65 cases (5.7% of sample) were deleted using listwise deletion due to the presence of missing values. Also, given that the proportion of cases with missing values was small as compared to the sample size, excluding the cases using listwise deletion will not greatly reduce the explanatory power and precision of the parameter estimates (Acock, 2005).

The data were subsequently screened for outliers. There were no univariate outliers, but the test for multivariate outliers using Mahalanobis distance indicated that there were 55 multivariate outliers. Based on the chi-square distribution, with 26 items (and therefore 26 independent variables) in the hypothesised mediation model, and at a critical cutpoint of .001, any cases with a Mahalanobis distance greater than 54.052 will be deemed as multivariate outliers. Following which, all 55 cases were excluded from the study as they were found to significantly reduce multivariate normality and overall fit of the hypothesised measurement and structural models. This yielded a final sample size of 1,014 cases.

4.4 Measures

Work-family conflict. Work-family conflict was assessed using Carlson et al.'s (2000) 18-item Work-Family Conflict Scale. The measure is divided into 6 sub-scales assessing each form of conflict – time-based WFC and FWC, strain-based WFC and FWC, and behaviour-

based WFC and FWC (see Table 1.1), with 3 items in each sub-scale. Each item used a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). A sample item from the strain-based FWC scale is "Because I am often stressed from family/life responsibilities, I have a hard time concentrating on my work." Another sample item from the time-based WFC is "I have to miss family/life activities due to the amount of time I must spend on work responsibilities". Carlson et al. (2000) reported internal consistency reliabilities of time-based WFC (.87) and FWC (.79), strain-based WFC (.85) and FWC (.87), and behaviour-based WFC (.78) and FWC (.85). In the current study, the internal consistencies for time-based WFC, time-based FWC, strain-based WFC, strain-based FWC, behaviour-based WFC, and behaviour-based FWC were .87, .86, .92, .92, .84, and .91 respectively.

Work-life balance self-efficacy (WLBSE). WLBSE was measured using a five-item scale that was validated in Chapter 3. Each item had a scale ranging from 0 (cannot do at all) to 100 (highly certain can do), which sought to assess how confident respondents were in achieving certain work- and non-work goals. Two examples of the items were "How confident are you in achieving your ideal work/life balance?" and "How confident are you in inventing ways to balance your work and life?". The internal consistency for the scale in the present study was .95 for WLBSE.

Job satisfaction. Job satisfaction was measured using three items adapted by Camman et al. (1983) from the Michigan Organisational Assessment Questionnaire (Seashore et al., 1982). The scale provided an overall measure assessing the degree to which respondents were

happy and satisfied with their jobs, and whether they enjoyed their work. Two examples of the items were "In general, I don't like my job" and "In general, I like working here" (refer to Appendix D). For the purpose of CFA and SEM, responses to item 1 of job satisfaction were recoded inversely because it was negatively phrased in comparison to the other two items. Responses to the items were measured on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The internal consistency for the scale in the present study was .86 for job satisfaction.

4.5 Data analysis and results

Correlational analyses (refer to Appendix K, Table 4.2) provided initial support for Hypotheses 3a, 3b, 3c, 3d, 3e, and 3f. Essentially, WLBSE was significantly and negatively correlated with time-based WFC ($r = -.54$), time-based FWC ($r = -.21$), strain-based WFC ($r = -.56$), strain-based FWC ($r = -.21$), behaviour-based WFC ($r = -.40$), and behaviour-based FWC ($r = -.38$). Additionally, WLBSE was significantly and positively correlated with job satisfaction ($r = .35$). The correlations were both statistically significant and in the expected directions, indicating that WLBSE is likely to fully mediate the hypothesised relationships.

4.5.1 Measurement model

The objective of CFA is to test whether the observed data fit the hypothesised measurement model. This hypothesised model is usually based on theory or previous analytic research. In the current cross-sectional study, CFA is used to study the expected causal relations among

the following variables − time-based WFC, time-based FWC, strain-based WFC, strain-based FWC, behaviour-based WFC, behaviour-based FWC, WLBSE, and job satisfaction.

To determine the presence of CMV, the Harman's one-factor (or single-factor) test was conducted using CFA. According to Podsakoff and Organ (1986), the test assumes that a single factor will account for all of the covariance among the variables of interest if CMV is present. However, as shown in Table 4.3, the CFA analyses indicated that a one-factor measurement model does not provide a good fit to the data with chi-square = 12,414.79 (df = 299, p = .00), GFI = .42, TLI = .40, CFI = .41, PCFI = .38, and RMSEA = .20. Correspondingly, the fit statistics for the tests of the one-factor, four-factor, and eight-factor measurement models revealed that the eight-factor model was the best fitting model among the three models tested. The findings confirmed that work-family conflict should not be treated as a uni-dimensional construct, and is better represented by the three forms of conflict (time-based, strain-based, and behaviour-based conflict) in both directions (WFC and FWC).

Table 4.3. CFA results for hypothesised cross-sectional mediation model

Model	χ^2	df	p-value	χ^2/df	SRMR	GFI	TLI	CFI	PCFI	RMSEA
1-factor	12,414.79	299	.00	41.52	–	.42	.40	.41	.38	.20
4-factor	6171.51	293	.00	21.06	.15	.62	.68	.71	.64	.14
8-factor	653.00	271	.00	2.41	.03	.95	.98	.98	.82	.04

Notes: 1) N = 1,014; 2) df = degrees of freedom; 3) SRMR = Standardised Root Mean Square Residual; 4) GFI = Goodness-Of-Fit Index; 5) TLI = Tucker-Lewis Index; 6) CFI = Comparative Fit Index; 7) PCFI = Parsimony Comparative Fit Index; 8) RMSEA = Root Mean Square Error of Approximation.

Despite having a significant chi-square, the eight-factor measurement model exhibited good fit indices (SRMR=.03, GFI=.95, TLI=.98, CFI=.98, PCFI=.82, and RMSEA=.04), with all the fit indices falling within the various recommended threshold levels accepted in literature. Recall that for the fit indices to provide adequate and good fit to the data, GFI and CFI should both exceed .95, and RMSEA should be kept under .08 (Hair, Black, Babin, Anderson, & Tatham, 2005). GFI, CFI, and RMSEA are key indicators of model fit.

4.5.2 Structural model

Table 4.4. SEM results for hypothesised cross-sectional mediation model

Model	χ^2	df	p-value	χ^2/df	GFI	TLI	CFI	PCFI	SRMR	RMSEA
Full Mediation	648.45	275	.00	2.36	.95	.98	.98	.83	.04	.04
Partial Mediation	627.06	272	.00	2.31	.95	.98	.98	.82	.03	.04

Notes: 1) N = 1,014; 2) df = degrees of freedom; 3) GFI = Goodness-Of-Fit Index; 4) TLI = Tucker-Lewis Index; 5) CFI = Comparative Fit Index; 6) PCFI = Parsimony Comparative Fit Index; 7) SRMR = Standardised Root Mean Square Residual; 8) RMSEA = Root Mean Square Error of Approximation

The second stage involved testing the hypothesised causal relationships among the latent factors, which is also referred to as the testing of the structural model. Figure 4.1 depicts the hypothesised full mediation model. Test of the hypothesised full mediation model yielded a chi-square of 648.45 (df = 275, p = .00). Although the chi-square was significant, the fit indices were satisfactory, indicating that the structural model was a good fit to the data. More specifically, the fit indices GFI = .95 (> = .95), TLI = .98 (> = .95), CFI = .98 (> = .95), SRMR = .04 (= < .05), and RMSEA = .04 (= < .08), are well within the acceptable

range as specified in SEM literature (*see* Dattalo [2013] and Lance, Butts and Michels [2006] for a review of fit indices). A closer look at the path estimates of the full mediation model revealed that WLBSE was found to fully mediate the relationships between: (1) time-based WFC and job satisfaction; (2) strain-based WFC and job satisfaction; and (3) behaviour-based WFC and job satisfaction. In other words, full mediation was supported for Hypotheses 3a, 3b, and 3c.

Figure 4.1. Hypothesised cross-sectional full mediation model
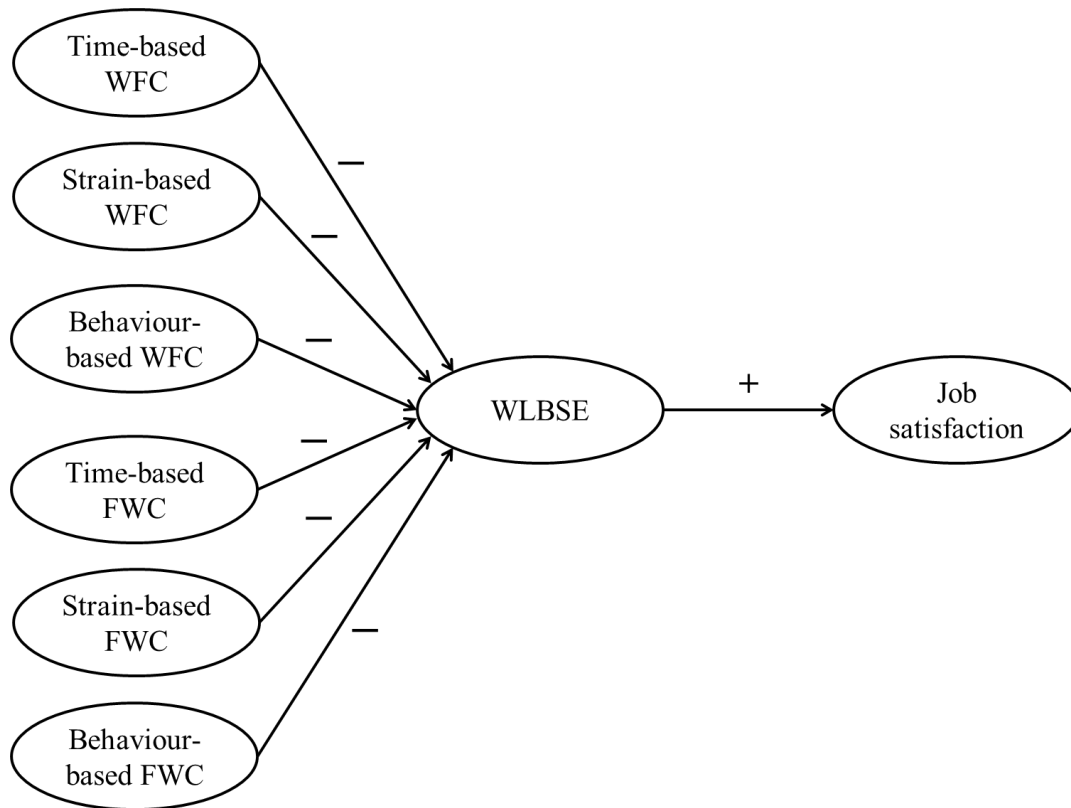
Notes: 1) (–) indicates a negative relationship between the variables; 2) (+) indicates a positive relationship between the variables; 3) It is hypothesised that WLBSE will mediate the negative relationships between time-based, stain-based, and behaviour-based WFC and job satisfaction, and time-based, stain-based, and behaviour-based FWC and job satisfaction (Hypotheses 3a, 3b, 3c, 3d, 3e, and 3f).

Figure 4.2. SEM results for hypothesised cross-sectional full mediation model
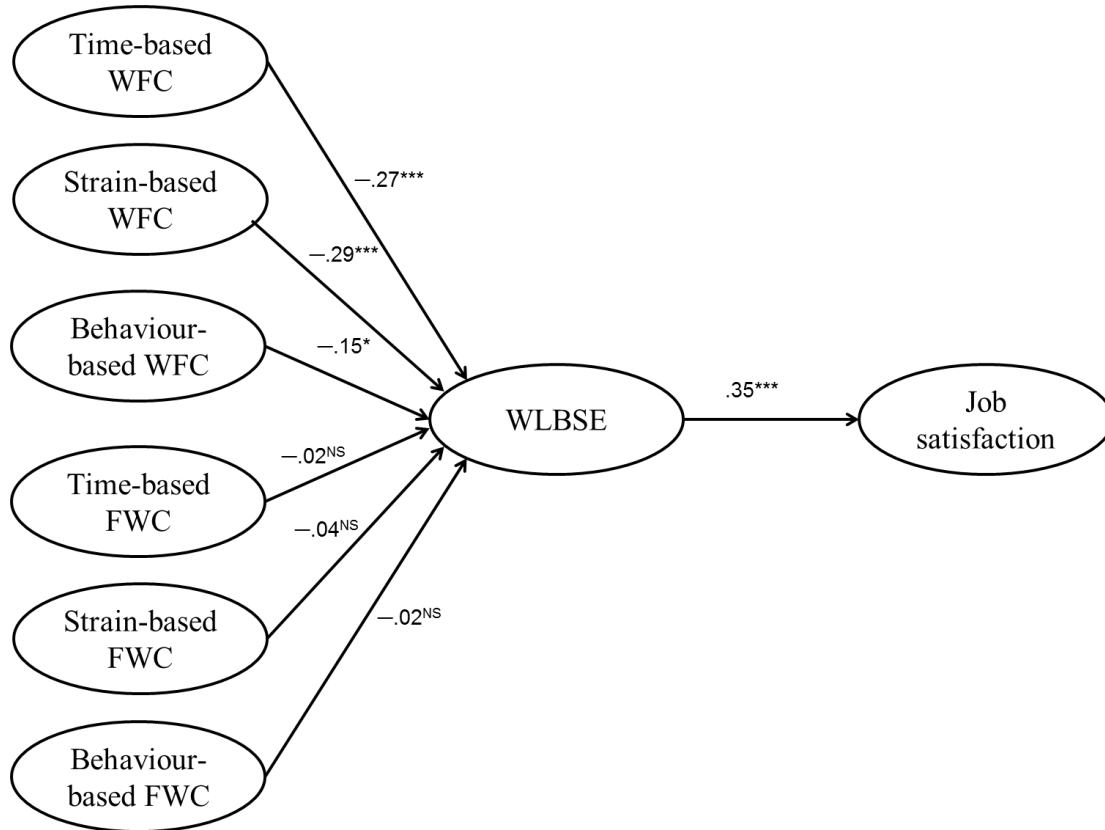
Notes: 1) Values represent standardised regression weights; 2) Loadings are significant if indicated with *** (p = < .001), ** (p = < .01), or * (p = < .05); 3) Loadings are not significant when indicated with NS (p > = .05).

However, WLBSE did not fully mediate the relationships between: (1) time-based FWC and job satisfaction; (2) strain-based FWC and job satisfaction; and (3) behaviour-based FWC and job satisfaction. That is, at this point in time, the cross-sectional findings are not supportive of Hypotheses 3d, 3e, and 3f.

As shown in Figure 4.2, the standardised parameter estimates were tested for significance with 95% confidence intervals calculated using the bias-corrected bootstrap method (5,000 samples, as recommended by Hayes [2009]). The path estimates leading from time-based,

strain-based, and behaviour-based WFC to WLBSE were statistically significant at p < .05, but the paths leading from time-based, strain-based, and behaviour-based FWC to WLBSE were not significant at p < .05. Nevertheless, WLBSE was found to be significantly and positively correlated with job satisfaction (standardised coefficient = .35, p = .00). The hypothesised cross-sectional full mediation model accounted for 12.3% of the variance in job satisfaction.

In light of the fact that WLBSE did not mediate any of the relationships between FWC and job satisfaction, the researcher then proceeded to re-run the hypothesised full mediation model with the time-based FWC–job satisfaction, strain-based FWC–job satisfaction, and behaviour-based FWC–job satisfaction paths freed, yielding a partial mediation model (see Figure 4.3). After performing SEM, the partial mediation model was shown to account for 14.7% of the variance in job satisfaction. Although the partial mediation model represented a slight improvement over the full mediation model (chi-square reduced from 648.45 to 627.06, SRMR reduced from .04 to .03), the direct and indirect paths leading from time-based, strain-based, and behaviour-based FWC to WLBSE and job satisfaction remained insignificant (see Figure 4.4).

These findings suggest that WLBSE did not partially mediate the relationships between time-based, strain-based, and behaviour-based FWC and job satisfaction as well. A subsequent test of the direct effects of time-based, strain-based, and behaviour-based WFC, and time-based, strain-based, and behaviour-based FWC on job satisfaction revealed that all three forms of FWC were also not significantly correlated with job satisfaction. At this

stage, it does appear that WLBSE does not have any mediating effect on the relationships between the three forms of FWC and job satisfaction.

Figure 4.3. Hypothesised cross-sectional partial mediation model
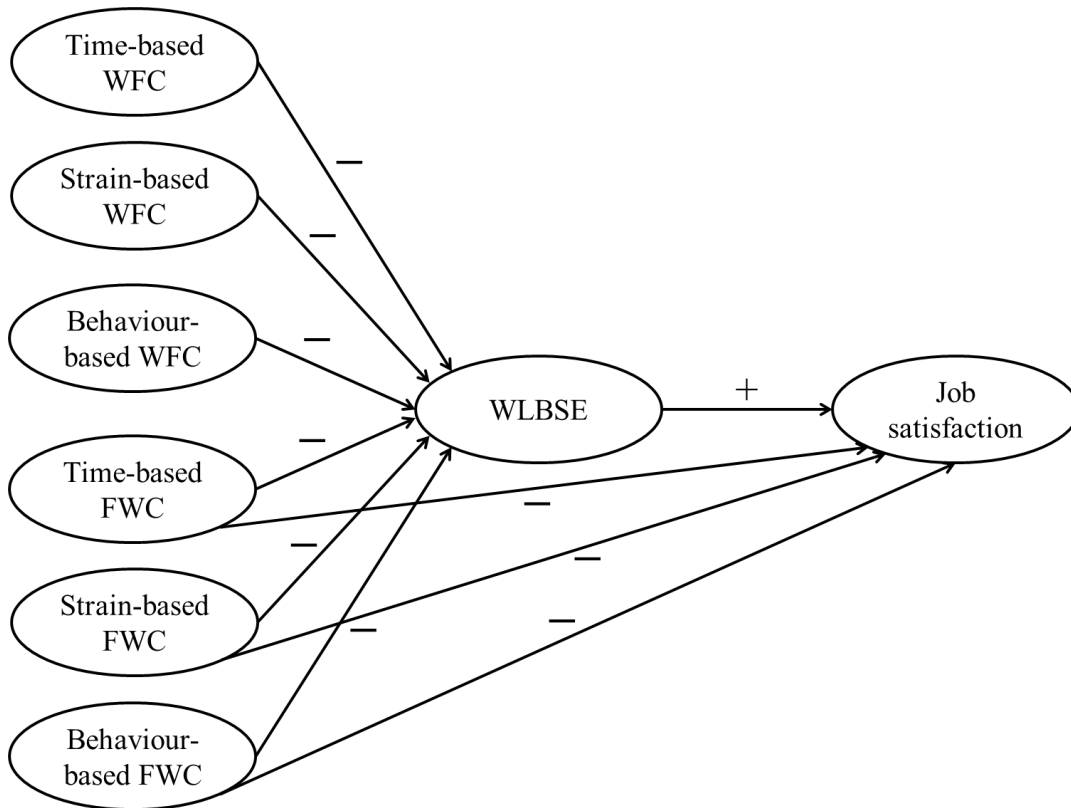
Notes: 1) (–) indicates a negative relationship between the variables; 2) (+) indicates a positive relationship between the variables; 3) It is hypothesised that WLBSE will partially mediate the negative relationships between time-based, stain-based, and behaviour-based FWC and job satisfaction, since it did not fully mediate the relationships previously.

