

**IMPACT OF PERCEIVED DYADIC COPING ON WELL-BEING AND WORK
ENGAGEMENT: A MULTILEVEL MODERATED MEDIATION APPROACH**

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DECLARATION

I hereby declare that this thesis is my original work and it has been written by me in its entirety. I have duly acknowledged all the sources of information which have been used in the thesis.

This thesis has also not been submitted for any degree in any university previously.



Chen JiaQing Don

26th December 2014

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EXECUTIVE SUMMARY

Coping is an important concept in the stress and strain literature. Coping refers to cognitive and behavioral efforts that individuals use to *manage* stressful situations (Lazarus & Folkman, 1984). Current research on coping typically assumes that coping is an individualized activity that an individual would pursue by himself or herself when he or she is under stress. Individuals, however, seldom cope in isolation. Scant attention has been given to the social aspects of coping. Apart from research on spousal support, we know little about how individuals' and their partners' cope with work stressors and the outcomes of such dyadic coping episodes (Folkman & Moskowitz, 2004). Answering the call for more research to understand how couples cope with work stress (Dewe et al., 2010; Folkman & Moskowitz, 2004), this dissertation developed and tested a model on how perceptions of having received dyadic coping from spouses affects individuals' well-being and next day's work engagement.

Based on Lazarus & Folkman's (1984) Transactional Model of Stress and their typology of coping strategies, I posited that couples could cope dyadically with daily work hassles by utilizing problem-focused and emotion-focused dyadic coping strategies. I proposed that individuals' perceptions of having received problem-focused or emotion-focused dyadic coping from their partners have both main and buffering effects on the core process facet (i.e. stressor-strain-consequence relationships) in Beehr & Newman's (1978) General Model of Occupational Stress.

Forty couples (N = 80) participated in a diary study that lasted two weeks (10 work days). Using a within-person multilevel approach, I first examined how perceptions of having received dyadic coping from spouses had positive main effects on one's daily distress, well-being, and next day's work engagement, above and beyond the effects accounted for by individual coping

strategies. In the same model, I tested how perceptions of having received dyadic coping would moderate the relationship between daily work hassles (stressor) and daily distress (strain), as well as, the relationship between daily distress (strain) and well-being/ next day's work engagement (consequences). Lastly, I also tested for moderated mediation effects of perceived dyadic coping by using Multilevel Structural Equation Modeling (MSEM). MSEM moderated mediation allow me to test how the indirect effects of daily work hassles on well-being and next day's work engagement would differ between those who perceived to have received high and low levels of dyadic coping.

Results indicated that perceptions of having received problem-focused and emotion-focused dyadic coping from spouses had differential impacts on daily distress and coping outcomes. Perceptions of having received problem-focused dyadic coping were found to have positive main effects on psychological well-being, marital satisfaction and positive affect; at the same time, negatively affecting individuals' next day's work engagement. Perceived emotion-focused dyadic coping, on the other hand, was found to have positive main effects on one's daily distress and all aspects of one's subjective well-being. Both perceived problem-focused and perceived emotion-focused dyadic coping had no impact on one's daily experiences of physical well-being.

The buffering effects of perceived problem-focused and perceived emotion-focused dyadic coping were mixed. Results indicated that perceived problem-focused dyadic coping reversed buffered the relationships between daily distress, negative affect, life satisfaction, and work engagement, such that those who perceived having received higher levels of problem-focused dyadic coping were more likely to experience higher levels of negative affect and lower levels of life satisfaction and reduced next day's work engagement during days which they

experience high levels of distress. Perceived emotion-focused dyadic coping, on the other hand, positively buffered individuals from detrimental effects of distress, although its buffering effects are limited to somatization, positive affect, and next day's work engagement.

MSEM moderated mediation analyses indicated that the indirect effects that daily work hassles had on coping outcomes did not differ much between those who perceived to have receive high and low levels of problem-focused dyadic coping. These indirect effects, however, are significantly different between those who perceived to have received high and low levels of emotion-focused dyadic coping from spouses. These results are largely due to the moderation effects that perceived emotion-focused dyadic coping had on the relationship between daily work hassles and daily distress. Taken together, these results seemed to indicate that perceptions of having received emotion-focused dyadic coping are more effective than perceptions of having received problem-focused dyadic coping in influencing the indirect effects of daily work hassle on individuals' well-being and next day's work engagement.

Overall, this dissertation contributed theoretically to our understanding of outcomes of perceptions of having received dyadic coping from spouses. Theoretical and practical implications of this dissertation were discussed and several suggestions were given on how research on dyadic coping could possibly progress in the future.

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CHAPTER 1: INTRODUCTION

1.1 BACKGROUND OF DISSERTATION

Coping is an important concept in the stress and strain literature. Coping refers to cognitive and behavioral efforts that individuals could use to *manage* stressful situations (Lazarus & Folkman, 1984). Individuals could cope with stress in several ways. First, they could cope with stress by adopting problem-focused or control-oriented strategies that involve appraising the stressful situation, generating alternative solutions, and act on those solutions to eliminate the source of stress (Lazarus & Folkman, 1984; Pearlin & Schooler, 1978). Second, they could utilize emotion-focused coping to deal with negative feelings or emotional reactions that might arise from the stressful situation (Lazarus & Folkman 1984). Third, they could use symptom-focused coping to try to decrease hardship associated with stress episodes without directly addressing the stressors themselves (Pearlin & Schooler, 1978). Fourth, they could downplay the severity of the stressful situation by utilizing escape-orientated coping by pretending that the stressor does not exist (Kinicki & Latack, 1990; Latack, 1986).

To date, most organizational scholars had focused on coping strategies employed by *individuals* and coping outcomes of such *individualized* coping strategies. Specifically, scholars have studied mainly the efficacy of different individual coping strategies in helping *individuals* manage work stressors and the impact of individual coping strategies on people's well-being (Folkman & Moskowitz, 2003; Folkman & Moskowitz, 2004). This emphasis on individualized coping has led to Dunahoo et al. (1998) describing extant research on coping as adopting “a single man against the elements” perspectives where it revolved mainly around understanding with how individuals cope with stress in silo on their own accord.

Recent research, however, suggests that stress experiences are not limited to individuals and individuals do not always cope in isolation during stress episodes (e.g. Revenson, Kayser & Bodenmann, 2005) – partners, in particular, play important roles during individuals’ coping processes (Revenson et al., 2005). This is because when individuals are stressed, their partners are affected as well, either by spillover effects from their stressors, acrimonious exchanges that resulted from stress-induced anxiety, or when stressors affect relationship functioning (e.g. Randall & Bodenmann, 2009; Revenson & DeLongis, 2011, Song et al., 2011; Westman & Vinokur, 1998; Westman et al. 2004). For instance, studies on chronic illnesses found that chronic diseases increased the stress levels of both disease sufferers and their spouses i.e. stress associated with the chronic disease is no longer limited to the disease sufferers but also negatively affect their spouses. Coping in instances such as these are communal and interpersonal in nature since spouses of disease sufferers have to help them cope with their illnesses either by taking on additional responsibilities such as helping them complete their share of household chores, bearing the financial burden of family livelihood, or by providing disease sufferers with emotional support (Revenson & DeLongis, 2011; Revenson et al., 2005).

Clearly, the impact of stress is not limited to individuals, but instead “spread out like crabgrass to affect the lives of others in the individual’s social network”, emphasizing the importance of dyadic coping (Revenson, et al., 2005: pg. 3). During the dyadic coping process, partners may facilitate, constrict, or interfere with each other’s coping outcomes. Conceptualizing coping strategies and coping outcomes as dyadic in nature is fairly new and organizational scholars have yet to substantively examine how perceptions of having received dyadic coping from partners affect stressor-strain-consequences relationships (Folkman & Moskowitz, 2004; Revenson & DeLongis, 2011). Responding to the call by Dewe, O’Driscoll &

Cooper (2010) and Folkman & Moskowitz (2004) for more research on social aspects of coping, this dissertation attempts to examine coping strategies that dual income couples could use to manage daily work hassles and the outcomes of their perceptions of having received dyadic coping from spouses impact their well-being and next day's work engagement. In the words of Dunahoo et al. (1998), "even the Lone Ranger had Tonto" (pp. 137); it is therefore important to understand how spouses affect each other's' endeavors to manage his/her stressors.

Stemming from Lazarus and Folkman's (1985) seminal work on stress, appraisal, and coping, dyadic coping is defined in this dissertation as *cognitive and behavioural efforts that one's spouse put in to help one manage demands of situations that are appraised by oneself as exceeding or taxing one's resources* and perceived dyadic coping refers to *one's perceptions of the level of cognitive and behavioural efforts that one's spouse is putting in to help one manage demands of situations that are appraised by oneself as exceeding or taxing one's resources*.

1.2 OBJECTIVES OF DISSERTATION

This dissertation sets out to answer two broad questions. First, how perceptions of having received dyadic coping from spouses impact strain and stress outcomes. Second, how perceptions of having received dyadic coping potentially alter the indirect effects (moderated mediation) that daily work hassles have on individuals' well-being and work-related outcomes.

In consonance with the above research questions, I developed and tested a model that examined the main and buffering effects of perceived dyadic coping on the relationships between daily work hassles (stressors), daily distress (strain), well-being and next day's work engagement (consequences). An integrated model such as this is timely and essential for two reasons.

First, dominant theories of stress such as Lazarus & Folkman's (1984) Transactional Model of Stress, Cybernetic Theory of Stress (Cummings & Cooper, 1979; Carver & Scheier, 1981; Edwards, 1992), Job-Demand-Control Model (JDC) (Karasek, 1979) , and Hobfoll (1989) Conservation of Resources Theory (COR) typically construed stress as a phenomenon that is experienced by an individual. For example, Transactional Model of Stress suggested that individuals would experience stress when they do not have adequate resources to manage their environment or situations they encounter (Lazarus & Folkman, 1984). Conservation of Resources Theory, on the other hand, explained that stress occurs when individuals are threatened with resource loss, failed to regain resources after resource investment, or when their resources are depleted by environmental demands (Hobfoll & Freedy, 1993). Karasek's (1979) Job-Demand-Control Model (JDC) suggested that job strain is a function of two distinct aspects of the job: job demands and job control. Job strain is the result of the interactions between job demands and job control. Based on these dominant stress theories, traditional work stress studies typically assumed that work stress is an individualized phenomenon and successful coping with work stressors, therefore, depended solely on the types of coping strategies adopted by individuals (Folkman & Moskowitz, 2004; Latack, 1986).

Contemporary developments on these traditional stress models, however, challenged these perspectives by theorizing that social resources play an important role in the stressor-strain relationship. For example, stemming from the foundations of Karasek's (1979) Job-Demand-Control Model, Johnson & Halls (1988) developed the Job-Demand-Control(-Support) Model which argued that apart from job demands and job control, social support would play important roles in predicting job strain and strains outcomes. Specifically, Johnson & Halls (1988) introduced the concept of iso-strain which predicted that employees working on jobs that are

high in demand, low in control, and low in social support/high in isolation would experience the highest amount of strain and lowest level of well-being. Also, Hobfoll et al. (1990) extended COR theory by introducing two additional corollaries related to social resources. Social resources, as defined by Hobfoll et al. (1990), are social interactions or relationships that provide individuals with assistance or with feelings of attachment to a person or group that is perceived as caring. These social resources help individuals' widen their resources repertoire beyond the self and are integral components of one's identity. In the Conservation of Social Resource model, social resources such as social support has been theorized to have instrumental and self-defining functions that ensure a stable sense of self. In the context of stress research, the Conservation of Social Resource model highlighted the importance of social support in expanding individuals' resource pool, allowing them to better withstand stress and its detrimental outcomes.

Second, similar to stress and coping processes, coping outcomes such as well-being and work engagement are also likely to be dependent on the coping dynamics that individuals have with their spouses (Amstad & Semmer, 2009). Although coping outcomes have traditionally and primarily been studied as functions of individualized coping efforts, research evidence suggested that spousal interactions and support would alter the impact that work stressors have on individuals' well-being, marital satisfaction, and work-related outcomes such as job and career satisfaction (Ten Brummelhuis & Bakker, 2012; Granrose, Parasuraman & Greenhaus, 1992; Parasuraman, Greenhaus & Granrose, 1992).

Extensive research on work-family conflict suggested that social support from spouses play important roles in the work-family process (Carlson & Perrewé, 1999; Greenhaus & Beutell, 1985; Greenhaus & Parasuraman, 1986; Thomas & Ganster, 1995). Specifically, support from spouses would typically moderate the relationship between stress and well-being such that those

with greater degree of support from spouses were less likely to experience detrimental consequences of stress (Granrose et al., 1992; Parasuraman et al., 1992).

Research on spousal interactions suggested that family is an important life domain where many important recovery activities take place. Studies found that spouses can impede each other's well-being by imposing additional demands on each other or facilitate each other's well-being by reacting negatively or empathically to each other's disclosure about work. For example, Ilies, Keeney & Scott (2011) argued that partners provide a psychologically safe environment for individuals to share work-related emotions without the fear of prejudice and judgment. In particular, they found that individuals who shared positive work events with partners and received positive responses from them were more likely to experience positive outcomes such as increased marital and job satisfaction. Similarly, Hicks & Diamond (2008) found that couples who shared with each other about positive work events were more likely to experience positive affect. Furthermore, Ryff, Singer, Wing & Love (2001) found that compared to couples who did not support each other during distress, couples who supported each other were better able to cope with stressors and recovered better from stress episodes.

As noted above, spousal support and positive marital interactions have salubrious impacts on individuals, especially during work stress episodes. From a research standpoint, even though we know that the provision of social support and experiencing positive spousal interactions would benefit individuals, it remains unclear what social support and spousal interactions really are (Beehr, et al., 2000). Furthermore, social support and spousal interactions do not inform us about the types of coping strategies that couples could employ to cope with stress and the efficacies those coping strategies on personal and work-related outcomes.

Dyadic coping, is therefore, proposed to be a mean to explain how couples cope with stressors. To be sure, dyadic coping differ from social support and spousal interactions in important ways. Conceptually, social support refers to the provision and availability of supportive behaviours between couples and the evaluation of these supportive behaviours by support recipients (Granrose et al., 1992). Spousal interactions, on the other hand, refer to the quality of exchanges between couples. Both spousal support and interactions tend to be diffused in nature and are not targeted at achieving specific coping outcomes. Dyadic coping, on the other hand, are specific coping strategies that couples could adopt, with the explicit target intent of helping one's spouse address and manage his or her work stressors. Stemming from this differentiation, perceived dyadic coping could be understood as individuals' perceptions of their spouses' actions that are specific and targeted at helping them cope with their work stressors.

Although much research has been done to examine how spousal support and interactions can affect stress outcomes, examining specific dyadic coping strategies and their related outcomes have the added benefits of allowing us to better understand what exactly couples could do to help each other manage work stress and the impact and efficacies of these strategies on their strains and outcomes. Furthermore, studying how couples cope dyadically help recalibrate current coping research from one that is primarily focused on individuals to one that takes into account the psychological and social dynamics involving partners. This recalibration is important and necessary because individuals are inherently embedded in social relationships and social aspects of coping during stress episodes will inadvertently influence individuals' sense of wellness and work outcomes (O'Brien & DeLong, 1997; Revenson et al., 2005). Moreover, examining the relationships between perceptions of having received dyadic coping and stress outcomes would help shed light on partners' roles during the coping process and aid the

development of effective dyadic coping strategies that may facilitate positive coping outcomes among couples. For instance, examining perceptions of how having received different forms of dyadic coping strategies impact coping outcomes would help uncover which strategy would be most effective in helping couples manage work stressors. These findings would suggest the types of specific actions that couples could take to better help each other manage daily work stress.

1.3 INTEGRATED MODEL OF PERCEIVED DYADIC COPING

Drawing on Beehr & Newman's (1978) General Model of Occupational Stress, the basic research model in this dissertation is presented in Figure 1. Beehr & Newman's model is a general work stress model that expresses the relationships between organizational environment, contextual factors, work stressors, strains, and individual/ work-related consequences of stress. Generally, the model posited that occupational stressors precede employees' strain experiences in temporal causality and employees' strain experiences would, in turn, predict individual and work-related consequences of occupational stress. Collectively, this stressor-strain-consequence relationship forms the core process facet in the Beehr & Newman's (1978) model. Apart from the core process facet, Beehr & Newman (1978) argued that organizational environment, contextual factors, and adaptive responses (i.e. coping response) would potentially alter the core process facet (i.e. the stressor-strain-consequence relationship) either by moderating those relationships or by directly impacting those variables.

In this dissertation, I examine how the core process facet (i.e. stressor-strain-consequence relationship) in Beehr-Newman Model is moderated by individuals' perceptions of having received dyadic coping from their spouses. Using a daily diary and a within-person multilevel moderated mediation approach, I examine how perceptions of having received dyadic coping

would alter the relationships between daily work hassles, daily distress, well-being, and next day's work engagement.

Following the arguments made by Beehr & Newman (1978), I posit that exposure to daily work hassles (stressors) would trigger daily distress (strain), which in turn will negatively affect individuals' well-being and next day's work engagement (individual and work-related consequences).

I first hypothesize that perceptions of having received dyadic coping would have a direct impact on the core process facet. Specifically, I posit that after controlling for individual coping strategies, perceived dyadic coping would have a positive main effect on the amount of strain individuals experience on a daily basis. Perceptions of having received dyadic coping would also directly enhance individuals' well-being and next day's work engagement.

Besides directly impacting the variables in the core process facet, I also posit that perceptions of dyadic coping would have an incremental buffering effect on the stressor-strain-consequences relationship above and beyond the effects individualized coping. Specifically, perceived dyadic coping would buffer the relationship between daily work hassles and daily strain such that on days when individuals experience high levels of work hassles, they are less likely to experience strain if they perceive themselves to have received higher levels of dyadic coping from their spouses. Similarly, individuals who perceive themselves as having received higher levels of dyadic coping from their spouses are also less likely to experience declines in well-being and next day's work engagement on day when their strain level is high.

Lastly, I test for moderated mediation effects of dyadic coping. I theorized that the indirect negative effects of daily work hassles on well-being and next day's work engagement would be stronger for individuals who perceived to have received low levels of dyadic coping

compared to those perceived to have received high levels of dyadic coping from spouses. This is because perceptions of dyadic coping would mitigate the detrimental indirect impact of daily work hassles on well-being and next day's work engagement.

This dissertation has several conceptual and methodological strengths. First, this dissertation attempts to explain how and why perceptions of having received dyadic coping from spouses have incremental impact on stress-strain outcomes, above and beyond the benefits of individualized coping. Compared to social support, a non-targeted form of social resource, perceived dyadic coping are individuals' perceptions of whether their spouses have engaged in specific actions that are targeted at helping them cope with stressors. Theoretically, studying perceived dyadic offers a more fine-grained analysis on couple relations during stress and will help us better understand the possible types of dyadic strategies that couple employ and the efficacies of those different strategies in helping them cope during stress episodes.

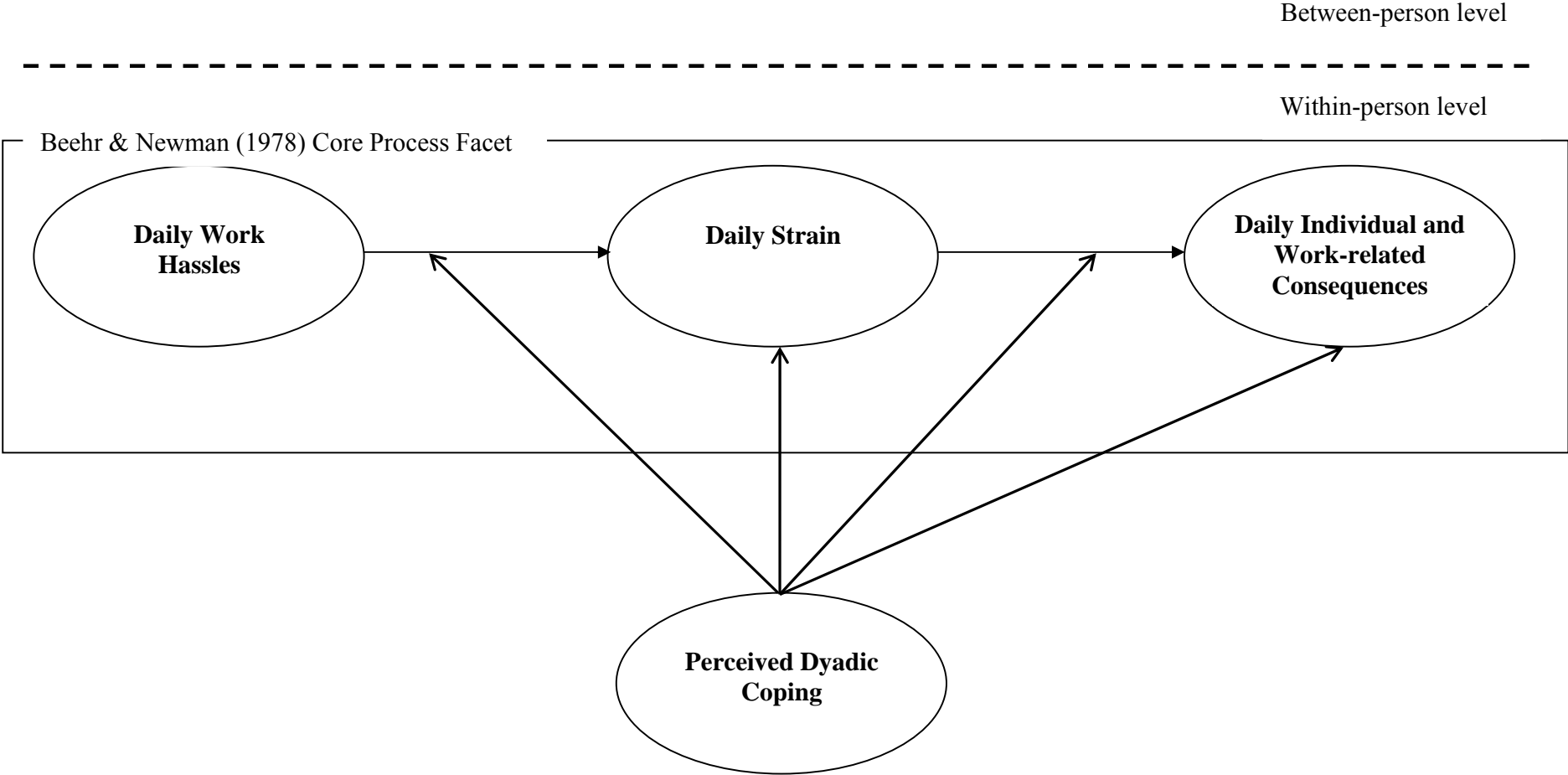
Second, this dissertation uses a daily diary within-person approach to examine how individual and work-related outcomes fluctuate as consequences of variations in levels of perceived dyadic coping, work stressors, and strain. Methodologically, this approach allows for the examination of perceived dyadic coping experiences and its related outcomes as they wax and wane naturally over a period of two weeks. This approach would lend greater confidence to the dissertation's results as they are obtained in a naturalistic setting; thereby allowing for a more accurate assessment of the impact that perceived dyadic coping has on stress-strain-consequence relationship.

Third, although work-family studies have examined how social support moderated the impact of work stressors, it remains unclear whether the indirect effects of work stressors on well-being and work outcomes differ between those who received high and low spousal support.

By proposing and examining a moderated mediation model that tests the differences in indirect effects of stressors between those who perceived to have received different forms and levels of dyadic coping, this dissertation attempts to uncover the types of dyadic coping strategies that are most effective in mitigating the detrimental impact of work stressors. Understanding how indirect effects of stressors differ as a function of perceived dyadic coping would help inform counselors on the type of marriage advice that they could give to dual income couples to help them better manage the process they cope with work stressors.

Last, this dissertation offers some practical implications for dual income couples. For example, empirical findings from this dissertation may suggest ways dual income couples could cope with stress more effectively, as well as, what couples should not do when coping with work stress.

Figure 1: Basic Research Model



1.4 ORGANIZATION OF DISSERTATION

The remainder of this dissertation is structured in the following ways. In Chapter 2, I briefly review the literature on stress, strain, coping, well-being, and work engagement. In the same chapter, I discuss how coping could mitigate negative consequences of work stressors and expound the importance and relevance of perceived dyadic coping to organizational research. Specifically, I argue for the application of dyadic coping in work stress and strain research and explain how dyadic coping could help enhance our understanding of how couples could cope with daily work hassles. In Chapter 3, I develop a conceptual model and postulate several hypotheses to illustrate the processes through which perceptions of dyadic coping cushion individuals from distress and negative well-being/work engagement outcomes that could possibly arise from work stress. In Chapter 4, I explain the methods and instruments that were used to test the hypotheses postulated in the previous chapter. In the same chapter, I also conducted Multilevel Confirmatory Factor Analyses (MCFA) to ascertain the factor structure of the key variables used in this dissertation. In Chapter 5, I briefly describe the analytical methods used in this study – namely, Multilevel Structural Equation Modeling (MSEM) and Multilevel Moderated Mediation. Chapter 6 describes the results of the hypotheses tests. In Chapter 7, I discuss the findings of the previous chapter, its implications to research and practice, the limitations of this dissertation, and some future directions for research.

CHAPTER 2: LITERATURE REVIEW

This dissertation developed and tested a multilevel moderated mediation model to examine the impact of perceived dyadic coping on the relationships between daily work stressors, daily distress and well-being/next day's work engagement. This chapter begins with a discussion on the work stress and strain literature. Following that, I provide a review on the coping literature, introduce the concept of perceived dyadic coping and contrast it with social support. This chapter would end off with an introduction on the well-being and work engagement literature. A thorough review of each of these research areas is beyond the scope of this dissertation. Instead, I will briefly summarize what we know about these research areas and discuss how they fit into the framework of this dissertation.

2.1 STRESS

Stress is a complex concept and theorists have consistently debated on what stress is and how it could be better defined. In one of the earliest formal study on stress, Hans Seyle, in 1936, defined stress as nonspecific results of any demand on the body (Seyle, 1991). Based on life events theory, Holmes & Rahe (1967) defined stress as a set of environmental, social, and internal demands (stressors) that require individuals to adjust their behavioural pattern. In their seminal work on stress, appraisal and coping, Lazarus & Folkman (1984) argued against defining stress in terms of bodily responses to stressors and environmental stimuli. They argued that defining stress in these terms is inherently flawed as what is considered stressful environmental demands for one person may not be so for another. It is, therefore, impossible for such definitions to objectively describe what stress is without making references to individual differences. In response to the theoretical inadequacies of previous definitions, Lazarus &

Folkman (1984: pg. 19) argued that stress is better defined as the “*relationship between a person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being*”.

In this section, I briefly review the theoretical origins of stress, the major ways that stress has been studied in the literature (i.e. major life events, chronic strain, and daily hassles), and how organizational researchers have adapted these conceptualizations of stress to understand organizational and work stress.

2.1.1 Stress and its Theoretical Origin

Although stress is a concept that can be dated back to ancient Greece, it did not enter mainstream psychology literature until the 1950s (Lazarus, 1999). Formal studies of stress arise out of the needs of military psychologists to manage battle fatigues and post-traumatic disorders among soldiers who fought in the first and second world wars (Lazarus, 1999).

Stress is generally studied at two levels – the physiological and the psychological levels. Physiological stress is concerned with bodily reactions, and how the brain and its hormonal neurotransmitters react when individuals are exposed to stressors. Psychological stress is concerned with individuals’ psychological reactions and behaviours when they are exposed to stressors.

Early research on physiological stress is based on the assumption that noxious physical conditions would elicit bodily responses such as diseases and illness. The most important physiological theory of stress is the General Adaptation Syndrome (GAS) proposed by Hans Selye (Selye, 1991). The GAS describes a 3-stage process of how the body would respond when coping with harms and threats induced by noxious agents. The *alarm reaction stage* occurs when

the noxious agent triggers defensive reactions from the body. After prolonged exposure to the noxious agent, the body would enter the *resistance stage* where the body would mobilize its resources to defend itself against the noxious agent. If the noxious agent is severe enough or one's exposure to it continues for an extended period of time, the *exhaustion stage* would occur. During the exhaustion stage, the body's resources are depleted and bodily defense against noxious agent fail. As a result, individuals would experience physiological reactions such as physical discomfort, distress, illnesses, or diseases.

Different from physiological stress research, early research on psychological stress is based on psychosomatic medicine. The focus of this research stream is on exploring the psychosocial factors that increase individuals' vulnerabilities and susceptibilities to psychological illness, as well as, factors that support adaptive coping responses to trauma (Cooper & Dewe, 2004). The psychosomatic approach is problematic because of the inherent inadequacies of psychosomatic theories. Specifically, psychosomatic theories are difficult to validate, offer simplistic explanations to complex psychosocial relationships, and did not bring about desired results in stress intervention programs (Cooper & Dewe, 2004). Given the limitations of psychosomatic theories, the field of psychological stress research entered a new phase of theoretical development and research. Leading this new wave of research is the stimulus-organism-response (SOR) model (Lazarus, 1999).

The SOR model is a cognitive model that emphasizes individuals' (organism) cognitive appraisal of their environmental stimulus and the resulting behavioural responses from such cognitive appraisals. In SOR models, stress is viewed as relational in nature and as a function of the interplay between individuals and their environment (Cooper & Dewe, 2004). Major life events, chronic stress, and daily hassles are examples of SOR models of stress.

2.1.2 Major Life Events, Chronic Stress, Daily Hassles

Three major forms of stress have been investigated in the literature: life events, chronic stressors, and daily hassles. Life events are acute changes in one's life circumstances that require major behavioural adjustments within relatively short period of time. Chronic stress are persistent environmental demands that require behavioural adjustments over prolong periods of time. Daily hassles are mini events that require small behavioural adjustments on a day-to-day basis or several behavioural adjustments within the same day (Thoits, 1995). In the following sections, I will briefly introduce these different SOR approaches in stress research.

Major life events

Life events theory of stress developed by Holmes & Rahe (1967) and Dohrenwend & Dohrenwend (1974) theorized that unexpected major changes in life circumstances require significant adaptations from individuals. These unexpected life events and their associated adaptation processes create acute stress that adversely affects the health and well-being of individuals. The life events theory dominated early research on stress and has been applied to study how major illnesses, bereavement, and divorce adversely affected individuals who had directly or indirectly experienced these events (Thoits, 1983).

Despite the ubiquity of its applications and popularity with early researchers of stress, life events theory has received a fair amount of criticisms (Cooper & Dewe, 2004). Criticisms leveled against the life event theory include: i) the assumed relationship between life events and stress is too simplistic – not all changes in life generate stress and one could experience stress with or without changes in one's life circumstances, ii) life events theory tends to ignore complex issues such as the meanings associated with the life events and the processes through

which life events affect well-being, iii) merely knowing that changes in life circumstances have occurred is insufficient to appraise how these changes would affect individuals – whether these changes are regarded as stressful events or not depends on how individuals experiencing these changes respond to them and the types of interactions individuals have with the environment where these changes had occurred; iv) the empirical relationships between life events, stress, and well-being are small i.e. life events are likely to be distal predictors that impact individuals' stress and well-being through more proximal predictors such as psychological and behavioural reactions to life events (Dewe et al., 2010).

In light of the limitations associated with life events theory, researchers theorized that the adverse impact of life events on individuals would most likely be manifested through daily hassles that these events produces (Pillow, Zautra & Sandler, 1996).

Chronic stress

Different from life event theory which suggested that sudden and unexpected changes in life circumstances produce acute stress, chronic stress is assumed to develop over time (Gottlieb, 1997). Unlike life events that have a definite start and end date, chronic stress may not necessarily have a clearly defined trigger. Furthermore, chronic stress would often last a long period of time and there is a possibility that chronic stressors would not be resolved (Gottlieb, 1997; Wheaton, 1997). Wheaton (1997) identified several sources of chronic stress: i) ongoing role occupancy (e.g. persistent job stress), ii) ongoing role non-occupancy (e.g. unemployment), iii) role stressors (e.g. caregiver for a family member who is suffering from chronic illness), and iv) ambient stressors such as life difficulties that are not connected to roles one occupied (e.g.

stigma and discrimination). Prolonged exposure to these chronic stressors would negatively affect individuals' well-being.

Given the persistent nature of chronic stress, traditional theories of coping have been criticized by Aldwin & Brustrom (1997) as inadequate in helping individuals manage chronic stressors. This is because many traditional coping strategies were developed to cope with acute or episodic stressors and coping with chronic stressors would require strategies that focus more on managing stress over prolonged periods of time. Some suggested strategies that individuals could potentially utilize to manage chronic stressors include exercising vigilance for potential changes in circumstances, remaining optimistic, sense making, acceptance, resignation, respite, and turning to religion (Gottlieb, 1997).

Daily hassles

Daily hassles are defined as experiences and conditions of daily living that have been appraised as salient and harmful to one's well-being (Lazarus, 1984). In general, daily hassles are little things that irritate or cause distress among people during their daily interactions with their environment (DeLongis et al., 1982; Kanner et al, 1981). Although daily hassles are less dramatic than life events, they are no less important than life events or chronic stressors in affecting the well-being of individuals. In fact, daily hassles in the long run, may perhaps be an even more important source of stress than life events (Cooper & Dewe, 2004). This is because daily hassles are micro-events that individuals experience frequently and repeatedly over time. Stress arising from these daily events builds up over time, chipping away at one's psychological and physiological well-being gradually. Compared to life events or chronic stress where coping

strategies are more easily developed, there are few effective strategies to manage daily hassles (Lazarus & Folkman, 1984).

Early research on daily hassles typically focuses on minor daily irritations such as arguments with others, or being caught in a traffic jam (DeLongis et al., 1982; Kanner et al, 1981). More recently, researchers had begun to apply the concept of daily hassles to study daily stressors that resulted from major life events and workplace experiences (e.g. Chen & Cunradi, 2008; McIntyre, Korn, & Matsu, 2008). For example, McIntyre et al. (2008) examined how experiencing micro-stressors at work negatively impact employees and Sonnentag & Krueger (2006) studied the impact that daily work hassle such as daily workload, role conflict, and role ambiguity have on individuals' psychological detachment and daily recovery experiences.

The application of daily hassles to life events and organizational stress research is an important development in stress research and is particularly crucial because these events create "ripple effects" that continue to affect psychological functioning and well-being of individuals long after the initial shock of these events have subsided (Pillay et al., 1996). The cumulative effect of daily stressors arguably makes individuals more susceptible to health and psychological problems than irregular major life events or a single high work stress episode since individuals would continue to experience daily hassles on a day-to-day basis.