Although several significant relationships have been observed between the demographic variables and the variables of interest, most demographic variables were not shown to have a significant impact on job satisfaction (path coefficients with p value $> = .05$) when they were included in the test of the structural model, except for age and the number of hours

worked per week. To minimise and control for the possible effects of age and number of hours worked per week on the criterion variable, both demographic variables were included in the test of the hypothesised structural model. However, they were subsequently shown to have no significant impact on job satisfaction, and were thus excluded from the structural model.

Figure 4.4. SEM results for hypothesised cross-sectional partial mediation model
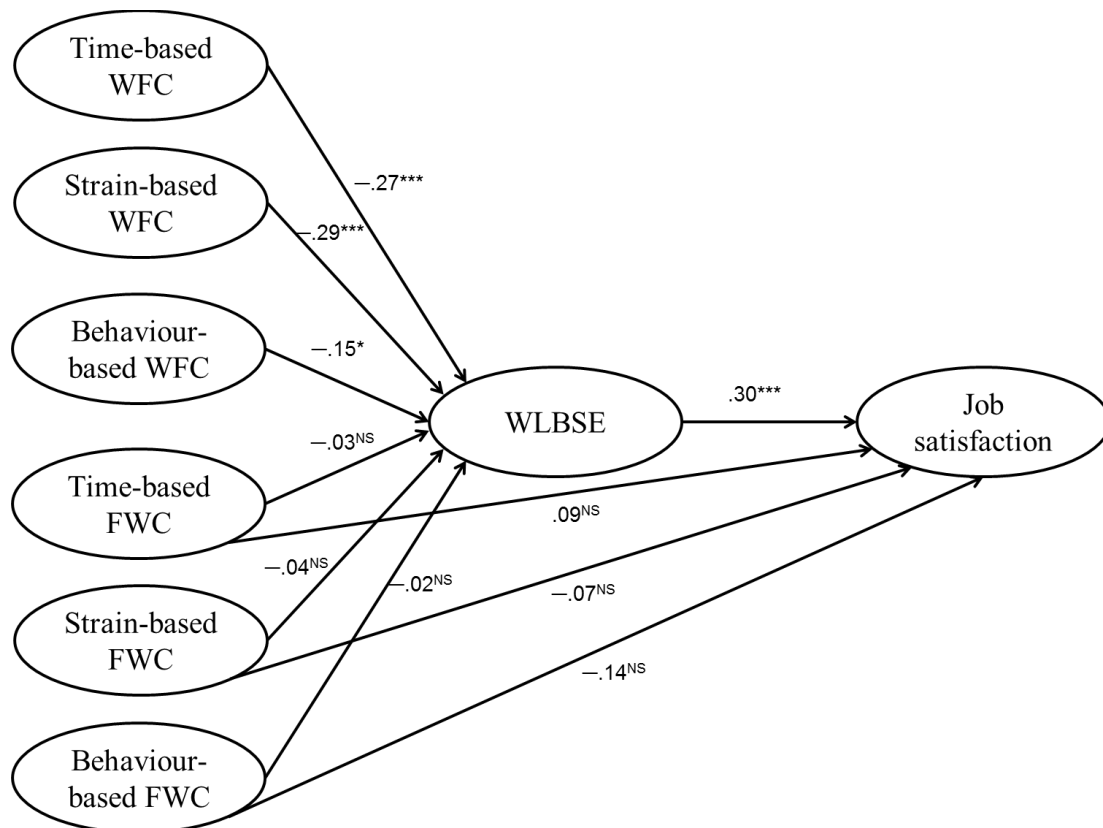
Notes: 1) Values represent standardised regression weights; 2) Loadings are significant if indicated with *** (p = < .001), ** (p = < .01), or * (p = < .05); 3) Loadings are not significant when indicated with NS (p > = .05).

4.6 Discussion

In this cross-sectional mediation study, the main idea being proposed is that the mediator WLBSE is the mechanism through which the negative influence of the three forms of WFC and FWC on job satisfaction can be alleviated, so as to enhance job satisfaction. The results of the current study suggest that WLBSE is a strong predictor of job satisfaction, and a strong mediator of the negative relationships between the three forms of WFC and job satisfaction, given that the domain-specific self-efficacy construct was shown to fully mediate all three hypothesised relationships. This finding lends support to on-going studies that look at the importance of self-efficacy in understanding the work-family interface (*see* Allen, Johnson, Saboe, Cho, Dumani, & Evans, 2012; Cinamon, 2006; Masuda, 2007), as well as the validity of the newly-developed WLBSE scale.

The fact that WLBSE did not mediate the relationships between all three forms of FWC and job satisfaction seems to reinforce prior findings in the work-family literature which have found that the family domain remains more permeable than the work domain, and that people experience, understand, and are concerned with WFC far more than they do in relation to FWC (*see* Gareis, Barnett, Ertel, & Berkman, 2009). The results could also indicate that WFC is more strongly related to job satisfaction than FWC, an outcome which is consistent in a number of studies in the work-family literature (*see* Chelariu & Stump, 2011; Shockley & Singla, 2011). It could also point to the need to study WFC and FWC in separate theoretical models, instead of incorporating both WFC and FWC in the same

theoretical model, since WFC and FWC have been found to have asymmetric antecedents and outcomes (*see* Frye & Breaugh, 2004).

Furthermore, in a recent study by Bagger and Li (2012) which focused on FWC exclusively, it was found that while both FWC and strain-based FWC had a significant influence on job satisfaction, the global measure of FWC had a slightly larger impact on job satisfaction than strain-based FWC. Additionally, Bagger, Li and Gutek (2008) found FWC to be less significantly associated with job satisfaction when people prioritise their families over work. With these findings, a potential area in which researchers could explore is to study the three forms of FWC along with the global measure of FWC, as well as several contextual variables such as work support, family support, family-centricity, and work-centricity.

In summary, the present study is an extension of previous research that looks at the relationships between work-family conflict and job satisfaction. It incorporated both WFC and FWC, and sought to examine WLBSE as a mediator of the relationships between work-family conflict and job satisfaction. While WLBSE was found to only mediate the relationships between WFC and job satisfaction, it is too premature to conclude that it does not mediate the relationships between FWC and job satisfaction. In light of the unexpected cross-sectional findings relating to the hypothesised time-based, strain-based, and behaviour-based FWC → WLBSE → job satisfaction pathways, the researcher proceeded to conduct a longitudinal study, with the aim of shedding more light on the nature of the relationships among the latent constructs, and to test the causal relationships between WFC, WLBSE, and job satisfaction.

CHAPTER 5 – STUDY 3: LONGITUDINAL MEDIATION STUDY

5.1 Method

*Figure 5.1.* Hypothesised longitudinal full mediation model
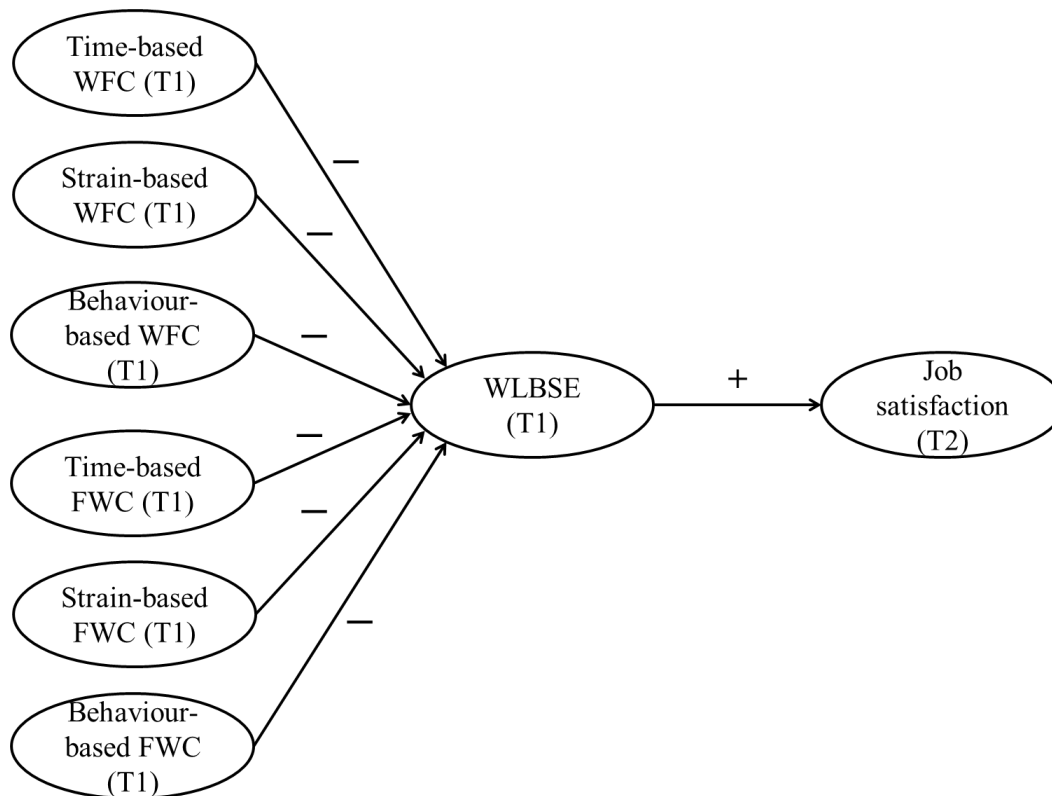
Notes: 1) (–) indicates a negative relationship between the variables; 2) (+) indicates a positive relationship between the variables; 3) It is hypothesised that WLBSE will mediate, over time, the negative relationships between time-based, stain-based, and behaviour-based WFC and job satisfaction, and time-based, stain-based, and behaviour-based FWC and job satisfaction (Hypotheses 4a, 4b, 4c, 4d, 4e, and 4f).

Due to repeated observation(s) at the individual level, longitudinal studies are widely

known to have more statistical power than cross-sectional studies, since the former allows

researchers to omit time-invariant unobservable individual differences and consider the

temporal sequence of events. Having examined the cross-sectional mediation model in Chapter 4 previously, the current section proceeded to test the mediation model (refer to Figure 5.1) over two time periods set 12 months apart. The data used was similar to the research sample used in Study 1B of Chapter 3. Consistent with Study 2 in the current research, SEM was performed according to the two-step approach recommended by Anderson and Gerbing (1988) in this longitudinal study.

5.2 Participants

The demographic characteristics of the respondents in this research sample were exactly similar to the longitudinal sample used in Study 1B. Specifically, the sample consisted of 36.1% males (n = 35), and 62.9% females (n = 61), and their ages ranged from 24.0 to 66.0 years, with an average age of 41.6 years (SD = 10.3 years). A majority (75.3%, n = 73) of the respondents were married or cohabiting, 14.4% (n = 14) were single or never married, and the remaining 9.3% (n = 9) were divorced, separated, or widowed. The average length of time with the organisation (or tenure) was 8.8 years (SD = 7.2 years), and around 73.2% (n = 71) of the respondents had either a university or a postgraduate qualification. The respondents spent an average of 38.6 hours (SD = 10.1 hours) working per week. Of the entire sample, 47.4% (n = 46) had no children, and 46.4% (n = 45) had at least one child or more. Lastly, most of the respondents (86.6%, n = 84) did not live with their parents. Although the sample size of the present longitudinal study was much smaller than that of cross-sectional Study 2, it is noted that the demographic characteristics of the respondents in both samples did not differ significantly.

5.3 Procedure and measures

There were no missing values for the variables of interest in all 97 cases – rendering them useful for both CFA and SEM analyses. The final sample size consisted of 97 cases, as one case was deemed to be a univariate outlier. In addition, the measures used in this longitudinal study were similar to those in the cross-sectional study detailed in Chapter 4. The internal consistencies of the latent variables were .84 for time-based WFC, .87 for time-based FWC, .94 for strain-based WFC, .92 for strain-based FWC, .87 for behaviour-based WFC, .89 for behaviour-based FWC, .95 for WLBSE, and .87 for job satisfaction.

5.4 Data analysis and results

5.4.1 Measurement model

Table 5.2 presents the fit statistics for the CFAs of the one-factor, four-factor, and eight-factor measurement models, with the eight-factor model emerging as the best fitting model among the three models tested. Similar to Study 2, to determine the presence of CMV, the Harman's one-factor (or single-factor) test was conducted using CFA. As shown in Table 5.2, the CFA analyses indicated that a one-factor measurement model does not provide adequate fit to the data with chi-square = 1,470.16 (df = 299, p = .00), GFI = .40, TLI = .40, CFI = .45, PCFI = .41, and RMSEA = .20. Consequently, it can be concluded that the impact of CMV on Study 3 results is minimal.

The findings also confirmed that work-family conflict should not be treated as a uni-dimensional construct, and is better represented by the three forms of conflict (time-based, strain-based, and behaviour-based conflict) in both directions (WFC and FWC). Despite having a significant chi-square, the eight-factor measurement model exhibited reasonably good fit indices (SRMR = .06, GFI = .77, TLI = .92, CFI = .93, PCFI = .78, and RMSEA = .07) as compared to the four-factor and one-factor measurement models (see Table 5.2). However, while the fit indices of the longitudinal eight-factor measurement model were acceptable, they were on the whole weaker as compared to the better-fitting cross-sectional measurement model tested in Study 2.

Table 5.2. CFA results for hypothesised longitudinal mediation model

Model	χ^2	df	p-value	χ^2/df	SRMR	GFI	TLI	CFI	PCFI	RMSEA
1-factor	1,470.16	299	.00	4.92	–	.40	.40	.45	.41	.20
4-factor	876.38	293	.00	2.99	.15	.58	.70	.73	.65	.14
8-factor	410.31	271	.00	1.51	.06	.77	.92	.93	.78	.07

Notes: 1) N = 97; 2) df = degrees of freedom; 3) SRMR = Standardised Root Mean Square Residual; 4) GFI = Goodness-Of-Fit Index; 5) TLI = Tucker-Lewis Index; 6) CFI = Comparative Fit Index; 7) PCFI = Parsimony Comparative Fit Index; 8) RMSEA = Root Mean Square Error of Approximation.

5.4.2 Structural model

After validating the longitudinal measurement model, the researcher proceeded to test the hypothesised causal relationships among the latent factors. Figure 5.1 depicts the hypothesised longitudinal full mediation model. Test of the hypothesised longitudinal full mediation model yielded a chi-square of 412.36 (df = 275, p = .00). Although the chi-

square was significant, the fit indices for the structural model were satisfactory (SRMR = .06, GFI = .77, TLI = .92, CFI = .94, PCFI = .79, and RMSEA = .07), indicating that it fitted the observed data reasonably well.

Table 5.3. SEM goodness-of-fit statistics for hypothesised longitudinal mediation model

Model	χ^2	df	p-value	χ^2/df	GFI	TLI	CFI	PCFI	SRMR	RMSEA
Full Mediation	412.36	275	.00	1.50	.77	.92	.94	.79	.06	.07
Partial Mediation	408.75	270	.00	1.51	.77	.92	.93	.78	.06	.07

Notes: 1) N = 97; 2) df = degrees of freedom; 3) GFI = Goodness-Of-Fit Index; 4) TLI = Tucker-Lewis Index; 5) CFI = Comparative Fit Index; 6) PCFI = Parsimony Comparative Fit Index; 7) SRMR = Standardised Root Mean Square Residual; 8) RMSEA = Root Mean Square Error of Approximation.

A closer look at the path estimates of the full mediation model revealed that WLBSE was found to fully mediate the relationship between strain-based WFC and job satisfaction. In other words, full mediation was only supported for hypothesis 4b, which states that WLBSE will mediate the negative relationship between strain-based WFC and job satisfaction over time. The standardised parameter estimates were tested for significance with 95% confidence intervals calculated using the bias-corrected bootstrap method (5,000 samples, as recommended by Hayes [2009]). Only the paths leading from strain-based WFC to WLBSE and from WLBSE to job satisfaction were statistically significant at p < .05. The hypothesised longitudinal full mediation model accounted for 11.1% of the variance in job satisfaction. Since WLBSE did not fully mediate the other five relationships,

the researcher thus proceeded to re-run the hypothesised full mediation model with all the

five paths freed, yielding a partial mediation model (see Figure 5.3).

Figure 5.2. SEM results for hypothesised longitudinal full mediation model
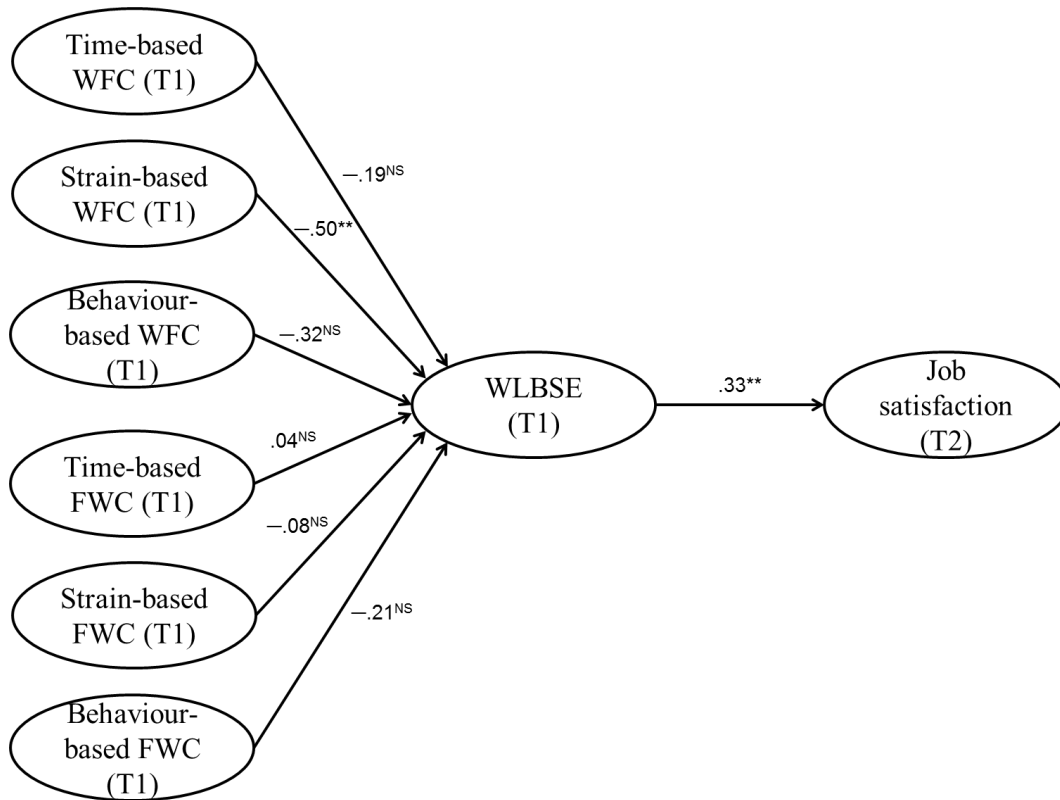
Notes: 1) Values represent standardised regression weights; 2) Loadings are significant if indicated with *** (p = < .001), ** (p = < .01), or * (p = < .05); 3) Loadings are not significant when indicated with NS (p > = .05).

Figure 5.3. Hypothesised longitudinal partial mediation model
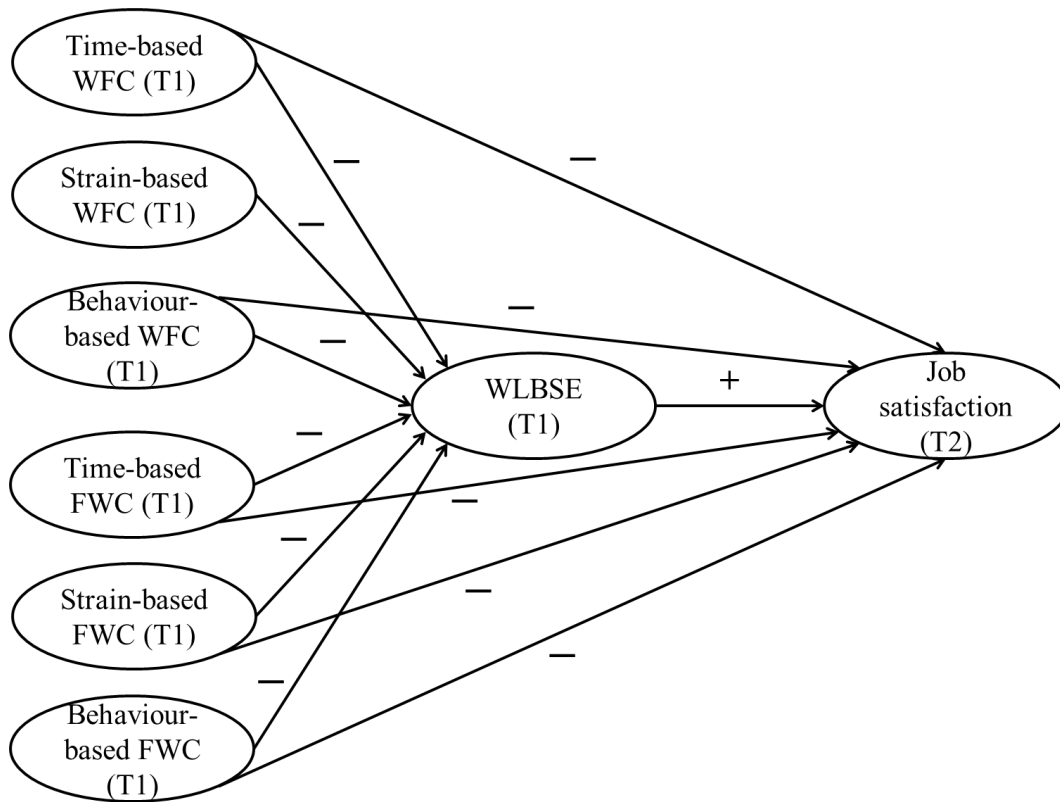
Notes: 1) (–) indicates a negative relationship between the variables; 2) (+) indicates a positive relationship between the variables; 3) It is hypothesised that WLBSE will partially mediate, over time, the negative relationships between time-based and behaviour-based WFC and job satisfaction, and time-based, stain-based, and behaviour-based FWC and job satisfaction, since it did not fully mediate the relationships previously.

The partial mediation model accounted for 16.2% of the variance in job satisfaction. Similar to the full mediation model, the partial mediation had reasonable fit indices, but the indices were on the whole less robust than their cross-sectional counterparts. Similar to the full mediation model, the findings for the hypothesised longitudinal partial mediation model suggest that WLBSE did not mediate the relationships between time-based and behaviour-based WFC and job satisfaction, as well as that between time-based, strain-based,

and behaviour-based FWC and job satisfaction. Therefore, to conclude, Hypotheses 4a, 4c, 4d, 4e, and 4f were not supported.

Figure 5.4. SEM results for hypothesised longitudinal partial mediation model
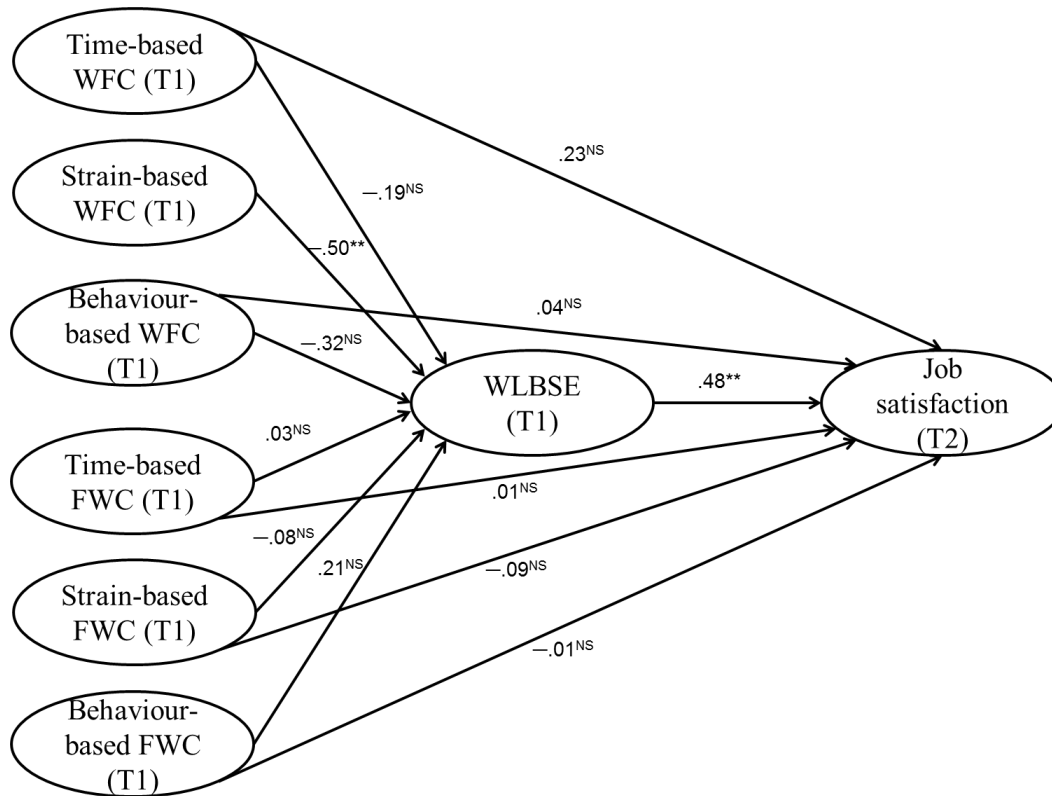
Notes: 1) Values represent standardised regression weights; 2) Loadings are significant if indicated with *** (p = < .001), ** (p = < .01), or * (p = < .05); 3) Loadings are not significant when indicated with NS (p > = .05).

5.5 Discussion

Given that the cross-sectional and longitudinal outcomes of the hypothesised mediation model did not support quite a number of the hypotheses as revealed in Study 2 and Study 3, the researcher proceeded to re-run the models separating FWC and WFC (refer to Figures

5.5.1 and 5.5.2). As expected, the fit indices improved for both the cross-sectional and longitudinal studies (particularly for the longitudinal studies), and WLBSE was found to mediate most of the relationships between work-family conflict and job satisfaction in the cross-sectional studies. As indicated earlier, this is likely to suggest that work-family conflict is best studied by separating WFC and FWC, rather than combining them in a single theoretical framework.

Table 5.4. SEM goodness-of-fit statistics when WFC and FWC were studied separately

Model	χ^2	df	p-value	χ^2/df	GFI	TLI	CFI	PCFI	SRMR	RMSEA
Cross-sectional 4-Factor (WFC, WLBSE, JS)	288.95	110	.00	2.63	.97	.98	.99	.80	.04	.04
Longitudinal 4-Factor (WFC, WLBSE, JS)	179.40	110	.00	1.63	.84	.94	.95	.78	.06	.08
Cross-sectional 4-Factor (FWC, WLBSE, JS)	214.35	110	.00	1.95	.98	.99	.99	.80	.03	.03
Longitudinal 4-Factor (FWC, WLBSE, JS)	168.94	110	.00	1.54	.84	.95	.96	.77	.06	.08

Notes: 1) N = 1,014 for cross-sectional models; 2) N = 97 for longitudinal models; 3) df = degrees of freedom; 4) GFI = Goodness-Of-Fit Index; 5) TLI = Tucker-Lewis Index; 6) CFI = Comparative Fit Index; 7) PCFI = Parsimony Comparative Fit Index; 8) SRMR = Standardised Root Mean Square Residual; 9) RMSEA = Root Mean Square Error of Approximation.

The fact that WLBSE fully mediated all three WFC–job satisfaction relationships and only two of the FWC–job satisfaction relationships could suggest that work-life balance is still tipped towards the work domain rather than the family domain. That is to say, work

continues to demand more attention than other non-work domains among individuals, and this consequently calls for more research to look into FWC. To date, FWC remains the less studied construct when compared to WFC (Amstad et al., 2011; Zhao et al., 2011). In light of the recent focus on FWC by researchers such as Bagger and Li (2012) and Witt and Carlson (2006), the current research thus proceeded to examine FWC exclusively.

However, WLBSE still did not mediate most of the relationships in the longitudinal studies, confirming the earlier outcomes of Study 2 and Study 3. Nevertheless, the importance of self-efficacy within the human agent in the work-family interface should not be undermined. What these findings could indicate is that much remains unclear about the multi-dimensional work-family conflict construct. For instance, why did WLBSE mediate the time-based WFC–job satisfaction, strain-based WFC–job satisfaction, and behaviour-based WFC–job satisfaction relationships in the cross-sectional study, but not in the longitudinal study? And why did WLBSE mediate the relationship between strain-based FWC and job satisfaction over time, but not the cross-sectional relationship between the same constructs? Indeed, the aforementioned questions prompt the need to find out how individuals come to form WLBSE beliefs, what influences individuals' WLBSE, and what may undermine WLBSE. In answering these questions, research can also shed light on the malleability of self-efficacy beliefs as described in Gist and Mitchell (1992), where self-efficacy beliefs are thought to vary in different situations and across time.

Last but not least, the sharp drop in the number of responses at T2 could also have weakened the robustness and accuracy of the findings in this section, hence it is far too premature to make any concrete conclusions about the mediating effects of WLBSE.

Figure 5.5.1. Cross-sectional and longitudinal WFC → WLBSE → Job satisfaction mediation models
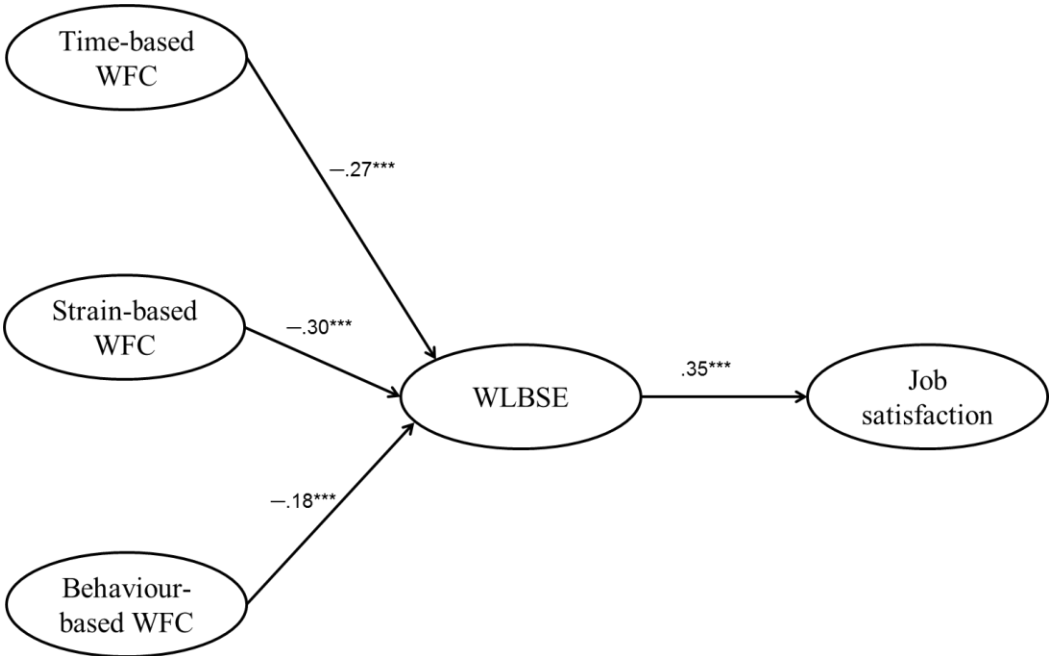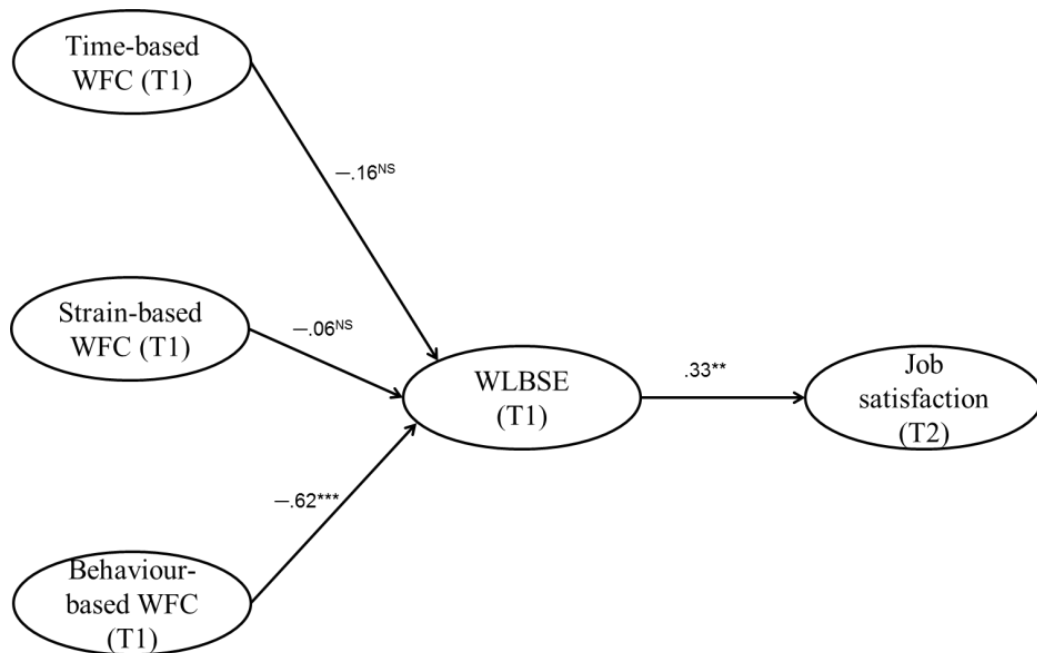
Notes: 1) Values represent standardised regression weights; 2) Loadings are significant if indicated with *** (p = < .001), ** (p = < .01), or * (p = < .05); 3) Loadings are not significant when indicated with NS (p > = .05).