2.1.3 Current Research on Work Stress

Stress is an important area of study in management and organizational research. Four of the mostly commonly applied models to study work and organizational stress are the Cybernetic Theory of Stress (Cummings & Cooper, 1979; Carver & Scheier, 1981), Job-Demand-Control Model (JDC) (Karasek, 1979) [and its extension Job-Demand-Control-Support model (Johnson

& Hall, 1988)], Conservation of Resources Theory (COR) (Hobfoll, 1989; Hobfoll & Ford, 2005) [and its extension, Conservation of Social Resources (Hobfoll et al., 1990)], and the general work stressor model (Beehr & Newman, 1978; Kahn et al., 1964).

Cybernetic Theory of Stress posits that stress creates negative feedback loops that cause individuals to monitor their psychological and physiological reactions to stressors (Carver & Scheier, 1981). When individuals perceived a discrepancy between their current status and their desired physical, psychological, or affective state (i.e. stress), they are motivated to reduce the discrepancy through discrepancy reduction behaviours (i.e. cope) (Frone & McFarlin, 1989).

The Job-Demand-Control Model (JDC) posits that job stress is a function of two distinct aspects of the job: job demands and job control. Job demands refer to work load and is operationalized as time pressure and role conflict. Job control refers to decision latitude and individual's abilities to manage his or her work. Job control is frequently operationalized as skill discretion and decision authority. According to JDC, job stress is the result of the interactions between job demands and job control. Individuals would experience job stress when they experience high levels of job demands and have low job control over these job demands. On the other hand, when individuals experience high levels of job demands and have high degree of control over these demands, they would perceive the job as challenging and these jobs would lead to positive job outcomes such as learning (Karasek, 1979).

Stemming from research on JDC, Johnson & Hall (1988) further suggest that social support and isolation at work have important implications on individuals' personal and work-related outcomes. Specifically, employees working in jobs that are high in job demand, low in job control, and low in social support/high in isolation would experience the greatest amount of strain and lowest level of well-being. Since its conceptualization, the Job Demands-Control-

Support model has received significant amount of research attention (Vander Doef & Maes, 2009).

Conservation of Resources Theory (COR) theorized that stress occurs when individuals are either threatened with resource loss, fail to regain resources after resource investment, or when they actually lose resources (Hobfoll, 1989; Hobfoll & Freedy, 1993). Resources are defined as object, personal characteristics, conditions, and energies that are necessary for the fulfilment of one's tasks (Hobfoll, 1989).

Hobfoll et al. (1990) further developed the original COR theory by suggesting that social support, an external resource, has important implications on individuals' stress and well-being. Specifically, social support expands individuals' resource pool, providing them with an additional resource avenue, thereby allowing those with high degree of social support to better withstand stress and its detrimental outcomes compared to those who do not have such resources.

In the general work stressor model, Kahn et al. (1964) identified two main sources of work stress – role ambiguity and role conflict. Role conflict is defined as the existence of two or more sets of demands or expectations on individuals such that complying with one such demand or expectation would make it difficult or impossible for individuals to comply with others. Role ambiguity, on the other hand, refers to situations where individuals are unclear as to what is expected of them in their jobs. Besides role ambiguity and conflict, other sources of work stressors have also been identified by researchers.

In their seminal work on occupational stress and health, Beehr & Newman (1978) argued that work stressors can be categorized under four distinct categories: i) role demands, ii) job characteristics, iii) organizational characteristics, and iv) external demands. Role demands consist of three distinct role specific stressors that one would encounter in one's work role. These

role specific stressors are i) role overload which reflect the demands that employers place on employees, as well as, Kahn et al.'s (1964) notion of ii) role conflict and iii) role ambiguity. Job characteristics refers to demands that are less directly attributed to demands of one's role but are inherent in one's job such as workload, job responsibility, and type of work done. Organizational characteristics refer to macro-organizational stressors such as organizational culture, job security, and hierarchical structure. Lastly, external demands are macro-environmental factors largely beyond the control of employees such as government policies, clients' demands, and technological changes. Among these different forms of work stressors, workload, role ambiguity, and role conflict are often regarded as the most important characteristics of the work environment that lead to experiences of work stress (Beehr, 1995, Jex, 2002).

In management and organizational stress research, these different models of work and organizational stress have been combined with the various SOR models (i.e. major life event, chronic stress, daily hassles) to study how work and organizational stressors impinges employees.

For example, researchers have investigated the implications that job loss, a major career event, had on displaced employees (e.g. McKee-Ryan et al., 2009). Researchers have also examined how employees in occupations such as air traffic controllers, radar controllers, municipal service officers (e.g. policemen and firefighters), social workers, health care workers were affected by chronic physical stressors in their work environment (e.g. Angelo & Chambel, 2014; Sulsky & Smith, 2007). More recently, researchers have utilized event sampling and diary methods to study the crossover and spillover effects of daily work hassles between spouses and also the relationships between daily work hassles, employees' recovery, well-being, and work-family conflict (e.g. Song et al., 2011; Sonnentag & Krueger, 2006).

Based on the Beehr-Newman (1978) General Model of Occupational Stress, this dissertation examines individual and work-related consequences of daily work hassles and the impact that perceived dyadic coping has on these consequences. In line with Beehr & Newman's (1978) General Model of Work Stress, daily work hassles in this dissertation are operationalized as the amount of workload, role conflict, and role ambiguity that individuals encounter at work on a daily basis. Operationalizing daily work hassles as a composite measure of workload, role ambiguity and role conflict is consistent with extant studies that had examined the effects of these daily work hassles on individuals' well-being (e.g. Sonnentag & Krueger, 2006) and is regarded as one of the widely accepted ways that work stress experiences are measured (Fusilier, Ganster, & Mayes, 1987).

2.2 STRAIN

Strain is defined as stress-produced changes or deformations of the body and is considered to be an aversive consequence of stress (Beehr & Newman, 1978; Lazarus, 1999). Strain can be divided into three broad categories: i) psychological strain, ii) physiological strain, and iii) adverse stress-induced behaviours that are likely to be deleterious to one's health and well-being (e.g. substance, alcohol, tobacco abuse) (Beehr, 1995).

Traditionally, there are four approaches to stressor-strain research: i) the medical model, ii) the clinical psychology/counseling model, iii) the engineering psychology model, and iv) the industrial organizational psychological/organizational behaviour model (Beehr, 1995). Although there are some overlaps in how stressor-strain relationships are studied in each of these research approaches, each of these approaches have, historically, focused on different levels of analysis and different types of stressors-strain relationships.

The medical model has historically focused on how physical stressors (e.g. temperature fluctuations, adverse physical conditions) resulted in physiological strains (e.g. hypertension, cardiovascular diseases). The clinical psychology/counseling model, on the other hand, typically studied the impact of psychological stressors on psychological strains and how psychological stressors induce adverse behaviours such as substance abuse. The engineering psychological model has a long history in studying work-related stress and had typically examined how the physical work environment impact physiological strains and job performance of employees. The last approach, industrial organizational psychological model typically studied how psychological work stressors induce psychological strains that affects the well-being and work performance of employees (Beehr, 1995).

Consistent with the industrial organizational psychological model, this dissertation examines how psychological work stressors such as work overload, role conflict, and role ambiguity would induce psychological strains among employees and the subsequent impact that such psychological strain has on individuals' well-being and next day's work engagement.

2.3 COPING

One of the most widely accepted definition of coping coined by Lazarus & Folkman (1984: pg. 141) suggested that coping refers to an *“individual’s constantly changing cognitive and behavioural efforts to manage demands of situations that are appraised by him or her as exceeding or taxing his or her resources”*. In this section, I briefly review the concept of coping, its theoretical origins, how it has been studied in organizational research and in the context of work stress. Subsequently, I introduce the concept of dyadic coping, explain how it has been studied in marital and family research, and offer a brief critique of it in its current form. In the

same section, I would present arguments for a new conceptualization of dyadic coping and its relevance to organizational research, especially to coping with work stressors.

2.3.1 Coping and its Theoretical Origins

According to Lazarus & Folkman's (1984) seminal work on stress and coping, studies on coping originated from the need to make sense of how individuals manage stressful situations. The developments in coping research can be traced to two distinct theoretical fields – i) animal experimentation, and ii) psychoanalytic ego model.

The animal experimentation model has its roots in Darwinian assumptions that survival is dependent on the animal (individual) managing its environment and discovering which aspects of its environment is controllable in order to avoid, escape or overcome noxious agents. Coping, in the animal experimentation model, emphasizes on the animal (individual) learning what are the best behavioural responses needed to neutralize environmental threats and using those learned behavioural responses to overcome dangerous environmental condition (Miller, 1980). Because the focus of coping in the animal experimentation model is on avoidance and escape behaviours, it does little to inform us about the wide range of cognitive and behavioural responses that humans could possibly engage in when managing stressful situations (Lazarus & Folkman, 1984).

Different from animal experimentation model, psychoanalytic ego model emphasizes less on individuals' learned behavioural responses to environmental threats but more on how individuals perceive and think about their relationships with their environment and the processes they could use to handle stress arising from person-environment interactions. Psychoanalytic ego models organize the processes that individuals could use to handle environmental stress in hierarchies and coping is regarded as the most advance and mature process that individuals could

utilize to handle their environmental challenges. Other processes that individuals could possibly use include disassociation, aggression, disorganization, disintegration, denial, fantasy, repression, distortion, defence, humour, and suppression (Menninger, 1963, Vaillant, 1977). The focus of psychoanalytic ego models, therefore, is to create a typology of systems to describe the type of processes, ranging from primitive and dysfunctional to mature and functional, that individuals could use to cope with stress (Beehr, 1995)

Of these two early models coping, the psychoanalytic ego model has dominated the field of coping research. Most of the major theories of coping today are founded on the principles and foundations of psychoanalytic ego models.

2.3.2 Coping Traits, Coping Styles, and Coping Strategies

Early theories of coping derived from psychoanalytic ego models typically characterized coping as a trait dependent behaviour. Proponents of trait coping theories argued that there are traits in individuals that predisposed them to cope with stress in a stable manner across a variety of stressful situations over the course of their life. Some traits that were thought to be relevant to coping include repression-sensitization (Byrne, 1964), monitoring-blunting (Miller, 1987), and neuroticism and extraversion of Big 5 (Hewitt & Flett, 1996). For example, high monitors and non-blunters were thought to be better at coping than low monitors and blunters because high monitors are good at seeking information and non-blunters are emotionally sensitive. During periods of stress, high monitors and non-blunters are vigilant to ego threats and are energized by emotions, and therefore are better at mustering their energies to overcome threats (Miller, 1987). The biggest drawbacks of trait coping theories, however, are its relatively low predictive values and its inability to take into account the complexity and varied nature of actual coping

behaviours. Also, there were few empirical evidences to show that individuals cope consistently in the same manner across different situations (Cohen, 1991; Cooper & Dewe, 2004).

Similar to trait theories of coping, coping style assumes that individuals have a habitual preference for dealing with problems and they would employ the same preference consistently across a variety of situation (Thoits, 1995). Coping style theories are different from coping trait theories in that coping style theories assume a broader and more encompassing perspective by arguing that habitual coping styles are partially learned behaviours driven by one's personality (Lazarus & Folkman, 1984). One particular coping style that has been studied extensively is Type A coping style, a style that is closely associated with Type A personality (Vickers et al. 1981).

As a personality trait, Type A personality is characterized by strong needs for control, achievement striving, fear-of-failure, and vulnerable esteem. Similar to the personality trait that the coping style is named after, individuals who habitually use Type A coping style would typically cope with stressors by attempting to exert greater control over them. Due to the fear of being overwhelmed by stressors, individuals with Type A coping style may, sometimes, engage in destructive coping behaviours, such sacrificing their sleep and diet, in order to exert more control over the stressful situations or stressors (Cooper & Dewe, 2004). Similar to the trait approach of coping, the coping style approach has been criticized for being inadequate in explaining the complex coping process and there are no longitudinal evidence to suggest that individuals consistently adopt a habitual single style to manage different situations over their lifetime (Monat & Lazarus, 1991a).

In view of the shortcomings of both the trait and coping style models, Lazarus & Folkman (1984) proposed that coping should be construed as a dynamic process that is

concerned with what people do in a particular situation rather than what they would usually do (i.e. the trait and coping style approach). Coping is, therefore, an evolving process where individuals would, at certain time, use one coping strategy over another as they evaluate and reevaluate changes in the person-environment interactions. As opposed to the trait and style approach that focus on how individuals cope, Lazarus & Folkman's (1984) argued that the focus of coping research should be on what coping does, in other words, what are the functions of coping. Lazarus & Folkman (1984) outlined two broad functions of coping. First, coping should help individuals manage or alter stressors that cause them distress. Second, coping should help individuals regulate their emotional responses to stressors. The former is termed problem-focused coping strategy and the latter is known as emotion-focused coping strategy.

Broadly speaking, problem-focused coping are strategies directed at defining stressors, generating solutions to tackle the stressor, weighing on alternative solutions, and acting on the solutions to try to resolve stressors. Emotion-focused coping, on the other hand, consists of processes that are directed at assuaging emotional distress that might arise from stressful events and involve strategies such as reappraisal, minimization, social comparison, and distancing (Lazarus & Folkman, 1984).

Conceptualizing coping in terms of coping functions is a noteworthy change from previous conceptualizations of coping because it suggests that coping is an evolving process. Depending on individuals' evaluations of a stressful situation, they could choose the best strategy to deal with that particular situation from a repertoire of available coping strategies (Monat, Lazarus & Reevy, 2007). For example, an individual is more likely to use problem-focused coping than emotion-focused coping when he or she is confronted with a stressful situation which he or she think can be resolved. The same individual, when confronted with a situation

that is deemed to be beyond his or her control is more likely to rely on emotion-focused coping. In reality, rather than relying on a single strategy as suggested in the above example, individuals are likely to use a mix of both strategies in varying degree to cope with stressors they encounter. It is important to note that no one particular strategy is inherently better than the other and a strategy's efficacy in helping individuals cope with stressors should be viewed in terms of the strategy's impact on coping outcomes (Kleinke, 2002).

Since Lazarus & Folkman's (1984) transactional model of stress and their initial conceptualization of coping strategies in terms of coping functions, the field of coping research has pretty much consolidated around their two broad strategies of problem-focused and emotion-focused coping (Monat et al., 2007). Among the various topologies of problem-focused and emotion-focused coping, the Coping Orientation to Problems Experienced (COPE) developed by Carver, Scheier, & Weintraub (1989) has gained the most traction among researchers.

The COPE scale was developed as an extension of Lazarus & Folkman's "Ways of Coping Scale" that measured problem-focused and emotion-focused coping. Compared to the "Ways of Coping Scale" that measured more generalized forms of problem-focused and emotion-focused coping, the COPE scale was designed to tap on the variants or sub-types of each coping function.

For example, problem-focused coping in the COPE scale taps on five distinct facets of behaviours that individuals could perform when they try to cope with a stressor by resolving it. Specifically, i) *active coping* assumes that people would take specific actions to resolve their stressors, ii) *planning* refers to the act of developing strategies to resolve stressors, iii) *suppression* suggests that people would put aside distracting activities in order to resolve their stressors, iv) *restraint* refers to efforts and self-control that people would exercise while they try

to resolve their stressors, and v) *instrumental support* that refers to how people would seek advice and suggestions from others on how to resolve their stressors.

The emotion-focused coping aspect of COPE consist of i) *emotional support* which refers to how people would confide in others about emotions distress caused by the stressors, ii) *positive reinterpretation* measures the extent people would reframe the stressful situation, iii) *acceptance* measures how well people have accepted the circumstances surrounding the stressful situation, iv) *denial* reflects the extent to which people would pretend that stressors do not exist, and v) *religion* taps on how likely people would turn to God in times of stress. Besides problem and emotion-focused coping, the COPE scale also tapped on dysfunctional coping strategies such as behavioural disengagement, mental disengagement, and substance abuse.

In all, the COPE scale is considered to be a more advanced and detailed instrument than the “Ways of Coping Scale” when measuring problem-focused and emotion-focused coping strategies (Carver, 1997).

2.3.3 Current Research in Coping with Work Stress

Similar to stress, coping is an important area of research in organizational studies. Organizational scholars studying the coping process have frequently examined how coping strategies, coping goals, and coping resources buffer employees from negative impacts of psychological work stressors (e.g. Matthews, Winkle & Wayne, 2014; Nelson & Sutton, 1990; Parker, Jimmieson & Amiot, 2013), negative work events (e.g. Brown, Westbrook & Challagalla, 2005), adverse job conditions (Van Veldhoven et al., 2002), and major career setbacks (e.g. Latack, 1986; Latack, Kinicki & Prussia, 1995).

Generally, research has found that individuals would typically employ a combination of problem-focused and emotion-focused coping to manage their work and career stressors.

Although there is no one best way to manage stressors, problem-focused coping is often regarded by organizational scholars to be more effective than emotion-focused coping when it comes to managing work and career stressors. This position, however, is controversial because of inconsistencies in research evidence (Thoits, 1995).

Research on the relationships between coping strategies and coping outcomes often produces mixed results. Research on coping resources, however, have consistently suggested that individuals with larger amount of coping resources are better at managing work stressors. Coping resource is defined as personal characteristics and social resources that people may draw upon when dealing with stressors (Pearlin & Schooler, 1978).

Personal resources that were found to have a positive impact on the coping process include job control (e.g. Schaubroeck & Merritt 1997), self-esteem (e.g. Jex et al., 2001), locus of control (e.g. Parkes, 1994), core self-evaluation (e.g. Luria & Torjman, 2009; Kammeyer-Muller, Judge & Scott, 2009), affectivity (e.g. Spector et al., 2000), and more recently, psychological capital (e.g. Avey, Luthans & Jensen., 2009; Chen & Lim, 2012). Generally, individuals who possess more of these coping resources are less adversely affected by work and career stressors and are more likely to experience higher levels of well-being than those who possess fewer such resources.

Besides personal resources, social resource such as support from supervisors, co-workers, and spouses are also important resources that expands individuals' capability to deal with stress (Vander Doef & Maes, 1999; Viswesvaran, Sanchez, Fisher, 1999). Although Lazarus & Folkman (1984) postulated that spouses could potentially play an important role in individuals'

coping process, how spouses help individuals cope is still relatively under-explored (Folkman & Moskowitz, 2004). Apart from research on spousal support, relatively little is known about the different coping strategies that couples could employ to manage stressors. In addressing this gap in coping research, some researcher suggested that spouses could jointly cope with either communal coping strategy or with relationship based coping strategies (Folkman & Moskowitz, 2004). Communal coping is a multi-axial coping model comprising prosocial-antisocial and passive-active dimensions (Wells, Hobfoll & Lavin, 1997). Couples could cope communally with stressors by adopting a prosocial stance where they take into consideration their spouses perspective in their actions or antisocially by asserting their dominance over the way their partners cope. Generally, prosocial coping is associated with better coping outcomes (Monnier et al., 1998). Apart from communal coping, couples could cope with stressors using relationship-focused coping strategies where they engage in behaviours that are targeted at preserve their social relationships with partners (Coyne & Smith, 1991; DeLongis & O'Brien, 1990). Individuals adopting relationship-focused coping may sometimes engage in behaviours that are damaging to their own well-being, such as taking on more responsibilities that necessary, in order to help their partners cope with their stressors.

Both communal coping and relationship-focused coping focuses predominantly on partners' interactions that took place during stress episodes and social motivations behind different coping behaviours. We, however, continue to know little about the type of coping strategies couples couple employ to manage stressors and how these dyadic coping strategies could potentially facilitate or impede coping outcomes, especially their impact on the couples' strain, well-being, and work-related outcomes. The notion of dyadic coping may help shed light on some of these questions.

2.4 PERCEIVED DYADIC COPING AND SOCIAL SUPPORT

Drawing from the seminal work of Lazarus & Folkman (1984), dyadic coping is defined in this dissertation as *cognitive and behavioural efforts that one's spouse put in to help one manage demands of situations that are appraised by oneself as exceeding or taxing one's resources* and perceived dyadic coping refers to *one's perceptions of the level of cognitive and behavioural efforts that one's spouse is putting in to help one manage demands of situations that are appraised by oneself as exceeding or taxing one's resources*.

In this section, I will briefly discuss how dyadic coping has been studied in extant literature, gaps associated with its current conceptualization, and suggest a new measure of perceived dyadic coping that is grounded in Lazarus & Folkman's (1984) theory of coping. In addition, I would discuss how this new measure is conceptually similar and dissimilar from social support, and how perceived dyadic coping can help us to better understand the roles played by spouses in helping individuals manage work stressors.

2.4.1 Perceived Dyadic Coping

The concept of dyadic coping was first studied in marriage and family literature, albeit in a different manner from how it has been conceptualized in this dissertation.

In marriage and family literature, dyadic coping was studied primarily as means that couples could use to cope with critical illness such as cancer and stroke (e.g. Berg, & Upchurch, 2007; Kayser, Watson, Andrade, 2007). One of the most ubiquitous theories of dyadic coping in marriage and family literature is the Dyadic Coping Theory (DCT) by Bodenmann and colleagues (e.g. Bodenmann, 1995; Randall & Bodenmann, 2009; Revenson et al., 2005).

Bodenmann (1995) extended Lazarus & Folkman's (1984) transactional model of stress by developing a model of dyadic coping to explain how couples manage major life events. Using a systematic-transactional approach, Bodenmann (1995) focus on how individuals appraise and communicate their stress, either verbally or non-verbally, to their partners and their partners' verbal or non-verbal behaviours after perceiving, interpreting, and decoding these stress communications from individuals. Different from Lazarus & Folkman (1984), Bodenmann examined dyads as coping systems instead of individuals during the coping process.

An important assumption underlying Bodenmann's dyadic coping is that one cannot examine an individual's stress and coping efforts without considering the effects of his or her stress and coping on his or her partner (Bodenmann, 1995; 2005).

In the DCT, couples can cope either positively or negatively with stress. Examples of positive dyadic coping outlined by Bodenmann (2005) include i) *supportive coping* (e.g. offering advice and understanding, and communicating belief in partner's capability), ii) *common coping* (e.g. joint problem solving and information seeking), and iii) *delegated coping* (e.g. new division of tasks within relationship structure). Negative dyadic coping include i) *hostile coping* (e.g. disparagement and sarcasm), ii) *ambivalent coping* (e.g. helping partner cope unwillingly), and iii) *superficial coping* (e.g. providing hypocritical support).

Whether individuals demonstrate positive or negative coping behaviours towards their partners depends primarily on their appraisal of their partners' culpability in triggering the stress event (Bodenmann, 2005) i.e. individuals are more likely to engage in positive dyadic coping behaviours when they perceive their partners as not being the cause of the stressful situation.

Bodenmann's (1995; 2005) concept of dyadic coping diverges from dominant theories of coping in two main ways. First, instead of focusing on the functions of coping (Carver et al.,

1989; Lazarus & Folkman, 1984), the emphasis of Bodenmann's (1995; 2005) dyadic coping is on the types of behaviours partners engaged in during stress episodes. Second, besides positive coping behaviours, Bodenmann (1995; 2005) suggested that couples may aggravate and agitate each other through dysfunctional behaviours such as disparagement. Although dysfunctional interactions between couples during stress episodes are empirically valid and probably reflect actual behaviours that couples might engage in, grouping dysfunctional behaviours under the rubric of dyadic coping is theoretically problematic. These conceptual and theoretical divergences between Bodenmann's DCT and dominant theories of coping warrant closer scrutiny, and would perhaps make Bodenmann's DCT an inappropriate construct of dyadic coping in light of existing coping theories.

Arguments against construing coping as behaviours and the advantages of studying coping processes in terms of functional outcomes have been thoroughly addressed by Lazarus & Folkman (1984). I will not dwell deeply into those arguments in this dissertation. It is, however, important to mention at this juncture that not all behaviours that individuals engage in during stress episodes constitute coping. Behaviours such as disparagement and being prosocial do not fulfill any coping functions; neither do they help individuals manage stress arising from stressors. Instead, these behaviours are "automatized adaptive behavioural responses" that resulted from exposures to stressors (Lazarus & Folkman, 1984: pg. 130). Theoretically, all coping activities must include efforts to manage stressors and should lead up to either resolving the stressors or managing negative emotions that might arise from the stress episode. By treating automatized adaptive behaviours to stress as dyadic coping behaviours, Bodenmann has confounded these automatized behavioural responses with the actual process of coping. This inherent confound makes the DCT a less than ideal construct of dyadic coping.

Besides confounding automatized adaptive behaviours with the coping, Bodenmann's typology of dyadic coping behaviours also does not fulfil what coping is supposed to do i.e. the alleviation of strains that are induced by stressors. By definition, coping involve palliative activities and processes that help mitigate negative impact of stressors (Monat & Lazarus, 1991b; Lazarus & Folkman, 1984). A coping construct that include negative interactions that aggravate the level of strain experienced by couples would run counter to theoretical arguments of what coping is and the empirical function of what coping does.

Thus, given these shortcomings of Bodenmann's typology of dyadic coping, there is a need to adapt a new measure of perceived dyadic coping that is theoretically aligned with the coping process and functions of coping. Following the coping typology outlined by Carver et al. (1989), perceived dyadic coping is conceptualized in this dissertation, as an extension of the Lazarus & Folkman's (1984) theory of coping.

In alignment with Carver et al. (1989), the typology of perceived dyadic coping in this dissertation would comprise the following two broad dimensions: perceived problem-focused dyadic coping and perceived emotion-focused dyadic coping. Essentially, perceived problem-focused dyadic coping refers to individuals' perceptions of efforts and behaviours that one's spouses have put in to assist individuals define their stressor, generating solutions to tackle their stressor, weighing on alternative solutions, and acting on the solutions to try to resolve their stressor. Emotion-focused dyadic coping, on the other hand, refers to individuals' perceptions of their spouses' effort that are directed at helping them assuage emotional distress that might arise from the stressful event. This conceptualization of perceived dyadic coping draws parallel between what one's spouses could do to resolve and assuage stressors faced by individuals and what individuals could do on their own to resolve stressors they face. Understanding dyadic

coping in terms of its problem-solving and emotional functions allow us to model its incremental impact above and beyond the benefits of individualized coping efforts.

In this dissertation, similar to Carver et al. (1989)'s COPE, perceived problem-focused dyadic coping would taps on five distinct facets of coping behaviours that individuals could perceive their spouse to engage in when their spouse try to assist them cope with their stressors. Specifically, *perceived dyadic active coping* refers to specific actions that individuals perceive their spouses to undertake when helping them resolve stressors, *perceived dyadic planning* refers to the strategies that individuals perceive their spouses to develop when helping them resolve stressors, *perceived dyadic suppression* refers to individuals' perceptions of how their spouses would help them put aside distracting activities when they try to resolve stressors, *perceived dyadic restraint* refers to individuals' perceptions of how their spouses assist them to exercise self-control when trying to resolve the stressors, and *perceived dyadic instrumental support* that refers to individuals' perceptions of how their spouses would seek advice and suggestions from others on how resolve stressors faced by them and convey these advice and suggestions to them.

The perceived emotion-focused dyadic coping consist of *perceived dyadic emotional support* which refers to individuals' perceptions of their spouses' efforts in helping them cope emotionally with their stressors, *perceived dyadic positive reinterpretation* measures individuals' perceptions of how their spouses assist them reframe the stressful situation, *perceived dyadic acceptance* refers to individuals' perceptions of how their spouses assist them to accept the circumstances surrounding stressful situation, *perceived dyadic denial* reflect the extent individuals perceive spouses to have helped them pretend that the stressor does not exist, and *perceived dyadic religious coping* refers to individuals' perceptions of how their spouses helped them seek solace in religious activities during periods of stress.

Table 1 summarizes the major literature on coping and dyadic coping reviewed in this dissertation.

Table 1: Summary of major theories on coping

Sources	Main arguments, findings, and limitations
<p><u>Coping Traits</u></p> <p>Byrne (1964) Miller (1987) Hewitt & Flett (1996)</p>	<p><u>Arguments</u></p> <p>Individuals possess traits that predisposed them to cope with stress in a stable manner across a variety of stressful situations over the course of their life.</p> <p><u>Limitations</u></p> <p>Relatively low predictive values and its inability to take into account the complexity and varied nature of coping.</p> <p>Few empirical evidences to show that individuals cope consistently in the same manner across different situation.</p>
<p><u>Coping Styles</u></p> <p>Vickers et al. (1981)</p>	<p><u>Arguments</u></p> <p>Individuals have a habitual preference for dealing with problems and they would employ the same preference consistently across a variety of situation</p> <p><u>Limitations</u></p> <p>Inadequate in explaining the complex coping process</p> <p>No longitudinal evidences to suggest that individuals consistently adopt a habitual single style to manage different situations over their lifetime.</p>
<p><u>Coping Strategies</u></p> <p>Lazarus & Folkman (1984)</p>	<p><u>Arguments</u></p> <p>Coping is a dynamic process that is concerned with what a person does in a particular situation rather than what they would usually do (i.e. the trait and coping style approach).</p>

Sources	Main arguments, findings, and limitations
<p>Carver et al. (1989)</p> <p>Folkman & Moskowitz (2004)</p>	<p>Coping evolves with situations and individuals would, at certain time, use one coping strategy over another as they evaluate and reevaluate changes in the person-environment interactions.</p> <p>Focus of coping research should be on what coping does i.e. functions of coping, not coping behaviours or responses to stress</p> <p>Outlined two broad coping functions: problem-focused coping and emotion-focused coping</p> <p>Further refined problem-focused and emotion-focused coping to include variants and sub-types of each coping function.</p> <p>Suggested examining dysfunctional strategies such as behavioural disengagement, mental disengagement, and substance abuse.</p> <p><u>Limitations</u></p> <p>Almost an exclusive focus on individuals' coping strategies i.e. what individuals do to cope with stressors.</p> <p>Little considerations on social aspects of coping</p>
<p><u>Dyadic coping</u></p> <p>Bodenmann (1995)</p> <p>Randall & Bodenmann (2009)</p> <p>Revenson et al. (2005)</p>	<p><u>Arguments</u></p> <p>Extended Lazarus & Folkman's (1984) transactional model of stress to develop a model of dyadic coping to explain how couples manage major life events.</p> <p>Examined dyads as coping systems instead of individuals during the coping process</p> <p>Outline six distinct dyadic coping behaviours: i) <i>supportive coping</i> (e.g. offering advice and understanding, and communicating belief in partner's capability), ii) <i>common coping</i> (e.g. joint problem solving and information seeking), iii) <i>delegated coping</i> (e.g. new division of tasks within relationship)</p>

Sources	Main arguments, findings, and limitations
	<p>structure), iv) <i>hostile coping</i> (e.g. disparagement and sarcasm), v) <i>ambivalent coping</i> (e.g. helping partner cope unwillingly), and vi) <i>superficial coping</i> (e.g. providing hypocritical support).</p> <p>Whether individuals demonstrate positive or negative coping behaviours towards their partners depends primarily on their appraisal of their partners' culpability in triggering the stress event</p> <p><u>Limitations</u></p> <p>Confounded “automatized adaptive behavioural responses” with coping</p> <p>Inclusion of negative coping behaviours in dyadic coping topologies runs counter to the theoretical objectives of what coping is and what it does.</p>
<p><u>Examples of empirical papers on coping</u></p> <p>Schaubroeck & Merritt (1997)</p> <p>Jex et al. (2001)</p> <p>Parkes (1994)</p> <p>Luria & Torjman (2009)</p> <p>Kammeyer-Muller et al. (2009)</p> <p>Spector et al. (2000)</p> <p>Avey et al. (2009)</p>	<p><u>Findings</u></p> <p>Job control is an important coping resource that buffered individuals from negative impact of strain</p> <p>Individuals with high self-efficacy were less likely to experience strain during stress episodes</p> <p>Individuals with internal locus of control typically adopt proactive coping strategies to cope with stressors</p> <p>Psychological resources such as core self-evaluation and job control has a buffering effect on stress-strain relationship</p> <p>Individuals with high core self-evaluation perceived fewer stressors and are less likely to engage in avoidance coping</p> <p>Positive affectivity, in general, is negatively related to experiences of work stress and strain</p> <p>Psychological capital is an important psychological resource that buffers individuals from work stressors. Individuals with higher levels of psychological capital were less likely to experience strain</p>

Sources	Main arguments, findings, and limitations
Chen & Lim (2012)	Psychological capital is an important coping resource during job loss. Displaced individuals with higher levels of psychological are more likely to utilize problem-focused coping to proactively look for jobs.

2.4.2 Social Support

Apart from coping, social support is another critical variable that plays an important role in the stress-strain-consequence relationship (Cohen & Wills, 1985; Greenhaus & Parasuraman, 1986; Lazarus & Folkman, 1984). Major stress models have identified social support as a coping resource that positively impact individuals during stress episodes (Gore, 1987). In the context of work stress research, social support is defined as interpersonal transactions that involve the exchange of resources from the provider to the recipient, with the intention of enhancing the well-being of recipient (Granrose et al., 1992).

The forms, sources, and mechanisms of social support have received considerable amount of research attention (Carlson & Perrewé, 1999; Thoits, 1995).

Extant literature suggested social support can exist in several forms. Some researchers suggest that social support could take the form of active and material support where support providers provide support recipients with tangible resources such as money and intangible resources like time (Cobb, 1979). Also, support could be affective and esteem in nature where support recipients feel loved and respected by support providers (Kahn & Antonucci, 1980). Among the various topologies, the most commonly cited taxonomy is that of House (1981). House (1981) suggested that social support could take four forms. First, emotional support involves the provision of trust and empathy. Second, informational support involves the provision of facts and opinions. Third, appraisal support refers to evaluations and provision of feedback. Last, instrumental support refers to the provision of tangible resources by support providers. In House's (1981) topology, instrumental and emotional support have received the most amount of research attention (Beehr et al., 2000; Cohen & Wills, 1985).

Scholars examining social support have typically studied how different sources of support affect individuals during stress episodes. Support from supervisors and co-workers are often regarded by stress scholars to be the most important resource that helps individuals mitigate negative consequences of work stress (Folkman & Moskowitz, 2004; Gore, 1987; House, 1981; Thoits, 1995). Extensive research suggested that experiencing high degree of support at work, especially from supervisors, would positively impact individuals well-being and job satisfaction (e.g, Beehr et al., 2000; Ducharme & Martin, 2000; Ganster, Fusilier & Mayes, 1986; Viswesvaran et al., 1999). This is because work stress arises primarily out of one's job characteristics, one's work contexts, or work environment (e.g. Beehr, 1985; Gore, 1987; Karasek, 1979). Having supportive supervisors and co-workers would make the work environment more positive and work situations less stressful (Carlson & Perrewé, 1999; Viswesvaran et al., 1999).