Figure 5.5.2. Cross-sectional and longitudinal FWC → WLBSE → Job satisfaction mediation models
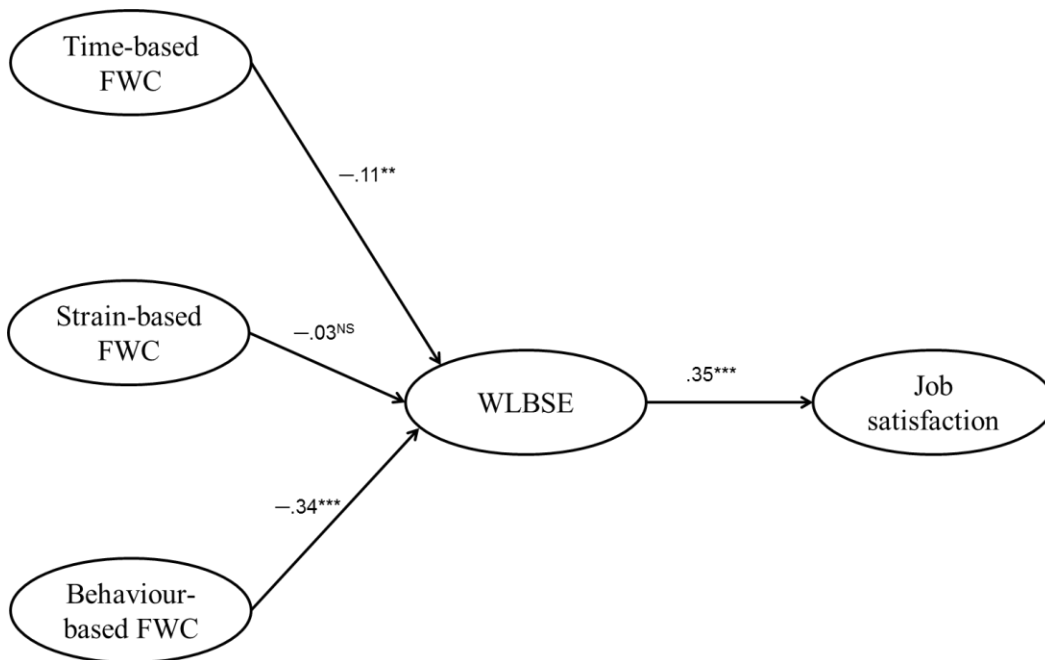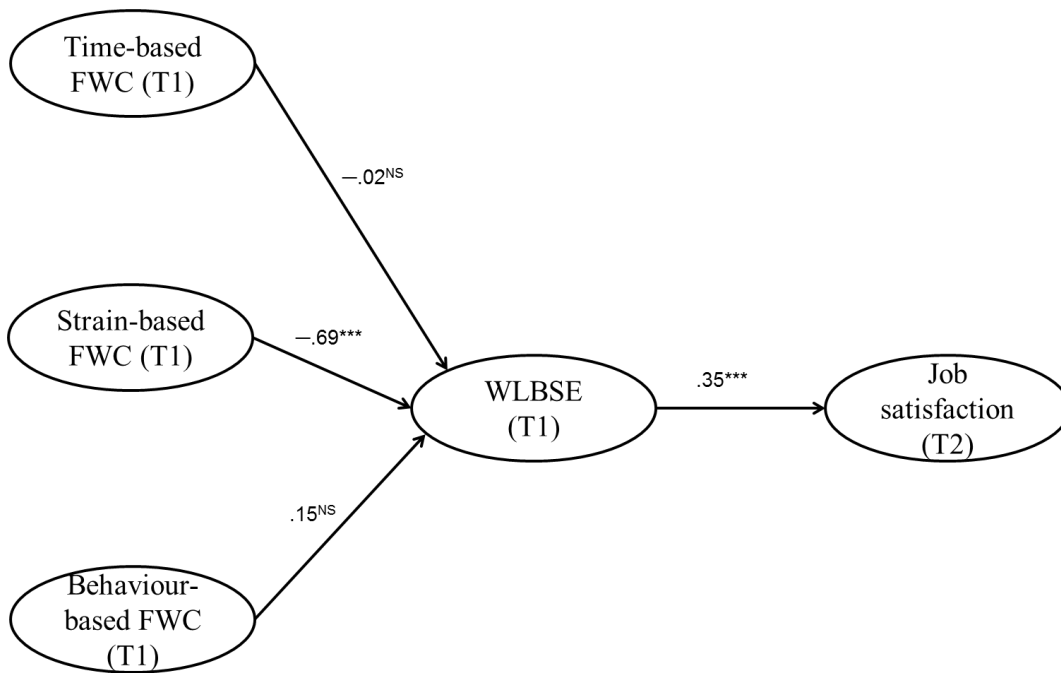
Notes: 1) Values represent standardised regression weights; 2) Loadings are significant if indicated with *** (p = < .001), ** (p = < .01), or * (p = < .05); 3) Loadings are not significant when indicated with NS (p > = .05).

CHAPTER 6 – GENERAL DISCUSSION

This chapter begins with a discussion of key research findings and their theoretical and practical implications. Next, the limitations of this research are being considered. In light of the findings and research limitations of this thesis, several possible directions for future research are proposed. The final section concludes this thesis.

6.1 Research findings

There were two primary objectives of this thesis: (1) to empirically validate the newly-developed WLBSE scale, and apply it to the nomological network of the work-family interface variables to test its criterion validity; and (2) to investigate the mediating effects of WLBSE on the negative relationships between the six dimensions of work-family conflict and job satisfaction. This is set against a backdrop of increased work and family pressures on individuals who have to balance between work, family, and other responsibilities.

To validate the WLBSE scale, the current research first sought to test the psychometric structure of the WLBSE measure, and proceeded to correlate it with a number of work and family variables cross-sectionally and longitudinally. These two steps helped to ensure that the WLBSE scale had a good fit to the observed data, and fulfilled the requirements of internal reliability, construct validity, and criterion validity. Upon testing the psychometric properties of WLBSE, the measure was found to produce acceptable goodness-of-fit in the independent sample comprising of responses from four different organisations. Therefore,

further analysis to test the validity of the WLBSE measure (Study 1B) was deemed worthwhile.

In Study 1B, while the fit indices of the longitudinal SEM were acceptable, they were in general weaker in strength than those of the cross-sectional SEM. The cross-sectional SEM rendered close to full support for Hypothesis 1, which postulated that the WLBSE measure will exhibit significant negative cross-sectional relationships with job demands, turnover intentions, and psychological strain – anxiety/depression, and significant positive cross-sectional relationships with job satisfaction and family satisfaction. Additionally, the longitudinal SEM partially supported Hypothesis 2, which posited that the WLBSE measure will demonstrate significant negative relationships over time with turnover intentions and psychological strain – anxiety/depression, and significant positive relationships over time with job satisfaction and family satisfaction.

The CFA and SEM outcomes of the scale validation study (Studies 1A and 1B) demonstrated that the WLBSE construct did have significant associations in the expected directions with the antecedent and outcome variables, but its predictive validity over time will require further investigation, given that WLBSE was only significantly correlated with two out of the four outcome variables. Specifically, WLBSE was found to mediate the job demands–job satisfaction and job demands–psychological strain – anxiety/depression relationships over time, but not the job demands–turnover intentions and job demands–family satisfaction relationships. Nonetheless, the testing of longitudinal relationships within a fairly large sample is noteworthy, and certainly lends support to causal

relationships among WLBSE, job demands, job satisfaction, and psychological strain –
anxiety/depression. It is also noted that in both cross-sectional and longitudinal studies
throughout this thesis, WLBSE was a consistent and strong predictor of job satisfaction,
which compares favourably with other research findings on the relationship between a
domain-specific self-efficacy construct and a job-related outcome (*see* Abele & Spurk,
2009; Jin et al., 2009; Wang et al., 2010).

The subsequent tests of the hypothesised cross-sectional mediation model (Study 2) and
longitudinal mediation model (Study 3) involving the six dimensions of work-family
conflict, WLBSE, and job satisfaction were not as expected, but certainly contributed to
more in-depth understanding of the nature of the relationships underlying the constructs.
Essentially, hypotheses 3a, 3b, 3c, 3d, 3e, and 3f intended to investigate the mediating
effects of WLBSE in a cross-sectional setting, while hypotheses 4a, 4b, 4c, 4d, 4e, and 4f
were aimed at investigating the construct in a longitudinal setting. Initially, it was also
intended for the longitudinal study (Study 3) to strengthen the arguments and findings of
the cross-sectional study (Study 2).

However, the results revealed that WLBSE only mediated the WFC–job satisfaction
relationships, which prompted the current research to investigate alternative models that
might account for such an outcome. On the whole, it was found that WFC was a stronger
and more consistent predictor of job satisfaction than FWC, and that each had asymmetric
impacts on WLBSE and job satisfaction. Additionally, while the CFA results stressed the
need to study work-family conflict as an all-inclusive, six-dimensional construct, the results

suggested otherwise – that combining both WFC and FWC into one study might weaken the statistical power of the hypothesised mediation model. Indeed, after separating work-family conflict into WFC and FWC, the fit indices improved substantially for the cross-sectional and longitudinal mediation studies, and WLBSE was shown to mediate more of the hypothesised relationships (refer to Chapter 5 – Section 5.5 Discussion).

Furthermore, contrary to previous research which highlighted the importance of several demographic (or control) variables in studies with job satisfaction as the criterion variable, as well as the correlational analyses which showed a number of significant relationships between the demographic variables and the latent constructs, the demographic variables were not shown to influence any of the variables of interest when included in the structural models for SEM analyses. Therefore, consistent with the recommendations of Becker (2005), Williams et al. (2009), and Spector and Brannick (2011), none of the demographic variables were being controlled for in testing the final hypothesised mediation models.

6.2 Theoretical implications

Unlike previous studies on the work-family conflict–job satisfaction relationship, the current research incorporated a domain-specific self-efficacy construct and went beyond the work-family conceptualisation to investigate the broader work-life interface. In doing so, the thesis addressed the gap in literature relating to the lack of studies involving agentic variables within the work-family interface, and sought to provide the cognitive mechanisms through which work-family conflict leads to job satisfaction.

Since WLBSE was found to fully mediate the relationships between all three forms of WFC and job satisfaction, the present research demonstrated that experiencing WFC may not necessarily lead to lowered job satisfaction. While experiencing WFC negatively impacts on the individual's WLBSE, strong WLBSE beliefs may buffer the negative impact of WFC and enhance job satisfaction in the event that the individual strongly believes in his own ability to manage work and non-work responsibilities. Specifically, based on Bandura's (1986) theory of self-efficacy, the human agent can learn to be resilient to environmental forces through the development of strong self-efficacy beliefs. Even though he may experience WFC from time to time, it would not necessarily impact negatively on his job satisfaction because of his strong sense of self-efficacy. Recall that the SCT takes on an agentic view of individuals as "self-organising, proactive, self-reflective, and self-regulatory" people, rather than as reactive beings controlled by environmental factors or inner impulses (Bandura, 1999, p. 193). Therefore, the implication of this research for Bandura's theory of self-efficacy and the study of the work-family conflict–job satisfaction relationship is that work-family conflict will only impact negatively on an individual's job satisfaction to the extent that the individual does not believe or has a weak belief in his own ability to manage work and non-work demands.

This study also serves to address Elias et al.'s (2013) call for management researchers to go beyond generalised self-efficacy and look into domain-specific self-efficacy constructs, the latter of which have been proven to be more relevant to and thus better predictors of specific behaviours and outcomes. Specifically, Bandura (1997) stressed that generalised

self-efficacy beliefs are not specific to a particular matter or theme, and Elias et al. (2013) further emphasised that generalised self-efficacy constructs are distal variables that operate through the proximal domain-specific self-efficacy variables. It follows that investigating WLBSE would be more relevant to the relationships between work-related and family-related constructs, since WLBSE is specific to the concept of work-life balance, and represents individuals' desire for recognition and balance in different areas of their lives.

Lastly, the current research also confirmed the subtle differences between WFC and FWC, thus contributing to existing research which have suggested that WFC and FWC are two distinct constructs (Frone et al., 1997) representing different conflict mechanisms (Mesmer-Magnus & Viswesvaran, 2005). At this stage, the current research lends support to the idea that family responsibilities are more flexible that work responsibilities, and that work roles are more likely to interfere with family roles than family roles are likely to interfere with work roles. Nevertheless, it is important to note that because there is only one outcome variable (that is, job satisfaction), so it may be too premature to make any firm conclusions. Cleary, this finding suggests the need for further investigation.

6.3 Practical implications

The finding that WFC, rather than FWC, was a stronger and more consistent predictor of job satisfaction points to the need to develop intervention strategies and organisational initiatives that are more precisely targeted at reducing the extent that work interferes with family, or enhance the extent to which work enriches family. The fact that WFC is distinct

from FWC also reinforces the idea that strategies to reduce FWC may not be effective interventions for WFC (Hammer, Kossek, Anger, Bodner, & Zimmerman, 2011).

The current research findings relating to WLBSE demonstrate that there are benefits when organisations, governments, and individuals invest in their own or people's WLBSE to increase their levels of job satisfaction and family satisfaction, and reduce their psychological strain – anxiety/depression. While work-life balance may not be directly relevant to job-related and family-related constructs, creating an environment where work-life balance is valued can contribute to fostering a stronger sense of WLBSE in individuals. Consistent with the triadic reciprocal nature of the determinants of human functioning in the SCT (Bandura, 1989), interventions, therapies, and counselling that are directed at personal, environmental, or behavioural factors can build up a stronger sense of self-efficacy within individuals (Schunk & Pajares, 2009).

Existing evidence of the malleable nature of self-efficacy in the area of athletic performance (*see* Gernigon & Delloye, 2003; Shea & Howell, 2000), employee engagement (*see* Gundlach, Martinko, & Douglas, 2003), and work performance (*see* Judge et al., 2007; Stajkovic & Luthans, 1998) also suggest the possibility that self-efficacy is both an individual trait and a psychological state. In psychological research, a trait refers to a permanent individual characteristic, while a state refers to a characteristic that tends to vary with experiences, such as the acquiring of context-specific knowledge and skills (Reigeluth, 1983, p. 32). While most researchers conceptualise self-efficacy as a state that can be acquired, given the influence of self-efficacy on individual motivation and

performance, it is equally important to take into account the individual's traits. Because each individual has his own unique character traits, by considering self-efficacy both as a trait and state, this will subsequently allow organisations to implement appropriate interventions for employees who may require different types and levels of interventions. Furthermore, Gist and Mitchell (1992) indicated that there are limits to the malleability of self-efficacy, and this is confirmed by Vancouver, Thompson, Tischner and Putka (2002) who showed that self-efficacy leads to overconfidence in some individuals over time. Again, this emphasises the need to account for individual traits in implementing self-efficacy-based interventions, as the effect of changes in self-efficacy differs from individual to individual.

Because WLBSE is shown to be a consistent mediator of the relationships between certain aspects of work-family conflict and job satisfaction, coupled with the malleability of self-efficacy, the findings of the present study presents to human resource practitioners the potential of WLBSE beliefs to influence job satisfaction and consequently, work performance. Both the SCT and theory of self-efficacy provide a wealth of information which human resource practitioners can draw on when designing training programs, feedback systems, and goal-setting initiatives for employees. For instance, to empower employees and enable them to manage their work and family roles effectively, it is contingent on the individual to possess a sense of competence in handling both roles (that is, WLBSE). In response, Appelbaum and Hare (1996, p. 46) and Gist (1989, p. 803) have suggested that the assessment and development of self-efficacy beliefs can be facilitated by guided training sessions which utilise cognitive modelling. Essentially, the ease with which

self-efficacy can be applied to organisational settings points to the potential utility of WLBSE in strategic human resource management.

6.4 Research limitations

Although the current study contributes to the literature, there are several limitations that warrant further discussion. First, as acknowledged, the dropout rate for survey responses in the longitudinal SEM studies was particularly high, which resulted in a much smaller than anticipated T2 data set (n = 97). As noted in Chapter 3, one possible cause for the high dropout rate could be due to the recent cost-cutting measures implemented by organisations in Australia. Correspondingly, the drop in response rate could have influenced the causal relationships between work-family conflict, WLBSE, and job satisfaction in the longitudinal studies. The high dropout rate was unfortunate because specific measures were taken to avoid such a situation. Essentially, the researchers who collected the data had provided interested participants with T1 feedback reports and electronically sent two reminders to respondents each time they collected data at T1 and T2. To improve response rates, Japec (1995, as cited in De Leeuw, 2005) suggested the combined use of an inexpensive method (such as e-mail reminders) to increase response rates for the whole sample, and a more expensive method (such as telephone reminders) for non-response follow-up.

Next, because the questionnaires were completed by respondents alone at their own time, this research was highly reliant on self-reported data, which may lead to issues relating to

CMV and consistency bias. The fact that this research only included a single outcome (that is, job satisfaction) also contributes to potential common method bias. Despite the robustness of longitudinal data, Cole and Maxwell (2003) have indicated that problems with CMV are inevitable mainly because researchers tend to use the same measures repeatedly when assessing the same constructs across time. While CMV remains a potential threat to the present study's findings, the Harman's single factor tests performed in Study 2 and Study 3 suggest that the effect of CMV on the research findings is minimal. Furthermore, Podsakoff et al. (2003) found that the nature of the effects of CMV on observed relationships can be difficult to detect, and Spector (2006) found that studies tend to overstate its pervasiveness. Consequently, it cannot be known with certainty if CMV would substantially increase or decrease the relationships reported in this study. Nevertheless, future studies should include more than one outcome to reduce the negative effects of CMV on the accuracy of the research findings.

Also, the sample was predominantly female, and majority of the respondents were highly educated individuals who have obtained at least a university degree. In Chapter 2, it was noted that research has found that women tended to experience a stronger negative effect of work-family conflict on job satisfaction, and that individuals who have received more education were better able to control the effects of work-family conflict on their levels of job satisfaction. Consequently, there is a possibility that the current research findings may not be generalisable to other research samples. For instance, the bivariate correlational analyses suggest that gender is highly correlated with behaviour-based work-family conflict and education level is highly correlated with time-based work-family conflict. Nevertheless,

after including all demographic variables in the hypothesised structural mediation model, both gender and education level were not found to have a significant effect on the dependent variable – job satisfaction.

6.5 Directions for future research

In light of the fact that WLBSE did not mediate the relationships between FWC and job satisfaction, this area of research thus merits further empirical investigation before conclusive generalisations can be made. Meanwhile, it is hoped that the results of the current study will stimulate further investigation, and the following discussion features some suggestions for future research.

First, other variables such as family satisfaction and job performance which are part of the nomological network of the work-life interface (*see* Grawitch et al., 2013), should be included in future research. In exploring how WLBSE relates to these other constructs, a deeper understanding of WLBSE and its mediating effects on the work-family conflict–job satisfaction relationship may emerge. It would be useful to continue examining the structural and psychometric properties of the WLBSE measure in more demographically and geographically diverse samples so as to determine the construct's external validity.

Also, as elaborated in the previous section, WFC and FWC should be studied separately and as a global construct at the same time. Without considering the alternative models to the current theoretical framework proposed in this study, the researcher would not have

known that WFC was a better predictor of job satisfaction, and that WLBSE was found to mediate more of the hypothesised relationships when WFC and FWC were studied separately.

Lastly, an extension of SEM is multi-level modelling (MLM), a statistical analysis approach which takes into account the hierarchical or clustered structure in the human or social sciences (Hox, 1998). In light of the fact that the initial sample comprised of 1,134 individuals from four different organisations, it is expected that most if not all of the organisations would have a hierarchical structure within it. Since most of what researchers study are multi-level in nature, Luke (2004) highlighted the importance of applying theories and analytical techniques that are also multi-level and unique to the research context. Because MLM looks at various levels within a particular group, Buxton (2008, p. 6) suggested that the statistical technique is easily generalisable to the wider population, requires fewer parameters (advantageous when there is a limited amount of data), and allows information to be shared among groups (thereby improving the precision of predictions when there is a limited amount of data).

6.6 Conclusion

To summarise, this thesis utilised the SCT as the theoretical framework to examine the impact of work-family conflict on individuals' job satisfaction. Specifically, the current research found strong support for the application of the theory of self-efficacy in understanding WFC and job satisfaction. The present study also validated a WLBSE scale,

and provided preliminary support for the reliability and validity of the measure. It is suggested that the WLBSE scale can be applied in future research which study the role of self-efficacy in relation to the nomological network of variables within the work-family interface. Most importantly, the findings from this study contribute to the extant literature by providing a framework of the underlying explanatory mechanisms linking the key aspects of work-family conflict to job satisfaction. Future research can help to further clarify the causal nature of these relationships, and investigate how they generalise across different outcome measures and operationalisations of the work-family interface.

REFERENCES

Abele, A. E., & Spurk, D. (2009). The longitudinal impact of self-efficacy and career goals on objective and subjective career success. *Journal of Vocational Behavior*, *74*(1), 53–62.

Acock, A. C. (2005). Working with missing values. *Journal of Marriage and Family*, *67*(4), 1012–1028.

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, *32*(4), 665–683.

Albert, C., & Davia, M. A. (2005). *Education, wages and job satisfaction*. Paper presented at the Epunet Conference 2005, Colchester, Essex.

Allen, T. D., Herst, D. E., Bruck, C. S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology*, *5*(2), 278–308.

Allen, T. D., Johnson, R. C., Saboe, K. N., Cho, E., Dumani, S., & Evans, S. (2012). Dispositional variables and work-family conflict: A meta-analysis. *Journal of Vocational Behavior*, *80*(1), 17–26.

Amstad, F. T., Meier, L. L., Fasel, U., Elfering, A., & Semmer, N. K. (2011). A meta-analysis of work-family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology*, *16*(2), 151–169.

Anderson, S. L., & Betz, N. E. (2001). Sources of social self-efficacy expectations: Their measurement and relation to career development. *Journal of Vocational Behavior*, *58*(1), 98–117.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411–423.

Appelbaum, S. H., & Hare, A. (1996). Self-efficacy as a mediator of goal setting and performance: Some human resource applications. *Journal of Managerial Psychology*, *11*(3), 33–47.

Arbuckle, J. L., & Wothke, W. (1999). *Amos 4.0 user's guide*. Chicago: Smallwaters Corporation.

Atinc, G., Simmering, M. J., & Kroll, M. J. (2012). Control variable use and reporting in macro and micro management research. *Organizational Research Methods*, *15*(1), 57–74.

Atkins, R. (2010). Self-efficacy and the promotion of health for depressed single mothers. *Mental Health in Family Medicine*, *7*(3), 155–168.

Bagger, J., & Li, A. (2012). Being important matters: The impact of work and family centralities on the family-to-work conflict–satisfaction relationship. *Human Relations*, *65*(4), 473–500.

Bagger, J., Li, A., & Gutek, B. A. (2008). How much do you value your family and does it matter? The joint effects of family identity salience, family-interference-with-work, and gender. *Human Relations*, *61*(2), 187–211.

Bandura, A. (1977a). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191–215.

Bandura, A. (1977b). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. (1978). Reflections on self-efficacy. *Advances in Behavioral Research and Therapy*, *1*(4), 237–269.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*(2), 122–147.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice–Hall.

Bandura, A. (1988). Self-efficacy conception of anxiety. *Anxiety Research*, *1*(2), 77–98.

Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, *44*(9), 1175–1184.

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, *28*(2), 117–148.

Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71–81). New York: Academic Press.

Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York: Freeman.

Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, *3*(3), 193–209.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, *52*(1), 1–26.

Bandura, A. (2005a). Guide for constructing self-efficacy scales. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 1–43). Greenwich, CT: Information Age.

Bandura, A. (2005b). The evolution of social cognitive theory. In K.G. Smith & M.A. Hitt (Eds.), *Great minds in management* (pp. 9–35). Oxford: Oxford University Press.

Bandura, A. (2006). Toward a psychology of human agency. *Perspectives on Psychological Science*, *1*(2), 164–180.

Bandura, A., Adams, N. E., Hardy, A. B., & Howells, G. N. (1980). Tests of the generality of self-efficacy theory. *Cognitive Therapy and Research*, *4*(1), 39–66.

Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, *88*(1), 87–99.

Barnett, R. C., & Baruch, G. K. (1985). Women's involvement in multiple roles and psychological distress. *Journal of Personality and Social Psychology*, *49*(1), 135–145.

Becker, T. E. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods*, *8*(3), 274–289.

Bedeian, A. G., Burke, B. G., & Moffett, R. G. (1988). Outcomes of work-family conflict among married male and female professionals. *Journal of Management*, *14*(3), 475–491.

Bedeian, A. G., Ferris, G. R., & Kacmar, K. M. (1992). Age, tenure, and job satisfaction: A tale of two perspectives. *Journal of Vocational Behavior*, *40*(1), 33–48.

Bellavia, G. M., & Frone, M. R. (2005). Work-family conflict. In J. Barling, E. K. Kelloway, & M. R. Frone (Eds.), *Handbook of work stress* (pp. 113–147). Thousand Oaks, CA: Sage.

Bender, K. A., & Heywood, J. S. (2006). Job satisfaction of the highly educated: The role of gender, academic tenure, and earnings. *Scottish Journal of Political Economy*, *53*(2), 253–279.

Bernal, D., Snyder, D., & McDaniel, M. (1998). The age and job satisfaction relationship: does its shape and strength still evade us?. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *53*(5), 287–293.

Betz, N. E. (2001). Career self-efficacy. In F. T. L. Leong & A. Barak (Eds.), *Contemporary models in vocational psychology* (pp. 55–77). Mahwah, NJ: Erlbaum.

Betz, N. E. (2007). Career self-efficacy: Exemplary recent research and emerging directions. *Journal of Career Assessment*, *15*(4), 403–422.

Betz, N. E., & Hackett, G. (1981). The relationship of career-related self-efficacy expectations to perceived career options in college women and men. *Journal of Counseling Psychology*, *28*(5), 399–410.

Beutell, N. J., & Wittig-Berman, U. (1999). Predictors of work-family conflict and satisfaction with family, job, career, and life. *Psychological Reports*, *85*(3), 893–903.

Bianchi, S. M., & Milkie, M. A. (2010). Work and family research in the first decade of the 21st century. *Journal of Marriage and Family*, *72*(3), 705–725.

Boswell, W. R., Boudreau, J. W., & Tichy, J. (2005). The relationship between employee job change and job satisfaction: The honeymoon-hangover effect. *Journal of Applied Psychology*, *90*(5), 882–892.

Boswell, W. R., & Olson-Buchanan, J. B. (2007). The use of communication technologies after hours: The role of work attitudes and work-life conflict. *Journal of Management*, *33*(4), 592–610.

Boyar, S. L., Carr, J. C., Mosley, D. C., & Carson, C. M. (2007). The development and validation of scores on perceived work and family demand scales. *Educational and Psychological Measurement*, *67*(1), 100–115.

Bradley, D. E., & Roberts, J. A. (2004). Self-employment and job satisfaction: Investigating the role of self-efficacy, depression, and seniority. *Journal of Small Business Management*, *42*(1), 37–58.

Brees, J. R., Mackey, J., & Martinko, M. J. (2013). An attributional perspective of aggression in organizations. *Journal of Managerial Psychology*, *28*(3), 252–272.

Bresó, E., Schaufeli, W. B., & Salanova, M. (2011). Can a self-efficacy-based intervention decrease burnout, increase engagement, and enhance performance? A quasi-experimental study. *Higher Education*, *61*(4), 339–355.

Brough, P., & Frame, R. (2004). Predicting police job satisfaction and turnover intentions: The role of social support and police organisational variables. *New Zealand Journal of Psychology*, *33*(1), 8–18.

Brown, I., & Inouye, D. K. (1978). Learned helplessness through modeling: The role of perceived similarity in competence. *Journal of Personality and Social Psychology*, *36*(8), 900–908.

Bruck, C. S., & Allen, T. D. (2003). The relationship between big five personality traits, negative affectivity, type A behavior, and work–family conflict. *Journal of Vocational Behavior*, *63*(3), 457–472.

Bruck, C. S., Allen, T. D., & Spector, P. E. (2002). The relation between work-family conflict and job satisfaction: A finer-grained analysis. *Journal of Vocational Behavior*, *60*(3), 336–353.

Brush, D. H., Moch, M. K., & Pooyan, A. (1987). Individual demographic differences and job satisfaction. *Journal of Organizational Behavior*, *8*(2), 139−155.

Burke, R. J., & Nelson, D. (1998). Mergers and acquisitions, downsizing, and privatization: A North American perspective. In M. K. Gowing, J. D. Kraft, & J. C. Quick (Eds.), *The new organizational reality: Downsizing, restructuring, and revitalization* (pp. 21−54). Washington, DC: American Psychological Association.

Buxton, R. (2008). *Multilevel modelling*. Retrieved September 29, 2013, from http://mlsc.lboro.ac.uk/resources/statistics/Multilevel_modelling.pdf.

Byrne, B. M. (1998). *Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming*. Mahwah, NJ: Erlbaum.

Byrne, B. M. (2001). Structural equation modeling with AMOS, EQS, and LISREL: Comparative approaches to testing for the factorial validity of a measuring instrument. *International Journal of Testing*, *1*(1), 55−86.

Byron, K. (2005). A meta-analytic review of work-family conflict and its antecedents. *Journal of Vocational Behavior*, *67*(2), 169−198.

Cabrita, J., & Perista, H. (2006). *Measuring job satisfaction in surveys − Comparative analytical report*. Retrieved September 29, 2013, from http://www.eurofound.europa.eu/ewco/reports/TN0608TR01/TN0608TR01_9.htm.

Cammann, C., Fichman, M., Jenkins, D., & Kelsh, J. (1983). Assessing the attitudes and perceptions of organizational members. In S. Seashore, E. Lawler, P. Mirvis, & C.

Cammann (Eds.), *Assessing organizational change: A guide to methods, measures and practices* (pp. 71–138). New York: Wiley.

Caprara, G. V., Barbaranelli, C., Borgogni, L., & Steca, P. (2003). Efficacy beliefs as determinants of teachers' job satisfaction. *Journal of Educational Psychology*, *95*(4), 821–832.

Carlson, D. S., & Kacmar, K. M. (2000). Work-family conflict in the organization: Do life role values make a difference?. *Journal of Management*, *26*(5), 1031–1054.

Carlson, D. S., Kacmar, K. M., & Williams, L. J. (2000). Construction and initial validation of a multidimensional measure of work-family conflict. *Journal of Vocational Behavior*, *56*(2), 249–276.

Casper, W. J., Eby, L. T., Bordeaux, C., Lockwood, A., & Lambert, D. (2007). A review of research methods in IO/OB work-family research. *Journal of Applied Psychology*, *92*(1), 28–43.

Casper, W. J., Martin, J. A., Buffardi, L. C., & Erdwins, C. J. (2002). Work-family conflict, perceived organizational support, and organizational commitment among employed mothers. *Journal of Occupational Health Psychology*, *7*(2), 99–108.

Chan, D. (1998). The conceptualization and analysis of change over time: An integrative approach incorporating longitudinal mean and covariance structures analysis (LMACS) and multiple indicator latent growth modeling (MLGM). *Organizational Research Methods*, *1*(4), 421–483.

Chelariu, C., & Stump, R. (2011). A study of work-family conflict, family-work conflict and the contingent effect of self-efficacy of retail salespeople in a transitional economy. *European Journal of Marketing*, *45*(11/12), 1660–1679.

Chen, G., Gully, S. M., & Eden, D. (2004). General self-efficacy and self-esteem: Toward theoretical and empirical distinction between correlated self-evaluations. *Journal of Organizational Behavior*, *25*(3), 375–395.

Chwalisz, K., Altmaier, E. M., & Russell, D. W. (1992). Causal attributions, self-efficacy cognitions, and coping with stress. *Journal of Social and Clinical Psychology*, *11*(4), 377–400.

Cimete, G., Gencalp, N. S., & Keskin, G. (2003). Quality of life and job satisfaction of nurses. *Journal of Nursing Care Quality*, *18*(2), 151–158.

Cinamon, R. G. (2003). *Work-family conflict self-efficacy and career plans of young adults*. (Unpublished manuscript). Tel Aviv University, Israel.

Cinamon, R. G. (2006). Anticipated work-family conflict: Effects of gender, self-efficacy, and family background. *The Career Development Quarterly*, *54*(3), 202–215.

Clark, A. E. (1997). Job satisfaction and gender: Why are women so happy at work?. *Labour Economics*, *4*(4), 341–372.

Clark, A., Oswald, A., & Warr, P. (1996). Is job satisfaction U-shaped in age?. *Journal of Occupational and Organizational Psychology*, *69*(1), 57–81.

Cole, D. A., & Maxwell, S. E. (2003). Testing mediational models with longitudinal data: questions and tips in the use of structural equation modeling. *Journal of Abnormal Psychology*, *112*(4), 558–577.

Compeau, D., Higgins, C. A., & Huff, S. (1999). Social cognitive theory and individual reactions to computing technology: a longitudinal study. *MIS Quarterly*, *23*(2), 145–158.

Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues for field settings*. Boston, MA: Houghton Mifflin.

Cote, J. A., & Buckley, M. R. (1987). Estimating trait, method, and error variance: Generalizing across 70 construct validation studies. *Journal of Marketing Research*, *24*(3), 315–318.

Crede, M., Chernyshenko, O. S., Stark, S., Dalal, R. S., & Bashshur, M. (2007). Job satisfaction as mediator: An assessment of job satisfaction's position within the nomological network. *Journal of Occupational and Organizational Psychology*, *80*(3), 515–538.

Crook, T. R., Todd, S. Y., Combs, J. G., Woehr, D. J., & Ketchen Jr, D. J. (2011). Does human capital matter? A meta-analysis of the relationship between human capital and firm performance. *Journal of Applied Psychology*, *96*(3), 443–456.

Crooker, K. J., Smith, F. L., & Tabak, F. (2002). Creating work-life balance: A model of pluralism across life domains. *Human Resource Development Review*, *1*(4), 387–419.

Dalal, R. S. (2012). Job attitudes: Cognition and affect. In N. W. Schmitt & S. Highhouse (Eds.), *Handbook of psychology: Industrial and organizational psychology* (Vol. 12, pp. 341–366). Hoboken: Wiley.

Dattalo, P. (2013). *Analysis of multiple dependent variables*. New York: Oxford University Press.

Day, D. V., & Silverman, S. B. (1989). Personality and job performance: Evidence of incremental validity. *Personnel Psychology*, 42(1), 25–36.

De Cieri, H., Holmes, B., Abbott, J., & Pettit, T. (2005). Achievements and challenges for work-life balance strategies in Australian organizations. *The International Journal of Human Resource Management*, *16*(1), 90–103.

De Leeuw, E. D. (2005). To mix or not to mix data collection modes in surveys. *Journal of Official Statistics*, *21*(5), 233–255.

Demerouti, E., Bakker, A. B., & Bulters, A. J. (2004). The loss spiral of work pressure, work-home interference and exhaustion: Reciprocal relations in a three-wave study. *Journal of Vocational Behavior*, *64*(1), 131–149.

DeSantis, V. S., & Durst, S. L. (1996). Comparing job satisfaction among public- and private-sector employees. *The American Review of Public Administration*, *26*(3), 327–343.

Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980–2002). *Journal of Vocational Behavior*, *66*(1), 124–197.

Edwards, J. R. (1991). Person-job fit: A conceptual integration, literature review, and methodological critique. In C. L. Cooper & I. T. Robertson (Eds.), *International review of industrial and organizational psychology* (Vol. 6, pp. 283–357). Oxford: Wiley.

Edwards, J. R., & Rothbard, N. P. (1999). Work and family stress and well-being: An examination of person-environment fit in the work and family domains. *Organizational Behavior and Human Decision Processes*, *77*(2), 85–129.

Elias, S. M., Barney, C. E., & Bishop, J. W. (2013). The treatment of self-efficacy among psychology and management scholars. *Journal of Applied Social Psychology*, *43*(4), 811–822.

Elloy, D. F., & Smith, C. (2004). Antecedents of work-family conflict among dual-career couples: an Australian study. *Cross Cultural Management: An International Journal*, *11*(4), 17–27.

Erdwins, C. J., Buffardi, L. C., Casper, W. J., O'Brien, A. S., (2001). The relationship of women's role strain to social support, role satisfaction, and self-efficacy. *Family Relations*, *50*(3), 230–239.

Ergeneli, A., Ilsev, A., & Karapınar, P. B. (2010). Work-family conflict and job satisfaction relationship: The roles of gender and interpretive habits. *Gender, Work & Organization*, *17*(6), 679–695.

Evans, J. R., & Mathur, A. (2005). The value of online surveys. *Internet Research*, *15*(2), 195–219.

Fabra, M. E., & Camisón, C. (2009). Direct and indirect effects of education on job satisfaction: A structural equation model for the Spanish case. *Economics of Education Review*, *28*(5), 600–610.

Fields, D. (2002). *Taking measure of work: A guide to validated scales for organizational research and diagnosis*. Thousand Oaks, CA: Sage.

Fleming, C., Kifle, T., & Kler, P. (2013). *Power of the pram: The impact of young children on job satisfaction amongst female workers*. Paper presented at the Proceedings of the 3rd Global Accounting, Finance and Economics Conference, Rydges Melbourne, Australia. Retrieved 20 September, 2013, from http://www.wbiworldconpro.com/uploads/melbourne-conference-2013/economics/1367476858_218-Parvinder.pdf.

Ford, M. T., Heinen, B. A., & Langkamer, K. L. (2007). Work and family satisfaction and conflict: A meta-analysis of cross-domain relations. *Journal of Applied Psychology*, *92*(1), 57–80.

Frone, M. R. (2003). Work-family balance. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of occupational health psychology* (pp. 143–162). Washington, DC: American Psychological Association.

Frone, M., Russell, M., & Cooper, M. L. (1992). Antecedents and outcomes of work-family conflict: Testing a model of the work-family interface, *Journal of Applied Psychology*, *77*(1), 65–78.

Frone, M. R., Russell, M., & Cooper, M. L. (1994). Relationship between job and family satisfaction: Causal or non-causal covariation?. *Journal of Management*, *20*(3), 565–579.