Support from spouses, on the other hand, has spun off extensive research in the work-family conflict literature (Brummelhuis & Bakker, 2012; Granrose et al., 1992). Major work-family conflict models, such as those by Greenhaus & Beutel (1985), Greenhaus & Parasuraman (1986), Kessler, Price, & Wortman (1985), and Thomas & Ganster (1995) have identified spousal support as being important in reducing work-family conflict and enhancing one's well-being when one experiences work-related stress. Empirically, receiving spousal support has been found to be negatively related to work-family conflict, marital stress, and is positively related to well-being, job satisfaction, family satisfaction, and marital functioning (e.g. Matthews et al., 2014; Parasuraman et al., 1992; Seiger & Wiese, 2009).

How the forms and sources of support function in the stress-strain-outcome relationship is subjected to considerable amount of research attention and debate (Dewe et al., 2010).

Conceptually, Cohen and Wills (1985) suggested that support impact the stressor-strain-consequence relationships, primarily in two ways. First, support could buffer the negative impact of stress on individuals by interacting with stress such that those who experience high levels of support are less likely to experience deleterious consequences of stress (moderation effect). Second, apart from buffering individuals from stress, support could have a main effect on stress outcomes by directly reducing strain and improving individuals' well-being, irrespective of the level of stress individual experience (main effect). Gore (1987) extends Cohen and Wills (1985) by suggesting that apart from the buffering and main effects, support could function in two additional ways. According to her, support could play an intervening role where support increases in tandem with increases in stress (mediation effect) or it could play a protective role by directly impacting stressors (independent variable effect).

Among these four proposed mechanisms of support, the buffering and main effects of support has received the most amount of empirical research attention (Carlson & Perrewé, 1999; Dewe et al., 2010).

2.4.3 Dyadic Coping and Social Support: Two Sides of The Same Coin

On the onset, how dyadic coping is conceptualized in this dissertation seems to mirror instrumental and emotional social support. To be sure, dyadic coping differs from these forms of social support in important ways.

Although social support from partners is an essential resource that individuals can tap on during stress episodes, social support from partners alone, however, is insufficient to help individuals manage stressful situations. From the perspective of support provider, social support reflects the provision and availability of coping resource. From the perspective support recipient,

social support involves how the available support are used and evaluated (Granrose et al., 1992). Dyadic coping, on the other hand, goes beyond provision and evaluation of support by emphasizing on collaborative efforts between partners, as well as, the taking on of a “we” approach among couples where both partners work together to maintain their relationship quality during stress episodes. At the same time, dyadic coping also reflect couples’ joint approach to tackle individual’s work stressors as a dyad, with the objective of helping each other resolve their work stressors or to assuage negative emotions that might be caused by those. These conceptual differences between dyadic coping and social support are evident in the ways that these constructs are defined and measured.

In the social support literature, social support measures are developed to assess the structure or function of support. These measures could assess either specific aspects of support structure and function and could take the form of either a global measure that assess general structures and functions of support. Scales such as Thoits (1982) and Etzion (1984) that measure structure of support are designed to assess the quality of social relationships and the number of friends and family members that one could meet up or share problems with. In contrast, scales like Cohen et al. (1992) that assess global support structure would measure the level and quality of cohesion and interactions in one’s community or social network.

Measures that access forms of social support are designed to evaluate the provision and availability of different types of support. Popular measures of functional support such as those developed by Carlson & Perrewé (1999); Parasuraman et al., (1992), Schaefer, Coyne & Lazarus (1981) and Winefield, Winefield & Tiggemann (1992) measures the extent that support receivers have received different forms of support (e.g. emotional, instrumental, informational, appraisal, esteem, tangible, etc.) from their support providers (e.g. supervisors, co-workers, or partner) and

how readily are these different forms of support are made available to them by those support providers. Examples of items from Carlson & Perrew (1999) are “Please indicate degree to which emotional support is present in your family life” and “Please indicate degree to which recognition is present in your family life”.

Conspicuously missing in these measures of social support is the notion of collaborative efforts between support providers and receivers that are targeted to resolve stressors or to assuage negative emotions that might arise from encountering stressors.

Conceptually, the perceived dyadic coping scale adopted in this dissertation is meant to address this gap by emphasizing perceptions of collaborative efforts between couples that are targeted to manage work stressors. For example, perceived dyadic planning emphasises individuals’ perceptions of how their spouses have developed specific strategies and plans with the target intent of helping them resolve or ease work stressors. Similarly, dyadic acceptance focuses on individuals’ perceptions of how their spouses would put in effort to help them accept the circumstances surrounding their work stressors, with the target intent of reducing negative emotions that might arise from those work stressors.

The emphasis on effortful coping that are specific and targeted to address stressors is important because it reflects the intimate nature of the relationships couples share and their inherent motivations to help each other manage or assuage each other’s stressors.

Aside from conceptual differences, dyadic coping is a more encompassing concept than instrumental and emotional social support. This is because both instrumental and emotional support are subsumed under perceived problem-focused and emotion-focused dyadic coping respectively. Included in both perceived problem-focused and emotion-focused dyadic coping is a repertoire of other coping activities that partners could use to assist each other cope with

stressors. For example, during dyadic coping episodes, couples could assist each other reframe and positively interpret stressors as opportunities for growth (positive reinterpretation) or assist each other by coming up with alternative strategies to overcome stressors (dyadic planning).

Essentially, perceived problem-focused/emotion-focused dyadic coping and instrumental/emotional social support are two sides of the same coin with dyadic coping being a more encompassing, fine-grained, targeted, and multi-faceted approach to understand how couples could collaboratively manage work stressors.

2.5 WELL-BEING

Well-being can be broadly defined as the optimal level of human functioning and a general sense of wellness that individuals experience in their lives. As a field of study, it is concerned with optimal human experiences and what constitute “the good life” (Ryan & Deci, 2001). Scientific inquiries on well-being have largely revolved around two distinct philosophies – hedonism and eudaimonism. Research on hedonic well-being is primarily concerned with what leads to pleasure and happiness in lives (Diener, 1994). Studies on eudaimonic well-being, on the other hand, emphasizes that well-being is more than mere happiness. Instead, it is about actualizing human potentials (Waterman, 1984).

Research has largely supported the notion that individuals with higher levels of hedonic and eudaimonic well-being are more successful across multiple settings and are physically healthier than those with lower levels of well-being (Lyubomirsky, King & Diener, 2005; Ryan & Deci, 2001).

Although health has frequently been studied as an outcome of hedonic and eudaimonic well-being, health on its own, is an important aspect of wellness that has been found to have

significant implications for organizational functioning (Danna & Griffin, 1999). In organizational research, health or physical well-being is commonly expressed in terms of psychosomatic complaints that employees have or actual physical discomfort that employees experienced (Frese, 1985; Terluin, van Rhenen, Schaufeli & de Haan, 2004). In this section, I will briefly review the literature on these various aspects of well-being.

2.5.1 Hedonic Well-being – Subjective Well-being

Since antiquity, the pursuit of happiness has been considered to be the ultimate motivation for human actions. In fact, philosophers such as Hobbes and DeSade have argued that happiness lies in maximizing human appetites for sensations and the ultimate goal of life is to pursue pleasure (Ryan & Deci, 2001). Psychologists who have adopted the hedonic perspective of well-being have conceptualized wellness as subjective experiences of happiness and the preference for pleasures over displeasures in life. Although there are several ways to operationalize the construct of hedonic well-being, researchers have typically assessed it in the form of subjective well-being (Diener, 1984).

Subjective well-being broadly refers to individuals' cognitive and affective evaluations about the quality of their life (Diener, 1994). As an evaluative and hedonic measure of well-being, it is the global assessment of individuals' idiosyncratic life experiences and emphasizes both the lack of negative experiences, as well as the presence of positive ones (Diener, Lucas & Oishi, 2005; Diener, Suh, Lucas, & Smith, 1999). As explained by Diener (1984), subjective well-being has both cognitive and affective components. The cognitive aspects of subjective well-being are concerned with individuals' satisfaction with the quality of their lives and the perceived discrepancies between their current achievements and aspirations (i.e. general life

satisfaction and satisfaction with specific domains of their lives such as marital and job satisfaction). The affective or hedonic aspects of subjective well-being, on the other hand, refer to pleasantness of encounters, as well as, moods and emotions that individuals experienced (i.e. positive and negative affect). In general, individuals with high subjective well-being believe that life is “good” and would rate themselves as being “happy and satisfied” with their lives (Diener, 1984; Diener et al., 2005).

Extant research shown that subjective well-being has both stable and variable components. That is to say, although it is relatively stable in the long run, it can fluctuate in the short run and these fluctuations are due to exogenous dynamic events (Headey & Wearing, 1989). These perspectives are best explained by three classical models of subjective well-being.

The personality model suggests that personality differences would predispose a person to experience stable levels of subjective well-being throughout their lives. Among the various personality factors, extraversion and neuroticism were found to account for the largest variance in subjective well-being over a period of 20 years (e.g. Costa & McCrae, 1984; Diener & Lucas, 1999; DeNeve & Cooper, 1998).

The adaptation model (or the hedonic treadmill model), recognizes that subjective well-being can fluctuate in the short term. These fluctuations, however, tend to be short lived because subjective well-being has a point of neutrality and any fluctuations in subjective well-being will be reconstituted back to the point of neutrality fairly quickly. This reconstitution occurs because individuals are able to adapt quickly to major exogenous life events, regardless of whether they are unusually favourable (e.g. winning a lottery) or unusually adverse (e.g. meeting a major accident). In fact, the adaptation process is so quick that highly favourable and adverse events

will leave no detectable impact on a person's subjective well-being in the long run (e.g. Brickman, Coates & Janoff-Bulman, 1978).

Lastly, the dynamic model recognizes both the long term stability and short term adaptation process of subjective well-being. It suggests that although there are long term stable factors that influence subjective well-being and individuals can adapt fairly quickly to short term changes in their life circumstances, exogenous life events would still have meaningful impact on a person's subjective well-being, above and beyond those accounted for by stable personality factors and the adaptation process (Headey & Wearing, 1989).

Adopting the perspective from the dynamic model, this dissertation examines how subjective well-being will be affected by short term temporal changes in daily work hassles. Following the arguments made by Diener et al. (1999), subjective well-being is operationalized in this dissertation as a composite measure that comprises of individuals' life satisfaction, positive affect, negative affect, and marital satisfaction, with marital satisfaction being an important domain of life that would likely be affected by dyadic coping dynamics.

Although these cognitive (life and marital satisfaction) and affective (positive and negative affect) components of subjective well-being can be affected by different factors, and in some instances, may perhaps even move in different directions, they are nonetheless highly related to each other (Diener et al., 1999). Whether these partially separable components of subjective well-being should be examine as orthogonal variables or as part of an overall subjective well-being construct is not an empirical question but is a definition one (Diener, 1994). Consistent with the current themes in the subjective well-being literature (e.g. Diener et al., 1999; Diener et al., 2005), this dissertation will treat positive affect, negative affect, and marital

satisfaction as components of subjective well-being and they will be collectively referred to as subjective well-being throughout this dissertation.

2.5.2 Eudaimonic Well-being – Psychological Well-being

Eudaimonic well-being has its roots in Aristotelian philosophy (Ryan & Deci, 2001). Aristotle regarded hedonic pursuit of pleasure as base desires that will make humans slavish followers of sensations. He advocated for the distinction between satisfactions that are rooted in pleasure from those that are obtained from the realization of human nature and meaningful developmental growth. The latter is referred to as eudaimonia and forms the foundation of eudaimonic well-being (Ryan & Deci, 2001; Waterman, 1984; 1993).

Different from the hedonic perspective which argued that well-being is synonymous with the pursuit of happiness, theorists of eudaimonic well-being argued that well-being is obtained only when one is leading an authentic life that is in accordance with one's true self or *daimon* (Waterman, 1993). The *daimon* refers to the potentialities of each person and represents an aspirational perfection state that one should strive towards obtaining. The actions of striving towards the *daimon* (self-actualization) would give meanings and directions to one's life and result in a sense of fulfilment and wellness (Waterman, 1984, 1993). Theorists of eudaimonic well-being generally believe that well-being can only be derived from self-actualization and the realization of one's potential, not from unfettered pursuit of happiness (Ryff, 1989; Ryff & Singer, 1999 Waterman, 1984, 1993).

Ryff and colleagues (e.g. Ryff, 1989; Ryff & Keyes, 1995; Ryff et al., 2001) argued that there are six distinct human potentialities and actualizing these potentialities would lead to eudaimonia, or eudaimonic well-being. According to Ryff and colleagues, the six distinct human

potentialities are Autonomy, Environmental Mastery, Personal Growth, Positive Relations, Purpose in life, and Self-acceptance. These six potentialities underscore the importance of volition (Autonomy), effective management of one's life and surrounding (Environmental mastery), continued growth and development (Personal growth), warm relations with friends and families (Positive relations), purpose and meaning (Purpose in life), and evaluation of one's life (Self-acceptance) (Ryff, 1989; Ryff & Keyes, 1995).

Collectively these six human potentialities form a multidimensional composite measure of psychological well-being that measures a person's eudaimonia and is distinctively different from subjective well-being (Ryff & Singer, 1998). Empirically, psychological well-being has been found to be related to physiological health, immunological systems, and emotional wellness (Ryan & Deci, 2001; Ryff & Singer, 1998, Ryff et al., 2001).

Consistent with the eudaimonic well-being theories put forth by Waterman (1984, 1993) and Ryff and colleagues (e.g. Ryff, 1989; Ryff & Keyes, 1995; Ryff et al., 2001), eudaimonic well-being is measured in this dissertation with the multidimensional measure of psychological well-being.

2.5.3 Somatization – Physical Well-being

Somatization or psychosomatic syndrome is defined as physical discomfort or disease that has no identifiable physical cause and is one in which psychological processes play a substantial role in the etiology of illness (Kellner, 1994). Common forms of somatization include headaches, muscle aches, fatigues, chest and stomach discomforts, urethral problems, and insomnia. Although organic illness may also cause the above physical symptoms, the causes of

psychosomatic syndrome are often non-virulent or immunological in nature but are rooted in psychological processes (Kellner, 1994).

There are several ways to understand causes of somatization. Research suggests that some people are more predisposed than others to report experience somatization. In a non-clinical population, researchers have found that individuals with high levels of negative affect, neuroticism, and alexithymia are more likely than their peers to report somatization (e.g. Kirmayer, Robbins & Paris, 1994; Noyes et al., 2001). This is because individuals with high levels of negative affect and neuroticism are more sensitive to somatic sensations when they encounter distress, even when distress is at very low levels. Alexithymic individuals, on the other hand, lack the capacity to express their distress in psychological or affective terms and are likely to convey their distress to others in the forms of bodily sensations (Bass, 1991).

In clinical settings, somatization is associated with patients suffering from anxiety, depression, distress, and psychiatric illness (Katon et al., 1991; Kellner, 1994).

From an organizational research perspective, somatization is most commonly studied as outcomes of increased work stress and job demands (Askew & Keyes, 2005; De Gucht, Fischler & Heiser, 2003; Frese, 1985; Terluin et al., 2004). The relationship between work stress and somatization has been studied extensively (Frese, 1985, Sonnentag & Frese, 2003). One of the most common ways that work stress may lead to somatization is when it disrupts employees' tissue functions through its neurohumoral influences (Holroyd & Lazarus, 1982). This occurs when work stressors dramatically alter hormonal levels that leads to bodily changes which individuals would sense as tightness in chest, breathing difficulties, excessive perspiration, etc. (Monat & Lazarus, 1991a).

Although work stress was empirically found to be related to somatization, not all forms of it would lead to somatization. In a study that tested different models of work stress-somatization relationships, Frese (1985) found that although subjective levels of work stress experienced by employees were significantly related to somatization, objective measures of work stress, however, were largely unrelated to it. These findings reinforce the notion that somatization is rooted in psychological factors. Whether employees perceive themselves to possess sufficient resources to manage work stressors will have a major impact on how they rate their physical well-being.

Consistent with job stress models which suggest that subjective experiences of work stress are related to somatization and poor physical health (Beehr, 1995, Dewe et al., 2010; Sonnentag & Frese, 2003), this dissertation examines how daily reports of work hassles affect individuals' daily report of somatization.

2.6 WORK ENGAGEMENT

Work engagement is defined as persistent, positive affective motivational state of fulfilment characterized by vigour, dedication and absorption (Schaufeli et al., 2002). Work engagement has traditionally been conceptualized as the antipode of job burnout (Maslach & Leiter, 1997; Maslach, Schaufeli & Leiter, 2001).

Research found that engaged employees are energetic, efficacious, perform better at work, are intrinsically motivated in what they do, more proactive, more committed to their organizations, more likely to engage in extra-role behaviours, and are less likely to quit their jobs (e.g. Bakker, Albrecht & Leiter, 2011; Halbesleben, 2010b; Halbesleben & Wheeler, 2005; Saks,

2006; Sonnentag, 2003). Among the different antecedents of work engagement, job resources were found to be the most important drivers of engagement.

According to the Job Demands-Resources model (Demerouti et al., 2001; Bakker & Demerouti, 2007), job resources are physical, psychological, social, or organizational conditions that reduces the cost of job demands and are functional in assisting individuals achieve their work goals and personal growth (Demerouti et al., 2001). Examples of job resources are support from colleagues and supervisors, role clarity, feedback, autonomy, and participation in decision making (Hakanen & Roodt, 2010). These resources are central to the work engagement process because they foster intrinsic motivation at work and are necessary to deal with job demands and to attain work goals. More importantly, they create work environments that energize employees, encourage them to dedicate their efforts and abilities towards task fulfilment, and be absorbed in their work roles – the key components of work engagement (Bakker & Demerouti, 2007).

Extant studies on work engagement typically examined between-persons aspects of engagement i.e. how individuals' resources, job demands, work role, and work activities affect their levels of work engagement (Bakker et al. 2011; Bakker, Schaufeli, Leiter, & Taris, 2008; Sonnentag, 2011). Recent theoretical and empirical developments, however, suggest that work engagement can be a temporal experiential state that has substantial and meaningful within-person fluctuations across different days, and sometimes even within the same day during different performance episodes (e.g. Bakker & Xanthopoulou, 2009; Bledow, Schmitt, Frese & Kühnel, 2011; Sonnentag, Dormann & Demerouti, 2010). These fluctuations in work engagement, otherwise known as state engagement, were thought to be due to differences in employees' recovery experiences at home (e.g. Sonnentag, 2003; Sonnentag, 2011; Sonnentag et

al., 2010), changes in affective experiences at work (Bledow et al. 2011) or variations in the amount of resources employees possess to cope with work demands (Sonnentag et al., 2010).

Studying work engagement as a state is both theoretically and empirically important. From a theoretical perspective, investigating temporal within-person variations in work engagement allow researchers to examine dynamic and proximal predictors of engagement instead of relying on predictions made by stable factors such as job resources or personality traits (Sonnentag et al., 2010). Empirically, studying antecedents and consequences of state work engagement would yield stronger and more accurate causal evidences of work engagement. This allows researchers to glean insights into situational and within-person predictors of engagement and would facilitate the implementation of interventions that support greater levels of work engagement at work. Disregarding variations in work engagement (e.g. day-to-day, within the same day) would ignore dynamic factors associated with it and could potentially obfuscate our understanding of the work engagement phenomenon and its consequences (Bakker et al. 2011; Sonnentag et al., 2010; Sonnentag, 2011).

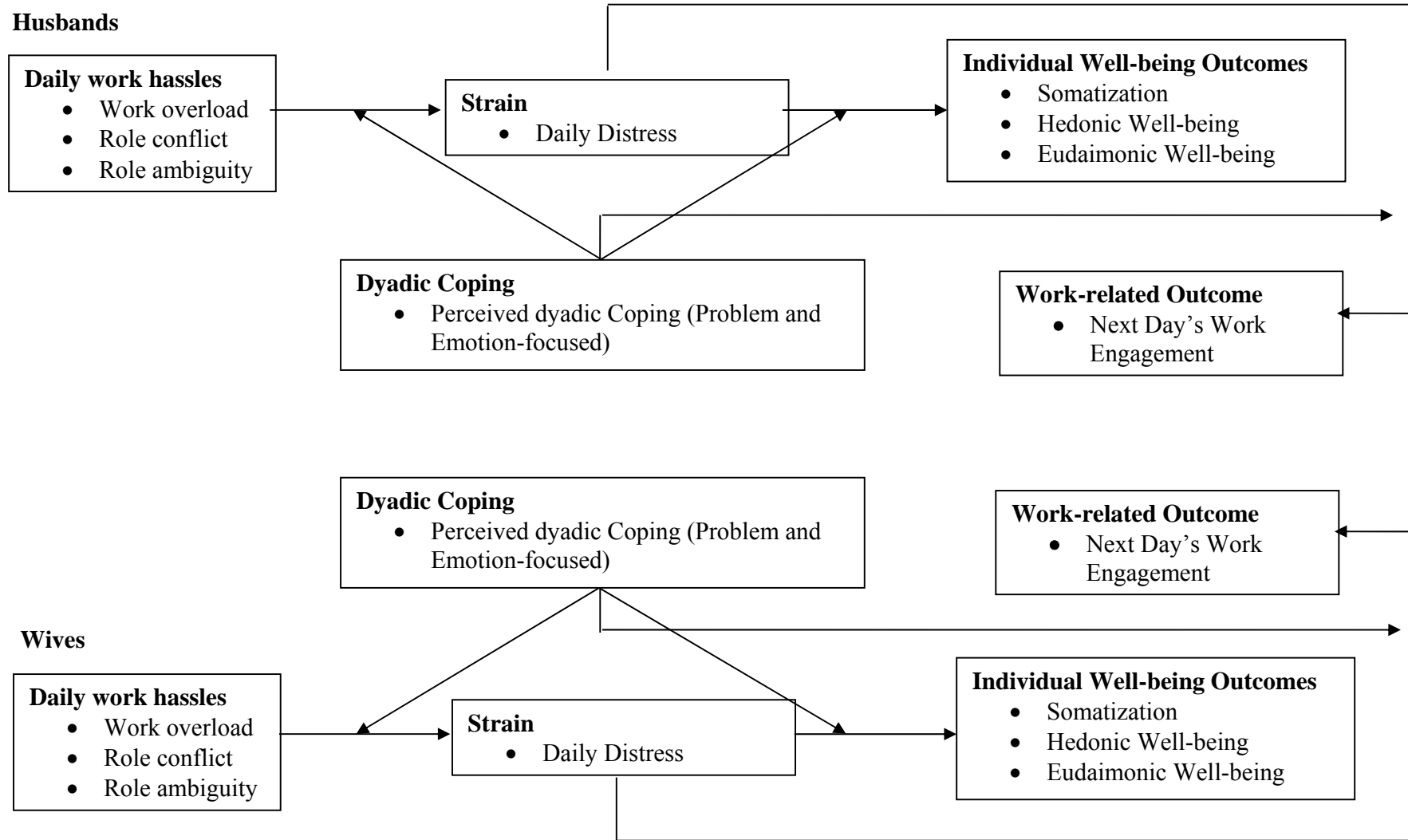
To investigate the phenomenological experiences of state work engagement, one must focus on examining work engagement a transient state that fluctuates within short periods of time (e.g. day-to-day). Consistent with Sonnentag et al.'s (2010) arguments of state engagement, this dissertation examines how work engagement fluctuates from day-to-day as a function of individuals' daily strain and dyadic coping experiences.

CHAPTER 3: HYPOTHESES

This chapter presents the hypotheses in this dissertation. This dissertation focus on the moderated mediation effects of perceived dyadic coping. Following the procedures outlined by Liu et al. (2012) for multilevel dual stage moderated mediation model, I begin this chapter by theorizing the relationship between daily work hassles (X – daily work stressors) and daily distress (M – strain). Following that, I establish the relationships between daily distress (M), well-being (Y – individual consequences), and next day’s work engagement (Y – work-related consequences). Next, I theorize how perceptions of dyadic coping (W) would moderate the relationship between (X) and (M) (first stage moderation); and how it would also moderate the relationships between (M) and (Ys) (second stage moderation). Lastly, by integrating the above hypotheses, I propose a dual stage moderated mediation that explains how perceived dyadic coping, by moderating the relationships between (X) and (M) and the relationship between (M) and (Y) would alter the indirect effects of (X) on (Ys) via (M) for employees who experience high and low levels of dyadic coping. As explained by Liu et al. (2012: pg. 63), it is statistically unnecessary to theorize a mediation relationship between the independent variable and dependent variables in multilevel dual stage moderation models. Therefore, I would not present specific mediation hypotheses on the indirect relationships between (X) on (Ys) via (M).

Besides advancing the moderated mediation hypotheses, I also argue that perceptions of dyadic coping would have a direct positively impact on daily distress (M) that individuals experience, as well as, positively affecting their well-being (Y) and next day’s work engagement (Y). These positive benefits of perceived dyadic coping on individuals’ distress, well-being, and next day’s work engagement are above and beyond those accounted for by individual coping strategies. The detailed hypothesized model in this study is presented in Figure 2.

Figure 2: Detailed Research Model



3.1 Daily Work Hassles and Daily Distress

The relationship between work stressors and psychological strain is well-established (Kahn & Byosiere, 1992). Research consistently suggested that exposure to work stressors lead to psychological strain such as anxiety and frustration (e.g. Spector, Chen & O'Connell, 2000), depression (e.g. Dormann & Zapf, 1999), psychotic disorder (e.g. Muntaner et al., 1991) and distress (e.g. Nelson & Sutton, 1990). In this dissertation, I focus on distress as a form of psychological strain reaction to daily work hassles.

Distress is broadly defined as maladaptive psychological functioning in face of stressful events (Abeloff et al., 2000). On days when individuals experience high levels of work hassle (i.e. work overload, role ambiguity, and role conflict), they are also more likely to experience heighten levels of distress (Van Veldhoven et al., 2002). This is because when individuals are exposed to work stressors, they are likely to utilize their personal resources such as energy to manage their stressors. Over time, continuous use of personal resources to deal with stressors would deplete their resources pool, causing them to perceive themselves as having insufficient resources to meet additional demands of work stressors. When individuals perceive themselves to lack resources, they would experience a correspondingly increase in level of strain, in this case, distress (Hobfoll & Freedy, 1993).

Consistent with prior studies that had examined the impact of daily work hassle on individuals (e.g. Sonnentag & Krueger, 2006); daily work hassle is operated in this dissertation as a composite variable that comprised of work overload, role ambiguity, and role conflict.

Role ambiguity and role conflict have their roots in role theory and are regarded by researchers as critical variables in work stress research (House & Rizzo, 1970). They are commonly examined together in the same breath with work overload to reflect the types of

psychological work stressors that one would face at work (Dewe, 2010). Both role ambiguity and role conflict occur when a role sender (supervisor) has role related expectations about a focal person (employee) and send those role expectations to the focal person in the form of messages that may contain differing degrees of ambiguity and conflict (Kahn et al., 1964). Upon receiving those role messages, the focal person has to decipher and navigate through the ambiguity and conflict embedded in those messages and may experience strain in the process.

Role ambiguity may take the form of information deficiency or unpredictability and would be manifested as either task or socioemotional ambiguity in the workplace (Kahn et al., 1964). Task ambiguity refers to uncertainty that employees would face with regards to what is expected of their work role and socioemotional ambiguity refers to uncertainty about evaluations and consequences of their role behaviours. Role conflict may take the form of intra-role or inter-role conflict. Intra-role conflict refers to conflicting messages about the expectations of a single role and inter-role conflict refers to conflicting messages about the expectations of multiple roles.

Role ambiguity and role conflict violate the principles of organizational accountability and responsibility, and are perceived by employees as stressful (House & Rizzo, 1970). Empirically, role ambiguity and role conflict were found to be associated with decreased job satisfaction, lower organizational commitment, reduced work performance, and were also related to psychological outcomes such as distress and reduced well-being (Jackson & Schuler, 1985).

Workload refers to the amount of work an employee has to do within a given amount of time (Jex, 2002; Meijman & Mulder, 1998). Experiencing large amount of workload is stressful and causes distress to employees as they would perceive themselves as not having adequate resources to manage demands expected of them in their jobs (Van Veldhoven et al., 2002).

Given that experiencing high degree of role ambiguity, role conflict, and work overload are stressful work experiences, individuals are more likely to utilize greater amount of personal resources to deal with these work stressors on days they experience high levels of these work stressors. The increased in resource utilization on those days would deplete their personal resources, causing them to experience a correspondingly higher levels of distress. Therefore,

H1: On days when individuals experience high level of work hassles, they would also experience higher levels of distress

3.2 Daily Distress and Individual/Work-related Consequences

Experiences of stress and strains have both individual and work-related consequences (Dewe et al., 2010). One of the most immediate individual consequences associated with strain is the decline in individuals' well-being (Lazarus & Folkman, 1984). Prior research consistently found that stress-induced strains were positively related to increased experiences of somatization (i.e. physical well-being), poor subjective well-being (i.e. hedonic well-being), and lower levels of psychological well-being (i.e. eudaimonic well-being) (Sonnentag & Frese, 2003). Implicit in these findings is a psychometric approach which recognizes the interactions between the mind and body. Specifically, experiences of stress produce strain that disrupt the homeostasis of the body. These disruptions manifest themselves in the form of illness and ill-feelings that led to lower levels of well-being (Kellner, 1994).

These findings are largely consistent with predictions put forth by different stress and strain models which generally posit that strains induce feelings of helplessness and a sense of being overwhelmed by environmental demands. These feelings would negatively impact

individuals' well-being by causing them to experience higher levels of negative affect, lower levels of positive affect and life satisfaction, higher degree of somatization, and poorer perceptions of mastery, control, and growth.

Consistent with these arguments, I would expect individuals to experience lower levels of well-being on days they experience high levels of distress. Thus,

H2a: On days when individuals experience high levels of distress, they would also experience low levels of physical, hedonic, and eudaimonic well-being.

Traditionally, studies on psychological work stressors (role ambiguity, role conflict, and work overload) have focused on individual consequences of stress and little research has been done to understand what are the work-related consequences of being exposed to work stressors (Beehr et al. 2000). This is because stress and strain have been construed as personal experiences and there have been little theoretical developments to link personal experiences of stress with work-related outcomes. Therefore, few empirical studies of stress have used organizational and work-related consequences as criterions (Beehr et al.2000).

In recent years, however, researchers have increasingly investigated the interdependence between psychological work stressors and work-related consequences such as job performance, absenteeism, and work withdrawal (Beehr et al. 2000; Dewe et al., 2010). Work stressors have been theorized to have a distal impact on work-related consequences through its deleterious consequences on employees' strain experiences (Dewe et al., 2010; Sonnentag & Frese, 2003). This line of argument is plausible because employees experiencing high levels of distress

induced by psychological work stressors are more likely to stay away from their job, be psychologically absent from what they do, and be disengaged at work (Beehr, 1995).

Theoretically, this phenomenon could plausibly be explained by COR which suggested that resource scarce individuals are motivated to protect their limited resources when they perceive their resources to be under threat of depletion (Hobfoll, 1989; Hobfoll & Freedy, 1993). When individuals experience work-related strain, they are likely to perceive their work environment as threatening that exposes them to further resource loss. When at work, these individuals are likely to withhold their efforts and be less engaged at work in hope of conserving personal resources such as energy and to prevent future loss of resources.

Based on these arguments, it is reasonable to believe that when individuals experience high levels of distress due to exposures to work stressors, they are also more likely to be withdrawn and disengaged at work the next day. Therefore, I hypothesize that,

H2b: On days when employees experience high levels of distress, they would also be less engaged at work the next day.

3.3 Main and Buffering Effects of Perceived Dyadic Coping

Two particular sets of hypotheses , i) the main effect hypothesis and ii) buffering effect hypothesis, may help shed light on how perceived dyadic coping would impact the relationship between daily work hassle, daily distress, individuals' daily well-being and their experiences of work engagement the next day.

3.3.1 Main effects of perceived dyadic coping

The first hypothesis is drawn from what is known as the main effect hypothesis in social support research (Carlson & Perrewé, 1999; Cohen & Wills, 1985). The main effect hypothesis suggests that coping resources, irrespective of the intensity of stressor, would directly reduce the effects that stress has on stress outcomes. Similar to other forms of coping resource such as social support, perceptions of having received dyadic coping are likely to positively impact the level of strain experienced by individuals, as well as their well-being and next day's work engagement.

During problem-focused dyadic coping episodes, spouses provide each other not only with instrumental social support such as advice, but are also actively focused on helping each other resolve problems and work stressors by identifying possible solutions, crafting strategies and action plans, and by taking concrete steps to help each other resolve problems encountered at work. These problem-focused approaches of coping with work stressors are manifestations of couples' joint resolve in helping each other overcome stress episodes.

Similarly, during the emotion-focused dyadic coping process, couples would go beyond providing emotional social support such as providing sympathy and a listening ear to each other. Instead, the emotion-focused dyadic coping process also focuses on helping each other reframe and reinterpret stress episodes into something more positive, at the same time, help each other come to terms that problems had occurred at work and accept that there are possible solutions to resolve these problems.

Individuals' perceptions of their spouses being actively involved in helping them resolve and manage work stressors would most likely have a calming effect on individuals (Kahn & Byosiere, 1992). This is because feelings of having received dyadic coping create the impression

of togetherness where individuals would perceive their spouses to be standing by them through the stressful episode and they are not left to their own devices to resolve their work stressors (Dunahoo et al. ,1998). These perceptions are likely to lessen level of negative arousal that stressors have on individuals the nervous system since they know that they are not facing the stressor alone (Beehr, 1995). Therefore, when individuals perceived their spouses as being actively involved in helping them cope with stressors, they are more likely to report lower levels of strains and higher levels of well-being.

At the same time, perceptions of having received dyadic coping would positively impact individuals' next day's work engagement. This is because the process of dyadic coping involves spouses helping individuals manage negative emotions associated with work stressors and also helping them plan and strategize concrete steps to overcome those stressors. Individuals are more likely to feel a sense of control over their work stressors when negative emotions associated with those stressors are assuaged and when they have plans to manage those stressors (Lazarus & Folkman, 1984).

In addition, individuals who perceived their spouses as having put in efforts to help them manage their stressors through problem-focused and emotion-focused dyadic coping are likely to experience and renewed energies and determination to revolve work difficulties. This is because these individuals are likely to view the dyadic coping efforts of their spouses as invaluable external social resources that replenish what otherwise would be a depleted resource reservoir (Hobfoll et al., 1990). Given these experiences of mastery and control over stressors, as well as, renewed energies and determination to resolve work stressors, individuals who perceived their spouses as having provided them with problem-focused and emotion-focused dyadic coping are

more likely to experience greater levels of vigor at work and be more dedicated and absorbed in what they do the next day.