Frone, M. R., Yardley, J. K., & Markel, K. S. (1997). Developing and testing an integrative model of the work-family interface. *Journal of Vocational Behavior*, *50*(2), 145–167.

Frye, N. K., & Breaugh, J. A. (2004). Family-friendly policies, supervisor support, work–family conflict, family–work conflict, and satisfaction: A test of a conceptual model. *Journal of Business and Psychology*, *19*(2), 197–220.

Gareis, K. C., Barnett, R. C., Ertel, K. A., & Berkman, L. F. (2009). Work-family enrichment and conflict: Additive effects, buffering, or balance?. *Journal of Marriage and Family*, *71*(3), 696–707.

Gernigon, C., & Delloye, J. B. (2003). Self-efficacy, causal attribution, and track athletic performance following unexpected success or failure among elite sprinters. *The Sport Psychologist*, *1*(7), 55–76.

Geurts, S. A. E., & Demerouti, E. (2003). Work/non-work interface: A review of theories and findings. In M. Schabracq, J. Winnubst, & C. L. Cooper (Eds.), *Handbook of work and health psychology* (pp. 279–312). Chichester: Wiley.

Gist, M. E. (1987). Self-efficacy: Implications for organizational behavior and human resource management. *Academy of Management Review*, *12*(3), 472–485.

Gist, M. E. (1989). The influence of training method on self-efficacy and idea generation among managers. *Personnel Psychology*, *42*(4), 787–805.

Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review*, *17*(2), 183–211.

Goldberg, D. P. (1972). *The detection of psychiatric illness by questionnaire: A technique for the identification and assessment of non-psychotic psychiatric illness*. London: Oxford University Press.

Gong, Y., Huang, J. C., & Farh, J. L. (2009). Employee learning orientation, transformational leadership, and employee creativity: The mediating role of employee creative self-efficacy. *Academy of Management Journal*, *52*(4), 765–778.

Goode, W. J. (1960). A theory of role strain. *American Sociological Review*, *25*(4), 483–496.

Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about internet questionnaires. *American Psychologist*, *59*(2), 93–104.

Grandey, A., Cordeiro, B., & Crouter, A. (2005). A longitudinal and multi-source test of the work-family conflict and job satisfaction relationship. *Journal of Occupational and Organizational Psychology*, *78*(3), 305–323.

Grandey, A. A., & Cropanzano, R. (1999). The conservation of resources model applied to work-family conflict and strain. *Journal of Vocational Behavior*, *54*(2), 350–370.

Grawitch, M. J., Maloney, P. W., Barber, L. K., & Mooshegian, S. E. (2013). Examining the nomological network of satisfaction with work-life balance. *Journal of Occupational Health Psychology*, *18*(3), 276–284.

Gray, M., Qu, L., Stanton, D., & Weston, R. (2004). Long work hours and the well-being of fathers and their families. *Australian Journal of Labour Economics*, *7*(2), 255–273.

Greenhaus, J. H. (1988). The intersection of work and family roles: Individual, interpersonal, and organizational issues. *Journal of Social Behavior and Personality*, *3*(4), 23–44.

Greenhaus, J. H., Allen, T. D., & Spector, P. E. (2006). Health consequences of work-family conflict: The dark side of the work-family interface. In P. L. Perrewe & D.C. Ganster (Eds.), *Research in occupational stress and well-being* (Vol. 5, pp. 61–98). Amsterdam: JAI Press/Elsevier.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, *10*(1), 76–88.

Greenhaus, J. H., Parasuraman, S., & Collins, K. M. (2001). Career involvement and family involvement as moderators of relationships between work-family conflict and withdrawal from a profession. *Journal of Occupational Health Psychology*, *6*(2), 91–100.

Gregory, A., & Milner, S. (2009). Editorial: Work-life balance: A matter of choice?. *Gender, Work & Organization*, *16*(1), 1–13.

Griggs, T. L., Casper, W. J., & Eby, L. T. (2013). Work, family and community support as predictors of work-family conflict: A study of low-income workers. *Journal of Vocational Behavior*, *82*(1), 59–68.

Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work-family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology*, *5*(1), 111–126.

Guest, D. E. (2002). Perspectives on the study of work-life balance. *Social Science Information*, *41*(2), 255–279.

Gundlach, M. J., Martinko, M. J., & Douglas, S. C. (2003). Emotional intelligence, causal reasoning, and the self-efficacy development process. *International Journal of Organizational Analysis*, *11*(3), 229–246.

Hackett, G., & Betz, N. E. (1981). A self-efficacy approach to the career development of women. *Journal of Vocational Behavior*, *18*(3), 326–339.

Hair, J. F., Jr., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2005). *Multivariate data analysis (6th Ed.)*. Upper Saddle River, NJ: Prentice Hall.

Halbesleben, J. R. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology*, *91*(5), 1134–1145.

Hammer, L. B., Allen, E., & Grigsby, T. D. (1997). Work-family conflict in dual-earner couples: Within-individual and crossover effects of work and family. *Journal of Vocational Behavior*, *50*(2), 185–203.

Hammer, L. B., Kossek, E. E., Anger, W. K., Bodner, T., & Zimmerman, K. L. (2011). Clarifying work-family intervention processes: The roles of work-family conflict

and family-supportive supervisor behaviors. *Journal of Applied Psychology*, *96*(1), 134–150.

Hanson, S. L., & Sloane, D. M. (1992). Young children and job satisfaction. *Journal of Marriage and the Family*, *54*(4), 799–811.

Hawk, S. R., & Aldag, R. J. (1990). Measurement biases in user involvement research. *Omega*, *18*(6), 605–613.

Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, *76*(4), 408–420.

Hennessy, K. D. (2005). *Work-family conflict self-efficacy: A scale validation study* (Doctoral dissertation, University of Maryland). Retrieved from http://drum.lib.umd.edu/bitstream/1903/2526/1/umi-umd-2410.pdf.

Hennessy, K. D., & Lent, R. W. (2008). Self-efficacy for managing work-family conflict: Validating the English language version of a Hebrew scale. *Journal of Career Assessment*, *16*(3), 370–383.

Higgins, C. A., Duxbury, L. E., & Lyons, S. T. (2010). Coping with overload and stress: Men and women in dual-earner families. *Journal of Marriage and Family*, *72*(4), 847–859.

Hirsch, B. J., & Rapkin, B. D. (1986). Multiple roles, social networks, and women's well-being. *Journal of Personality and Social Psychology*, *51*(6), 1237–1247.

Hoath, D. R., Schneider, F. W., & Starr, M. W. (1998). Police job satisfaction as a function of career orientation and position tenure: Implications for selection of community policing. *Journal of Criminal Justice*, *26*(4), 337–347.

Hobfoll, S. E. (1988). *The ecology of stress*. New York: Hemisphere.

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, *44*(3), 513–524.

Hobfoll, S. E. (2001). The influence of culture, community, and the nested-self in the stress process: Advancing conservation of resources theory. *Applied Psychology*, *50*(3), 337–421.

Hobfoll, S. E., & Kay (Ford), J. S. (2000). Conservation of resources: A stress theory based on the primacy of resource loss. In G. Fink (Ed.), *Encyclopedia of stress* (Vol. 1, pp. 519–525). San Diego: Academic Press.

Hodson, R. (1989). Gender differences in job satisfaction: Why aren't women more dissatisfied?. *The Sociological Quarterly*, *30*(3), 385–399.

Hoobler, J. M., Wayne, S. J., & Lemmon, G. (2009). Bosses' perceptions of family-work conflict and women's promotability: Glass ceiling effects. *Academy of Management Journal*, *52*(5), 939–957.

Hopwood, C. J. (2007). Moderation and mediation in structural equation modelling: Applications for early intervention research. Journal of Early Intervention, *29*(3), 262–272.

Hox, J. (1998). Multilevel modeling: When and why. In I. Balderjahn, R. Mathar, & M. Schader (Eds.), *Classification, data analysis, and data highways* (pp. 147–154). New York: Springer-Verlag.

Hulin, C. L., & Judge, T. A. (2003). Job attitudes. In W. C. Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Handbook of psychology: Industrial and organizational psychology* (pp. 255–276). Hoboken: Wiley.

Iaffaldano, M. T., & Muchinsky, P. M. (1985). Job satisfaction and job performance: A meta-analysis. *Psychological Bulletin*, *97*(2), 251–273.

James, L. R., Mulaik, S. A., & Brett, J. M. (2006). A tale of two methods. *Organizational Research Methods*, *9*(2), 233–244.

Japec, L. (1995). *Issues in mixed-mode survey design*. Stockholm: Statistics Sweden.

Jin, L., Watkins, D., & Yuen, M. (2009). Personality, career decision self-efficacy and commitment to the career choices process among Chinese graduate students. *Journal of Vocational Behavior*, *74*(1), 47–52.

Jones, G. R. (1986). Socialization tactics, self-efficacy, and newcomers' adjustments to organizations. *Academy of Management Journal*, *29*(2), 262–279.

Jones, T. L., & Prinz, R. J. (2005). Potential roles of parental self-efficacy in parent and child adjustment: A review. *Clinical Psychology Review*, *25*(3), 341–363.

Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits – self-esteem, generalized self-efficacy, locus of control, and emotional stability – with job

satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, *86*(1), 80–92.

Judge, T. A., Boudreau, J. W., & Bretz, R. D. (1994). Job and life attitudes of male executives. *Journal of Applied Psychology*, *79*(5), 767–782.

Judge, T. A., Jackson, C. L., Shaw, J. C., Scott, B. A., & Rich, B. L. (2007). Self-efficacy and work-related performance: The integral role of individual differences. *Journal of Applied Psychology*, *92*(1), 107–127.

Judge, T. A., & Klinger, R. (2009). Promote job satisfaction through mental challenge. In E. A. Locke (Ed.), *Handbook of principles of organizational behavior* (Ch. 6, pp. 107–121). Chichester: Wiley.

Judge, T. A., & Watanabe, S. (1993). Another look at the job satisfaction-life satisfaction relationship. *Journal of Applied Psychology*, *78*(6), 939–948.

Jung, K., Moon, M. J., & Hahm, S. D. (2007). Do age, gender, and sector affect job satisfaction? Results from the Korean labor and income panel data. *Review of Public Personnel Administration*, *27*(2), 125–146.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity*. New York: Wiley.

Kaiser, S., Ringlstetter, M., Eikhof, D. R., & Pina e Cunha, M. (2011). *Creating balance? International perspectives on the work-life integration of professionals*. Heidelberg: Springer.

Kalliath, T., & Brough, P. (2008). Work-life balance: A review of the meaning of the balance construct. *Journal of Management & Organization*, *14*(3), 323–327.

Karatepe, O. M., & Sokmen, A. (2006). The effects of work role and family role variables on psychological and behavioral outcomes of frontline employees. *Tourism Management*, *27*(2), 255–268.

Kavanagh, D. J. (1992). Self-efficacy and depression. In R. Schwarzer (Ed.), *Self-efficacy: Thought control of action* (pp. 177–193). Washington, DC: Hemisphere Publishing Corporation.

Keeney, J., Boyd, E. M., Sinha, R., Westring, A. J., & Ryan, A. M. (2013). From "work-family" to "work-life": Broadening our conceptualization and measurement. *Journal of Vocational Behavior*, *82*(3), 221–237.

Kirkcaldy, B. D., Trimpop, R., & Cooper, C. L. (1997). Working hours, job stress, work satisfaction, and accident rates among medical practitioners and allied personnel. *International Journal of Stress Management*, *4*(2), 79–87.

Kish, L. (1959). Some statistical problems in research design. *American Sociological Review*, *24*(3), 328–338.

Kline, R. B. (2005). *Principles and practice of structural equation modeling (2nd ed.)*. New York: Guilford Press.

Komarraju, M., & Nadler, D. (2013). Self-efficacy and academic achievement: Why do implicit beliefs, goals, and effort regulation matter?. *Learning and Individual Differences*, *25*(1), 67–72.

Kossek, E. E., Lewis, S., & Hammer, L. B. (2010). Work-life initiatives and organizational change: Overcoming mixed messages to move from the margin to the mainstream. *Human Relations*, *63*(1), 3–19.

Kossek, E. E., Noe, R. A., & DeMarr, B. J. (1999). Work-family role synthesis: Individual and organizational determinants. *International Journal of Conflict Management*, *10*(2), 102–129.

Kossek, E. E., & Ozeki, C. (1998). Work-family conflict, policies, and the job-life satisfaction relationship: A review and directions for organizational behavior-human resources research. *Journal of Applied Psychology*, *83*(2), 139–149.

Kristof-Brown, A., & Guay, R. P. (2011). Person-environment fit. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology* (Vol. 3, pp. 3–50). Washington, DC: American Psychological Association.

Kuo, Y. F., & Chen, L. S. (2004). Individual demographic differences and job satisfaction among Information Technology personnel: An empirical study in Taiwan. *International Journal of Management*, *21*(2), 221–231.

Lambert, E., Hogan, N. L., & Altheimer, I. (2010). The association between work-family conflict and job burnout among correctional staff: A preliminary study. *American Journal of Criminal Justice*, *35*(1–2), 37–55.

Lance, C. E., Butts, M. M., & Michels, L. C. (2006). The sources of four commonly reported cutoff criteria: What did they really say?. *Organizational Research Methods*, *9*(2), 202–220.

Lapierre, L. M., Spector, P. E., Allen, T. D., Poelmans, S., Cooper, C. L., O'Driscoll, M. P., & Kinnunen, U. (2008). Family-supportive organization perceptions, multiple dimensions of work–family conflict, and employee satisfaction: A test of model across five samples. *Journal of Vocational Behavior*, *73*(1), 92–106.

Lawler, E. E., & Porter, L. W. (1967). The effect of performance on job satisfaction. *Industrial Relations: A Journal of Economy and Society*, *7*(1), 20–28.

Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.

Lent, R. W. (2005). A social cognitive view of career development and counseling. In S. D. Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and research to work* (pp. 101–130). Hoboken, NJ: Wiley.

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, *45*(1), 79–122.

Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to career choice: A social cognitive analysis. *Journal of Counseling Psychology*, *47*(1), 36–49.

Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, *83*(404), 1198–1202.

Locke, E. A. (1969). What is job satisfaction?. *Organizational Behavior and Human Performance*, *24*(4), 309–336.

Locke, E. A. (1973). Satisfiers and dissatisfiers among white-collar and blue-collar employees. *Journal of Applied Psychology*, *58*(1), 67–76.

Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297–1349). Chicago, IL: Rand McNally.

Locke, E. A. (1984). Job satisfaction. In M. Gruneberg & T. Wall (Eds.*), Social psychology and organizational behavior* (pp. 93–117). London: Wiley.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Upper Saddle River, NJ: Prentice-Hall, Inc.

Loscocco, K. A. (1990). Reactions to blue-collar work: A comparison of women and men. *Work and Occupations*, *17*(2), 152–177.

Luke, D. A. (2004). *Multilevel modeling*. Newbury Park: Sage.

Lunenburg, F. C. (2011). Self-efficacy in the workplace: Implications for motivation and performance. *International Journal of Management, Business, and Administration*, *14*(1), 1–6.

MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods*, *7*(1), 83–104.

Macklin, E. D. (1980). Non-traditional family forms: A decade of research. *Journal of Marriage and the Family*, *42*(4), 905–922.

Marks , S. R. (1977). Multiple roles and role strain: Some notes on human energy, time and commitment. *American Sociological Review*, *41*(6), 921–936.

Mason, R. L., Gunst, R. F., & Hess, J. L. (2003). *Statistical design and analysis of experiments: With applications to engineering and science*. Hoboken, NJ: Wiley.

Masuda, A. D. (2007). *Choosing and pursuing multiple work and family goals: Does prioritizing work or family goals influence well-being?*. Paper presented at the International Conference of Work and Family Harmonizing Work, Family, and Personal Life: Strategies for Crossing Boundaries. Barcelona, Spain, 9–11 July 2007.

Mathieu, J. E., & Taylor, S. R. (2006). Clarifying conditions and decision points for mediational type inferences in organizational behavior. *Journal of Organizational Behavior*, *27*(8), 1031–1056.

Mathis, C. J. & Brown, U. J. (2008). Work-family conflict and job satisfaction: The mediating effects of job-focused self-efficacy. *Journal of Organizational Culture, Communication and Conflict*, *12*(1), 93–106.

Maxwell, S. E., & Cole, D. A. (2007). Bias in cross-sectional analyses of longitudinal mediation. *Psychological Methods*, *12*(1), 23–44.

McDonald, T., & Siegall, M. (1992). The effects of technological self-efficacy and job focus on job performance, attitudes, and withdrawal behaviors. *The Journal of Psychology*, *126*(5), 465–475.

McElwain, A. K., Korabik, K., & Rosin, H. M. (2005). An examination of gender differences in work-family conflict. *Canadian Journal of Behavioural Science*, *37*(4), 283–298.

Meece, J. L., Wigfield, A., & Eccles, J. S. (1990). Predictors of math anxiety and its influence on young adolescents' course enrollment intentions and performance in mathematics. *Journal of Educational Psychology*, *82*(1), 60–70.

Mesmer-Magnus, J. R., & Viswesvaran, C. (2005). Convergence between measures of work-to-family and family-to-work conflict: A meta-analytic examination. *Journal of Vocational Behavior*, *67*(2), 215–232.

Michel, J. S., Kotrba, L. M., Mitchelson, J. K., Clark, M. A., & Baltes, B. B. (2011). Antecedents of work-family conflict: A meta-analytic review. *Journal of Organizational Behavior*, *32*(5), 689–725.

Middleton, C. A. (2008). Do mobile technologies enable work-life balance? Dual perspectives on BlackBerry usage for supplemental work. In D. Hislop (Ed.), *Mobility and technology in the workplace* (pp. 209–224). New York: Routledge.

Moritz, S. E., Feltz, D. L., Fahrbach, K. R., & Mack, D. E. (2000). The relation of self-efficacy measures to sport performance: A meta-analytic review. *Research Quarterly for Exercise and Sport*, *71*(3), 280–294.

Morris, M. L., & Madsen, S. R. (2007). Advancing work-life integration in individuals, organizations, and communities. *Advances in Developing Human Resources*, *9*(4), 439–454.

Multon, K. D., Brown, S. D., & Lent, R. W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology*, *38*(1), 30–38.

Namasivayam, K., & Mount, D. J. (2004). The relationship of work-family conflicts and family-work conflict to job satisfaction. *Journal of Hospitality & Tourism Research*, *28*(2), 242–250.