The utility of dyadic coping is likely to extend beyond those individualized coping since problem-focused and emotion-focused dyadic coping are additional external coping resources that benefit individuals during stress episodes (Hobfoll et al., 1990). Thus, I postulate that:

H3: After controlling for individual coping behaviours, perceived dyadic coping have incremental positive impacts on individuals' daily distress, well-being, and next day's work engagement.

3.3.2 Buffering effects of perceived dyadic coping

The second hypothesis that may explain the benefits of perceived dyadic coping is drawn from what is commonly known as the buffering hypothesis (Carlson & Perrewé, 1999; Cohen & Wills, 1985). The buffering hypothesis suggests that those who received social support from others during stress episodes are less likely to experience strain and negative well-being than those who do not receive social support (Carlson & Perrewé, 1999; Cohen & Wills, 1985; Ganster et al., 1986).

Similar to how social support would buffer individuals from detrimental consequences of stress, perceptions of having received dyadic coping are likely to buffer individuals' strain, well-being, and next day's work engagement the same way. This is because perceptions of having received problem-focused and emotion-focused dyadic coping would influence the ways individuals appraise their stressors and give meaning to stress outcomes.

The central tenet of Lazarus & Folkman's (1984) transactional model of stress is the cognitive appraisal process. Cognitive appraisal refers to the process of categorizing a stressful encounter with respect to its significance to well-being (Lazarus & Folkman, 1984: pg. 31). When individuals encounter stressors, they would engage in two forms of cognitive appraisals: i) primary appraisal, and ii) secondary appraisal. Primary appraisal refers to the ways individuals evaluate and give meaning to stress episodes, appraising each stress episode as either a harm, a threat, or as a challenge (Lazarus & Folkman, 1984). Secondary appraisal, on the other hand, is the process whereby individuals evaluate what are the coping resources and options available to them and what can they do to overcome stressors.

Individuals' perceptions of having received dyadic coping are likely to affect how they reappraise the relationship between their work stressors (first stage stressor-strain relationship), as well as, how they reappraise whether they have enough resources to overcome the detrimental impact of strain on their well-being and next day's work engagement (second stage strain-outcomes relationships).

Perceptions of having received dyadic coping are likely to alter the individuals' reappraisal of their daily work hassles and affect the level of strain they report. Compared to those who perceived themselves as having received low levels of dyadic coping, individuals who perceived themselves as having received high levels of dyadic coping from their spouses are, retrospectively, less likely to evaluate their daily work hassles as harmful or threatening. This is because perceived problem-focused dyadic coping from spouses would alter individuals' perceptions about the amount of control and mastery they have over their work stressors. Perceived emotion-focused dyadic coping, on the other hand, would influence individuals to view their work stressors in more positive light, thereby changing the ways they interpret their

person-environment relationship. This process of reassessing stressors and reappraising stress episodes based on external factors is known as the reappraisal process (Lazarus & Folkman, 1984). When individuals reappraise their stressors more positively, they are less likely to experience strain because they are more likely to perceive their stressors as manageable.

The reappraisal process is triggered by new environmental information individuals receive (Lazarus & Folkman, 1984). Perceived dyadic coping, the trigger for the reappraisal process, are individuals' perceptions of how their spouses are assisting them to cope with stressors and these perceptions are independent from one's own coping efforts. Since perceptions of dyadic coping are externally derived and are independent from one's own coping efforts, it would continue have a buffering effect on the stressor-strain relationship even after accounting for individual coping strategies. Therefore, I hypothesized that:

H4: After controlling for individual coping behaviours, the tendency for individuals with high daily work hassles to experience high levels of daily distress (predicted by Hypothesis 1) is weaker for those who perceived to have received more, rather than less dyadic coping from their spouses.

Similar to how perceived dyadic coping buffer the stressor-strain relationship, perceived dyadic coping is expected to also buffer the relationship between strain, well-being, and next day's work engagement. Declines in well-being and increases in work withdrawal behaviours (i.e. low levels of work engagement) occur when individuals perceived that the demand imposed by environment to exceed the amount of resources they possess (Lazarus & Folkman, 1984). Perceptions of whether they have received dyadic coping would buffers individuals from

negative impact of stress-induced strain because the perceptions of whether spouses are actively involved in the coping process would affect their appraisal of whether they possess sufficient resources to cope with their environmental demands (Lazarus & Folkman, 1982).

Individuals who perceived themselves as having received higher levels of dyadic coping from their spouses are more likely than those who perceived themselves to have received lower levels of dyadic coping to appraise themselves as having the necessary resources to manage the strain induced by stressors. Reappraising themselves as having resources to manage strain would abate the negative relationship between strain and well-being because positive reappraisals about their coping resources and coping options alter their perceptions of how strain is damaging their well-being (Dewe et al., 2010). This is because when individuals believe that they possess the necessary resources and options to manage strain, they are more likely to perceive their strain as manageable and less likely to experience negative impact of strain on their well-being (Hobfoll & Ford, 2005).

Perceptions of having received problem-focused and emotion-focused dyadic coping the day before are likely to buffer how strain affects individuals' work engagement the next day. When individuals make positive reappraisals about their strain, the impact that strain has on their next day's work engagement is weaker because they would interpret themselves as being able to meet the challenges imposed by their work stressors. Specifically, the solutions, strategies, and suggestions offered by their spouses during problem-focused dyadic coping process would provide them with possible action plans to manage their work. The encouragement, positive reframing, and emotional support they received during emotion-focused dyadic coping, on the other hand, would reinforce their self-efficacy that the difficulties they encounter at work is surmountable.

Thus, instead of being disengaged and withdrawn at work the next day, those who perceived to have received high levels of dyadic coping the previous day are more likely to be focused at work the next day. Thus, I hypothesize that:

H5: After controlling for individual coping behaviours, the tendency for individuals with high daily distress to experience low levels of well-being and next day's work engagement (predicted by Hypotheses 2a and 2b) is weaker for those who perceived to have received more, rather than less dyadic coping from their spouses.

3.4 Dual Stage Moderated Mediation

The buffering hypotheses presented earlier suggested that perceptions of having received dyadic coping would moderate the stressor-strain and strain-outcome relationships such that those who perceived high levels of dyadic coping are less likely to experience strain and are also less likely to experience detrimental consequences of strain on their well-being and work engagement.

By altering the association between daily work hassles (X) and daily distress (M), and the relationships between daily distress (M) and well-being/ next day's work engagement (Ys), perceptions of dyadic coping would alter the indirect effect of daily work hassles (X) on well-being/ next day's work engagement (Ys) via daily distress (M) such that the detrimental impact of daily work hassles (X) on well-being/ next day's work engagement (Ys) is weaker for those who perceived themselves to have received high levels of dyadic coping from their spouses than those who perceived themselves to have received lower levels of it. This is because perceptions of high levels of dyadic coping changes individuals' assessments about their control and mastery

over stressors (primary appraisal) and alter their beliefs about whether they have the resources to manage strain (secondary appraisal). When individuals believe that they have control over their stressors and have the necessary resources to manage strain, they are less likely to appraise their work stressors as threatening and would therefore experience fewer harmful consequences of work stress via distress (Dewe et al., 2010). Therefore:

H6: Due to the buffering effects of perceived dyadic coping, the indirect impact of daily work hassles on well-being and next day's work engagement is weaker for individuals who perceived to have received high levels of dyadic coping than those who perceived to have received low levels of dyadic coping.

3.5 Implications of Main and Buffering Effect Hypotheses

Testing both main effects and buffering effects in a single model is theoretically meaningful because it allows us to test whether mere perceptions of dyadic coping are sufficient to make a difference to individuals or would differences in intensity of perceived dyadic coping experiences make a differences to the beneficial effects of dyadic coping.

The main effect, buffering effect, and moderated mediation model would allow us to test for several types of interesting relationships: i) when only main effects of perceived dyadic coping are significant would indicate that mere perceptions of dyadic coping are sufficient in affecting individuals and the intensity of perceived dyadic coping is immaterial; ii) when only buffering effects of dyadic coping are significant would indicate that mere perceptions of dyadic coping are insufficient to affect individuals and only when individuals perceived sufficiently high levels of dyadic coping (+1 SD) then would perceived dyadic coping buffers the impact that

stressors and strains as on them; iii) when both main effects and buffering effects are significant would indicate that mere perceptions of dyadic coping and intensity of such perceptions works in tandem to benefit individuals; iv) when moderated mediation is significant would indicate that the indirect effects of daily hassles on well-being and work engagement are different between groups who perceived to have received high and low levels of dyadic coping, v) when moderated mediation is non-significant would indicate that there are no overall differences in the indirect effects of daily hassles on well-being and work engagement between groups that perceived high and low levels of dyadic coping, even though buffering effects may be significant at either Stage 1 or Stage 2 of the model.

Table 2 summarizes the hypotheses in this dissertation.

Table 2: Summary of hypotheses

H1	On days when individuals experience high levels of work hassles, they would also experience high levels of distress.
H2	<p>a) On days when individuals experience high levels of distress, they would also experience low levels of physical, hedonic, and eudaimonic well-being.</p> <p>b) On days when employees experience high levels of distress, they would also be less engaged at work the next day.</p>
H3	After controlling for individual coping behaviours, perceived dyadic coping have incremental positive impacts on individuals' daily distress, well-being, and next day's work engagement.
H4	After controlling for individual coping behaviours, the tendency for individuals with high daily work hassles to experience high levels of daily distress (predicted by Hypothesis 1) is weaker for those who perceived to have received more, rather than less dyadic coping from their spouses.
H5	After controlling for individual coping behaviours, the tendency for individuals with high daily distress to experience low levels of well-being and next day's work engagement (predicted by Hypotheses 2a and 2b) is weaker for those who perceived to have received more, rather than less dyadic coping from their spouses.
H6	Due to the buffering effects of perceived dyadic coping, the indirect impact of daily work hassles on well-being and next day's work engagement is weaker for individuals who perceived to have received high levels of dyadic coping than those who perceived to have received low levels of dyadic coping.

CHAPTER 4: METHODOLOGY

4.1 RESEARCH METHODOLOGY OVERVIEW

Research in dyadic coping is fraught with methodological challenges. Some of these challenges include difficulties in capturing dynamic cognitive and behavioural processes between couples during dyadic coping episodes (Tennen, Affleck, Armeli & Carney, 2000), biases and distortions associated with retrospective recall during periods of stress (Smith, Leffingwell & Ptacek, 1999), and inaccuracies due to aggregation of multiple coping episodes (O'Brien & DeLongis, 1997). Daily diary method has been proposed as a way to overcome many of these methodological concerns in dyadic coping studies (Revenson et al., 2011) and has been found to be useful in studying other dynamic phenomenon such as stress, affect, interpersonal interactions, and support (Gunthert & Wenze, 2011).

Daily diary method involves multiple assessments where respondents report their experiences over a fixed period of time. Daily diary method is a recommended method to study dynamic phenomenon because such data are captured close to their occurrence and this process is important in examining episodic events such as coping between couple (Revenson et al., 2011).

Since this study involves examining the impact of daily dyadic coping on couple's daily distress, well-being and next day's work engagement, data for this study will be collected via interval-contingent sampling on cellphone. Interval-contingent sampling or fixed timing schedule is a daily diary method where assessments are made at pre-determined time of the day, for example, in the morning or in the evening (Wheeler & Reis, 1991). In interval-contingent sampling, respondents are asked about their experiences or behaviours at the pre-determined time or to reflect on their experiences and behaviours during the time between the previous report and the current report (Wheeler & Reis, 1991).

4.2 DATA COLLECTION PROCEDURES

The data collection occurred in two phases. In the first phase, respondents completed an online baseline survey on demographics. One week after the baseline survey, daily diary surveys were conducted for ten weekdays over two consecutive weeks. During the daily diary survey phase, each respondent was required to complete one mobile phone survey every night before they go to bed. At 9pm each night, respondents would receive a short message on their mobile that consist of a reminder and a link to the daily diary survey. Each respondent had up to 12am each night to complete the survey and was instructed to complete the surveys independently, without conferring with their spouses. In each daily diary survey, respondents were required to report on the strategies they used to cope with work hassles that they had encountered during the day, the type of coping assistance their spouses had rendered them to help them cope with their daily work hassles, their state of distress and well-being at the time of each survey, as well as, their general level of work engagement during the day.

4.3 SAMPLE

Respondents were recruited from the alumni database of a Business School in Singapore. Since this study examines the how couples cope dyadically with daily work hassles, in order to qualify for the study, both husband and wife must be gainfully employed in a full time job. Approximately 350 alumni in the database met this requirement. An email invitation was sent to them to invite them to participate in the study. The email invitation consists of an introduction to the study and a factsheet that described the study's objectives and data collection methods (Refer to Appendix 1). Alumni and their spouse who were keen to participate in the study were requested to contact the principal investigator (i.e. me) directly via email. All alumni and their

spouses who expressed interest in the study were briefed about the study's sampling procedures over the phone and were informed that they would receive a maximum of \$50 as incentive for their participation, contingent on the number of matched surveys completed.

Forty three heterosexual pairs of alumni and their spouses expressed interest in the study. During the phone briefing, two pairs of respondents decided to withdraw from the study and one pair of respondents withdrew one day after the study had commenced, leaving forty pairs of alumni and their spouses in the final sample. This yielded a response rate of approximately 11.50%. A check with the database suggested that respondents who signed up for the study were no different demographically from those who did not respond to the study's invitation. A total of 739 daily surveys were generated over a period of two weeks by the forty couples and 716 surveys were successfully matched, yielding an average of 8.95 pairs of surveys per couple and a response rate of 89.5% across couples and time.

4.4 MEASURES

In this section, I will describe and explain the measures used in the study. Since most of the measures used in this study were not originally developed for daily sampling, there is a need for to adapt these measures to suit the nature of the data collection. Specifically, I have reduced the number of items in each measure to better fit the format of a mobile phone survey. Minor modifications were made to the items wordings in order to reflect the daily nature of the items. Items in the adapted measures were selected based on their reported psychometric properties, in particular, their factor loadings as described in the original articles they were first published in. A full list of items used in this study can be found in the Appendix 2.

Daily work hassles ($\alpha = .85$) were measured with six items, with two items from the work overload ($\alpha = .90$) scale developed by Karasek (1979), and two items from the role conflict ($\alpha = .87$) and role ambiguity ($\alpha = .79$) scale by Riozz, House & Lirtzman. (1970). All items were measured on 5-point scale. A high score on the work overload and role conflict scale and a low score on role ambiguity would indicate a high degree of daily work hassles. A sample item measuring work overload is: “I feel that I have an excessive amount of work to be done. A sample item measuring role conflict is “I have to work under vague directives or orders”. A sample item measuring role ambiguity is “I know what is exactly expected of me”. Items measuring role ambiguity were re-coded in the final analyses. All six items were used to form a composite score of daily work hassles.

Daily Distress ($\alpha = .82$) was measured with two items from Goldberg’s (1972) 12-item version of the General Health Questionnaire (GHQ). The GHQ was first developed to assess non-psychotic psychiatric illness in a non-clinical population. For the purpose of this study, two items were adapted from the psychological distress dimension in the GHQ. All items were measured on a 5-point scale with high scores indicating high levels of distress. A sample item is “Today, I feel that I cannot overcome my difficulties”.

Individual coping and **Perceived Dyadic Coping** were adapted from Carver et al. (1989) COPE scale and Carver’s (1997) Brief COPE scale. Carver et al.’s (1989) original COPE scale consisted of 14 sub-scales that tapped on three distinct coping strategies – problem-focused coping (active, planning, suppression, restraint, and instrumental), emotion-focused coping (emotional, positive reinterpretation, acceptance, denial, and religion), and dysfunctional coping (venting, behavioural disengagement, mental disengagement and substance abuse). The psychometric properties of the COPE scale were further refined in Carver (1997). Two sub-

scales from problem-focused coping were dropped in Carver (1997). Specifically, the restraint sub-scale was dropped due to poor predictor criterion relationships and the suppression sub-scale was dropped due to item redundancy. All other sub-scales were shortened in Carver (1997) to comprise of two items each.

Since this study examines the incremental positive impact of dyadic coping on distress, well-being, and next day's work engagement, I have omitted dysfunctional coping strategy from the study's instrument and adapted only the sub-scales from problem-focused and emotion-focused strategies from Carver's (1997) shortened COPE scale.

The adapted problem-focused and emotion-focused coping scales used in this study consist of three sub-scales each. The denial sub-scale was omitted from the emotion-focused scale because it is a form of escapism and is psychometrically similar to dysfunctional coping strategies (Carver et al. 1989). The religion sub-scale was also omitted from the emotion-focused scale because almost half of the study's respondents indicated in the baseline survey that they do not practice a religion.

The **Problem-focused Individual coping scale** ($\alpha = .83$) consists of six items from the active, planning, and instrumental sub-scales. The **Emotion-focused Individual coping scale** ($\alpha = .81$) consists of six items from the emotional, positive reinterpretation, and acceptance sub-scales. All items were scored on a 5-point scale where a high score would indicate utilization of a particular coping strategy. Respondents were instructed to think about the type of work difficulties that they had encountered during the day and what did they do to resolve those difficulties. A sample of active coping is "I focused my efforts on doing something to resolve my work difficulties". A sample item from the planning sub-scale is "I thought hard about what steps to take to ease my work difficulties". A sample item from the instrumental sub-scale is "I asked

people who have experienced similar difficulties on what they did.” A sample item from the emotional sub-scale is “I talked to people about how I feel about my work difficulties”. A sample item from the positive reinterpretation sub-scale is “I tried to see my work difficulties in a different light in order to make the situation seem more positive”. Lastly, a sample item from the acceptance sub-scale is “I have accepted the reality that work difficulties have happened”.

The same item adaption procedures were used to adapt the measures of dyadic coping. Similar to the individual coping scales used in this study, the **Perceived Problem-focused Dyadic-coping scale** ($\alpha = .83$) and **Perceived Emotion-focused Dyadic-coping scale** ($\alpha = .84$) consist of six items each from their respective three sub-scales. Instead of asking respondents to think about how they had resolved their difficulties, respondents were instructed to recall how their spouses had helped them cope with their work difficulties. A sample of dyadic active coping is “My spouse tried to improve my situation”. A sample item from the dyadic planning sub-scale is “My spouse tried to come up with strategies on what I should do to resolve my work difficulties”. A sample item from the dyadic instrumental sub-scale is “My spouse tried to give me advice about what to do.” A sample item from the dyadic emotional sub-scale is “My spouse discussed with me about my feelings regarding my work difficulties”. A sample item from the dyadic positive reinterpretation sub-scale is “My spouse helped me to look for something good in what has happened”. Lastly, a sample item from the dyadic acceptance sub-scale is “My spouse has helped me learnt to live with my work difficulties”. All items were scored on a 5-point scale where a high score would indicate higher perceptions of having received of a particular dyadic coping strategy from spouses.

Somatization or physical well-being ($\alpha = .83$) were measured with three items from the Four-Dimensional Symptom Questionnaire (4DSQ) developed by Terluin et al. (2004). The

4DSQ measures four symptoms dimensions associated with psychological complaints and were used to differentiate patients of psychiatric illness from those suffering from stress-related disorders (Terluin et al., 2004). The four dimensions in the 4DSQ are distress, depression, anxiety, and somatization. For the purpose of this study, we adapted three items from the somatization sub-scale. The somatization sub-scale measures psychosomatic syndrome, or bodily stress reactions. In this study, respondents were required to report daily on a 5-point scale whether they are currently experiencing headaches, bloated feelings in the stomach, and tightness in chest. A high score on these items indicate high levels somatization or poor physical well-being. An example of an item is “At the present moment, I experience pressure or a tight feeling in my chest”.

Subjective Well-being comprised of four distinct yet interrelated components – positive affect, negative affect, life satisfaction, and domain satisfaction (Diener et al., 1999). In this study, we examined the impact of dyadic coping on all four components. The intensity of **Positive** ($\alpha = .88$) and **Negative affect** ($\alpha = .88$) were measured with four items from the Affect Adjective Scale used in Diener, Wolsic, & Fujita (1995), with two items measuring positive and negative affect respectively. The items were measured on a 5-point scale and a high score would reflect more intense feelings of the stated affect. A sample item for positive affect is “At the current moment, I feel joyful”. A sample item for negative affect is “At the current moment, I feel angry”. **Life satisfaction** ($\alpha = .86$) was measured with two items from Diener, et al.’s (1985) The Satisfaction with Life Scale. All items were measured on 5-point scale. A high score on each item indicate high levels of life satisfaction. An example of an item is “At this point in time, I feel that in most ways, my life is close to ideal”. Since this study examines dyadic coping behaviours, marital satisfaction was used as a proxy for domain satisfaction. **Marital**

satisfaction ($\alpha = .95$) was measured with two items from the Kanas Marital Satisfaction Scale developed by Schumm et al. (1986). All items were measured on 5-point scale. A high score on each item indicate high levels of marital satisfaction. An example of an item is “At the current moment, how satisfied are you with your husband (wife) as a spouse?”.

Psychological Well-being ($\alpha = .78$) was measured with the psychological well-being scale developed by Ryff (1989). The original psychological well-being scale is a 42-item scale that measured six dimensions of well-being – autonomy, mastery, personal growth, positive relations, purpose in life, and self-acceptance. In this study, I have adapted two items from each dimension. The items were chosen primarily based on their understandability, as well as, how well they factor loaded in past research. Since psychological well-being is a second-order factor, a multilevel CFA was conducted to ascertain its factor structure. Multilevel CFA revealed that with the exception of the two items in the growth dimension, all other items had loaded reasonably well onto their latent factors. The growth dimension was subsequently dropped from all analyses and multilevel CFA showed that the remaining five dimensions of autonomy, mastery, positive relations, purpose in life, and self-acceptance had loaded well onto the second-order psychological well-being ($\chi^2(30,716) = 122.73, p < .01, CFI = .97, TLI = .91, RMSEA = .07, SRMR = .07$). Therefore, I aggregated the ten items from the five remaining dimensions to form the psychological well-being scale used in the study. All items were measured on 5-point scale. A high score on each item indicate high levels of psychological well-being.

A sample item for autonomy is “At the current moment, I feel that it is difficult for me to voice my opinion on controversial issues”. A sample item for mastery is “At the current moment, I am quite good at managing the responsibilities of my daily life”. A sample item for positive relations is “At the current moment, I feel lonely because I have few people with whom to share

my concerns” (reverse coded). A sample item for purpose in life is “At the current moment, I feel that I have a sense of direction and purpose in life”. A sample item for self-acceptance is “At the current moment, in many ways, I feel disappointed about my achievements in life”.

Work engagement ($\alpha = .80$) was measured with three items from the Shorten Utrecht Work Engagement Scale (UWES-9) developed by Schaufeli, Bakker, & Salanova, (2006). Each item in the daily measure corresponded to one dimension of work engagement (i.e. vigour, dedication, and absorption). Wordings of the items were modified to reflect the daily nature the mobile phone diary survey. Specifically, respondents were asked to report how engaged they were at work on the day of survey. For example, the item “I am enthusiastic about my job” was modified to “While at work today, I felt enthusiastic about what I do”. All items were measured on 5-point scale. A high score on each item would indicate high levels of work engagement. Scores from all three items were used to form a composite score of daily work engagement.

4.5 MULTILEVEL CONFIRMATORY FACTOR ANALYSES

Multilevel Confirmatory Factor Analyses (CFA) were conducted with Mplus 6.11 to establish the factor structure for the two key constructs in this study. Refer to Appendix 4 for the Mplus syntax used in these analyses.

4.5.1 Multilevel CFA for Individual Coping Strategies

Results for the Multilevel CFA (Figure 3) showed that the items in problem-focused and emotion-focused individual coping loaded reasonably well onto their latent variable and a two-factor structure is a good fit for the data ($\chi^2(47,716) = 379.34, p < .01$, Scaling Correction Factor for MLR = 1.54, CFI = .97, TLI = .95, RMSEA = .06, SRMR = .03). To ascertain that the two-

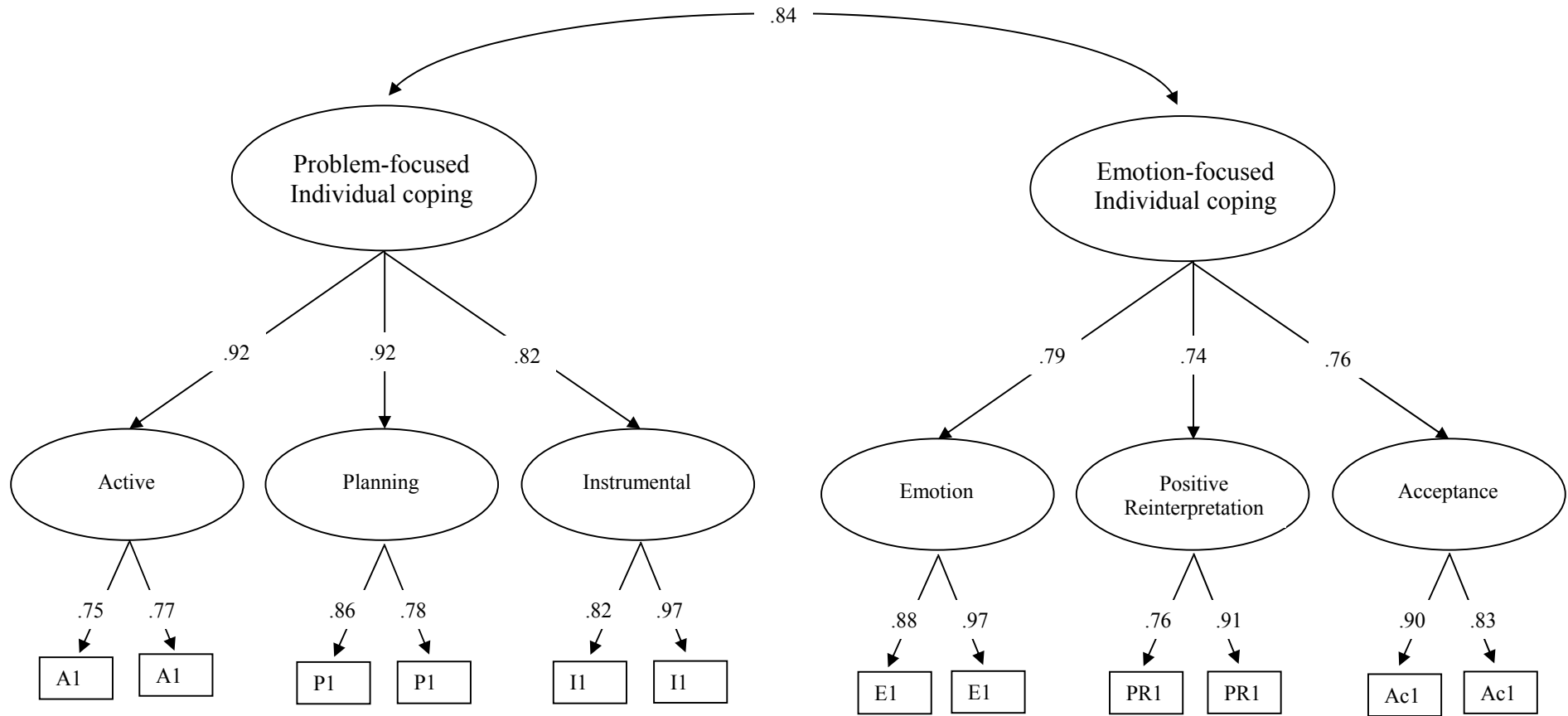
factor structure provides the best fit for the data, I compared it with a more restricted one-factor model. Since the Chi-square value in multilevel models cannot be used for chi-square difference test like those in single level models, I conducted the extended Satorra-Bentler scaled Chi-square difference test described in Satorra (2000) (refer to Appendix 3 for the extended Satorra-Bentler scaled Chi-square difference test formula). The extended Satorra-Bentler scaled Chi-square difference test revealed that the Chi-square difference between the two models were significant, hence the less restricted two-factor model for individual coping was a better fit for the data.

4.5.2 Multilevel CFA for Perceived Dyadic-coping

Multilevel CFA for dyadic coping in Figure 4 revealed that all items had loaded reasonably well onto the perceived problem-focused and perceived emotion-focused dyadic coping latent variables; and a two-factor structure for perceived dyadic coping is a good fit for the data ($\chi^2(47,716) = 176.96, p < .01$, Scaling Correction Factor for MLR = 2.48, CFI = .97, TLI = .95, RMSEA = .06, SRMR = .04). Likewise, I conducted the extended Satorra-Bentler scaled Chi-square difference test to compare the two-factor structure for perceived dyadic coping with a one-factor structure. Similar to individual coping, the extended Satorra-Bentler scaled Chi-square difference test revealed that the two-factor model for perceived dyadic coping was a better fit for the data.

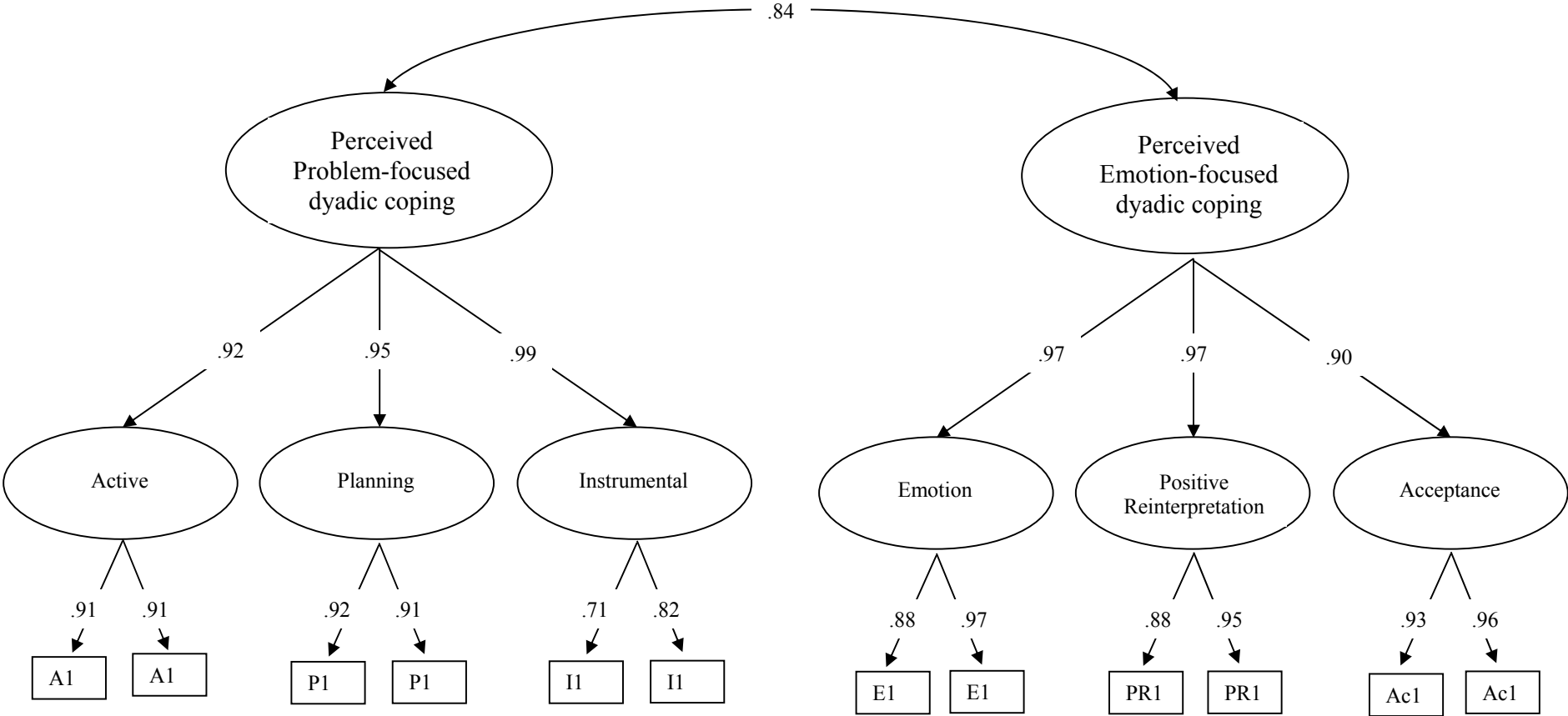
These results suggested that perceived dyadic problem and emotion-focused coping strategies were empirically distinct from each other and should be analysed as such.

Figure 3: Multilevel CFA for individual coping strategies



Model	χ^2	Scaling Correction Factor for MLR	CFI	TLI	RMSEA	SRMR
Two Factor	(47,716) = 379.34, p < .01	1.54	.97	.95	.06	.03
One Factor	(48,716) = 401.10, p < .01	1.52	.85	.80	.10	.12

Figure 4: Multilevel CFA for dyadic coping strategies



Model	χ^2	Scaling Correction Factor for MLR	CFI	TLI	RMSEA	SRMR
Two Factor	(47,716) = 176.96, p < .01	2.48	.97	.95	.06	.04
One Factor	(48,716) = 322.78, p < .01	2.35	.93	.90	.09	.05

CHAPTER 5: ANALYTICAL STRATEGY

5.1 MULTILEVEL STRUCTURAL EQUATION MODELING (MSEM)

Multilevel structural equation modeling, or MSEM, is an analytical technique designed to incorporate the use of structural equation modeling in the context of analyzing hierarchically clustered data (Lüdtke et al., 2008; Preacher, Zyphur, & Zhang, 2010). The data collected in this dissertation are clustered within individual respondents. Daily distress, a within-person variable, is hypothesized to mediate the relationship between daily work hassles and individual outcomes. This is an example of a 1-1-1 multilevel mediation model (Bauer, Preacher, & Gil, 2003). Traditional methods typically used to assess mediation, such as the causal step (e.g. Baron & Kenny, 1986), difference in coefficients (e.g. Olkin & Finn, 1995), or the product of coefficient (e.g. Sobel, 1982), are inappropriate in this dissertation because these methods assumed that the data used for mediation analyses are collected via random sampling and are non-interdependent. These assumptions are clearly violated in a multilevel setting, such as in this dissertation, where the collected data are nested within individuals. This is because repeated measures obtained from the same individual overtime are correlated within the person and this compromises the independence assumption required for most statistical models.

Scholars have proposed several methods to test for mediation when data are hierarchically clustered (Bauer et al., 2003). These techniques, which include aggregation, disaggregation, two-step analyses, are grouped under the general rubrics of Multilevel Modeling (MLM) (Preacher, Zhang, & Zyphur, 2011). Although easily implemented, these analytical techniques are both controversial and inadequate. First, they do not adequately separate within and between-group variances, leading to the conflation of within and between-group effects. Second, they are unable to model dependent variables that reside at the cluster level and are also

unable to accommodate random slopes as the model's mediators or independent variables. Third, current multilevel mediation model does not allow for model comparisons and limit researchers' understanding of how different models are related to each other (Preacher et al., 2011). Given recent advances in Structural Equation Model (SEM) software which allow for the use of SEM to analyze cluster data, MSEM was proposed by scholars as an alternative analytical method to the existing MLM mediation techniques (Preacher et al., 2010, 2011).

Statistically, MSEM helps overcome many shortcomings in traditional multilevel mediation analyses. For example, in traditional MLM analyses, all variables are observed and measurement errors cannot be accounted for in analyses. In MSEM, however, researchers have the option of modeling latent variables in the mediation models to account for measurement errors. Also, MSEM does not impose restrictions on the levels of the variables in mediation analyses. That is to say, while traditional MLM models restricted the use of dependent variables to level 1, MSEM does not impose such restriction. Furthermore, unlike traditional MLM models that disallow the modeling of random slopes as mediators or dependent variables, researchers using MSEM can model these slopes as mediators or dependent variables. This allows them to examine a wider range of models previously not possible under traditional MLM mediation. Lastly, MSEM will implicitly separately estimate the between and within-person effect each variables. Separately estimating between and within-group components of each variables reduces the conflation of between and within-group effects in mediation models and would give researchers a less biased estimation of the mediation effects on both the between and within-group level. This separate estimation process will produce less biased results that adequately partition between and within-groups effects when researchers test for cross-level mediation (Lüdtke et al., 2008; Preacher et al., 2011).

Computationally, simulations with computer generated datasets found that MSEM produced less biased results and more accurate confidence interval estimations than existing multilevel mediation analytical techniques. MSEM also produces acceptable levels of estimation efficiency and had good convergence rates (Lüdtke et al., 2008; Preacher, et al., 2011). Furthermore, MSEM was found to have sufficient power to reject null hypotheses in simulations that uses actual field data (Preacher et al., 2010).

Given the statistical and computational advantages of MSEM over traditional MLM methods, MSEM is considered to be a more robust and parsimonious analytical technique for analyzing multilevel mediation. Therefore, it is recommended that researchers who wish to test for mediation effects in clustered data adopt the use of MSEM in their analyses (c.f. Lüdtke et al., 2008; Preacher et al., 2010, 2011).

In this dissertation, I use a specific form of MSEM – the multilevel moderated mediation model, to examine how dyadic coping moderates the mediated relationship between daily work hassles and well-being/work engagement outcomes.

5.2 MULTILEVEL MODERATED MEDIATION

Multilevel moderated mediation analysis is an analytical technique within the family of MSEM that allows researchers to examine how mediation effects between independent and dependent variables vary as a function of either a level 1 or level-2 moderators when data are hierarchically clustered (Liu, Zhang & Wang, 2012). Multilevel moderated mediation is conceptually similar to single-level moderated mediation where a hypothesized moderator can alter the relationship between an independent variable and mediator (Stage 1 Moderated Mediation), or when the moderator increases/ or decreases the effect of a mediator on a

dependent variable (Stage 2 moderated mediation), or when a moderator(s) simultaneously affects the relationship between an independent variable and mediator, as well as, the relationship between the mediator and the dependent variable (Dual Stage Moderated Mediation) (Edwards & Lambert, 2007; Preacher, Rucker, & Hayes). Unlike traditional MLM that impose restrictions on the level of analyses, MSEM moderated mediation models allow researchers to model moderators, mediators and outcomes at both within and between-group levels, making it a highly flexible analytical technique that can be used to model a variety of different types of multilevel moderated mediation models (Liu et al., 2012).

Researchers who are keen to examine moderated mediation in MSEM would need to pay particular attention to two issues when specifying their moderated mediation models.

First, researchers must specify correctly the level at which the hypothesized moderated mediation would take place. According to Preacher et al. (2010), with the exception of a 1-1-1 mediation model, mediation effect in any MSEM models that contain level-2 predictors, mediators or outcome variables can only take place at the upper level. This is because variables that exist at the group level (level-2) can only have between-group effect and these between-group effects cannot be associated with differences across units nested within the groups at level-1 (Zhang, Zyphur, Preacher, 2009). Thus, any effect associated with level-2 variables, whether direct or mediated, can only exist at the group level and researchers modeling MSEM mediated models with level-2 predictor or mediator should only model between-group mediation using level-2 variances of those variables. Any attempt to model a combination of between and within-group mediation or misspecification of the variances used in analyses will confound the within and between-group mediation effect (Preacher et al., 2010).

The same argument is extended to researchers specifying moderated mediation models. Moderated mediation effects of models with level-2 predictor, mediator, or outcome, can only exist at level-2 and only the between-group variance of the moderator variable, even if the moderator resides in level 1, should be used in analyzing such models. The only exception to this rule is when researchers are estimating a pure within-group moderated mediation model where all variables of interest reside at the within-group level. In such models, researchers would use the within-group component of the moderator to estimate how the mediation effects differ within the group when the within-group moderator takes on different value (Liu et al., 2012). Since I am estimating a pure within-group moderated mediation model with all variables of interests residing at the within-person level, I would be using the within-group variance of the moderators to estimate how the indirect effect of daily work hassles differ between individuals who received high and low dyadic coping from their spouses.

Second, researchers must specify the type of centering that is to be made to the variables because centering decisions have implications for the interpretations of multilevel results (Hofmann & Garvin, 1998). In conducting MSEM, researchers may opt not to center their variables and use their raw metrics for analyses because MSEM models, in generally, will implicitly estimate both within and between-person variances in the model. Having said that, researchers may however choose to center their variables in MSEM and specify the type of centering that is most appropriate for their theory and hypotheses.

Similar to traditional multilevel modeling, researchers may choose to grand mean or group mean centered their variables before conducting multilevel moderated mediation analyses. In grand mean centering, researchers rescale the predictor and moderator variables by subtracting the variables' grand mean from their raw score, regardless of cluster membership. Rescaling

variables using their grand mean is recommended when researchers are keen to examine cross-level interactions because grand mean centering reduces multicollinearity between level 1 outcome and level-2 predictors, as well as, reduces biases in estimates when random intercepts are highly correlated with random slopes (Kreft, De Leeuw & Aiken, 1995). Group mean centering, on the other hand, examines a substantively different research question. In group mean centering, researchers essentially remove the between-person variance from a variable by subtracting the cluster's mean from that variable before using it to conducting further analyses (Hofmann & Garvin, 1998). By doing so, group mean centering renders the variable to be a strictly within-person variable and is a recommended process when researchers wish to examine within-person phenomenon.

As explained by scholars, (e.g. Bryk & Raudenbush, 1992; Hofmann & Garvin, 1998; Kreft et al., 1995) different centering methods essentially produces non-equivalent models and centering decisions in multilevel models have implications the interpretation of the model intercept, the variance of the intercept across groups, and the covariance of the intercept term with other parameters. Given that centering decisions have specific implications on how the model results are interpreted, centering decisions should be guided by theories and the substantial research questions that are to be answered.

In this dissertation, I am keen to examine how dyadic coping function as a within-person moderator that moderates the within-person indirect effect of daily work hassles on daily distress (Stage 1) and subsequently, on the relationships between daily distress and well-being/ work engagement outcomes (Stage 2)

Although the predictor (daily work hassles), mediator (daily distress), and the moderators (dyadic coping) have both between and within-person variances, I choose to focus only on the

within-person moderated mediational process. That is to say, this dissertation will examine moderated mediation models that existed purely at level 1 with no cross-level effects. Consistent with Preacher et al.'s (2010) recommendation, I group mean centered the predictor and moderator variables before creating the interaction terms so that the estimates of these variables in the multilevel moderated mediation models reflect pure within-person processes.

Multilevel moderated mediation analyses were conducted using Mplus 6.11. The Mplus moderated mediation syntax was adapted from the addendums accompanying Preacher et al. (2010, 2011) and Liu et al. (2012). Following the analytical principles described in Preacher et al. (2010, 2011), the below variables were designated as within-person variables in models:

- Daily work hassles (predictor)
- Daily distress (mediator)
- Perceived dyadic coping (moderator)
- The interaction terms between daily work hassles and perceived dyadic coping

Since above variables have both between and within-person components, I allow the between-person components of these variables to vary at level-2 in the model (Liu et al., 2012). The analytical model consist of three distinct components: i) the first stage moderation, ii) second stage moderation, and iii) the moderated mediation test that takes into account moderator's effect in both Stage 1 and 2 moderation. The moderated indirect effects are reported in the results section only when the moderated meditation test is significant.

The general syntax used in the analyses is appended in Appendix 5.

CHAPTER 6: RESULTS

This chapter presents the results of the statistical analyses. I would first briefly describe the characteristics of respondents in this study. Following that, descriptive statistics, average Cronbrach's alphas (across days), and correlational analyses are presented. Thereafter, I would present the results from the MSEM moderated meditation models. Lastly, I would present multilevel-multigroup analyses to compare the differences in MSEM path coefficients between husbands and wives.

6.1 CHARACTERISTICS OF RESPONDENTS

Demographics characteristics of the respondents were summarized in Table 3. Since this study was conducted with heterosexual couples, exactly 50% of the respondents were male. Majority of the respondents in study were of Chinese descent. 96.25% of respondents have at least tertiary education, with an average age of approximately 34 years old ($SD = 6.22$ years) and a mean income of \$4501 – \$5500. The average marriage tenure of the respondents is 4.3 years ($SD = 2.41$) and 42.50% of respondents indicated that they have at least one child.

Table 3: Demographics characteristics of respondents

Characteristics	Valid percentage of respondents (%)
Gender	
Male	50.00
Female	50.00
Ethnic Group	
Chinese	92.50
Malay	0.00
Indian	3.75
Eurasian	1.25
Others	2.50
Education	
Secondary School and below	3.75
Pre-U/ Junior College	2.50
Polytechnic	5.00
University	82.50
Others	6.25
Income	
Less than \$2500	5.00
\$2501 – \$2500	16.25
\$3501 – \$4500	22.50
\$4501 – \$5500	21.25
\$5501 – \$6500	11.25
\$6501 and above	23.75
Children	
Yes	42.50
No	57.50

N = 80

6.2 DESCRIPTIVE STATISTICS AND CORRELATIONS

The Means, Standard Deviation, average Cronbach's alphas (across days), and Pearson product-moment correlations of the variables were presented in Table 4.

Average Cronbach's alphas (across days) show that the measures used in this study are reliable. Table 4 reported the between and within-person correlation coefficients of the key variables. The correlation coefficients reported below the diagonal are between-person correlations and those reported above the diagonal are within-person correlations. The within-person correlations were calculated with the user-developed Stata "withincorr" command (Bland & Altman, 1995). The "withincorr" command accounted for the lack of independence in repeated measurements by removing between-subject variances in variables that were measured on multiple occasions and reported whether increases in those variables were associated with increases in other variables within the same individuals (Bland and Altman, 1995).

Table 4 summarizes the correlations among the key variables in this study. Please refer to Appendix 6 for a detailed breakdown on the between and within-person correlations among the sub-dimensions of the various variables.

Correlational analyses revealed that the correlations among majority of the variables were in the expected directions. Consistent with expectations, daily work hassles was positively and significantly correlated with daily distress ($r = .52, p < .01$).

Daily distress was positively and significantly related to somatization ($r = .34, p < .01$), and with negative affect measured in the evening ($r = .40, p < .01$). It was also negatively and significantly related to daily marital satisfaction ($r = -.24, p < .01$), life satisfaction ($r = -.34, p < .01$), positive affect measured in the evening ($r = -.31, p < .01$), and with psychological well-being ($r = -.40, p < .01$).

The results also revealed that daily work hassles was more strongly related to problem-focused individual coping ($r = .13, p < .01$) than with other forms of coping behaviours. This possibly suggested that individuals were more likely to meet difficult issues they faced at work head-on and would try to resolve those issues through their own efforts rather than to adopt an emotion based individual coping approach that involved strategies such as positive reinterpretation.

Results suggested that although daily distress was negatively and significantly correlated with perceived emotion-focused dyadic coping ($r = -.14, p < .01$), it was not related to other forms of coping behaviours. This possibly suggested that individuals who perceived that spouses had helped them cope with daily work hassles emotionally were less likely to experience distress than those with spouses who did not do the same.

Interestingly, while somatization was generally unrelated to individual coping behaviours, it was positively and significantly related to perceived problem-focused dyadic coping ($r = .10, p < .05$). This probably suggested that individuals who tried to help their spouses cope with work hassle by offering suggestions or solutions might possibly end up doing more harm than good since such behaviours are likely to cause their spouses to experience greater degree of somatization such as headaches and chest discomfort.

The correlational analyses revealed that the three components of subjective well-being (life satisfaction, marital satisfaction, and positive affect in the evenings) were positively and significantly related to all four forms of coping behaviours. These relationships, however, were stronger with perceived dyadic coping than with individual coping behaviours. This suggested that individuals who perceived themselves as having received dyadic coping from their spouses were more likely to be satisfied with their life and marriage on a daily basis, as well as,

experiencing greater levels of positive affect daily than those who relied more on individual coping behaviours to manage daily work hassles they faced at work.

Correlational analyses also revealed that while both problem-focused individual coping ($r = -.12, p < .01$) and perceived problem-focused dyadic coping were positively related to negative affect ($r = -.12, p < .01$), both types of emotion-focused coping were largely unrelated to it. These results seemed to suggest that problem-focused coping strategies, regardless of whether it was adopted by individuals themselves or administered by their spouses, would give rise to higher levels of negative affect among individuals.

Although psychological well-being was positively and significantly related to all forms of self and dyadic coping, it was most strongly related to emotion-focused dyadic coping ($r = .22, p < .01$).

Lastly, although individuals' work engagement on the next day was positively and significantly related to both self and dyadic coping, it was most strongly related to the two types of individual coping behaviours than to dyadic coping that individuals experienced from their spouses.

Table 4: Means, Standard Deviations, Average Cronbach's Alphas (Across Days), and Correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Daily work hassles	2.87	.59	(.85)	.33**	.09*	-.06	-.10**	-.14**	.17**	-.07 [†]	-.06	.03	.21**	.11**	-.03	.02
2 Daily Distress	2.51	.81	.52**	(.82)	.07 [†]	-.16**	-.23**	-.27**	.25**	-.19**	-.17**	-.07	.15**	.04	-.05	-.12**
3 Somatization	1.37	.59	.26**	.34**	(.83)	-.10**	-.13*	-.11**	.18**	-.08*	-.15**	-.02	-.01	-.01	.04	-.01
4 Marital Satisfaction	4.11	.73	-.14**	-.24**	-.17**	(.95)	.18**	.31**	-.25**	.17**	.16**	.08 [†]	.01	.03	.15**	.18**
5 Life Satisfaction	3.43	.75	-.31**	-.34**	-.23**	.22**	(.86)	.22**	-.23**	.20**	.20**	-.01	.10**	.16**	.09*	.09*
6 PA	3.14	.87	-.19**	-.31**	-.13**	.30**	.34**	(.88)	-.28**	.14**	.28**	.15**	.09*	.08*	.12**	.17**
7 NA	1.96	.84	.24**	.40**	.35**	-.27**	-.27**	-.24**	(.88)	-.22**	-.10**	.03	.08*	-.04	.01	-.03
8 Psychological Well-being	3.66	.50	-.39**	-.40**	-.32**	.35**	.57**	.29**	-.33**	(.78)	.17**	.01	.05	.08	-.01	.01
9 Work Engagement (Day t)	3.26	.73	-.13**	-.27**	-.18**	.04	.28**	.43**	-.15**	.30**	(.80)	.22**	.21**	.17**	.13**	.11**
10 Work Engagement (Day t+1)	3.26	.73	-.10*	-.22**	-.11**	.02	.19**	.40**	-.08 [†]	.24**	.63**	(.80)	.10*	-.04	-.07	-.04
11 Problem-focused Individual coping	3.53	.55	.13**	.07 [†]	-.01	.08*	.17**	.28**	.12**	.16**	.31**	.22**	(.83)	.54**	.16**	.15
12 Emotion-focused Individual coping	3.55	.54	.05	.01	-.02	.13**	.24**	.28**	.04	.18**	.29**	.17**	.71**	(.81)	.16**	.19**
13 Perceived Problem-focused Dyadic Coping	2.94	.75	-.07 [†]	-.05	.10*	.28**	.23**	.33**	.12**	.12**	.20**	.13**	.34**	.38**	(.83)	.63**
14 Perceived Emotion-focused Dyadic Coping	3.13	.84	-.02	-.14**	.06	.38**	.27**	.36**	.04	.22**	.20**	.14**	.40**	.43**	.82**	(.84)

[†]p<.10, *p < .05, **p < .01

Note:

^a Average Cronbach's alphas (across days) appear in parentheses along the diagonals

^b Refer to Appendix 6 for detailed correlations between variables and sub-dimensions of variables.

6.3 HYPOTHESES TESTING

Hypotheses in this dissertation were tested with MSEM procedures as described by Preacher et al. (2010, 2011) and Liu et al. (2012).

6.3.1 MSEM Baseline Model

To test for within-person main effects, I estimated a baseline MSEM model that did not include any control variables or moderators. In this model, at the within-person level, daily distress was modeled as a function of daily work hassles. In addition, the various well-being outcomes (life satisfaction, marital satisfaction, psychological well-being, and somatization) and next day's work engagement outcomes were modeled as a function of daily distress. Following Preacher et al.'s (2010, 2011) recommendation, I allowed the variables to covary at the between-person level.

Table 5 showed the unstandardized coefficients for the main effects and their 95% confidence intervals (C.I) in the baseline MSEM model. Results showed that the mean value of the random slope of daily work hassles on daily distress was significant ($\gamma_{10} = .53, p < .01$). This indicated that on days when individuals experienced high levels of work hassle, they were also more likely to experience distress to a greater degree.

Consistent with predictions, results also revealed that the random slope of daily distress was negatively and significantly related to life satisfaction ($\gamma_{20} = -.13, p < .01$), marital satisfaction ($\gamma_{30} = -.11, p < .01$), positive affect ($\gamma_{40} = -.29, p < .01$), and psychological well-being ($\gamma_{60} = -.17, p < .01$); and was positively and significantly related to negative affect ($\gamma_{50} = .27, p < .01$) and somatization ($\gamma_{70} = .26, p < .01$). Daily distress, however, was unrelated to individuals' next day's work engagement ($\gamma_{70} = .06, n.s.$) These results suggested that on days where

individuals experienced high levels of distress, they were also less likely to feel satisfied with their life and marriage, as well as, experienced lower levels of positive affect and psychological well-being and higher levels of negative affect and somatization.

Table 5: MSEM baseline model

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.54**	.09	[.39, .69]
Variance (τ_1)	.21**	.14	[.02, .43]
β_2 : Daily distress \rightarrow Somatization			
Slope (γ_{20})	.26**	.04	[.02, .12]
Variance (τ_2)	.05	.02	[.01, .08]
β_3 : Daily distress \rightarrow Marital satisfaction			
Slope (γ_{30})	-.11**	.03	[-.16, -.05]
Variance (τ_3)	.01	.01	[-.01, .02]
β_4 : Daily distress \rightarrow Life satisfaction			
Slope (γ_{40})	-.13**	.04	[-.20, -.07]
Variance (τ_4)	.05	.02	[.07, .08]
β_5 : Daily distress \rightarrow Positive affect			
Slope (γ_{50})	-.29**	.06	[-.39, -.19]
Variance (τ_5)	.07	.03	[.02, .13]
β_6 : Daily distress \rightarrow Negative affect			
Slope (γ_{60})	.27**	.05	[.19, .36]
Variance (τ_6)	.05	.02	[.01, .08]
β_7 : Daily distress \rightarrow Psychological well-being			
Slope (γ_{70})	-.17**	.02	[-.10, -.04]
Variance (τ_7)	.00	.00	[-.01, .01]
β_8 : Daily distress \rightarrow Next day's work engagement			
Slope (γ_{80})	.06	.04	[-.14, .03]
Variance (τ_8)	.05	.02	[-.02, .09]
Residual Variance			
Daily distress	.25**	.03	[.20, .30]
Somatization	.14**	.03	[.10, .18]
Marital satisfaction	.15**	.03	[.10, .19]
Life satisfaction	.13**	.02	[.10, .16]
Positive affect	.38**	.04	[.30, .44]
Negative affect	.41**	.04	[.34, .49]
Psychological well-being	.04	.00	[.03, .05]
Next day's work engagement	.03	.04	[.20, .30]

6.3.2 MSEM Moderated Mediation Models

In the subsequent sections, I will represent the results of the various moderated mediation models. Table 6 to 19 presented the parameter estimates for the moderated mediation MSEM models and their corresponding 95% confidence interval (CIs). Additionally, I also controlled for the respective individual coping behaviours in the models where their corresponding dyadic coping behaviours were tested i.e. in models where the effects of emotion-focused dyadic coping were tested, emotion-focused individual coping were also controlled for. Lastly, I also controlled for work engagement (Day t) when testing for the relationships between distress and next day's work engagement (Day t+1).

To test for moderated mediated effects, I estimated the indirect effects of daily work hassles on various outcomes at higher (+1 SD) and lower (-1 SD) values of the moderators at both stages of moderation in the models. The condition at which the moderators were +1 SD at both first and stage of the model would be referred to as the high-high condition and the condition at which the moderators were -1 SD at both first and stage of the model would be referred to as the low-low condition. A significant difference in the indirect effects between the high-high and low-low conditions would indicate moderated mediation where the magnitude of the indirect effects varies as a function of the moderators.

Besides testing for moderated mediation, I also tested for the significance of both the conditional values of daily work stress on daily distress and daily distress on well-being/engagement as a function of dyadic coping. Whenever the conditional values were significant, the corresponding interaction plots of the conditional values will be plotted at -1 and +1 SD by using the online interaction utilities on <http://www.quantpsy.org/interact/hlm2.htm>.

MSEM Moderated mediation – Somatization

Table 6 showed the dual stage moderated mediation of *perceived problem-focused dyadic coping* on *somatization*. Results suggested that perceived problem-focused dyadic coping did not moderate the relationship between daily work distress and daily distress ($\gamma_{12} = -.07$, n.s.), neither did it moderate the relationship between daily distress and somatization ($\gamma_{22} = .08$, n.s.).

The incremental main effects of perceived problem-focused dyadic coping on daily distress ($\gamma_{11} = -.06$, n.s.) and somatization ($\gamma_{21} = .04$, n.s.) were not significant.

Although the indirect effects were significant for both high-high group (Indirect effect = .56, 95% C.I. [.08, 1.02]) and low-low condition (Indirect effect = .53, 95% C.I. [.08, .99]), there was no moderated mediation effect because the difference in indirect effects between the two conditions was .02, 95% C.I. [-.80, .84], suggesting that no moderated mediation took place.

Interestingly, the direct effect parameters suggested that after accounting for the indirect effects, daily work hassles continued to have a significant direct effect on somatization (Direct effect = .13, 95% C.I. [.11, .46] in the low-low condition while its direct effect on somatization was not significant in the high-high condition (Direct effect = .06, 95% C.I. [-.22, .34]). These results suggested that the effect of daily work hassles were fully mediated by distress in the high-high condition but was only partially mediated in the low-low condition.

Total effect analyses (Differences in total effect = -.05, 95% C.I. [-.09, .78]) suggested that there were no difference in the effect sizes between the two conditions.

Table 6: MSEM moderated mediation effects of perceived problem-focused dyadic coping on distress and somatization

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.51**	.11	[.33, .70]
Perceived problem-focused dyadic coping (γ_{11})	-.06	.10	[-.22, .10]
Daily work hassles*Perceived problem-focused dyadic coping (γ_{12})	-.07	.30	[-.56, .42]
β_2 : Daily distress \rightarrow Somatization			
Slope (γ_{20})	.04	.05	[-.05, .12]
Perceived problem-focused dyadic coping (γ_{21})	.04	.04	[-.06, .12]
Daily distress*Perceived problem-focused dyadic coping (γ_{22})	.08	.07	[-.09, .08]
Fixed Slopes			
β_3 : Problem-focused individual coping \rightarrow Daily distress	.06	.05	[-.02, .14]
β_4 : Problem-focused individual coping \rightarrow Somatization	-.04	.06	[-.14, .06]
Residual Variance			
Daily distress	.22**	.02	[.20, .25]
Somatization	.14**	.01	[.12, .16]
Moderated mediation effect			
Indirect effect for high-high condition	.56**	.29	[.08, .92]
Indirect effect for low-low condition	.53**	.28	[.08, .99]
Difference in indirect effect between high-high and low-low condition	.02	.49	[-.80, .84]
Direct effect			
Direct effect of daily work hassles on somatization in high-high condition	.06	.17	[-.22, .34]
Direct effect of daily work hassles on somatization in low-low condition	.13**	.20	[.11, .46]
Difference in indirect effect between high-high and low-low condition	-.07	.34	[-.63, .49]
Total Effect			
Total effect in high-high condition	.62**	.25	[.20, 1.03]
Total effect in low-low condition	.66**	.31	[.16, .77]
Difference in total effect between high-high and low-low condition	-.05	.50	[-.09, .78]

Table 7 showed the dual stage moderated mediation of *perceived emotion-focused dyadic coping* on *somatization*. Results revealed that perceived emotion-focused dyadic coping significantly moderated the relationship between daily work hassles and daily distress ($\gamma_{12} = -.13$, $p < .01$), as well as, the relationship between daily distress and somatization ($\gamma_{22} = -.16$, $p < .01$). Figures 5 and 6 showed the interaction plots.

Figure 5 showed that regardless of their level of daily work hassles, individuals who perceived to have received high daily levels of emotion-focused dyadic coping would experience lower levels of daily distress compared to those who perceived to have received low daily levels of emotion-focused dyadic coping. This relationship is more acute at higher levels of work hassle than at lower levels of it. Since the conditional effects of emotion-focused dyadic coping on the relationship between daily work hassles and daily distress was consistent in all MSEM models, for the sake of brevity, I shall not discuss these results in the rest of the analyses.

Figure 6 showed that, on average, individuals who perceived to have received high daily levels of emotion-focused dyadic coping experienced lower levels of somatization than individuals who perceived to have received low daily levels of emotion-focused dyadic coping. Furthermore, on day when daily distress was high, individuals who perceived to have received high levels of emotion-focused dyadic coping were less likely to experience somatization than those who perceived to have received low levels of emotion-focused dyadic coping. This suggested that the negative impact of daily distress on somatization was more severe when individuals perceived to have received low levels of emotion-focused dyadic coping from their spouses.

The MSEM analyses revealed that the incremental main effect of perceived emotion-focused dyadic coping on daily distress ($\gamma_{11} = -.11, p < .01$) was significant while its main effect on somatization was not ($\gamma_{21} = .01, n.s.$).

The moderated mediation analyses suggested the indirect effect for both high-high (Indirect effect = .40, 95% C.I. [.18, .98]) and low-low (Indirect effect = .58, 95% C.I. [.12, .95]) conditions were significant and were fully mediated by daily distress. The effect difference between the two conditions was -.18, 95% C.I. [.67, .77], suggesting that the indirect of daily work hassles on somatization was significantly stronger for individuals who perceived low levels of emotion-focused dyadic coping versus those who perceived high levels of emotion-focused dyadic coping from their spouses.

Total effect analyses (Differences in total effect = -.26, 95% C.I. [-.58, -.12]) suggested that the impact of daily work hassles on somatization were stronger for the low-low condition than for the high-high condition.

Table 7: MSEM moderated mediation effects of perceived emotion-focused dyadic coping on distress and somatization

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.53**	.11	[.35, .70]
Perceived emotion-focused dyadic coping (γ_{11})	-.11*	.10	[-.26, -.10]
Daily work hassles*Perceived emotion-focused dyadic coping (γ_{12})	-.13**	.24	[-.52, -.06]
β_2 : Daily distress \rightarrow Somatization			
Slope (γ_{20})	.03	.05	[-.05, .11]
Perceived emotion-focused dyadic coping (γ_{21})	.01	.06	[-.09, .10]
Daily distress*Perceived emotion-focused dyadic coping (γ_{22})	-.16**	.13	[.06, .37]
Fixed Slopes			
β_3 : Emotion-focused individual coping \rightarrow Daily distress	.01	.06	[-.09, .10]
β_4 : Emotion-focused individual coping \rightarrow Somatization	-.02	.15	[-.10, .06]
Residual Variance			
Daily distress	.23**	.01	[.21, .24]
Somatization	.14**	.01	[.13, .15]
Moderated mediation effect			
Indirect effect for high-high condition	.40**	.19	[.18, .98]
Indirect effect for low-low condition	.58**	.25	[.12, .95]
Difference in indirect effect between high-high and low-low condition	-.18**	.15	[-.67, -.17]
Direct effect			
Direct effect of daily work hassles on somatization in high-high condition	.02	.17	[-.29, .26]
Direct effect of daily work hassles on somatization in low-low condition	.10 ⁺	.12	[.00, .40]
Difference in indirect effect between high-high and low-low condition	-.08	.25	[.10, .18]
Total Effect			
Total effect in high-high condition	.42**	.30	[.07, 1.10]
Total effect in low-low condition	.68**	.29	[.27, 1.29]
Difference in indirect effect between high-high and low-low condition	-.26**	.54	[-.58, -.12]

Figure 5: Interaction plot for buffering effects of perceived emotion-focused dyadic coping on the relationship between daily work hassles and daily distress

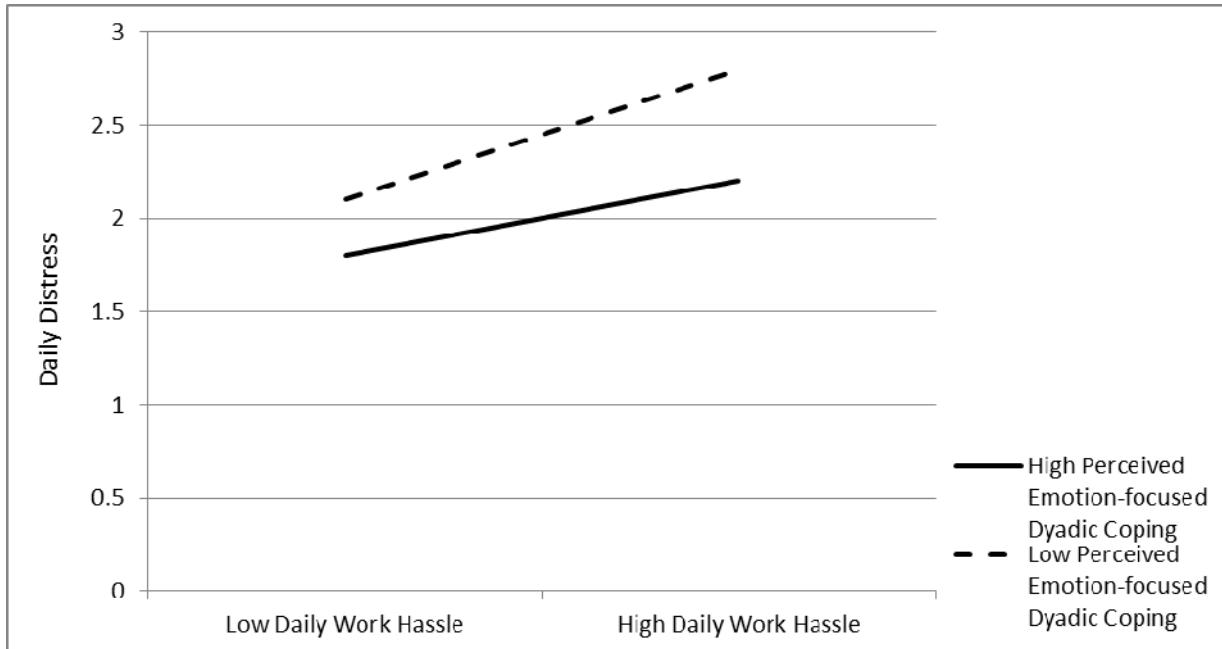
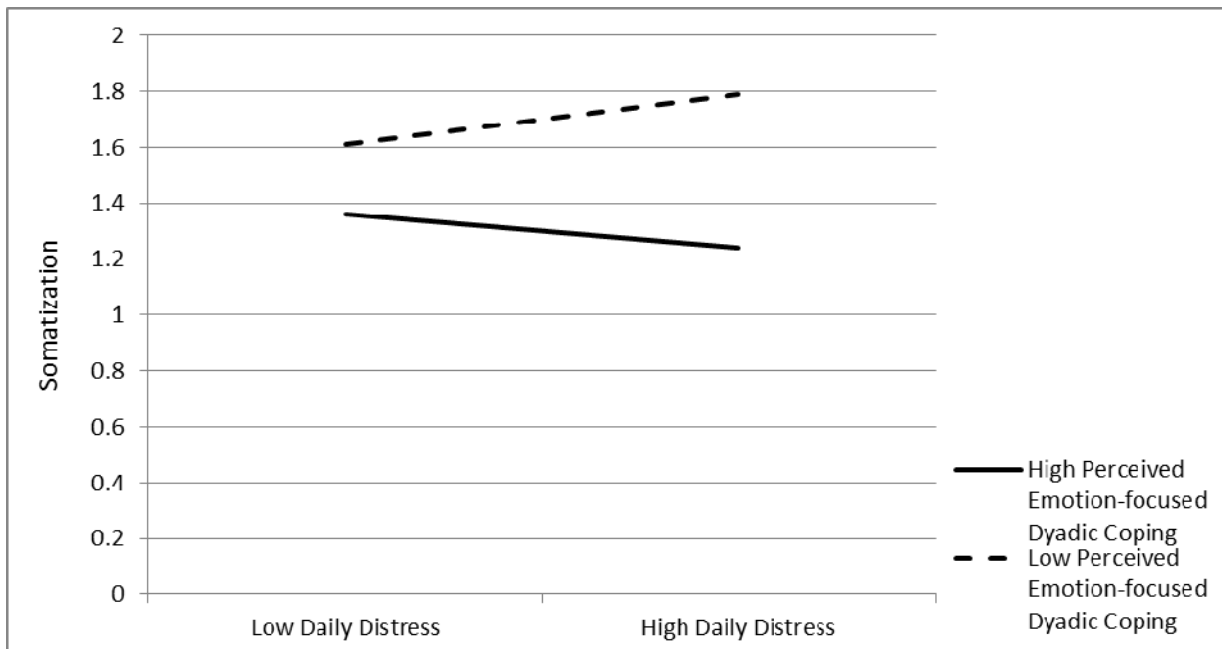


Figure 6: Interaction plot for buffering effects of perceived emotion-focused dyadic coping on the relationship between daily distress and somatization



MSEM Moderated mediation – Marital satisfaction

Table 8 showed the dual stage moderated mediation of *perceived problem-focused dyadic coping* on *marital satisfaction*. Results suggested that perceived problem-focused dyadic coping did not moderate the relationship between daily work distress and daily distress ($\gamma_{12} = -.07$, n.s.), neither did it moderate the relationship between daily distress and marital satisfaction ($\gamma_{22} = .05$, n.s.).