Netemeyer, R. G., Boles, J. S., & McMurrian, R. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology*, *81*(4), 400–410.

Nielsen, I., & Smyth, R. (2008). Job satisfaction and response to incentives among China's urban workforce. *The Journal of Socio-Economics*, *37*(5), 1921–1936.

O'Driscoll, M. P., Poelmans, S., Spector, P. E., Kalliath, T., Allen, T. D., Cooper, C. L., & Sanchez, J. I. (2003). Family-responsive interventions, perceived organizational and supervisor support, work-family conflict, and psychological strain. *International Journal of Stress Management*, *10*(4), 326–344.

Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behavior. *Personnel Psychology*, *48*(4), 775–802.

Ostroff, C., Kinicki, A. J., & Clark, M. A. (2002). Substantive and operational issues of response bias across levels of analysis: An example of climate-satisfaction relationships. *Journal of Applied Psychology*, *87*(2), 355–368.

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, *66*(4), 543–578.

Pajares, F. (1997). Current directions in self-efficacy research. In M. Maehr & P. R. Pintrich (Eds.), *Advances in motivation and achievement* (Vol. 10, pp. 1–49). Greenwich, CT: JAI Press.

Pajares, F. (2002). *Overview of social cognitive theory and of self-efficacy*. Retrieved September 29, 2013, from http://www.uky.edu/~eushe2/Pajares/eff.html.

Pajares, F., & Schunk, D. H. (2005). Self-efficacy and self-concept beliefs. In H. W. Marsh, R. G. Craven, & D. M. McInerney (Eds.), *International advances in self research* (Vol. 2, pp. 95–121). Greenwich, CT: Information Age Publishing.

Panatik, S. A., Shah, I. M., & Rahman, H. A. (2012). Psychological strain as the mediator in the relationships between work design and work attitudes among Malaysian technical workers. *International Journal of Social Sciences and Humanity Studies*, *4*(2), 439–450.

Parasuraman, S., & Greenhaus, J. H. (2002). Toward reducing some critical gaps in work-family research. *Human Resource Management Review*, *12*(3), 299–312.

Parasuraman, S., & Simmers, C. A. (2001). Type of employment, work-family conflict and well-being: a comparative study. *Journal of Organizational Behavior*, *22*(5), 551–568.

Parelius, R. J., Parelius, A. P., & Ellis, R. A. (1974). Role strain, satisfaction and success: The case of the collegiate scholar. *Kansas Journal of Sociology*, *10*(2), 137–156.

Pedhazur, E. J., & Schmelkin, L. P. (1991). *Measurement, design, and analysis: An integrated approach*. Hillsdale, NJ: Erlbaum.

Perrewé, P. L., & Hochwarter, W. A. (2001). Can we really have it all? The attainment of work and family values. *Current Directions in Psychological Science*, *10*(1), 29–33.

Pintrich, P. R., & Garcia, T. (1991). Student goal orientation and self-regulation in the college classroom. In M. L. Maehr & P. R. Pintrich (Eds.), *Advances in motivation and achievement: Goals and self-regulatory processes* (Vol. 7, pp. 371–402). Greenwich, CT: JAI Press.

Pocock, B. (2003). *The work-life collision: What work is doing to Australians and what to do about it?*. Sydney, NSW: The Federation Press.

Pocock, B. (2005). Work-life "balance" in Australia: Limited progress, dim prospects. *Asia Pacific Journal of Human Resources*, *43*(2), 198–209.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879–903.

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, *12*(4), 531–544.

Poelmans, S. A. Y. (2005). *Work and family: An international research perspective*. Mahwah, NJ: Erlbaum.

Preacher, K. J., & Kelley, K. (2011). Effect size measures for mediation models: Quantitative strategies for communicating indirect effects. *Psychological Methods*, *16*(2), 93–115.

Premeaux, S. F., Adkins, C. L., & Mossholder, K. W. (2007). Balancing work and family: A field study of multi-dimensional, multi-role work-family conflict. *Journal of Organizational Behavior*, *28*(6), 705–727.

Qiu, L., & Yan, B. (2010). *Work-family conflict and job satisfaction: A study based on multi-dimensional measures*. Paper presented at the 2010 International Conference on Management and Service Science (MASS), New York, NY.

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Raelin, J., Bailey, M., Hamann, J., Pendleton, L., Raelin, J., Reisberg, R., & Whitman, D. (2011). The effect of cooperative education on change in self-efficacy among undergraduate students: Introducing work self-efficacy. *Journal of Cooperative Education and Internships*, *45*(2), 17–35.

Rain, J. S., Lane, I. M., & Steiner, D. D. (1991). A current look at the job satisfaction/life satisfaction relationship: Review and future considerations. *Human Relations*, *44*(3), 287–307.

Raju, B. N. (2006). *Human Resource Management*. New Delhi: Discovery Publishing House.

Reigeluth, C. M. (1983). Instructional design: What is it and why is it? In C. M. Reigeluth (Ed.), *Instructional-design theories and models: An overview of their current status* (pp. 3–36). Hillsdale, NJ: Erlbaum.

Restubog, S. L. D., Florentino, A. R., & Garcia, P. R. J. M. (2010). The mediating roles of career self-efficacy and career decidedness in the relationship between contextual support and persistence. *Journal of Vocational Behavior*, *77*(2), 186–195.

Rice, R. W., Gentile, D. A., & McFarlin, D. B. (1991). Facet importance and job satisfaction. *Journal of Applied Psychology*, *76*(1), 31–39.

Rice, R. W., Markus, K., Moyer, R. P., & McFarlin, D. B. (1991). Facet importance and job satisfaction: Two experimental tests of Locke's range of affect hypothesis. *Journal of Applied Social Psychology*, *21*(24), 1977–1987.

Rode, J. C. (2004). Job satisfaction and life satisfaction revisited: A longitudinal test of an integrated model. *Human Relations*, *57*(9), 1205–1230.

Ross, C. E., & Reskin, B. F. (1992). Education, control at work, and job satisfaction. *Social Science Research*, *21*(2), 134–148.

Rucker, D. D., Preacher, K. J., Tormala, Z. L., & Petty, R. E. (2011). Mediation analysis in social psychology: Current practices and new recommendations. *Social and Personality Psychology Compass*, *5*(6), 359–371.

Russell, G., & Bowman, L. (2000). *Work and family: Current thinking, research and practice*. Canberra, ACT: Department of Family and Community Services.

Saari, L. M., & Judge, T. A. (2004). Employee attitudes and job satisfaction. *Human Resource Management*, *43*(4), 395–407.

Scarpello, V., & Campbell, J. P. (1983). Job satisfaction: Are all the parts there?. *Personnel Psychology*, *36*(3), 577–600.

Schunk, D. H., & Mullen, C. A. (2012). Self-efficacy as an engaged learner. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 219–235). New York: Springer-Verlag.

Schunk, D. H., & Pajares, F. (2002). The development of academic self-efficacy. In A. Wigfield & J. Eccles (Eds.), *Development of achievement motivation* (pp. 16–31). San Diego: Academic Press.

Schunk, D. H., & Pajares, F. (2009). Self-efficacy theory. In K. R. Wentzel & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 35–53). New York: Routledge.

Schwarzer, R. (1993). *Measurement of perceived self-efficacy: Psychometric scales for cross-cultural research*. Berlin, Germany: Freie Universität Berlin.

Schwarzer, R., Bäßler, J., Kwiatek, P., Schröder, K., & Zhang, J. X. (1997). The assessment of optimistic self-beliefs: Comparison of the German, Spanish, and Chinese versions of the General Self-efficacy Scale. *Applied Psychology*, *46*(1), 69–88.

Schwarzer, R., & Fuchs, R. (1996). Self-efficacy and health behaviors. In M. Conner & P. Norman (Eds.), *Predicting health behavior: Research and practice with social cognition models* (pp. 163–196). Buckingham: Open University Press.

Schwoerer, C. E., & May, D. R. (1996). Age and work outcomes: The moderating effects of self-efficacy and tool design effectiveness. *Journal of Organizational Behavior*, *17*(5), 469–487.

Seashore, S. E., Lawler, E. E., Mirvis, P., & Cammann, C. (1982). *Observing and measuring organizational change: A guide to field practice*. New York: Wiley.

Secord, P. F., & Backman, C. W. (1964). Interpersonal congruency, perceived similarity and friendship. *Sociometry*, *27*(2), 115–127.

Shea, C. M., & Howell, J. M. (2000). Efficacy-performance spirals: An empirical test. *Journal of Management*, *26*(4), 791–812.

Shockley, K. M., & Singla, N. (2011). Reconsidering work-family interactions and satisfaction: A meta-analysis. *Journal of Management*, *37*(3), 861–886.

Sieber, S.D. 1974. Toward a theory of role accumulation. *American Sociological Review*, *39*(4), 567–578.

Silver, W. S., Mitchell, T. R., & Gist, M. E. (1995). Responses to successful and unsuccessful performance: The moderating effect of self-efficacy on the relationship between performance and attributions. *Organizational Behavior and Human Decision Processes*, *62*(3), 286–299.

Sitzmann, T., & Ely, K. (2011). A meta-analysis of self-regulated learning in work-related training and educational attainment: What we know and where we need to go. *Psychological Bulletin*, 137(3), 421–442.

Sonnentag, S. (2002). Performance, well-being, and self-regulation. In S. Sonnentag (Ed.), *Psychological management of individual performance* (pp. 405–424). New York: Wiley.

Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences*. Thousand Oaks, CA: Sage.

Spector, P. E. (2006). Method variance in organizational research: Truth or urban legend?. *Organizational Research Methods*, *9*(2), 221–232.

Spector, P. E., & Brannick, M. T. (2011). Methodological urban legends: The misuse of statistical control variables. *Organizational Research Methods*, *14*(2), 287–305.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, *38*(5), 1442–1465.

Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin*, *124*(2), 240–261.

Steel, R. P. (2002). Turnover theory at the empirical interface: Problems of fit and function. *Academy of Management Review*, *27*(3), 346–360.

Tams, S. (2008). Constructing self-efficacy at work: A person-centered perspective. *Personnel Review*, *37*(2), 165–183.

Theodossiou, I., & Zangelidis, A. (2009). Career prospects and tenure-job satisfaction profiles: Evidence from panel data. *Journal of Socio-Economics*, *38*(4), 648–657.

Thoits, P. A. (2010). Compensatory coping with stressors. In W. R. Avison, C. S. Aneshensel, S. Schieman & B. Wheaton (Eds.), *Advances in the conceptualization of the stress process: Essays in honor of Leonard I. Pearlin* (pp. 23–34). New York: Springer-Verlag.

Thompson, C. A. (2002). Conservation of resources theory. In *Sloan work and family research network encyclopedia*. Retrieved September 26, 2013, from: http://www.bc.edu/wfnetwork.

Tierney, P., & Farmer, S. M. (2011). Creative self-efficacy development and creative performance over time. *Journal of Applied Psychology*, *96*(2), 277–293.

Torres, J. B., & Solberg, V. S. (2001). Role of self-efficacy, stress, social integration, and family support in Latino college student persistence and health. *Journal of Vocational Behavior*, *59*(1), 53–63.

Van Steenbergen, E. F., & Ellemers, N. (2009). Is managing the work-family interface worthwhile? Benefits for employee health and performance. *Journal of Organizational Behavior*, *30*(5), 617–642.

Van Steenbergen, E. F., Ellemers, N., & Mooijaart, A. 2007. How work and family can facilitate each other: Distinct types of work-family facilitation and outcomes for women and men. *Journal of Occupational Health Psychology*, *12*(3), 279–300.

Vancouver, J. B., Thompson, C. M., Tischner, E. C., & Putka, D. J. (2002). Two studies examining the negative effect of self-efficacy on performance. *Journal of Applied Psychology*, *87*(3), 506–516.

Voydanoff, P., & Donnelly, B. W. (1999). Multiple roles and psychological distress: The intersection of the paid worker, spouse, and parent roles with the role of the adult child. *Journal of Marriage and the Family*, *61*(3), 725–738.

Wang, P., Lawler, J. J., & Shi, K. (2010). Work-family conflict, self-efficacy, job satisfaction, and gender: Evidences from Asia. *Journal of Leadership & Organizational Studies*, *17*(3), 298–308.

Wanous, J. P., Reichers, A. E., & Hudy, M. J. (1997). Overall job satisfaction: How good are single-item measures?. *Journal of Applied Psychology*, *82*(2), 247–252.

Westring, A. F., & Ryan, A. M. (2011). Anticipated work-family conflict: A construct investigation. *Journal of Vocational Behavior*, *79*(2), 596–610.

Williams, L. J. (1995). Covariance structure modeling in organizational research: Problems with the method versus applications of the method. *Journal of Organizational Behavior*, *16*(3), 225–233.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management*, *17*(3), 601–617.

Williams, L. J., & Hazer, J. T. (1986). Antecedents and consequences of satisfaction and commitment in turnover models: A reanalysis using latent variable structural equation methods. *Journal of Applied Psychology*, *71*(2), 219–231.

Williams, L. J., Vandenberg, R. J., & Edwards, J. R. (2009). 12 structural equation modeling in management research: A guide for improved analysis. *The Academy of Management Annals*, *3*(1), 543–604.

Williamson, D. A. (1996). Job satisfaction in social services. New York: Garland Publishing.

Wise, S. (2003). *Family structure, child outcomes and environmental mediators: An overview of the development in diverse families study*. Melbourne, VIC: Australian Institute of Family Studies Research Paper No. 30.

Witt, L. A., & Carlson, D. S. (2006). The work-family interface and job performance: Moderating effects of conscientiousness and perceived organizational support. *Journal of Occupational Health Psychology*, *11*(4), 343–357.

Wood, R. E., Goodman, J. S., Beckmann, N., & Cook, A. (2008). Mediation testing in management research: A review and proposals. *Organizational Research Methods*, *11*(2), 270–295.

Ybema, J. F., Smulders, P. G., & Bongers, P. M. (2010). Antecedents and consequences of employee absenteeism: A longitudinal perspective on the role of job satisfaction and burnout. *European Journal of Work and Organizational Psychology*, *19*(1), 102–124.

Zhao, J., Settles, B. H., & Sheng, X. (2011). Family-to-work conflict: Gender, equity and workplace policies. *Journal of Comparative Family Studies*, *42*(5), 723–738.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekarts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13–39). San Diego: Academic Press.

Zimmerman, B. J., & Cleary, T. J. (2006). Adolescents' development of personal agency: The role of self-efficacy beliefs and self-regulatory skill. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 45–69). Greenwich, CT: Information Age.

APPENDIX A: Letter of ethics approval

From: ARIES (Australian National University Information Research Enterprise System)
Sent: Thursday, 10 April 2008 2:45 PM
To: meredith.monroe@anu.edu.au
Cc: thomas.kalliath@anu.edu.au; Human Ethics Officer
Subject: Human Ethics Protocol 2008/065

THIS IS A SYSTEM-GENERATED E-MAIL. PLEASE DO NOT REPLY. SEE BELOW FOR E-MAIL CONTACT DETAILS.

Dear Ms Meredith Monroe,

Protocol: 2008/065

Work/Life Balance: Individual and Organisational Strategies that Aid Australian Workers

I am pleased to advise you that your Human Ethics protocol received approval by the Chair of the Humanities & Social Sciences DERC on 10 April 2008.

For your information:

1. Under the NHMRC/AVCC National Statement on Ethical Conduct in Human Research we are required to follow up research that we have approved. Once a year (or sooner for short projects) we shall request a brief report on any ethical issues which may have arisen during your research or whether it proceeded according to the plan outlined in the above protocol.

2. Please notify the committee of any changes to your protocol in the course of your research, and when you complete or cease working on the project.

3. Please notify the Committee immediately if any unforeseen events occur that might affect continued ethical acceptability of the research work.

4. The validity of the current approval is five years' maximum from the date shown approved. For longer projects you are required to seek renewed approval from the Committee.

All the best with your research!

Kim

Ms Kim Tiffen
Ethics Officer
Office of Research Integrity
Research Office
Chancelry 10B
The Australian National University
ACTON ACT 0200

Work-Life Balance Survey

Work Demands

These questions evaluate the demands that your work and family make on you. Please use the response below to answer the questions.

[Strongly Disagree 1 / 2 / 3 / 4 / Strongly Agree 5]

- My job requires all of my attention.

- I feel like I have a lot of work demand.

- I feel like I have a lot to do at work.

- My work requires a lot from me.

- I am given a lot of work to do.

Work-Life Balance Self-Efficacy

Please indicate below your score between 0 and 100 with regards to how confident you are in achieving the goals below:

- Change my lifestyle to achieve a good work-life balance.

- Find out how to balance work and life.

- Achieve my ideal work-life balance.

- Implement strategies to achieve work-life balance.

- Invent ways to balance my work and life.

Scale:

0 (Cannot do at all)

10

20

30

40

50 (Moderately can do)

60

70

80

90

100 (Highly certain can do)

Turnover

This question asks you about your intentions to leave your organisation.

[Not at all 1 / Rarely 2 / Sometimes 3 / Often 4 / A great deal 5]

- How often have you seriously considered leaving your current job in the past 6 months?

- How likely are you to leave your job in the next 6 months?

- How often do you actively look for jobs outside your present organisation?

Psychological Strain – Anxiety/Depression (GHQ-12)

These questions ask you about your physical and mental health.

Have you recently experienced the following during the past few weeks?

[Not at all / No more than usual / Rather more than usual / Much more than usual]

- been losing confidence in yourself?

- lost much sleep over worry?

- felt constantly under strain?

- felt that you couldn't overcome your difficulties?

- been feeling unhappy and depressed?

- been thinking of yourself as a worthless person?

Family/Home Satisfaction

The following items ask you to reflect on how satisfied you are with your family/home life.

[Strongly disagree 1 / Moderately disagree 2 / Slightly disagree 3 / Neutral 4 / Slightly agree 5 / Moderately agree 6 / Strongly agree 7]

- In general, I am satisfied with my family/home life

- All in all, the family/home life I have is great

- My family/home life is very enjoyable

Job Satisfaction

These questions ask how satisfied you are with your current job. Use the response scale below to answer the question.

[Strongly disagree 1 / Disagree 2 / Neutral 3 / Agree 4 / Strongly agree 5]

- In general I don't like my job

- All in all I am satisfied with my job

- In general I like working here

Demographics

Please tick the most appropriate box or type your answer in the space provided. Your survey responses are confidential.

- Are you male or female?

[Male / Female]

- How old are you?

[Open-ended comments field]

- What is your current marital status?

[Single or never married / Divorced or separated or widow(er) / Married or cohabitating]

- What is your highest grade or academic level completed?

[Secondary education / TAFE or Diploma / University or College degree / Postgraduate degree]

- How long (in years) have you worked for the company?

[Open-ended comments field]

Working week and household responsibilities

Please tick the most appropriate box or type your answer in the space provided.

- How many hours do you normally work in a typical week?

[Open-ended comments field]

Your Dependents

Please provide some information about the number and age of the dependents you care for in your home.

Children

- How many children are in your care?

[Open-ended comments field]

Parents

- How many parents are in your care?

[Open-ended comments field]

Other Disabled Adults

- How many disabled adults (not including any parents) are in your care?

[Open-ended comments field]

End of Survey

Work-Life Balance Survey

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 questions.

[Strongly Disagree 1 / 2 / 3 / 4 / Strongly Agree 5]

Time-based work-to-family conflict

- My work keeps me from my family/life activities more than I would like.

- The time I must devote to my job keeps me from participating equally in household responsibilities and activities.

- I have to miss family/life activities due to the amount of time I must spend on work responsibilities.

Time-based family-to-work conflict

- The time I spend on family/life responsibilities often interferes with my work responsibilities.

- 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.

- I have to miss work activities due to the amount of time I must spend on family/life responsibilities.

Strain-based work-to-family conflict

- When I get home from work I am often too frazzled to participate in family/life activities/responsibilities.

- I am often so emotionally drained when I get home from work that it

prevents me from contributing to my family/life.

- Due to all the pressures at work, sometimes when I come home I am too stressed to do the things I enjoy.

Strain-based family-to-work conflict

- Due to stress at home, I am often preoccupied with family/life matters at work.

- Because I am often stressed from family/life responsibilities, I have a hard time concentrating on my work.

- Tension and anxiety from my family life often weakens my ability to do my job.

Behaviour-based work-to-family conflict

- The problem-solving behaviours I use in my job are not effective in resolving problems at home.

- Behaviour that is effective and necessary for me at work would be counter-productive at home.

- The behaviours I perform that make me effective at work do not help me to be a better parent and spouse.

Behaviour-based family-to-work conflict

- The behaviours that work for me at home do not seem to be effective at work.

- Behaviour that is effective and necessary for me at home would be counter-productive at work.

- The problem solving behaviours that work for me at home do not seem to be as useful at work.

Work-Life Balance Self-Efficacy

Please indicate below your score between 0 and 100 with regards to how confident

you are in achieving the goals below:

- Change my lifestyle to achieve a good work-life balance.

- Find out how to balance work and life.

- Achieve my ideal work-life balance.

- Implement strategies to achieve work-life balance.

- Invent ways to balance my work and life.

Scale:

0 (Cannot do at all)

10

20

30

40

50 (Moderately can do)

60

70

80

90

100 (Highly certain can do)

Job Satisfaction

These questions ask how satisfied you are with your current job. Use the response scale below to answer the question.

[Strongly disagree 1 / Disagree 2 / Neutral 3 / Agree 4 / Strongly agree 5]

- In general I don't like my job

- All in all I am satisfied with my job

- In general I like working here

Demographics

Please tick the most appropriate box or type your answer in the space provided. Your survey responses are confidential.

- Are you male or female?

[Male / Female]

- How old are you?

[Open-ended comments field]

- What is your current marital status?

[Single or never married / Divorced or separated or widow(er) / Married or cohabitating]

- What is your highest grade or academic level completed?

[Secondary education / TAFE or Diploma / University or College degree / Postgraduate degree]

- How long (in years) have you worked for the company?

[Open-ended comments field]

Working week and household responsibilities

Please tick the most appropriate box or type your answer in the space provided.

- How many hours do you normally work in a typical week?

[Open-ended comments field]

Your Dependents

Please provide some information about the number and age of the dependents you care for in your home.

<u>Children</u>

- How many children are in your care?

[Open-ended comments field]

<u>Parents</u>

- How many parents are in your care?

[Open-ended comments field]

<u>Other Disabled Adults</u>

- How many disabled adults (not including any parents) are in your care?

[Open-ended comments field]

End of Survey

APPENDIX D: Cammann et al.'s (1983) overall job satisfaction measure

Overall Job Satisfaction

Description   This measure, developed by Cammann, Fichman, Jenkins, and Klesh (1983) as part of the Michigan Organizational Assessment Questionnaire (OAQ), uses three items to describe an employee's subjective response to working in his or her job and organization. This is a global indication of worker satisfaction with a job.

Reliability   Coefficient alpha values ranged from .67 to .95 (Hochwarter, Perrewé, Igalens, & Roussel, 1999; McFarlin & Rice, 1992; McLain, 1995; Pearson, 1991; Sanchez & Brock, 1996; Siegall & McDonald, 1995).

Validity   Job satisfaction correlated positively with leader's positive affectivity, leader's job involvement, distribution of risk exposure in the workplace, the economic value placed on health and safety, organizational commitment, job involvement, job focus, and work complexity (George, 1995; McLain, 1995; Siegall & McDonald, 1995). Job satisfaction correlated negatively with employees' off-job focus, perceived danger, perceived risk, task distractions, and intent to leave (Siegall & McDonald, 1995). In Sanchez, Kraus, White, and Williams (1999), confirmatory factor analysis showed that organizational munificence, high-involvement human resources (HR) practices, benchmarking, and job satisfaction were empirically distinct constructs.

Source   Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1983). Assessing the attitudes and perceptions of organizational members. In S. Seashore, E. Lawler, P. Mirvis, & C. Cammann (Eds.), *Assessing organizational change: A guide to methods, measures and practices.* New York: John Wiley. Items were taken from Table 4-2, p. 84. Copyright © 1983. Reprinted by permission of John Wiley and Sons, Inc.

Items   Responses are obtained using a 7-point Likert-type scale where 1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, and 7 = *strongly agree*.

Items:

1. All in all, I am satisfied with my job
2. In general, I don't like my job (R)
3. In general, I like working here

Items denoted with (R) are reverse scored.

Adapted from Fields (2002, p. 5)

APPENDIX E: *Table 3.1*. **Demographic characteristics of Study 1B cross-sectional WLBSE scale validation sample (N = 1,034)**

Variable	Sample
Gender	Male: 36.0% (372) Female: 63.1% (652) Undisclosed: 1.0% (10)
Age	Range: 17.0–71.0 years Mean: 41.1 years SD: 11.1 years
Tenure	Range: 0.0–42.0 years Mean: 8.0 years SD: 7.9 years
Hours worked per week	Range: 1.0–100.0 hours Mean: 39.3 hours SD: 10.6 hours
Marital status	Single/Never Married: 19.5% (202) Divorced/Separated/Widow(er): 8.3% (86) Married/Co-habiting: 70.8% (732) Others: 1.1% (11) Undisclosed: 0.3% (3)
Dependents (Children)	Range: 0–5 None: 45.3% (468) ≥ 1: 42.0% (434) Undisclosed: 12.8% (132)
Dependents (Parents)	Range: 0–3 None: 77.5% (801) ≥ 1: 6.9% (72) Undisclosed: 15.6% (161)
Dependents (Others)	Range: 0–1 None: 66.0% (682) ≥ 1: 2.5% (26) Undisclosed: 31.5% (326)
Education	Secondary: 15.7% (162) TAFE/Diploma: 17.4% (180) University/College: 31.8% (329) Postgraduate: 34.9% (361) Undisclosed: 0.2% (2)

Figure 3.1. Model C – Final model of the WLBSE measure – One Factor (e1 and e2 correlated; e1 and e3 correlated)
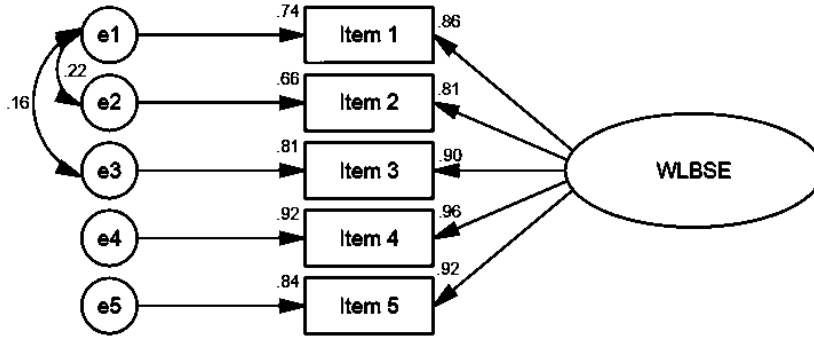
Figure 3.1.1. Model A – Initial model of the WLBSE measure – One Factor Model
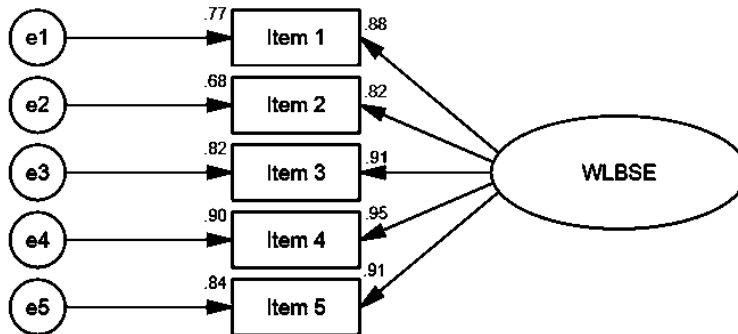
Figure 3.1.2. Model B – Intermediate model of the WLBSE measure – One Factor Model (e1 and e2 correlated)
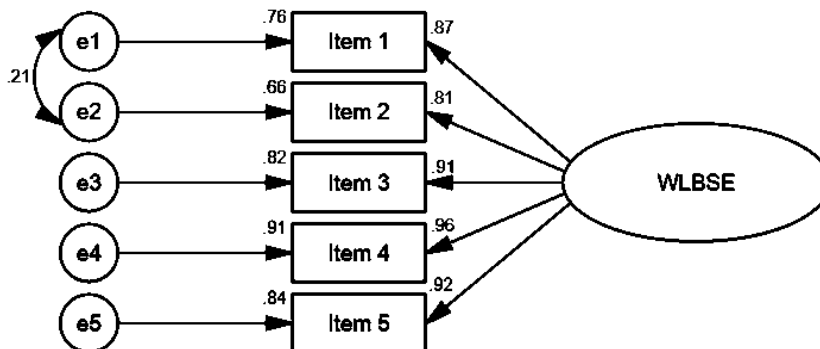
Notes: 1) Values to the left of the manifest variables represent squared multiple correlations (R^2); 2) Values to the right of the manifest variables represent standardised factor loadings (β).

APPENDIX G: *Table 3.3.* **Demographic characteristics of Study 1B longitudinal WLBSE scale validation sample (N = 97)**

Variable	Sample
Gender	Male: 36.1% (35) Female: 62.9% (61) Undisclosed: 1.0% (1)
Age	Range: 24.0–66.0 years Mean: 41.6years SD: 10.3 years
Tenure	Range: 1.0–34.0 years Mean: 8.8 years SD: 7.2 years
Hours worked per week	Range: 5.0–65.0 hours Mean: 38.6 hours SD: 10.1 hours
Marital status	Single/Never Married: 14.4% (14) Divorced/Separated/Widow(er): 9.3% (9) Married/Co-habiting: 75.3% (73) Others: 1.0% (1)
Dependents (Children)	Range: 0–4 None: 47.4% (46) ≥1: 46.4% (45) Undisclosed: 6.2% (6)
Dependents (Parents)	Range: 0–2 None: 86.6% (84) ≥1: 5.1% (5) Undisclosed: 8.2% (8)
Dependents (Others)	Range: 0–1 None: 78.3% (76) ≥1: 2.0% (2) Undisclosed: 19.6% (19)
Education	Secondary: 11.3% (11) TAFE/Diploma: 15.5% (15) University/College: 36.1% (35) Postgraduate: 37.1% (36)

APPENDIX H: *Table 4.1*. **Demographic characteristics of Study 2 research sample (N = 1,014)**

Variable	Sample
Gender	Male: 36.7% (372) Female: 62.4% (633) Undisclosed: 0.9% (9)
Age	Range: 17.0–71.0 years Mean: 41.3 years SD: 11.1 years
Tenure	Range: 0.0–40.0 years Mean: 8.0 years SD: 7.9 years
Hours worked per week	Range: 1.0–100.0 hours Mean: 39.3 hours SD: 10.7 hours
Marital status	Single/Never Married: 19.5% (198) Divorced/Separated/Widow(er): 8.1% (82) Married/Co-habiting: 71.1% (721) Others: 1.0% (10) Undisclosed: 0.3% (3)
Dependents (Children)	Range: 0–5 None: 45.2% (458) ≥1: 42.1% (427) Undisclosed: 12.7% (129)
Dependents (Parents)	Range: 0–3 None: 77.0% (781) ≥1: 7.4% (75) Undisclosed: 15.6% (158)
Dependents (Others)	Range: 0–1 None: 66.5% (674) ≥1: 2.4% (24) Undisclosed: 31.2% (316)
Education	Secondary: 15.1% (153) TAFE/Diploma: 17.7% (179) University/College: 31.8% (322) Postgraduate: 35.3% (358) Undisclosed: 0.2% (2)

APPENDIX I: *Table 5.1*. **Demographic characteristics of Study 3 research sample (N = 97)**

Variable	Sample
Gender	Male: 36.1% (35) Female: 62.9% (61) Undisclosed: 1.0% (1)
Age	Range: 24.0–66.0 years Mean: 41.6years SD: 10.3 years
Tenure	Range: 1.0–34.0 years Mean: 8.8 years SD: 7.2 years
Hours worked per week	Range: 5.0–65.0 hours Mean: 38.6 hours SD: 10.1 hours
Marital status	Single/Never Married: 14.4% (14) Divorced/Separated/Widow(er): 9.3% (9) Married/Co-habiting: 75.3% (73) Others: 1.0% (1)
Dependents (Children)	Range: 0–4 None: 47.4% (46) ≥1: 46.4% (45) Undisclosed: 6.2% (6)
Dependents (Parents)	Range: 0–2 None: 86.6% (84) ≥1: 5.1% (5) Undisclosed: 8.2% (8)
Dependents (Others)	Range: 0–1 None: 78.3% (76) ≥1: 2.0% (2) Undisclosed: 19.6% (19)
Education	Secondary: 11.3% (11) TAFE/Diploma: 15.5% (15) University/College: 36.1% (35) Postgraduate: 37.1% (36)

APPENDIX J: *Table 3.4*. **Means, standard deviations, and inter-correlations among latent constructs and demographic variables of cross-sectional Study 1B (N = 1,034)**

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender	.64	.48	-												
2. Age	41.14	11.06	-.13***	-											
3. Marital status	1.54	.81	-.06	.27***	-										
4. Education	2.86	1.07	-.07*	.01	.04	-									
5. Tenure	8.02	7.91	-.12***	.51***	.04	-.11**	-								
6. Number of children	.89	1.08	-.06	.10**	.33***	-.02	.04	-							
7. Hours worked per week	39.27	10.58	-.21***	.12***	.00	.12***	.08*	-.05	-						
8. Job demands	3.51	1.07	-.09*	.12***	.04	.15***	.15***	-.01	.34***	(.91)					
9. WLBSE	60.30	24.36	.07*	-.14***	-.04	.04	-.20***	-.07*	-.17***	-.31***	(.95)				
10. Turnover intentions	2.43	1.32	-.07*	-.05	-.04	.02	.00	-.01	.10**	.07	-.21***	(.86)			
11. Anxiety/depression	1.04	.89	.07*	-.02	-.08*	-.08*	.06	.00	.13***	.28***	-.46***	.37***	(.90)		
12. Job satisfaction	3.81	1.02	.04	.04	.07*	.15*	-.06	.07	.01	-.01	.35***	-.67***	-.41***	(.87)	
13. Family satisfaction	5.73	1.49	.10**	-.06	.21***	.03	-.09**	-.04	-.11**	-.10**	.34***	-.03	-.38***	.16***	(.97)

Notes: 1) *** Correlation is significant at the 0.001 level (two-tailed); 2) ** Correlation is significant at the 0.01 level (two-tailed); 3) * Correlation is significant at the 0.05 level (two-tailed).

Appendix K: *Table 4.2*. **Means, standard deviations, and inter-correlations among latent constructs and demographic variables of cross-sectional Study 2 (N = 1,014)**

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender	.63	.48	-														
2. Age	41.26	11.07	-.11**	-													
3. Marital status	1.54	.81	-.06	-.06***	-												
4. Education	2.87	1.06	-.08*	-.08	.05	-											
5. Tenure	8.02	7.92	-.08**	-.08***	.04	-.12***	-										
6. No. of children	.89	1.08	-.04	-.04***	.36***	-.01	.04	-									
7. Hours worked	39.26	10.71	-.23***	-.23***	.02	.14***	.09**	-.06	-								
8. Time-based WFC	2.82	1.17	-.06	.13***	.08*	.10**	.15***	.18***	.28***	(.86)							
9. Time-based FWC	2.37	1.16	-.04	.04	.17***	.11**	.07*	.37***	-.11**	.26***	(.86)						
10. Strain-based WFC	3.09	1.22	.01	.11**	-.03	.00	.15***	.05	.23***	.67***	.18***	(.92)					
11. Strain-based FWC	2.06	.99	.01	-.03	-.02	-.04	.02	.12***	-.09**	.14***	.57***	.20***	(.92)				
12. Behaviour-based WFC	2.67	1.12	-.13***	.07*	.05	.04	.06	.06	.08*	.33***	.25***	.42***	.37***	(.84)			
13. Behaviour-based FWC	2.71	1.05	-.09**	.01	.03	.02	.06	.08*	.02	.32***	.25***	.43***	.35***	.85***	(.91)		
14. WLBSE	60.24	24.38	.07*	-.15***	-.06	.04	-.19***	-.06	-.18***	-.54***	-.21***	-.56***	-.21***	-.40***	-.38***	(.95)	
15. Job satisfaction	3.79	1.04	.04	.04	.08*	.06	-.05	.05	.01	-.20***	-.05	-.37***	-.13***	-.23***	-.26***	.35***	(.86)

Notes: 1) *** Correlation is significant at the 0.001 level (two-tailed); 2) ** Correlation is significant at the 0.01 level (two-tailed); 3) * Correlation is significant at the 0.05 level (two-tailed).