The incremental main effect of perceived problem-focused dyadic coping on daily distress ($\gamma_{11} = -.06$, n.s.) was not significant but was significant for marital satisfaction ($\gamma_{21} = .13$, $p < .01$).

Although the indirect effects were significant for both high-high (Indirect effect = .40, 95% C.I. [.14, .88]) and low-low (Indirect effect = .43, 95% C.I. [.13, .85]) conditions, the differences in indirect effects between the two conditions was .03, 95% C.I. [-.76, .70], suggesting that no moderated mediation took place.

The direct effect analyses suggested that the effect of daily distress on marital satisfaction were completely mediated by daily distress in both high-high (Direct effect = -.04, 95% C.I. [-.25, .17]) and low-low (Direct effect = -.02, 95% C.I. [-.21, .26]) conditions.

Total effect analyses (Differences in total effect = -.05, 95% C.I. [-.29, .07]) suggested that there were no difference in the effect sizes between the two conditions.

Table 8: MSEM moderated mediation effects of perceived problem-focused dyadic coping on distress and marital satisfaction

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.51**	.11	[.33, .70]
Perceived problem-focused dyadic coping (γ_{11})	-.06	.10	[-.22, .10]
Daily work hassles*Perceived problem-focused dyadic coping (γ_{12})	-.07	.30	[-.56, .42]
β_2 : Daily distress \rightarrow Marital satisfaction			
Slope (γ_{20})	-.10*	.02	[-.18, -.01]
Perceived problem-focused dyadic coping (γ_{21})	.13**	.03	[.01, .13]
Daily distress*Perceived problem-focused dyadic coping (γ_{22})	.05	.05	[-.15, .05]
Fixed Slopes			
β_3 : Problem-focused individual coping \rightarrow Daily distress	.06	.05	[-.02, .14]
β_4 : Problem-focused individual coping \rightarrow Marital satisfaction	.01	.05	[-.07, .09]
Residual Variance			
Daily distress	.22**	.01	[.20, .24]
Marital satisfaction	.14**	.01	[.13, .15]
Moderated mediation effect			
Indirect effect for high-high condition	.40**	.25	[.14, .88]
Indirect effect for low-low condition	.43**	.25	[.13, .85]
Difference in indirect effect between high-high and low-low condition	-.03	.44	[-.76, .70]
Direct effect			
Direct effect of daily work hassles on marital satisfaction in high-high condition	-.04	.13	[-.25, .17]
Direct effect of daily work hassles on marital satisfaction in low-low condition	-.02	.14	[-.21, .26]
Difference in indirect effect between high-high and low-low condition	-.02	.24	[-.42, .33]
Total Effect			
Total effect in high-high condition	.36**	.27	[.09, .81]
Total effect in low-low condition	.41**	.28	[.10, .90]
Difference in indirect effect between high-high and low-low condition	-.05	.50	[-.29, .07]

Table 9 showed the dual stage moderated mediation of *perceived emotion-focused dyadic coping* on *marital satisfaction*. Results revealed that perceived emotion-focused dyadic coping significantly moderated the relationship between daily work hassles and daily distress ($\gamma_{12} = -.13$, $p < .01$) in the first stage, but not the relationship between daily distress and marital satisfaction ($\gamma_{22} = .04$, n.s.) in the second stage of the model.

The analyses revealed that the incremental main effects of perceived emotion-focused dyadic coping on both daily distress ($\gamma_{11} = -.11$, $p < .01$) and marital satisfaction were significant ($\gamma_{21} = .14$, $p < .01$).

Moderated mediation analyses revealed the indirect effects for both high-high (Indirect effect = .36, 95% C.I. [.06, .72]) and low-low (Indirect effect = .52, 95% C.I. [.19, .84]) conditions were significant. The effect difference between the two conditions was -.15, 95% C.I. [-.77, -.06], suggesting that the indirect effects of daily work hassles on marital satisfaction was significantly stronger for individuals who perceived to have received low levels of emotion-focused dyadic coping than those who perceived to have received high levels of emotion-focused dyadic coping. These effects were likely to be due to the moderation that perceived emotion-focused dyadic coping had on the relationship between daily work hassles and daily distress.

Direct effect analyses suggested that the effect of daily distress on marital satisfaction were completely mediated by daily distress since the direct effect in both high-high (Direct effect = -.04, 95% C.I. [-.25, .16]) and low-low (Direct effect = -.06, 95% C.I. [-.17, .28]) conditions were non-significant.

Total effect analyses (Differences in total effect = -.14, 95% C.I. [-.84, -.12]) suggested that the impact of daily work hassles on marital satisfaction were stronger for the low-low condition than for the high-high condition.

Table 9: MSEM moderated mediation effects of perceived emotion-focused dyadic coping on distress and marital satisfaction

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.53**	.11	[.35, .70]
Perceived emotion-focused dyadic coping (γ_{11})	-.11*	.10	[-.26, -.10]
Daily work hassles*Perceived emotion-focused dyadic coping (γ_{12})	-.13**	.24	[-.52, -.06]
β_2 : Daily distress \rightarrow Marital satisfaction			
Slope (γ_{20})	-.09	.03	[-.12, .04]
Perceived emotion-focused dyadic coping (γ_{21})	.14**	.06	[.05, .24]
Daily distress*Perceived emotion-focused dyadic coping (γ_{22})	.04	.12	[-.17, .24]
Fixed Slopes			
β_3 : Emotion-focused individual coping \rightarrow Daily distress	.03	.03	[-.04, .05]
β_4 : Emotion-focused individual coping \rightarrow Marital satisfaction	.06	.05	[-.07, .08]
Residual Variance			
Daily distress	.23**	.03	[.18, .27]
Marital satisfaction	.12**	.02	[.08, .16]
Moderated mediation effect			
Indirect effect for high-high condition	.36**	.22	[.06, .72]
Indirect effect for low-low condition	.52**	.20	[.19, .84]
Difference in indirect effect between high-high and low-low condition	-.15**	.37	[-.77, -.06]
Direct effect			
Direct effect of daily work hassles on marital satisfaction in high-high condition	-.04	.12	[-.25, .16]
Direct effect of daily work hassles on marital satisfaction in low-low condition	-.06	.14	[-.17, .28]
Difference in indirect effect between high-high and low-low condition	.02	.24	[-.50, .01]
Total Effect			
Total effect in high-high condition	.32**	.25	[.10, .74]
Total effect in low-low condition	.46**	.24	[.18, .97]
Difference in indirect effect between high-high and low-low condition	-.14**	.45	[-.84, -.12]

MSEM Moderated mediation – Life satisfaction

Table 10 showed the dual stage moderated mediation of *perceived problem-focused dyadic coping* on *life satisfaction*. Results revealed that perceived problem-focused dyadic coping do not moderate the relationship between daily work hassles and daily distress ($\gamma_{12} = -.07$, n.s.) but moderated the relationship between daily distress and life satisfaction ($\gamma_{22} = -.11$, $p < .01$) in Stage 2 of the model. Figure 7 showed the interaction plots for the Stage 2 moderation.

Figure 7 showed that on average, individuals who perceived to have received high daily problem-focused dyadic coping experienced lower life satisfaction than those who perceived to have received low daily problem-focused coping. Furthermore, the decline in life satisfaction on day when individuals experienced high levels of daily distress was steeper in those who perceived to have received high levels of problem-focused dyadic coping than those who perceived to have received low levels of problem-focused dyadic coping. This suggested that perceived problem-focused dyadic coping had a reverse buffering effect that exacerbates the negative impact of daily distress on individuals' life satisfaction.

The incremental main effects of perceived problem-focused dyadic coping on daily distress ($\gamma_{11} = -.06$, n.s.) and life satisfaction ($\gamma_{21} = .09$, n.s.) were not significant.

The MSEM analyses also revealed the indirect effects for both high-high (Indirect effect = .26, 95% C.I. [.11, .63]) and low-low (Indirect effect = .53, 95% C.I. [.17, .89]) conditions were significant. The effect difference between the two conditions was -.27, 95% C.I. [-.39, -.25], suggesting that the indirect of daily work hassles on life satisfaction was significantly stronger for individuals who had low levels of perceived problem-focused dyadic coping versus those who had high levels of perceived problem-focused dyadic coping. . These effects were likely to

be due to the moderation effect that perceived problem-focused dyadic coping had on the relationship between daily distress and life satisfaction.

Furthermore, direct effect analyses suggested that the impact of daily work hassles on life satisfaction were partially mediated by daily distress since daily work hassles continue to have a direct effect on both high-high (Direct effect = $-.12$, 95% C.I. [$-.13$, $-.03$]) and low-low (Direct effect = $-.29$, 95% C.I. [$-.49$, $-.09$]) conditions, even after taking into account the indirect effects through daily distress.

Total effect analyses (Differences in total effect = $-.10$, 95% C.I. [$-.10$, $-.01$]) suggested that the impact of daily work hassles on life satisfaction were stronger for the low-low condition than for the high-high condition.

Table 10: MSEM moderated mediation effects of perceived problem-focused dyadic coping on distress and life satisfaction

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.51**	.11	[.33, .70]
Problem-focused dyadic coping (γ_{11})	-.06	.10	[-.22, .10]
Daily work hassles*Perceived problem-focused dyadic coping (γ_{12})	-.07	.30	[-.56, .42]
β_2 : Daily distress \rightarrow Life satisfaction			
Slope (γ_{20})	-.11*	.04	[-.18, -.04]
Problem-focused dyadic coping (γ_{21})	.09	.06	[-.01, .19]
Daily distress*Perceived problem-focused dyadic coping (γ_{22})	-.11*	.14	[-.34, -.10]
Fixed Slopes			
β_3 : Problem-focused individual coping \rightarrow Daily distress	.06	.03	[.00, .11]
β_4 : Problem-focused individual coping \rightarrow Life satisfaction	.17**	.04	[.10, .24]
Residual Variance			
Daily distress	.22**	.02	[.18, .26]
Life satisfaction	.10*	.01	[.07, .11]
Moderated mediation effect			
Indirect effect for high-high condition	.26**	.22	[.11, .63]
Indirect effect for low-low condition	.53**	.22	[.17, .89]
Difference in indirect effect between high-high and low-low condition	-.27**	.40	[-.39, -.25]
Direct effect			
Direct effect of daily work hassles on life satisfaction in high-high condition	-.12**	.15	[-.13, -.03]
Direct effect of daily work hassles on life satisfaction in low-low condition	-.29**	.12	[-.49, -.09]
Difference in indirect effect between high-high and low-low condition	.17**	.25	[.01, .28]
Total Effect			
Total effect in high-high condition	.14**	.25	[.03, .79]
Total effect in low-low condition	.24**	.24	[.16, .63]
Difference in indirect effect between high-high and low-low condition	-.10*	.45	[-.10, -.01]

Figure 7: Interaction plot for buffering effects of perceived problem-focused dyadic coping on the relationship between daily distress and life satisfaction

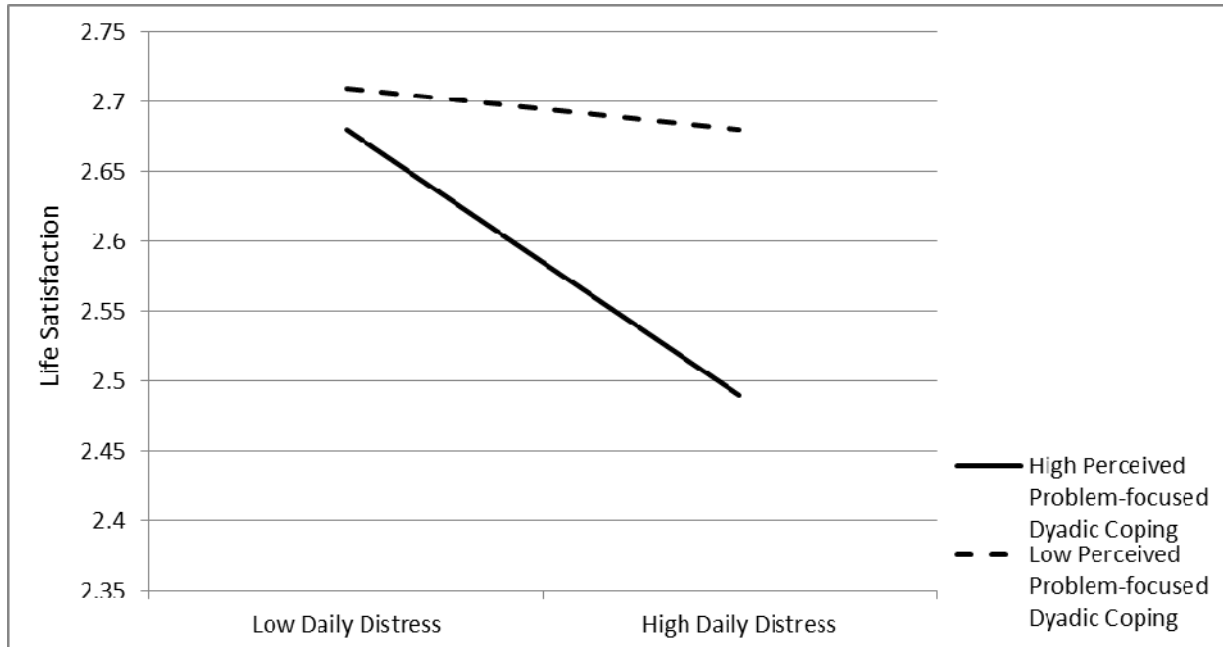


Table 11 showed the dual stage moderated mediation of *perceived emotion-focused dyadic coping* on *life satisfaction*. Results revealed that perceived emotion-focused dyadic coping significantly moderated the relationship between daily work hassles and daily distress ($\gamma_{12} = -.13, p < .01$) in the first stage, but not the relationship between daily distress and life satisfaction ($\gamma_{22} = .05, n.s.$) in the second stage of the model.

The analyses revealed that the incremental main effects of perceived emotion-focused dyadic coping on both daily distress ($\gamma_{11} = -.11, p < .01$) and life satisfaction were significant ($\gamma_{21} = .32, p < .01$).

The moderated mediation analyses revealed the indirect effects for both high-high (Indirect effect = .34, 95% C.I. [.05, .69]) and low-low (Indirect effect = .48, 95% C.I. [.15, .81]) conditions were significant. The difference between the two conditions was -.14, 95% C.I. [-.74, -.04], suggesting that the indirect of daily work hassles on life satisfaction was significantly stronger for individuals who perceived to have received low levels of emotion-focused dyadic coping than those who perceived to have received high levels of emotion-focused dyadic coping. These effects were likely to be due to the moderation effect that perceived emotion-focused dyadic coping had on the relationship between daily work hassles and daily distress.

Direct effect analyses suggested that the indirect effects of daily work hassles on life satisfaction are only partially mediated by daily distress since daily work hassles continue to have direct effects on life satisfaction in both high-high (Direct effect = -.14, 95% C.I. [-.34, -.07]) and low-low (Direct effect = -.17, 95% C.I. [-.39, -.05]) conditions.

Total effect analyses (Differences in total effect = -.11, 95% C.I. [-.19, -.08]) suggested that the impact of daily work hassles on life satisfaction were stronger for the low-low condition than for the high-high condition.

Table 11: MSEM moderated mediation effects of perceived emotion-focused dyadic coping on distress and life satisfaction

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.53**	.11	[.35, .70]
Emotion-focused dyadic coping (γ_{11})	-.11*	.10	[-.26, -.10]
Daily work hassles*Perceived emotion-focused dyadic coping (γ_{12})	-.13**	.24	[-.52, -.06]
β_2 : Daily distress \rightarrow Life satisfaction			
Slope (γ_{20})	-.12**	.04	[-.19, -.04]
Emotion-focused dyadic coping (γ_{21})	.32**	.05	[.26, .42]
Daily distress*Perceived emotion-focused dyadic coping (γ_{22})	.05	.10	[-.11, .21]
Fixed Slopes			
β_3 : Emotion-focused individual coping \rightarrow Daily distress	.03	.03	[.00, .11]
β_4 : Emotion-focused individual coping \rightarrow Life satisfaction	.21**	.04	[.10, .24]
Residual Variance			
Daily distress	.23**	.03	[.18, .27]
Life satisfaction	.10*	.01	[.08, .13]
Moderated mediation effect			
Indirect effect for high-high condition	.34**	.21	[.05, .69]
Indirect effect for low-low condition	.48**	.20	[.15, .81]
Difference in indirect effect between high-high and low-low condition	-.14**	.37	[-.74, -.04]
Direct effect			
Direct effect of daily work hassles on life satisfaction in high-high condition	-.14**	.12	[-.34, -.07]
Direct effect of daily work hassles on life satisfaction in low-low condition	-.17**	.14	[-.39, -.05]
Difference in indirect effect between high-high and low-low condition	.30**	.22	[.07, .67]
Total Effect			
Total effect in high-high condition	.20**	.24	[.09, .87]
Total effect in low-low condition	.31**	.22	[.04, .67]
Difference in indirect effect between high-high and low-low condition	-.11**	.40	[-.19, -.08]

MSEM Moderated mediation – Positive Affect

Table 12 showed the dual stage moderated mediation of *perceived problem-focused dyadic coping* on *positive affect*. Results suggested that perceived problem-focused dyadic coping did not moderate the relationship between daily work distress and daily distress ($\gamma_{12} = -.07$, n.s.), neither did it moderate the relationship between daily distress and positive affect ($\gamma_{22} = .05$, n.s.).

The incremental main effects of perceived problem-focused dyadic coping on daily distress ($\gamma_{11} = -.06$, n.s.) was not significant but it was significant for positive affect ($\gamma_{21} = .14$, $p < .01$).

Although the indirect effects were significant for both high-high (Indirect effect = .36, 95% C.I. [.12, .55]) and low-low (Indirect effect = .35, 95% C.I. [.04, .66]) conditions, the differences in indirect effect was .01 95% C.I. [-.81, .14], suggesting that no moderated mediation took place.

The direct effect analyses suggested that the effect of daily distress on marital satisfaction were completely mediated by daily distress only in high-high (Direct effect = -.04, 95% C.I. [-.35, .43]) condition but was partially mediated in the low-low (Direct effect = -.34, 95% C.I. [-.64, -.04]) condition since daily work hassles continue to have an impact on positive affect in the low-low condition even after taking into account the indirect effects.

Total effect analyses (Differences in total effect = .39, 95% C.I. [.12, .98]) suggested that the impact of daily work hassles on positive affect were stronger for the high-high condition than for the low-low condition.

Table 12: MSEM moderated mediation effects of perceived problem-focused dyadic coping on distress and positive affect

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.51**	.11	[.33, .70]
Problem-focused dyadic coping (γ_{11})	-.06	.10	[-.22, .10]
Daily work hassles*Perceived problem-focused dyadic coping (γ_{12})	-.07	.30	[-.56, .42]
β_2 : Daily distress \rightarrow Positive Affect			
Slope (γ_{20})	-.25**	.05	[-.34, -.17]
Problem-focused dyadic coping (γ_{21})	.14**	.09	[.01, .29]
Daily distress*Perceived problem-focused dyadic coping (γ_{22})	-.05	.16	[-.32, .21]
Fixed Slopes			
β_3 : Problem-focused individual coping \rightarrow Daily distress	.06	.03	[.00, .11]
β_4 : Problem-focused individual coping \rightarrow Positive Affect	.25**	.10	[.09, .41]
Residual Variance			
Daily distress	.22**	.02	[.19, .26]
Positive Affect	.34*	.04	[.27, .41]
Moderated mediation effect			
Indirect effect for high-high condition	.36**	.23	[.12, .55]
Indirect effect for low-low condition	.35**	.19	[.04, .66]
Difference in indirect effect between high-high and low-low condition	.01	.38	[-.81, .14]
Direct effect			
Direct effect of daily work hassles on positive affect in high-high condition	.04	.24	[-.35, .43]
Direct effect of daily work hassles on positive affect in low-low condition	-.34**	.18	[-.64, -.04]
Difference in indirect effect between high-high and low-low condition	-.38**	.39	[-.98, -.26]
Total Effect			
Total effect in high-high condition	.40**	.34	[.12, .76]
Total effect in low-low condition	.01	.26	[-.43, .44]
Difference in indirect effect between high-high and low-low condition	.39**	.55	[.12, .98]

Table 13 showed the dual stage moderated mediation of *perceived emotion-focused dyadic coping* on *positive affect*. Results revealed that perceived emotion-focused dyadic coping moderated the relationship between daily work hassles and daily distress ($\gamma_{12} = -.13, p < .01$) in Stage 1 and the relationship between daily distress and positive affect ($\gamma_{22} = .18, p < .01$) in Stage 2. Figures 8 showed the interaction plots for the Stage 2 moderation.

Figure 8 showed that on average, individuals who perceived to have received high daily levels of emotion-focused dyadic experience higher levels positive affect than individuals who perceived to have received low daily levels of emotion-focused dyadic coping. Furthermore, the decline in positive affect for individuals on day when they had high levels of daily distress was lower among those who perceived to have received high levels of emotion-focused dyadic coping than those who perceived to have received low levels of it. This suggested that perceived emotion-focused dyadic coping had a buffering effect that cushion the negative impact of daily distress on individuals' positive affect.

The analyses revealed that the incremental main effects that perceived emotion-focused dyadic coping had on both daily distress ($\gamma_{11} = -.11, p < .01$) and positive affect were significant ($\gamma_{21} = .17, p < .01$).

The MSEM analyses also revealed that the indirect for both high-high (Indirect effect = .18, 95% C.I. [.18, .53]) and low-low (Indirect effect = .40, 95% C.I. [.09, .71]) conditions were significant. The effect difference between the two conditions was -.22, 95% C.I. [-.37, -.18]. This suggested that the indirect of daily work hassles on positive affect was significantly stronger for individuals who perceived low levels of emotion-focused dyadic coping than those who perceived high levels of emotion-focused dyadic coping.

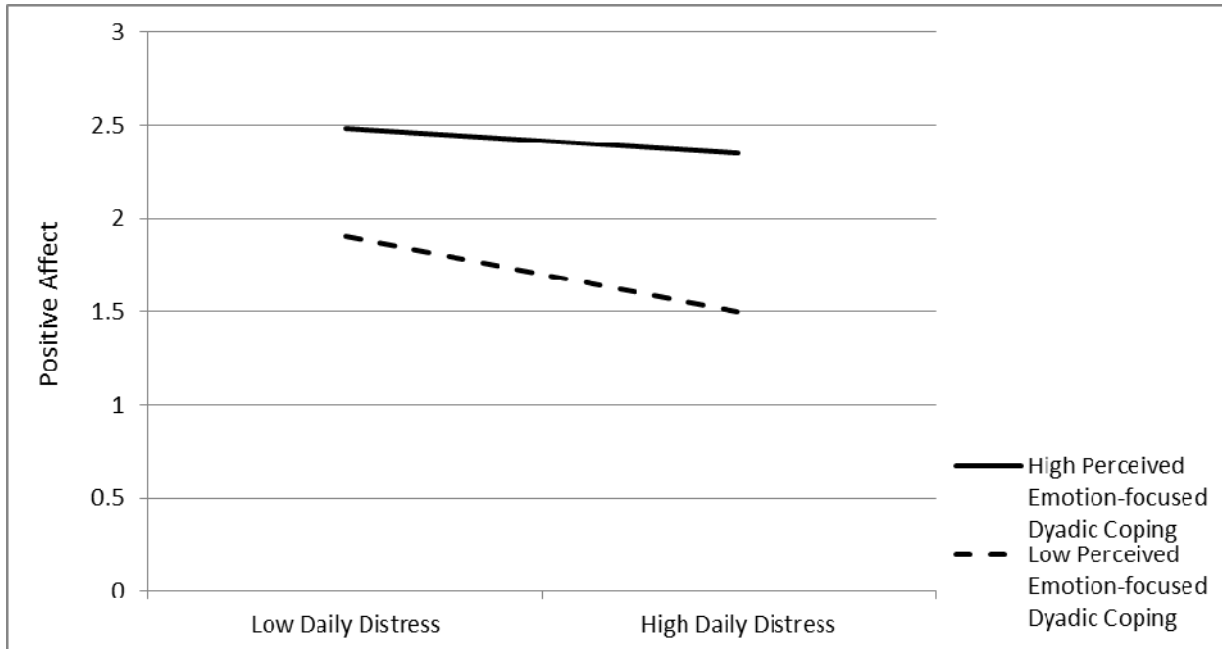
Direct effect analyses suggested that the impact of daily work hassles on positive affect was fully mediated in the high-high (Direct effect = $-.09$, 95% C.I. [$-.40$, $.21$]) condition but was only partially mediated in the low-low (Direct effect = $-.14$, 95% C.I. [$-.40$, $-.12$]) condition.

Total effect analyses (Differences in total effect = $-.17$, 95% C.I. [$-.94$, $-.23$]) suggested that the impact of daily work hassles on positive affect were stronger for the low-low condition than for the high-high condition.

Table 13: MSEM moderated mediation effects of perceived emotion-focused dyadic coping on distress and positive affect

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.53**	.11	[.35, .70]
Emotion-focused dyadic coping (γ_{11})	-.11*	.10	[-.26, -.10]
Daily work hassles*Perceived Emotion-focused dyadic coping (γ_{12})	-.13**	.24	[-.52, -.06]
β_2 : Daily distress \rightarrow Positive affect			
Slope (γ_{20})	-.24**	.05	[-.33, -.15]
Emotion-focused dyadic coping (γ_{21})	.17**	.07	[.05, .28]
Daily distress*Perceived emotion-focused dyadic coping (γ_{22})	.18**	.14	[.13, .22]
Fixed Slopes			
β_3 : Emotion-focused individual coping \rightarrow Daily distress	.03	.03	[.00, .11]
β_4 : Emotion-focused individual coping \rightarrow Positive affect	.20**	.07	[.09, .32]
Residual Variance			
Daily distress	.23**	.03	[.18, .27]
Positive affect	.44**	.04	[.27, .48]
Moderated mediation effect			
Indirect effect for high-high condition	.18**	.22	[.18, .53]
Indirect effect for low-low condition	.40**	.19	[.09, .71]
Difference in indirect effect between high-high and low-low condition	-.22**	.36	[-.37, -.18]
Direct effect			
Direct effect of daily work hassles on positive affect in high-high condition	-.09	.18	[-.40, .21]
Direct effect of daily work hassles on positive affect in low-low condition	-.14**	.16	[-.40, -.12]
Difference in indirect effect between high-high and low-low condition	.05	.30	[-.45, .55]
Total Effect			
Total effect in high-high condition	.09	.29	[-.39, .57]
Total effect in low-low condition	.26**	.24	[.14, .66]
Difference in indirect effect between high-high and low-low condition	-.17**	.47	[-.94, -.12]

Figure 8: Interaction plot for buffering effects of perceived emotion-focused dyadic coping on the relationship between daily distress and positive affect



MSEM Moderated mediation – Negative Affect

Table 14 showed the dual stage moderated mediation of *perceived problem-focused dyadic coping* on *negative affect*. Results revealed that perceived problem-focused dyadic coping do not moderate the relationship between daily work hassles and daily distress ($\gamma_{12} = -.07$, n.s.) but moderated the relationship between daily distress and negative affect ($\gamma_{22} = -.10$, $p < .05$) in Stage 2 of the model. Figure 9 shows the interaction plots for the Stage 2 moderation.

Interestingly, Figure 9 showed that compared to those who perceived to have received low problem-focused dyadic coping, individuals who perceived to have received high daily levels of problem-focused dyadic coping were more likely to experience negative affect when they experience distress. This relationship was more acute at higher levels of distress than at low levels. These results suggested the possibility that individuals who tried to help their spouse resolve work difficulties may unintentionally ended up exacerbating the amount of negative emotions their spouses experienced.

The incremental main effects of perceived problem-focused dyadic coping on daily distress ($\gamma_{11} = -.06$, n.s.) and negative affect ($\gamma_{21} = -.05$, n.s.) were not significant.

The MSEM analyses also revealed the indirect for both high-high (Indirect effect = .76, 95% C.I. [.30, .79]) and low-low (Indirect effect = .72, 95% C.I. [.29, .85]) conditions were significant and were fully mediated by daily distress. There was, however, no moderated mediation because the effect difference between the two conditions was .04, 95% C.I. [-.77, .85].

Total effect analyses (Differences in total effect = .04, 95% C.I. [-.78, .08]) suggested that there were no difference in the effect sizes between the two conditions.

Table 14: MSEM moderated mediation effects of perceived problem-focused dyadic coping on distress and negative affect

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.51**	.11	[.33, .70]
Problem-focused dyadic coping (γ_{11})	-.06	.10	[-.22, .10]
Daily work hassles*Perceived problem-focused dyadic coping (γ_{12})	-.07	.30	[-.56, .42]
β_2 : Daily distress \rightarrow Negative Affect			
Slope (γ_{20})	.23**	.05	[.15, .30]
Problem-focused dyadic coping (γ_{21})	.05	.08	[-.18, .08]
Daily distress*Perceived problem-focused dyadic coping (γ_{22})	.10*	.22	[.06, .45]
Fixed Slopes			
β_3 : Problem-focused individual coping \rightarrow Daily distress	.06	.03	[.00, .11]
β_4 : Problem-focused individual coping \rightarrow Negative Affect	.25**	.10	[.09, .41]
Residual Variance			
Daily distress	.22**	.02	[.19, .26]
Negative Affect	.39	.05	[.31, .47]
Moderated mediation effect			
Indirect effect for high-high condition	.76**	.28	[.30, .79]
Indirect effect for low-low condition	.72**	.26	[.29, .85]
Difference in indirect effect between high-high and low-low condition	.04	.50	[-.77, .85]
Direct effect			
Direct effect of daily work hassles on negative affect in high-high condition	-.03	.24	[-.06, .09]
Direct effect of daily work hassles on negative affect in low-low condition	-.06	.21	[-.02, .06]
Difference in indirect effect between high-high and low-low condition	.03	.42	[-.16, .23]
Total Effect			
Total effect in high-high condition	.73**	.33	[.07, .79]
Total effect in low-low condition	.69**	.29	[.50, .79]
Difference in indirect effect between high-high and low-low condition	.04	.55	[-.78, .08]

Figure 9: Interaction plot for buffering effects of perceived problem-focused dyadic coping on the relationship between daily distress and negative affect

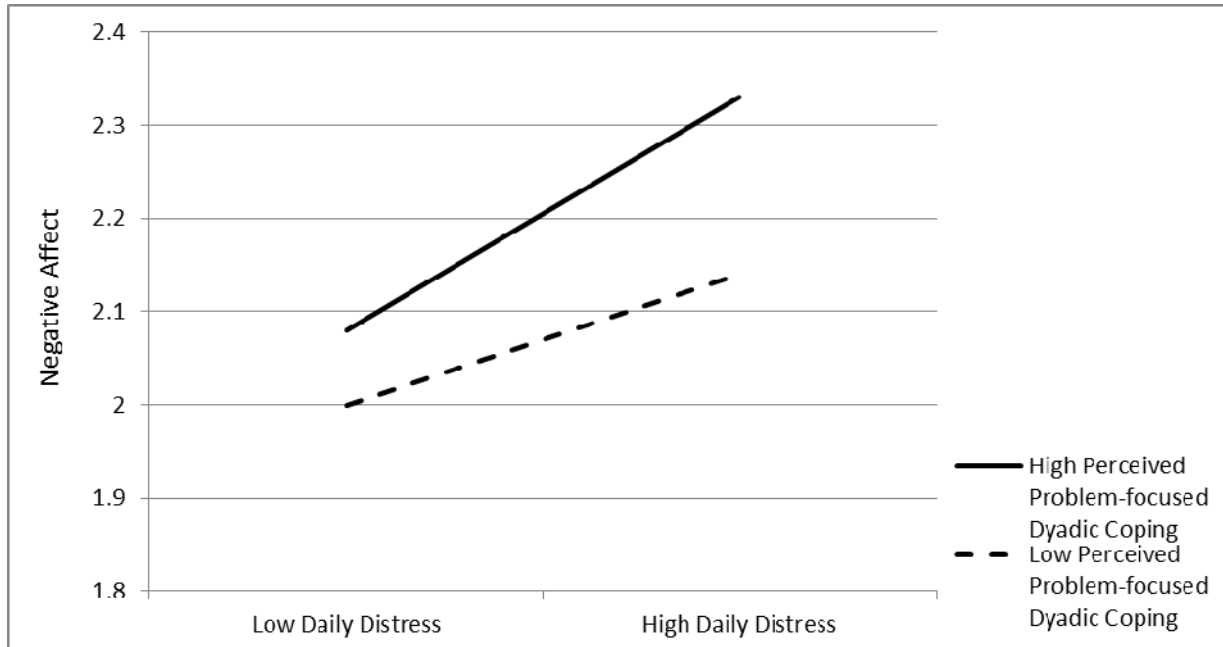


Table 15 showed the dual stage moderated mediation of *perceived emotion-focused dyadic coping* on *negative affect*. Results revealed that perceived emotion-focused dyadic coping significantly moderated the relationship between daily work hassles and daily distress ($\gamma_{12} = -.13$, $p < .01$) in the first stage, but not the relationship between daily distress and negative affect ($\gamma_{22} = .05$, n.s.) in the second stage of the model.

The analyses revealed that the incremental main effects of perceived emotion-focused dyadic coping on both daily distress was significant ($\gamma_{11} = -.11$, $p < .01$) and negative affect ($\gamma_{21} = .12$, $p < .01$).

The moderated mediation analyses revealed the indirect effects for both high-high (Indirect effect = .69, 95% C.I. [.22, .79]) and low-low (Indirect effect = .82, 95% C.I. [.40, .98]) conditions were significant. The effect difference between the two conditions was $-.12$, 95% C.I. [-.36, -.10], suggesting that the indirect of daily work hassles on negative was significantly stronger for individuals who perceived low levels of emotion-focused dyadic coping than those who perceived high levels of emotion-focused dyadic coping. These effects were likely to be due to the moderation effect that perceived emotion-focused dyadic coping had on the relationship between daily work hassles and daily distress.

Direct effect analyses suggested that the indirect effects of daily work hassles on negative affect were fully mediated by daily distress in the high-high (Direct effect = $-.02$, 95% C.I. [-.34, .30]) condition and was only partially mediated by it in the low-low (Direct effect = $-.10$, 95% C.I. [.10, .66]).

Total effect analyses (Differences in total effect = $-.25$, 95% C.I. [-.45, -.06]) suggested that the impact of daily work hassles on negative affect were stronger for the low-low condition than for the high-high condition.

Table 15: MSEM moderated mediation effects of perceived emotion-focused dyadic coping on distress and negative affect

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.53**	.11	[.35, .70]
Emotion-focused dyadic coping (γ_{11})	-.11*	.10	[-.26, -.10]
Daily work hassles*Perceived emotion-focused dyadic coping (γ_{12})	-.13**	.24	[-.52, -.06]
β_2 : Daily distress \rightarrow Negative affect			
Slope (γ_{20})	.23**	.05	[.15, .31]
Emotion-focused dyadic coping (γ_{21})	-.12**	.07	[-.13, -.09]
Daily distress*Perceived emotion-focused dyadic coping (γ_{22})	.05	.20	[-.28, .38]
Fixed Slopes			
β_3 : Emotion-focused individual coping \rightarrow Daily distress	.03	.03	[.00, .11]
β_4 : Emotion-focused individual coping \rightarrow Negative affect	.20**	.07	[.09, .32]
Residual Variance			
Daily distress	.23**	.03	[.18, .27]
Negative affect	.40**	.40	[.32, .47]
Moderated mediation effect			
Indirect effect for high-high condition	.69**	.29	[.22, .79]
Indirect effect for low-low condition	.82**	.25	[.40, .98]
Difference in indirect effect between high-high and low-low condition	-.12**	.49	[-.36, -.10]
Direct effect			
Direct effect of daily work hassles on negative affect in high-high condition	-.02	.19	[-.34, .30]
Direct effect of daily work hassles on negative affect in low-low condition	.10**	.17	[.10, .66]
Difference in indirect effect between high-high and low-low condition	-.41**	.33	[-.95, -.36]
Total Effect			
Total effect in high-high condition	.67**	.34	[.10, .79]
Total effect in low-low condition	.92**	.27	[.76, .98]
Difference in indirect effect between high-high and low-low condition	-.25**	.55	[-.45, -.06]

MSEM Moderated mediation – Psychological Well-being

Table 16 showed the dual stage moderated mediation of *perceived problem-focused dyadic coping* on *psychological well-being*. Results revealed that perceived problem-focused dyadic coping do not moderate the relationship between daily work hassles and daily distress ($\gamma_{12} = -.07$, n.s.) and the relationship between daily distress and psychological well-being ($\gamma_{22} = -.02$, n.s.).

The incremental main effects of perceived problem-focused dyadic coping on daily distress ($\gamma_{11} = -.06$, n.s.) were not significant but it was significant for psychological well-being ($\gamma_{21} = .10$, $p < .05$).

The MSEM analyses revealed the indirect for both high-high (Indirect effect = .47, 95% C.I. [.08, .81]) and low-low (Indirect effect = .50, 95% C.I. [.08, .84]) conditions were significant and were fully mediated by daily distress. There was, however, no moderated mediation because the effect difference between the two conditions was -.03, 95% C.I. [-.95, .66].

Total effect analyses (Differences in total effect = -.03, 95% C.I. [-.97, .60]) suggested that there were no difference in the effect sizes between the two conditions.

Table 16: MSEM moderated mediation effects of perceived problem-focused dyadic coping on distress and psychological well-being

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.51**	.11	[.33, .70]
Problem-focused dyadic coping (γ_{11})	-.06	.10	[-.22, .10]
Daily work hassles*Perceived problem-focused dyadic coping (γ_{12})	-.07	.30	[-.56, .42]
β_2 : Daily distress \rightarrow Psychological well-being			
Slope (γ_{20})	-.07	.03	[-.11, .03]
Problem-focused dyadic coping (γ_{21})	.10*	.03	[.08, .14]
Daily distress*Perceived problem-focused dyadic coping (γ_{22})	-.08	.06	[-.12, .07]
Fixed Slopes			
β_3 : Problem-focused individual coping \rightarrow Daily distress	.06	.03	[.00, .11]
β_4 : Problem-focused individual coping \rightarrow Psychological well-being	.06	.03	[.00, .11]
Residual Variance			
Daily distress	.22**	.02	[.19, .26]
Psychological well-being	.04	.01	[.04, .04]
Moderated mediation effect			
Indirect effect for high-high condition	.47**	.27	[.08, .81]
Indirect effect for low-low condition	.50**	.26	[.08, .94]
Difference in indirect effect between high-high and low-low condition	-.03	.49	[-.95, .66]
Direct effect			
Direct effect of daily work hassles on psychological well-being in high-high condition	-.05	.06	[-.15, .06]
Direct effect of daily work hassles on psychological well-being in low-low condition	-.01	.08	[-.13, .12]
Difference in indirect effect between high-high and low-low condition	-.04	.13	[-.26, .18]
Total Effect			
Total effect in high-high condition	.42**	.26	[.11, .75]
Total effect in low-low condition	.49**	.27	[.07, .94]
Difference in indirect effect between high-high and low-low condition	-.03	.48	[-.97, .60]

Table 17 showed the dual stage moderated mediation of *perceived emotion-focused dyadic coping* on *psychological well-being*. Results revealed that perceived emotion-focused dyadic coping significantly moderated the relationship between daily work hassles and daily distress ($\gamma_{12} = -.13, p < .01$) in the first stage, but not the relationship between daily distress and psychological well-being ($\gamma_{22} = .01, n.s.$) in the second stage of the model.

The analyses revealed that the incremental main effects of perceived emotion-focused dyadic coping on daily distress was significant ($\gamma_{11} = -.11, p < .01$). It was, however, not significant for psychological well-being ($\gamma_{21} = -.01, n.s.$).

The moderated mediation analyses revealed the indirect effects for both high-high (Indirect effect = .36, 95% C.I. [.02, .69]) and low-low (Indirect effect = .56, 95% C.I. [.29, .84]) conditions were significant. The effect difference between the two conditions was -.21, 95% C.I. [-.75, -.03], suggesting that the indirect of daily work hassles on negative was significantly stronger for individuals who perceived to have received low levels of emotion-focused dyadic coping than those who perceived to have received high levels of emotion-focused dyadic coping. These effects were likely to be due to the moderation effect that perceived emotion-focused dyadic coping had on the relationship between daily work hassles and daily distress.

Direct effect analyses suggested that the indirect effects of daily work hassles on psychological well-being were fully mediated by daily distress in both high-high (Direct effect = .02, 95% C.I. [-.16, .12]) and low-low (Direct effect = .02, 95% C.I. [-.13, .10]) conditions.

Total effect analyses (Differences in total effect = -.21, 95% C.I. [-.80, -.18]) suggested that the impact of daily work hassles on psychological well-being were stronger for the low-low condition than for the high-high condition.

Table 17: MSEM moderated mediation effects of perceived emotion-focused dyadic coping on distress and psychological well-being

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.53**	.11	[.35, .70]
Emotion-focused dyadic coping (γ_{11})	-.11*	.10	[-.26, -.10]
Daily work hassles*Perceived emotion-focused dyadic coping (γ_{12})	-.13**	.24	[-.52, -.06]
β_2 : Daily distress \rightarrow Psychological well-being			
Slope (γ_{20})	-.07	.02	[-.10, .04]
Emotion-focused dyadic coping (γ_{21})	-.02	.02	[-.06, .02]
Daily distress*Perceived emotion-focused dyadic coping (γ_{22})	.01	.04	[-.07, .07]
Fixed Slopes			
β_3 : Emotion-focused individual coping \rightarrow Daily distress	.03	.03	[.00, .11]
β_4 : Emotion-focused individual coping \rightarrow Psychological well-being	.06	.03	[-.02, .10]
Residual Variance			
Daily distress	.23**	.03	[.18, .27]
Psychological well-being	.04	.01	[-.03, .05]
Moderated mediation effect			
Indirect effect for high-high condition	.36**	.20	[.02, .69]
Indirect effect for low-low condition	.56**	.17	[.29, .84]
Difference in indirect effect between high-high and low-low condition	-.21**	.33	[-.75, -.03]
Direct effect			
Direct effect of daily work hassles on psychological well-being in high-high condition	.02	.08	[-.16, .12]
Direct effect of daily work hassles on psychological well-being in low-low condition	.02	.07	[-.13, .10]
Difference in indirect effect between high-high and low-low condition	.01	.14	[-.23, .22]
Total Effect			
Total effect in high-high condition	.34**	.22	[.03, .70]
Total effect in low-low condition	.58**	.19	[.24, .85]
Difference in indirect effect between high-high and low-low condition	-.21**	.36	[-.80, -.18]

MSEM Moderated mediation – Next day's work engagement

Table 18 showed the dual stage moderated mediation of *perceived problem-focused dyadic coping* on *next day's work engagement*. Results revealed that perceived problem-focused dyadic coping do not moderate the relationship between daily work hassles and daily distress ($\gamma_{12} = -.07$, n.s.) but moderated the relationship between daily distress and next day's work engagement ($\gamma_{22} = -.19$, $p < .05$) in Stage 2 of the model. Figures 10 showed the interaction plots for the Stage 2 moderation.

Figure 10 showed that on average, individuals who perceived to have received high levels of problem-focused dyadic coping the previous day were more likely to experience lower levels of work engagement the next day and this relationship was stronger at higher levels of daily distress. Interestingly, individuals who perceived to have received low problem-focused dyadic coping experience higher levels of work engagement the next day than those who perceived to have received high problem-focused dyadic coping and their work engagement remain somewhat the same regardless of the levels of distress they experience the previous day.

The incremental main effects of problem-focused dyadic coping on daily distress ($\gamma_{11} = -.06$, n.s.) was not significant but was significant for next day's work engagement ($\gamma_{21} = -.15$, $p < .01$).

The MSEM analyses revealed the indirect for both high-high (Indirect effect = .35, 95% C.I. [.09, .78]) and low-low (Indirect effect = .52, 95% C.I. [.08, .97]) conditions were significant. The effect difference between the two conditions was -.18, 95% C.I. [-.98, -.14]. This suggested that the indirect of daily work hassles on next day's work engagement was significantly stronger for individuals who perceived low levels of problem-focused dyadic coping than those who perceived high levels of emotion-focused dyadic coping. This mediated moderation effect is

likely to be due to the moderation effect that perceived problem-focused dyadic coping had on the relationship between daily distress and next day's work engagement.

Direct effect analyses suggested that even after accounting for the indirect effects through daily distress, daily work hassles continue to have a direct impact on next day's work engagement were partially mediated by daily distress in both high-high (Direct effect = $-.12$, 95% C.I. $[-.41, -.11]$) and low-low (Direct effect = $-.17$, 95% C.I. $[-.14, .38]$) conditions.

Total effect analyses (Differences in total effect = $-.12$, 95% C.I. $[-.45, -.08]$) suggested that the impact of daily work hassles on next day's work engagement were stronger for the low-low condition than for the high-high condition.

Table 18: MSEM moderated mediation effects of perceived problem-focused dyadic coping on distress and next day's work engagement

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.51**	.11	[.33, .70]
Problem-focused dyadic coping (γ_{11})	-.06	.10	[-.22, .10]
Daily work hassles*Perceived problem-focused dyadic coping (γ_{12})	-.07	.30	[-.56, .42]
β_2 : Daily distress \rightarrow Next day's work engagement			
Slope (γ_{20})	-.08	.04	[-.18, .03]
Problem-focused dyadic coping (γ_{21})	-.15**	.08	[.03, .26]
Daily distress*Perceived problem-focused dyadic coping (γ_{22})	-.19**	.05	[-.35, -.15]
Fixed Slopes			
β_3 : Problem-focused individual coping \rightarrow Daily distress	.06	.03	[.00, .11]
β_4 : Problem-focused individual coping \rightarrow Next day's work engagement	.15**	.09	[.01, .19]
β_5 : Work engagement \rightarrow Next day's work engagement	.18**	.08	[.10, .29]
Residual Variance			
Daily distress	.22**	.02	[.19, .26]
Next day's work engagement	.23**	.04	[.16, .29]
Moderated mediation effect			
Indirect effect for high-high condition	.35**	.26	[.09, .78]
Indirect effect for low-low condition	.52**	.27	[.08, .97]
Difference in indirect effect between high-high and low-low condition	-.18**	.50	[-.98, -.14]
Direct effect			
Direct effect of daily work hassles on next day's work engagement in high-high condition	-.12**	.18	[-.41, -.11]
Direct effect of daily work hassles on next day's work engagement in low-low condition	-.17**	.25	[-.38, -.14]
Difference in indirect effect between high-high and low-low condition	.05	.36	[-.33, .15]
Total Effect			
Total effect in high-high condition	.23**	.30	[.03, .26]
Total effect in low-low condition	.35**	.33	[.14, .72]
Difference in indirect effect between high-high and low-low condition	-.12**	.56	[-.45, -.08]

Figure 10: Interaction plot for buffering effects of perceived problem-focused dyadic coping on the relationship between daily distress and next day's work engagement

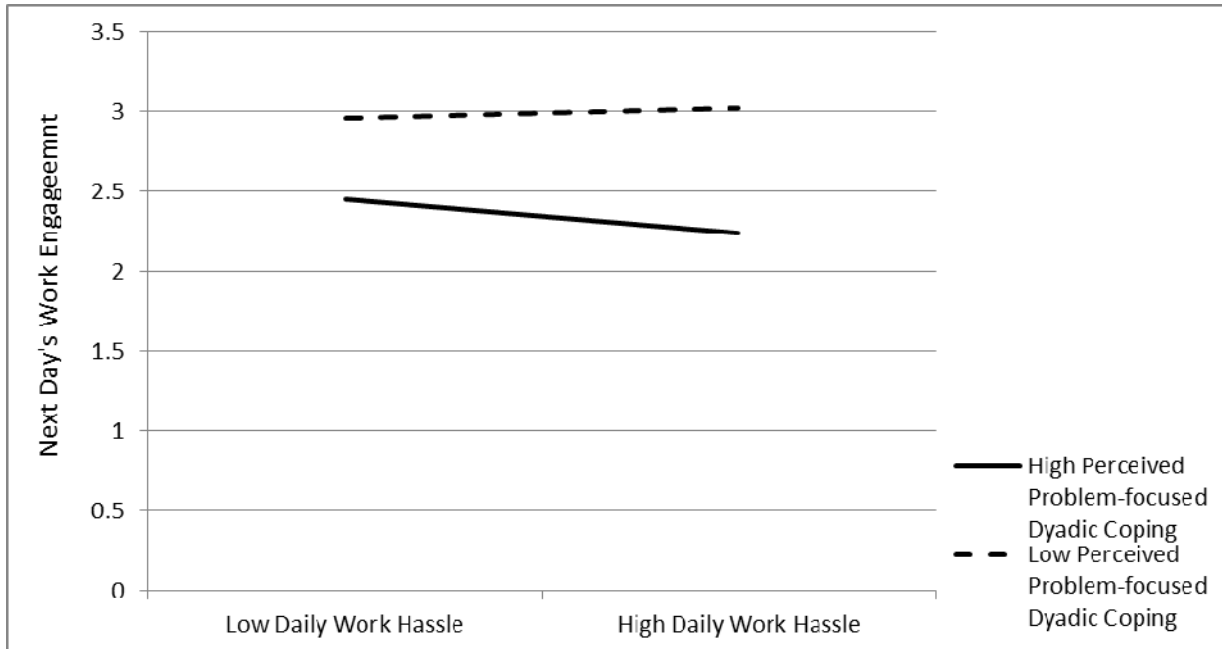


Table 19 showed the dual stage moderated mediation of *perceived emotion-focused dyadic coping* on next day's work engagement. Results revealed that perceived emotion-focused dyadic coping significantly moderated the relationship between daily work hassles and daily distress ($\gamma_{12} = -.13, p < .01$) and the relationship between daily distress and next day's work engagement ($\gamma_{22} = .17, p < .01$). Figure 11 showed the interaction plots for the Stage 2 moderation.

Figure 11 showed that on average, individuals who perceived to have received high daily levels of emotion-focused dyadic coping the previous day were more likely to experience higher levels of work engagement the next day and this relationship is stronger at higher levels of daily distress. Individuals who perceived to have received low daily levels of emotion-focused dyadic coping, however, experience lower levels of work engagement the next day and their work engagement decline significantly when they experience high levels of distress the previous day.

The analyses revealed that the incremental main effects of perceived emotion-focused dyadic coping on daily distress was significant ($\gamma_{11} = -.11, p < .01$). It was, however, not significant for next day's work engagement ($\gamma_{21} = -.05, n.s.$).

The moderated mediation analyses revealed the indirect effects for both high-high (Indirect effect = .21, 95% C.I. [.20, .69]) and low-low (Indirect effect = .70, 95% C.I. [.27, .92]) conditions were significant. The effect difference between the two conditions was -.49, 95% C.I. [-.53, -.34], suggesting that the indirect of daily work hassles on next day's work engagement was significantly stronger for individuals who perceived low levels of emotion-focused dyadic coping than those who perceived high levels of emotion-focused dyadic coping.

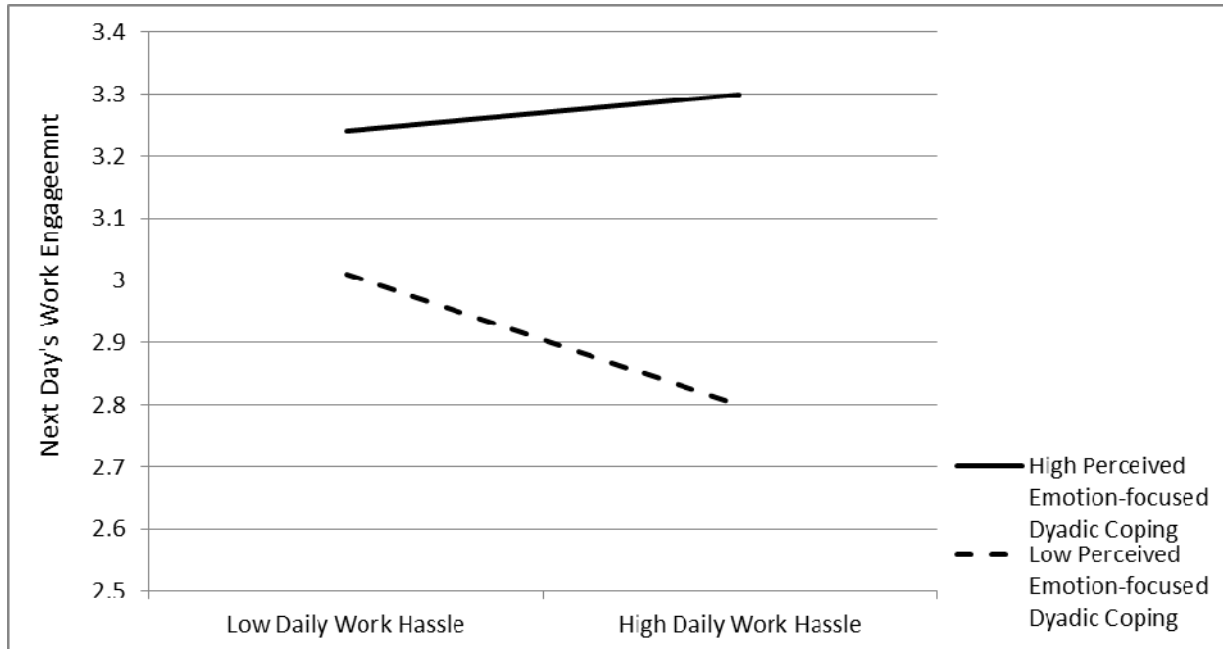
Indirect effects of daily work hassles on next day's work engagement were fully mediated by daily distress in the low-low (Direct effect = .01, 95% C.I. [-.52, .52]) condition but was only partially mediated in the high-high (Direct effect = .10, 95% C.I. [.03, .53]) condition.

Total effect analyses (Differences in total effect = $-.39$, 95% C.I. [$-.54$, $-.26$]) suggested that the impact of daily work hassles on next day's work engagement were stronger for the low-low condition than for the high-high condition.

Table 19: MSEM moderated mediation effects of perceived emotion-focused dyadic coping on distress and next day's work engagement

Within-person effect	Coefficient	S.E	95% C.I
Random Slopes			
β_1 : Daily work hassles \rightarrow Daily distress			
Slope (γ_{10})	.53**	.11	[.35, .70]
Emotion-focused dyadic coping (γ_{11})	-.11*	.10	[-.26, -.10]
Daily work hassles*Perceived emotion-focused dyadic coping (γ_{12})	-.13**	.24	[-.52, -.06]
β_2 : Daily distress \rightarrow Next day's work engagement			
Slope (γ_{20})	-.07	.05	[-.16, .02]
Emotion-focused dyadic coping (γ_{21})	-.05	.07	[-.07, .17]
Daily distress*Perceived emotion-focused dyadic coping (γ_{22})	.17**	.17	[-.44, -.10]
Fixed Slopes			
β_3 : Emotion-focused individual coping \rightarrow Daily distress	.03	.03	[.00, .11]
β_4 : Emotion-focused individual coping \rightarrow Next day's work engagement	.01	.06	[.18, .28]
β_5 : Work engagement \rightarrow Next day's work engagement	.18**	.08	[.10, .29]
Residual Variance			
Daily distress	.23**	.03	[.18, .27]
Next day's work engagement	.23**	.03	[.18, .28]
Moderated mediation effect			
Indirect effect for high-high condition	.21**	.29	[.20, .69]
Indirect effect for low-low condition	.70**	.26	[.27, .92]
Difference in indirect effect between high-high and low-low condition	-.49**	.52	[-.53, -.34]
Direct effect			
Direct effect of daily work hassles on next day's work engagement in high-high condition	.10*	.26	[.03, .53]
Direct effect of daily work hassles on next day's work engagement in low-low condition	.01	.32	[-.52, .52]
Difference in indirect effect between high-high and low-low condition	.10*	.53	[.07, .87]
Total Effect			
Total effect in high-high condition	.31**	.37	[.29, .98]
Total effect in low-low condition	.70**	.39	[.06, .97]
Difference in indirect effect between high-high and low-low condition	-.39**	.70	[-.54, -.26]

Figure 11: Interaction plot for buffering effects of perceived emotion-focused dyadic coping on the relationship between daily distress and next day's work engagement



6.3.3 Results Summary for MSEM Moderated Mediation Models

Table 20 to 23 summarized the results of the moderated mediation models. Results indicated that perceived problem-focused and perceived emotion-focused dyadic coping had differential impacts on strain and coping outcomes. Perceptions of having received problem-focused dyadic coping from spouses were found to have main effects on psychological well-being, next day's work engagement and two components of subjective well-being (i.e. marital satisfaction and positive affect). Perceptions of having received emotion-focused dyadic coping from spouses, on the other hand, were found to have main effects on one's daily distress and all aspects of one's subjective well-being. Both perceived problem-focused and emotion-focused dyadic coping had no impact on one's daily experiences of physical well-being.

In the moderated mediation analyses, perceived emotion-focused dyadic coping was found to have moderated the relationship between daily work hassles and daily distress (Stage 1) while problem-focused dyadic coping did not.

Moderation effects in Stage 2, however, were less uniformed. Perceived problem-focused dyadic coping was found to have Stage 2 moderation effects on the relationships between daily distress, negative affect, life satisfaction, and next day's work engagement. Perceived emotion-focused dyadic, on the other hand, moderated the relationships between daily distress, somatization, positive affect, and next day's work engagement.

Majority of moderated mediation effects found in this dissertation occurred due to moderation in either Stage 1 or Stage 2 of the models. Only three out of eight moderated mediation effects occurred due to dual stage moderation.

Table 20: Summary of results for main effects of perceived problem-focused dyadic coping

Main effects of perceived problem-focused dyadic coping	Stage 1 Main effect	Stage 2 Main effect
Daily Work Stressor → Daily Distress → Somatization	Not supported	Not supported
Daily Work Stressor → Daily Distress → Marital Satisfaction	Not supported	<i>Supported</i>
Daily Work Stressor → Daily Distress → Life Satisfaction	Not supported	Not supported
Daily Work Stressor → Daily Distress → Positive Affect	Not supported	<i>Supported</i>
Daily Work Stressor → Daily Distress → Negative Affect	Not supported	Not supported
Daily Work Stressor → Daily Distress → Psychological Well-being	Not supported	<i>Supported</i>
Daily Work Stressor → Daily Distress → Next Day's Work Engagement	Not supported	<i>Reversed Main Effect</i>

Table 21: Summary of results for main effects of perceived emotion-focused dyadic coping

Main effects perceived emotion-focused dyadic coping	Stage 1 Main effect	Stage 2 Main effect
Daily Work Stressor → Daily Distress → Somatization	<i>Supported</i>	Not supported
Daily Work Stressor → Daily Distress → Marital Satisfaction	<i>Supported</i>	<i>Supported</i>
Daily Work Stressor → Daily Distress → Life Satisfaction	<i>Supported</i>	<i>Supported</i>
Daily Work Stressor → Daily Distress → Positive Affect	<i>Supported</i>	<i>Supported</i>
Daily Work Stressor → Daily Distress → Negative Affect	<i>Supported</i>	<i>Supported</i>
Daily Work Stressor → Daily Distress → Psychological Well-being	<i>Supported</i>	Not supported
Daily Work Stressor → Daily Distress → Next Day's Work Engagement	<i>Supported</i>	Not supported

Table 22: Summary of results for moderated mediation effects of problem-focused dyadic coping

Dual stage moderated mediation MSEM models (Perceived problem-focused dyadic coping)	Stage 1 Moderation	Stage 2 Moderation	Moderated Mediation
Daily Work Stressor → Daily Distress → Somatization	Not supported	Not supported	Not supported
Daily Work Stressor → Daily Distress → Marital Satisfaction	Not supported	Not supported	Not supported
Daily Work Stressor → Daily Distress → Life Satisfaction	Not supported	Reversed Buffered	Supported
Daily Work Stressor → Daily Distress → Positive Affect	Not supported	Not supported	Not supported
Daily Work Stressor → Daily Distress → Negative Affect	Not supported	Reversed Buffered	Not supported
Daily Work Stressor → Daily Distress → Psychological Well-being	Not supported	Not supported	Not supported
Daily Work Stressor → Daily Distress → Next Day's Work Engagement	Not supported	Reversed Buffered	Supported

Table 23: Summary of results for moderated mediation effects of emotion-focused dyadic coping

Dual stage moderated mediation MSEM models (Perceived emotion-focused dyadic coping)	Stage 1 Moderation	Stage 2 Moderation	Moderated Mediation
Daily Work Stressor → Daily Distress → Somatization	Supported	Supported	Supported
Daily Work Stressor → Daily Distress → Life Satisfaction	Supported	Not supported	Supported
Daily Work Stressor → Daily Distress → Marital Satisfaction	Supported	Not supported	Supported
Daily Work Stressor → Daily Distress → Positive Affect	Supported	Supported	Supported
Daily Work Stressor → Daily Distress → Negative Affect	Supported	Not supported	Supported
Daily Work Stressor → Daily Distress → Psychological Well-being	Supported	Not supported	Supported
Daily Work Stressor → Daily Distress → Next Day's Work Engagement	Supported	Supported	Supported

Table 24: Summary of hypotheses results

		Results
H1	On days when individuals experience high levels of work hassles, they would also experience high levels of distress.	Supported
H2	a) On days when individuals experience high levels of distress, they would also experience low levels of physical, hedonic, and eudaimonic well-being.	Supported
	b) On days when employees experience high levels of distress, they would also be less engaged at work the next day.	Supported
H3	After controlling for individual coping behaviours and other relevant variables, perceived dyadic coping have incremental positive impacts on individuals' daily distress, well-being, and next day's work engagement.	Partially supported
H4	After controlling for individual coping behaviours and other relevant variables, the tendency for individuals with high daily work hassles to experience high levels of daily distress (predicted by Hypothesis 1) is weaker for those who perceived to have received more, rather than less dyadic coping from their spouses.	Partially supported
H5	After controlling for individual coping behaviours, and other relevant variables, the tendency for individuals with high daily distress to experience low levels of well-being and next day's work engagement (predicted by Hypotheses 2a and 2b) is weaker for those who perceived to have received more, rather than less dyadic coping from their spouses.	Partially supported
H6	Due to the buffering effects of dyadic coping, the indirect impact of daily work hassles on well-being and next day's work engagement is weaker for individuals who perceived to have received high levels of dyadic coping than those who perceived to have received low levels of dyadic coping.	Partially supported

CHAPTER 7: DISCUSSION AND CONCLUSION

7.1 DISCUSSION

This dissertation examined the main and buffering effects that perceived dyadic coping have on individuals' daily distress (strain), well-being, and next day's work engagement.

Although I hypothesized that perceptions of having received dyadic coping would collectively and positively have main and buffering effects on individuals' daily distress (strain), well-being, and next day's work engagement when they experienced work hassles (work stress), results in this dissertation seemed to suggest otherwise. Specifically, results indicated that perceptions of having received problem-focused dyadic coping produced mixed outcomes and in some instances, perceptions of spouses having provided problem-focused dyadic coping may even exacerbate the negative impact of daily work hassle have on one's well-being and work-related outcomes. Perhaps the benefits of having received dyadic coping from spouses are not as pervasive and beneficial as previously thought.

This dissertation found that perceived problem-focused dyadic coping did not have a main effect on daily distress of individuals. Neither did it moderate the impact of daily work hassles on daily distress. These results seemed to suggest that whether or not individuals perceived to have received problem-focused dyadic coping from their spouses had little influence on the daily levels of distress they experience when they encounter daily work stressors.

Perceived problem-focused dyadic coping, however, was found to have main effects on several criterion variables. Specifically, perceived problem-focused dyadic coping was found to affect one's daily marital satisfaction, positive affect, and psychological well-being. These findings suggested that, on days when individuals perceived to have received problem-focused dyadic coping from their spouses, they were also likely to experience corresponding increases in

their levels of positive affect, as well as, improved perceptions about marital satisfaction and psychological well-being. These results are plausible since problem-focused dyadic coping involved partners proactively helping each other overcome work stressors. Individuals who perceived their spouses as having taken active interest in their work stressors and had provided them with assistance in overcoming those stressors were more likely to develop positive perceptions about their marital relationships. Compared to those who perceived to have received little or no problem-focused dyadic coping, they were also more like to feel that the active discussions they had with their partners provided them with concrete action plans to manage their work problems and would therefore appraised that the problems they faced at work are resolvable. Experiencing problem-focused dyadic coping would thus directly and positively benefit individuals' levels of psychological well-being.

These positive effects of perceived problem-focused dyadic coping, however, seemed to be negated when individuals experience high levels of distress. Specifically, results suggested receiving advice from spouses would, in fact, negatively impact individuals when they experienced high levels of distress. In particular, perceived problem-focused dyadic coping was found to moderate the relationship between one's daily distress, negative affect, and life satisfaction such that on days when individuals experienced high levels of distress, those who also perceived to have received high levels of problem-focused dyadic coping would also experience higher levels of negative affect and lower levels of life satisfaction. These results are in line with Beehr's (1985) reverse buffering hypothesis which explained that receiving assistance from others during high stress episodes could possibly worsen outcomes of stress experience.

It is reasonable to expect perceived problem-focused dyadic coping to reverse buffer individuals' negative affect and life satisfaction because individuals may not always welcome problem-focused coping from spouses, especially when they are experiencing high levels of distress. From a cognitive processing perspective, receiving problem-focused dyadic coping is cognitively demanding because one would have to evaluate the strategies, plans, solutions, and ideas suggested by one's spouses. The cognitively taxing evaluation process would have deleterious consequences on individuals, especially when they are already experiencing high levels of distress. The additional mental workload imposed by the evaluation process would further deplete their already limited resources, exacerbating the negative impact that distress had on their affect and life satisfaction.

Furthermore, the very act of receiving advice from spouses and actively discussing those advices when one is highly distressed could be a stress event on its own since such discussions are likely to be peppered with divergent viewpoints between couples, which could possibly lead to altercation and marital tensions. The divergent viewpoints on how best to resolve stressors could possibly arise due to information asymmetry among spouses, with spouses typically lacking sufficient knowledge about each other's work. When spouses suggest solutions to the individuals, it is inevitable that the individuals would feel that those suggestions given their spouses are ineffectual and lack the perspectives needed to resolve their work issues. These supposedly ineffectual suggested solutions may result in individuals erroneously interpreting their spouses' dyadic coping actions as inept or insincere attempts to help them manage their daily work stressors, thereby resulting in increased amount of altercations and heighten negative emotions – amplifying the negative impact of distress on focal individuals. Anecdotally, it is not uncommon to witness individuals lament exasperatedly that their spouses do not understand the

amount of work stress they are under and are always giving them unwarranted solutions to their work problems.

Lastly, the reverse buffering effects of perceived dyadic coping could be explained by research in social support. Several studies on social support found that receiving support could invoke feelings of helplessness and damage one's self-esteem and confidence (Lu, 1997). This is because support recipients often perceive themselves to be in a more vulnerable position than support providers. Feelings of vulnerability could possibly exacerbate their distress and potentially leading to heightened negative emotions and worsen their satisfaction with life.

Results also suggested that perceptions of having received problem-focused dyadic coping have deleterious consequences on individuals' work engagement the next day. Given that perceived dyadic coping reversed buffered the impact of distress on negative affect and life satisfaction, it is therefore not surprising that it would also negatively impact one's work engagement the next day. It is reasonable to assume that unwelcomed suggestions given by spouses would frustrate individuals, create feelings of exasperation and helplessness. At work, these feelings of frustration and exasperation are likely to cause individuals to perceive their work stressors as insurmountable and looming because they are likely to feel that they are all alone in this uphill battle against work problems and their spouses had abandoned them to deal with work stressors alone.

Rather than being engaged at their work, individuals are more likely to ruminate the arguments they had with spouses the day before and how inept their spouses are in helping them deal with work stressors. The combined effects of negative affect, frustration, exasperation, and rumination are likely to sap one's energies at work, resulting in lower levels of concentration and efforts being put in into work, thereby leading to lower work engagement. As revealed by the

moderation analyses, the reverse buffering effects of perceived problem-focused dyadic coping were stronger on those who had higher levels of distress the previous day than those who had lower levels of it. These findings are within reasonable expectations since it is plausible that individuals who experienced higher levels of distress are more likely to feel exasperated and drained when they perceive their spouses to be part of their problem, not part of the solution, and are therefore are less engaged at work the next day.

These seemingly paradoxical results of perceived problem-focused dyadic coping highlighted the complexities of coping process between couples. On the one hand, perceptions of having received problem-focused dyadic coping would directly and positively impact on some aspects of individuals' well-being, yet on the other, individuals do not seemed to welcome such behaviours from spouses when they are experiencing high levels of distress. From a theoretical perspective, these results imply that positive benefits of perceived dyadic coping are limited to specific conditions and from an empirical perspective, spouses would need to know when to and when not to give advices to their partners, lest running the risk of creating counter-productive outcomes.

Of the seven moderated mediation models for perceived problem-focused dyadic coping, only the models for life satisfaction and next day's work engagement suggested that the indirect effect of daily work hassles differed significantly between those who perceived to have received high and low levels of daily problem-focused dyadic coping. These differences in indirect effects were likely to be due to the second-stage moderation that perceived problem-focused had on the relationship between daily distress, life satisfaction, and next day's work engagement. With the exception of these two outcomes, perceptions of having received different levels of problem-focused dyadic coping across different days with differing levels of daily work hassles and

distress did not result in differences in other individual and work-related outcomes. These results seemed to imply that the indirect effects of daily work hassles on various coping outcomes were somewhat similar between those who had perceived to have received high and low levels of problem-focused dyadic coping, therefore suggesting that problem-focused dyadic coping may be less beneficial in reducing the distal impact of daily work hassle on coping outcomes than initially thought.

Different from perceived problem-focused dyadic coping, perceived emotion-focused dyadic coping was found to have both main and buffering effect on individuals' daily distress. Results suggested that perceptions of having received emotion-focused dyadic coping on a daily basis would help reduce the amount of daily distress one would experience. Furthermore, on days when high levels of work stress were experienced, individuals who perceived to have received high levels of emotion-focused dyadic coping from their spouses were more likely to experience lower levels of distress compared to those who perceived to have received lower levels of emotion-focused dyadic coping from the spouses. These results highlighted the importance and efficacy of emotion-focused dyadic coping in curtailing the debilitating consequences of daily work stress on daily distress.

In addition, perceived emotion-focused dyadic coping was found to have main effects on all facets of subjective well-being. These results were not surprising given that subjective well-being is a hedonic measure of wellness and emotion-focused dyadic coping activities were targeted at managing negative emotions that might arise during stress episodes. Thus, it is plausible that individuals experiencing emotion-focused dyadic coping during stress episodes would continue to stay positive despite the challenges they encounter. This could be due to the

fact that having received emotion-focused dyadic coping from their spouses enabled them to stay resilient in the face of adversity and stress.

Apart from its main effects, perceived emotion-focused dyadic coping was found to have moderated the relationships between daily distress and coping outcomes such as somatization, positive affect, and next day's work engagement. Specifically, on day when high levels of distress were experienced, compared to individuals who perceived to have received lower levels of emotion-focused dyadic coping, those who perceived having received high levels of emotion-focused dyadic coping from their spouses were less likely to experience somatization and were more likely to experience positive affect and be engaged at work the next day.

Dual stage moderated mediation analyses further revealed that the detrimental impacts of daily work hassles on somatization, positive affect, and next day's work engagement were weaker for those who perceived to have received high levels than low levels of emotion-focused dyadic coping (Dual Stage Moderated Mediation). As well, the indirect effects of daily work hassles on other outcomes (life satisfaction, marital satisfaction, negative affect, and psychological well-being) were also significant in the moderated mediation analyses. These effects, however, were likely due to the moderating effects that perceived emotion-focused dyadic coping had on the relationship between daily work hassles and daily distress (Stage 1 Moderated Mediation).

Taken together, findings in this dissertation suggested that having received emotion-focused dyadic coping is an important factor that buffered individuals from distal negative consequences of work stressors i.e. perceived emotion-focused dyadic coping had salubrious effects on individuals who experienced work stress.

Overall, the MSEM moderated mediation models indicated that the indirect effects that daily work hassles had on coping outcomes did not differ much between those who had perceived to have received high and low levels of problem-focused dyadic coping. These indirect effects, however, are significantly different between those who perceived to have high and low levels of emotion-focused dyadic coping. These results seemed to indicate that emotion-focused dyadic coping is a more effective dyadic coping strategy than problem-focused dyadic coping in that it had significantly reduced the indirect impact of daily work hassles on individual and work-related outcomes.

In summary, having received emotion-focused dyadic coping seems to be more effective in helping individuals manage their daily work stressors than having received problem-focused dyadic coping. Individuals should exercise caution when using problem-focused dyadic coping to help their spouse manage their work stress since these strategies often produced mixed effects on their spouses.

7.2 THEORETICAL CONTRIBUTIONS

Research on interpersonal and social aspects of coping is still in the nascent stage and represents a new frontier in coping research (Dewe et al., 2010; Folkman & Moskowitz, 2004). This dissertation seeks to broaden the scope of research in this developing field by theorizing and testing the efficacy of perceptions of having received problem-focused and emotion-focused dyadic coping using a diary study method. This dissertation contributes to theory in several ways.

First, different from other interpersonal coping concepts such as communal coping (Monnier et al., 1998), relationships-focused coping (Coyne & Smith, 1991), and collaborative coping (Berg et al., 2008) that emphasized social interactions between couples during stress

episodes, this dissertation focused on coping strategies that couples could use to assist each other cope with daily work stressors. Focusing on dyadic coping strategies is theoretically meaningful and important because the objective of coping is to manage demands of situations that are deemed by individuals to be stressful (Lazarus & Folkman, 1984). The prior focus on social interactions during stress could not address the substantive question of how couples assist each other manage stressors and hence had provided inadequate explanations on the mechanisms underlying the dyadic coping process. By applying the well-established concepts of problem-focused and emotion-focused coping in the context of dyadic coping, this dissertation linked these traditional coping constructs with the dyadic coping process and helped mapped out the *functions* dyadic coping in helping individuals and their spouses manage daily work stressors.

Second, this dissertation contributed to theory by adopting a within-person diary approach to dyadic coping. A within-person diary approach allowed us to assess how differences in perceptions of dyadic coping across different days affected one's well-being and work engagement when one experienced different levels of work stress. This is a dynamic and robust test of the dissertations' theory since it allowed for the effects of dyadic coping to wax and wane naturally across different days. Capturing variations in perceived dyadic coping and how such variations impact well-being and work engagement outcomes are important in the theory building process because such an approach would provide us with a more accurate empirical assessment of the theory than cross-sectional approaches would. By relying on a within-person diary approach, this dissertation contributes to our understanding on the causal influences that different dyadic coping strategies have on individuals' well-being and next day's work engagement.

Third, results of this dissertation challenged Lazarus & Folkman's (1984) arguments that spousal support has pervasive positive influence on the how individuals manage their stressors. Opposed to conventional wisdoms which suggest that receiving coping assistance from spouses would benefit individuals; this dissertation found that perceptions of having received spousal coping assistance did not always benefit individuals. In fact, receiving problem-focused dyadic coping could have detrimental outcomes on individuals, especially when they are experiencing high levels of distress.

Prior research on social support often found that receiving support had mixed effects on individuals' well-being. An important theoretical contribution of this dissertation is to clarify that not all supportive behaviours would produce positive outcomes and demonstrated that distress could be an important boundary condition that determines whether a supposedly supportive behaviour would produce positive results. These findings are important in demonstrating that problem-focused and emotion-focused dyadic coping are not panaceas to work stressors and validated that the benefits of these dyadic coping strategies were likely to be less ubiquitous than we thought. Knowing what problem-focused and emotion-focused dyadic coping can do and what they do not do would help to clarify the limitations of these dyadic coping strategies and suggest practical ways that couples could cope with stressors more effectively. Furthermore, understanding the limitations of these dyadic coping strategies is important in helping us elucidate the boundary conditions of these theories and aid the development of more parsimonious theories that may help answer further questions on coping between couples.

Fourth, this dissertation answered the call for more research on interpersonal and social aspects of coping (Dewe, et al. 2010; Folkman & Moskowitz, 2004). Although the results of this dissertation were somewhat mixed, they suggested that perceptions of having received problem

and emotion-focused dyadic coping have beneficial outcomes on several aspects of well-being and work engagement, even after accounting for the positive benefits of individualized coping efforts. By developing a multilevel moderated mediation model to examine how different types of dyadic coping strategies affected the core process facet of Beehr & Newman's (1978) General Model of Occupational Stress, this dissertation helped advanced our understanding of the mechanisms through which dyadic coping would impact and buffer individuals from detrimental outcomes of daily work stressors.

Fifth, this dissertation demonstrated that perceptions of having received problem-focused and emotion-focused dyadic coping differ from each other. Perceived problem-focused dyadic coping were more likely to have main effects on cognitive outcomes such as work engagement and psychological well-being. Perceived emotion-focused dyadic coping, on the other hand, were more likely to affect affective outcomes such as subjective well-being. Theoretically, these findings helped clarified the differential impacts that these different dyadic coping strategies have and create rooms for further theorizing on how these different dyadic coping strategies would potentially affect cognitive and affective outcomes of individuals and their spouses.

Despite the above theoretical contributions, this dissertation is only but the first step in understanding the efficacy of dyadic coping during stress episodes. More theorizing and empirical investigations on the boundary conditions of various dyadic coping strategies are necessary so that we can better comprehend the impact of different dyadic coping strategies.

7.3 PRACTICAL IMPLICATIONS

Apart from its theoretical contributions, this dissertation also contributed to practice. Consistent with extant research on social aspects of coping, this dissertation highlighted that

work stress has a long arm and affects employees' family and spouses; and spouses could mitigate the detrimental impacts of stress on individuals' distress, well-being, and work engagement.

Employees and their spouses should be cognizant about the potential roles they play in assisting each other cope with stress. Effective dyadic coping, as suggested by the results of this dissertation, involved active utilization of both problem-focused and emotion-focused dyadic coping strategies. Compared to problem-focused dyadic coping, emotion-focused dyadic coping strategies, in general, were more effective in helping individuals and their spouses manage daily work stressors. Under high work stress conditions, perceptions of having received emotion-focused dyadic coping would help facilitate the unwinding process and mitigate negative stress reactions, while perceptions of having received problem-focused dyadic coping may exacerbate the cognitive workload of those who were already stressed out by their work.

How perceptions of emotion-focused dyadic coping can potentially facilitate the unwinding process can be explained by Fredrickson's (2001) broaden-and-build theory. The broaden-and-build theory explains that high levels of affective well-being will positively impact on other aspects of individuals' well-being. Experiencing emotion-focused dyadic coping is expected to lead to increased positive arousal and bolster individuals' psychological resources (Baumgardner & Crothers, 2009). During stress episodes, increased levels of positive arousal would promote optimism and hope that allowed individuals to engage in positive appraisals that added a bit of cheer and good feeling in difficult situations (Folkman & Moskowitz, 2000).

Although it is surprising to find that perceived problem-focused dyadic has a fairly weak impact on the dyadic coping process, and in some instances, even negatively affecting individuals' well-being and work-related outcomes. These results, however, does not mean that

problem-focused dyadic coping should be written out of the dyadic coping equation entirely. The paradoxical effects of perceived problem-focused dyadic coping are particularly revealing. Individuals or couples who habitually utilized problem-focused dyadic coping in their daily interactions should use it sparingly, at the very least, under the right conditions, lest running the risk of it leading to negative outcomes such as negative emotions, poorer evaluation of life satisfaction, and lower work engagement the next day.

Results in this dissertation offer some practical advice for husbands, since husbands typically are less engaged in helping their spouses cope with stressors, more likely to take a callous attitude towards their wives' distress, and are more likely to provide unsolicited advice to their wives (Campbell et al. 2001; Greenhaus & Parasuraman, 1986). Being in a romantic relationship involves husbands and wives providing each other with mutual support, assurance, and a psychologically safe environment to share each other's joy and distress (Ilies et al., 2011). Instead of reacting in hostile manner towards their wives when their wives are experiencing stress and distress (c.f. Neff & Karney, 2005), husbands should actively help their wives cope with their work stressors because these actions would positively impact their wives' well-being. This is because wives typically benefit more than husbands from support (Granrose et al., 1992). During periods of high work stress and distress, husbands should proactively involve themselves in the dyadic coping process and not engage in withdrawal behaviours, as most husbands normally would when stressed (Repetti, 1989). Active involvements in dyadic coping processes would ensure healthy and robust marital relationships. Wives, on the other hand, should not assume that their husbands could manage their own stressors. As revealed in this dissertation, emotion-focused dyadic coping has a stronger impact on husbands' distress and somatization than it would on wives' distress and somatization. This seems to imply that wives should engage

in more emotion-focused dyadic coping towards their husbands whenever possible so as to curtail the negative impacts that work stressors have on their husband's distress and somatization.

7.4 LIMITATIONS AND FUTURE RESEARCH

Although this dissertation presented a preliminary model to examine the main and buffering effects of dyadic coping on individuals' daily distress, well-being, and next day's work engagement, this dissertation has several limitations, which also give rise to future research opportunities.

7.4.1 Sample size

Results in this dissertation were based on a sample size of 40 couples ($N = 80$) and may potentially affect the model convergence rate and the stability of estimates. To date, little research has investigated what is the appropriate sample size for MSEM models (Preacher et al., 2010). Muthén (1994) recommended that multilevel SEM should be conducted with at least 50 level-2 clusters when testing for between clusters effects. Meuleman & Billiet (2009) concluded that as few as 40 level-2 clusters are sufficient to detect large effect size. In their study with simulated data, Preacher et al., (2011) found that even with a sample size of 20 clusters, the bias in results estimates in MSEM models remain acceptable as long as ICC is high.

7.4.2 Multicollinearity

The high degree of correlations (within-person $r = .82$) between the two key variables, perceived problem-focused dyadic coping and perceived emotion-focused dyadic coping, could potentially threaten the stability of the results. Although the two variables are highly related,

multicollinearity is unlikely to be a problem. Multi-level CFA (page 76) with Satorra-Bentler scaled Chi-square difference test suggested that a 2-factor model of perceived problem-focused dyadic coping and perceived emotion-focused dyadic coping is a better fit for the data than a 1-factor model of dyadic coping. Furthermore, results in this study suggested that perceived problem-focused dyadic coping and emotion-focused dyadic coping have differential moderated mediation impact on individuals' distress, well-being, and work engagement outcomes. These results are not inconsistent with theories and extant empirical findings. This is because individuals, and by extension, couples typically would rely on a myriad of coping strategies to manage their stressors (Folkman & Moskowitz, 2003; Folkman & Moskowitz, 2004; Thoits, 1995). The high correlation between perceived problem-focused and emotion-focused dyadic coping reflect the nature of the interrelatedness of coping strategies employed by couples.

7.4.3 Functional vs. Dysfunctional coping

Individuals do not always engage in positive coping behaviours, and would often at times, engaged in dysfunctional coping when they perceive themselves to be helpless or when they believe that they have no control over their stressors (Carver et al., 1989). Examples of such dysfunctional coping behaviours include denying the existence of the stressor, avoiding confronting the stressor, behavioural disengagement such as giving up on resolving the stressor, mental disengagement behaviours like daydreaming and sleeping, or even substance abuse (Carver et al., 1989). Couples, too, may also engage in dysfunctional coping behaviours during stress episodes (Bodenmann, 2005). The DCT outlined several such behaviours, including providing hypocritical help to spouse, helping spouse manage his/her stress unwillingly, being indifferent to spouse's stress, and disparaging or expressing sarcasms towards spouse's stress. In

a 2-year longitudinal study, dysfunctional coping behaviours between couples have been found to negatively impact one's marital relationships and well-being (Bodenmann et al., 2006).

Despite the supposed damaging nature of dysfunctional coping, Thoits (1995) suggested that dysfunctional coping, may sometimes, help alleviate individuals' distress, especially when one's stressor is perceived to be unsolvable. Although dysfunctional behaviours outlined by DCT are unlikely to alleviate one's stress, certain behaviours such as helping one's spouse to mentally disengage from stressors may have a potential positive impact on his/her well-being and distress. One possible future research agenda is to examine how behaviours such helping one's spouse engage in denial and avoidance behaviours may positively impact his/her well-being.

7.4.4 Within-cluster and between-cluster effects

Data in this dissertation were collected from dual income couples. Given that individuals were nested within couples, there are within-cluster effects that could potentially influence individuals' perceptions of dyadic coping, as well as, between-cluster effects that may further explain how dyadic coping dynamics differ between different couple pairings. This dissertation did not model these within-cluster and between-cluster effects. In order to better appreciate coping dynamics within couples and how dyadic coping outcomes would differ as a result of differences between different couples, research future could focus on modeling how within and between cluster level-2 variables such as marriage length, number of children, and marital quality would affect the dyadic coping process. Alternatively, researchers would use the Actor-Partner Independence Model (APIM) to model the mutual influence that husbands and wives have on each other.

7.4.5 Mutual influence between husbands and wives – Actor-Partner Independence Model

While this dissertation had examined the main and buffering effects of dyadic coping, this dissertation did not model the mutual influence that individuals and their spouses would have on each other's coping behaviours and coping outcomes. For example, it would be interesting to examine how individuals' dyadic coping behaviours varies as a function of their spouses' dyadic coping behaviour, or how variations in daily work hassles experienced by individuals would elicit different forms of dyadic coping behaviours from their spouses.

Modeling mutual influences and interdependency in dyadic coping is important because individuals in romantic relationships often influence each other's cognitions, emotions and behaviours (Campbell & Kashy, 2002). In such highly interdependent relationships, attributes and behaviours of one member in the dyad will impact attributes and behaviours of the other. Often, researchers struggled to model the interdependent nature of behaviours in dyadic relationship. In view of this difficulty, Kenny and colleagues (e.g. Cook & Kenny, 2005; Kashy & Kenny, 1999; Kenny, 1996; Kenny & Cook, 1999) developed the Actor-Partner Interdependence Model or APIM as a possible method of analyzing interdependent dyadic data.

Essentially, the APIM posits that individuals' independent variables affect theirs (actor effect), as well as, their partners' (partner effect) dependent variables. The partner's effect reflects the mutual influence that may occur between individuals in a close relationship (refer to Cook & Kenny, 2005; Kenny, 1996; and Kenny & Ledermann, 2010 for a detailed review of APIM).

Since APIM was first introduced, it had gained traction among both organizational and relationship researchers. In organizational research, the APIM had been used to study trust and cooperation in interpersonal/ intergroup relationships (e.g. Ferrin, Bligh & Kohles, 2008), group

dynamics (e.g. Bonito, DeCamp, Coffman & Fleming, 2006), and crossover effects of work engagement (Bakker & Xanthopoulou, 2009). In relationships studies, the APIM was used to examine how couples' behaviours were impacted by attachment styles (Campbell et al., 2001), antecedents of and outcomes of couple's marital satisfaction (e.g. Bodenmann, Pihet, & Kayser, 2006) and most importantly, how couples jointly coped with stress from critical life events such as chronic illness like cancer (e.g. Berg, & Upchurch, 2007; Kayser, Watson, Andrade, 2007).

In general, APIM has been recognized by researchers of dyadic relationships to be a useful and sophisticated analytical technique to model interdependence between couples (Campbell & Kashy, 2002; Cook & Kenny, 2005). Future research examining dyadic coping would benefit from using the APIM framework.

7.4.6 Daily work hassles vs. Major career events

Besides examining the impact of dyadic coping on daily work hassles, it would also be interesting to investigate how dyadic coping potentially affect chronic stressors associated with major career events. Life events theory suggested that sudden changes in one's life circumstances create major stressors that adversely impact one's well-being (Holmes & Rahe, 1967; Dohrenwend & Dohrenwend, 1974) and would cause ripple effects that continuously and adversely impact psychological functioning of individuals (Pillows et al., 1996). Job loss is one such major career event that could significantly impact individuals and their families (Howe et al, 1995).

Studies on job loss have consistently found that unemployment is one of the most stressful events that individuals can experience in their lifetime (Wanberg, 2012; Wanberg, Zhang & Diehn, 2010). In fact, the stress of unemployment is so severe that some unemployed

individuals have likened it to death of a loved one or close friend (e.g. Defrank & Ivancevich, 1986). Although prior studies have typically focused on the immediate impact of job loss on individuals and their families, the impact of job loss is likely to be most keenly felt through the day-to-day stressors it create (Pillows et al., 1996).

Some day-to-day stressors associated with job loss include daily experiences of financial hardship, loss of mastery and control, self-esteem, and loss of time structure (e.g. Jackson et al., 1983; Warr & Jackson, 1984; Jahoda, 1982). Others include psychological outcomes such as anxiety, frustration, rejection, and uncertainty associated with daily job search activities (Song et al., 2011). Stress arising from day-to-day stressors of job loss is interpersonal in nature because when individuals lost their job, their spouses are affected as well. In their study on depression and undermining during job loss, Vinokur et al. (1996) found that job loss and unemployment affected the psychological well-being of both unemployed individuals and their spouses. In a similar study, Westman et al. (2004) found that the threat of unemployment led to increased social undermining behaviours and marital dissatisfaction among couples. More recently, Song et al. (2011) examined the dynamic relationship between distress felt by an unemployed spouse and his or her employed partner.

Different from daily work hassles that may fluctuate in terms of severity and sources on a day to day basis, daily stressors arising from job loss is more likely to be chronic in nature. That is to say, daily stressors associated with job loss are likely to be persistent, prolonged, and be at a sustained level. In the words of Gottlieb (1997), daily chronic stressors, such those associated with job loss, are like rust that corrodes the structural integrity of a bridge over time. Slowly but surely, they will impinge on the well-being of both displaced employees and their spouses. Given that the origin, severity, and nature of chronic daily stressors and daily work hassles differ

significantly from each other, it would be interesting to examine how dyadic coping would function when displaced employees and their spouses have to cope with daily chronic stress caused by job loss.

7.4.7 Coping congruency

Individuals typically have a preference for one coping strategy over another and these preferences may or may not compliment the strategy preferred by their spouses. Whether couple's preference for coping strategy compliments each other is an important, yet understudied area of research (Folkman & Moskowitz, 2004). Although some research has begun to examine the how coping congruence and incongruence may affect spousal relationships and mutual well-being, there is still much to be done. As an extension of this study, future researchers could examine how congruence or incongruence in preference over problem-focused or emotion-focused dyadic would affect dyadic coping dynamics and outcomes.

7.4.8 Level-2 Moderators – Relationship Motivation (Attachment Style)

Despite the fact that the composition of dyadic coping strategies employed by individuals would likely differ from one stress episode to another, it is plausible that individuals have a dominant dyadic coping strategy that they prefer to use during dyadic coping episodes. This dominant dyadic coping strategy could be a function of their personal coping preference or a reflection of their motivation towards the relationship they share with their spouses.

According to Campbell et al. (2001), two major theories – attachment theory (Bowlby, 1969) and interdependence theory (Kelley & Thibaut, 1978) would explain how relationship motivation affects couples' behaviours towards each other during stressful encounters.

Bowlby (1969) explained that attachment systems are derived from early childhood experiences with attachment figures. These systems create stable beliefs among children about their own attributes (e.g. degree to which one is worthy of love and care), attributes about their attachment figures (e.g. degree to which the attachment figure will display love and care), and their expectations of relationships with their attachment figures (e.g. the degree to which the relationship will be filled with love and care).

Essentially, individuals who are securely attached perceived themselves to be worthy of others' affection, care, and concern. They also believe that their attachment figure is reliable and readily available when needed. These individuals tend to develop close relationships and are comfortable in depending on others and having others to depend on them (Simpson et al., 1992).

Individuals with avoidant attachment style tend to be emotionally aloof, distant, cynical, and are inherently fearful of being rejected by their attachment figures (Brennan, Clarke & Shaver, 1998). They are likely to see attachment figures as untrustworthy and are reluctant caregivers. Therefore, they are averse to forging close dependent relationships with others or allow themselves to be someone else's' caretaker (Bowlby, 1969).

Anxious/ambivalent attached individuals perceive themselves as being misunderstood, and underappreciated (Mikulincer & Florian, 1998). While they do not necessarily distant themselves from their attachment figures, these individuals are often apprehensive and cynical about close relationships since their past experiences with their attachment figures has been inconsistent and unpredictable (Crittenden & Ainsworth, 1989). On one hand, these individuals yearn for close relationships, yet on the other, they are uncertain whether their attachment figures can be trusted to provide support (Mikulincer & Florian, 1998). Lastly, disoriented attachment style is a cross between avoidant and anxious-ambivalent (Brennan, et al., 1998).

In recent years, a number of researchers have begun to use attachment styles to study how couples interact during stressful situations (e.g. Campbell et al, 2001; Simpsons, Rholes & Nelligan, 1992; Simpsons, Rholes & Phillips, 1996). For example, Simpsons et al. (1992) examined how attachment styles affected support giving and support receiving behaviours during stressful situations. Campbell et al. (2001) studied how attachment style affected the amount of negative interactions between couples under marital distress. Generally, these studies found that while secure and avoidant attachment styles were effective in predicting couples' interactions during stress, anxious/ambivalent and disoriented attachment styles, on the other hand, did not (Campbell et al., 2001). In line with these findings, a potential area for future research would be how secure-avoidant attachment styles would influence the levels and outcomes of dyadic coping between couples during stress episodes.

For example, securely attached individuals consider themselves to be valued by others and believe that others will provide them with support when needed (Ainsworth et al., 1978; Bowlby, 1979). As adults, these individuals tend to forge strong emotive relationships with their partners, knowing that their partners are trustworthy, reliable and will be available for them during times of distress (Feeney, 1999). During stressful situations, securely attached individuals are likely to provide their partners with increased levels of dyadic coping, especially when they sense that their partners require such coping assistance from them.

Avoidant individuals, on the other hand, tend to withdraw from the spouses during stress (Collins & Feeney, 2000). This is because avoidant individuals' prior experiences to establish contact with their childhood attachment figures have been rebuffed or thwarted (Crittenden & Ainsworth, 1989). This resulted in them developing negative views of their partners, assuming that they are unavailable when needed. Although avoidant individuals are not averse to

establishing romantic relationships, they are likely to keep such relationships at arms-length and superficial since they have an inherent fear of rejection (Ainsworth et al, 1978). When avoidant individuals encounter stressful situations, they actively suppress their need for support from their spouses by physically and psychologically distancing themselves from them (Mikulincer & Florian, 1998). This is because avoidant individuals are fearful that their spouses will reject their request for support and dislike seeking support. Rather than seek for assistance from their spouses whom they deemed to be untrustworthy and unreliable, these individuals would manage their stress by downplaying their severity or by dismissing them as trivial (Bowlby, 1979; Collins & Feeney, 2000; Simpsons et al., 1992). When confronted by their spouses' need for support, avoidant individuals are likely to berate their spouses because they have an inherent disdain for providing support (Campbell et al., 2001). It is therefore highly plausible that avoidant individuals would demonstrate low levels of dyadic coping during stress episodes. Future research should investigate the validity of these hypotheses.

7.4.9 Level-2 Moderators – Relationship Motivation (Relationship Dependence)

Individuals in close relationships form an interdependent dyad. Behaviours of individuals in such dyads are affected not only by members' attachment style but also by the degree of dependence between the members (Kenny & Cook, 1999). The more a dyad member had invested in the relationship, the more likely he/she would be affected by and be concerned about his/her partners. For example, the closer one feels towards one's spouse, the more one will engage in actions to ensure his/her well-being. Dyadic coping behaviours are likely to be affected by the degree of mutual dependence that exists in the dyad.

Interdependence theory suggests that individuals rely on their partners to fulfill important needs (Kelley & Thibaut, 1978). The greater the extent individuals are able to obtain desirable outcomes from their partners, the more dependent they will be on their partners and the more likely they will persist in the relationship. In contrast, when individuals are unable to obtain desirable outcomes from their partners, the more independent they will be from their partners and the more likely they will abandon the current relationship in search of better alternatives (Rusbult & Martz, 1995).

Dependence has profound effect on a variety of interpersonal behaviours. When couples are highly dependent, they are committed to a variety of behaviours that sustain the relationship. For example, highly dependent couples were more likely to use constructive means to resolve conflicts, were more accommodating towards each other, were less likely to engage in retaliatory actions, and were more willing to sacrifice one's own interest to promote the well-being of their partner (Rusbult & Arriaga, 1977). Therefore, it is probable that the amount of dependence in a relationship would affect how couples cope with stressful situations.

To some extent, dependence is distinct from attachment style. Prior studies have shown that highly avoidant individuals can form dependent relationships with their partners when they were able to obtain desirable outcomes from them that cannot be obtained either in an alternate relationship or through their own independent actions (e.g. Campbell et al, 2001; Rusbult & Arriaga, 1997). Based on these arguments, it is plausible that couples in highly dependent relationships will engage in fewer actions that threaten the relationship (Rusbult & Arriaga, 1997) and are more likely to exhibit high levels of dyadic coping behaviours towards each other during stress. This is because they are concerned about the long-term survival of their relationships and

would engage in behaviors that promote the survival of their relationship. Future research should investigate the validity of these hypotheses.

7.4.10 Self-focused vs. Relationship-orientated

The dyadic coping process is a demanding one that requires commitments from partners. During stress episodes, individuals have to balance between helping their partners manage their stressors, while at the same time managing their own stress, emotions, and constraints (Coyne & DeLongis, 1986). The act of balancing between one's own stress and one's partner's need is a complex process that requires much research.

Theories such as COR suggest individuals' resources are depleted during stress and individuals would engage in defensive strategies by acting in self-interested manners to ensure their own well-being and to preserve their remaining resources. Based on the assumptions of COR, individuals are less likely to engage in dyadic coping behaviours towards their spouses when they themselves are experiencing high levels of stress and might perhaps even engage in detrimental behaviours such as disparagement (Helgeson, 1994).

Research in marital relationship, however, suggested that besides being focused on altering and resolving stressful situations (problem-focused coping) and regulating their own emotional distress (emotion-focused coping), individuals had also shown inclinations towards managing, regulating, and persevering relationships i.e. they were also likely to engage in behaviours that preserve their social relationships with their partners (e.g. Coyne & Smith, 1991; DeLongis & O'Brien, 1990). When individuals and their partners encounter stressful situations, they do not always act in agentic self-interested ways and may intentionally engage in behaviours that are beneficial to their partner's well-being at the expense of their own well-being (O'Brien &

DeLongis, 1997). This is because desires to form and maintain social relationships is a fundamental human motivation and maintaining a sense of emotional relatedness to partners during stress episodes may be a crucial factor that determines one's own emotional well-being (Baumeister & Leary, 1985; DeLongis & O'Brien, 1990).

During stressful periods, it is plausible that couples would use empathy to understand the feelings and thoughts of each other so as to recognize and understand the underlying causes of each other's stress (O'Brien & DeLongis, 1997). Moreover, individuals may empathetically try to determine how their actions will affect the well-being of their partners, and generate ways of behaving and responding in less disconcerting manner towards their partners (O'Brien & DeLongis, 1997).

Empirically, whether partners engage in agentic self-focused behaviours during stress episodes or would they act in a manner that enhances relationships with their partners is not well-studied. Some theories suggested that individuals are motivated to engage in behaviours that maintain and preserve their relationships with their partners, others would suggest otherwise. What motivates individuals to engage in dyadic coping and what determines the level of dyadic coping is highly complex. Future research should attempt to uncover this current black box.

7.4.11 Other coping outcomes?

Research on recovery experiences has consistently found that individuals' experiences at home have strong implications on their recovery outcomes such as sleep quality, fatigue, and morning affect (e.g. Sonnentag & Fritz, 2007; Sonnentag et al., 2008; Zijlstra & Sonnentag, 2006). A major concept that has found traction among recovery researchers is the notion of psychological detachment after work (Sonnentag & Bayer, 2005).

Psychological detachment refers to individuals' sense of being away from work. It implies not only being physically away from work or work-related tasks but also to stop thinking about work related issues during after-work hours (Sonnentag & Bayer, 2005; Sonnentag, Binnewies, & Mojza 2008). More broadly, psychological detachment is a disengagement technique where individuals disassociate themselves from stressors and cease to think or ruminate about stressful events (Sonnentag & Krueger, 2006). When individuals are able to detach themselves from stressors and reduce their mental preoccupation with stressful encounters, recovery occurs (e.g. Sonnentag & Bayer, 2005; Sonnentag & Fritz, 2007; Sonnentag et al., 2008; Sonnentag, & Krueger, 2006).

Although dyadic coping has not been explicitly examined in the context of daily recovery, studies on how couples cope with chronic illness may offer some insights on how dyadic coping may influence couples' daily recovery. In their study on dyadic coping between women with rheumatoid arthritis and their healthy husband, Manne & Zautra (1989) found that women with highly critical spouses who engaged in negative dyadic coping behaviours during their illnesses were more likely to ruminate over their illness (Manne & Zautra, 1989). In a study on breast cancer patients, Badr et al. (2010) found that positive spousal interactions decreased cancer-related distress and increased adjustment among patients. These findings suggested that patients who experienced positive spousal interactions during illnesses were less likely to experience psychological distress, were more likely to have positive adjustments towards their ailments, and were less likely to ruminate excessively and negatively over it. To some extent, these studies provided preliminary support that positive spousal interactions increases positive psychological functioning and detachment from illnesses (i.e. stressors). Based on the same premise that positive spousal interactions during illnesses foster positive psychological health and detachment

from stressors, dyadic coping may function the same way by reducing employees' cognitive preoccupation with their workplace stressors. The relationships between dyadic coping and psychological detachment would potentially have extensive implications on one's daily recovery.

For example, failure to detach from work and repetitive ruminative thoughts about the day's stressful encounters activates negative affect and heighten emotional arousal that increases sleep latency and sleep perturbation (Åkerstedt, Nilsson & Kecklund, 2009; Pilcher & Huffcutt, 1996; Scott & Judge, 2006; Sonnentag et al., 2008). These continuous ruminative thoughts about work stressors would involuntarily preoccupy individuals' minds with images of failures and discontent, leading them to experience increased difficulties in unwinding and switching off before sleep (Smith & Alloy, 2009).

Furthermore, poor sleep quality is linked to the activation of negative affect the next morning – a proxy measure for recovery (Åkerstedt et al., 2009; Sonnentag & Geurts, 2009). This is because poor sleep quality impairs individuals' emotional regulation (Pilcher & Huffcutt, 1996; Rothbard & Wilk, 2011) Sleep deprived individuals lack resources to regulate negative emotions that might arise from distressing events encountered in the morning (Sonnentag et al., 2008). Rather than regulating their negative emotions, sleep deprived individuals are more likely experience them when they wake up (Rothbard & Wilk, 2011). Furthermore, poor sleep quality, in itself, is undesirable and triggers negative affect such as anger and frustration upon awakening (Pilcher & Ott, 1998). Experiencing poor sleep quality may impair cognitive abilities by inhibiting the functioning of the pre-frontal cortex, which is responsible for complex information processing and emotional responses (Johnson & Proctor, 2004; Petiau et al, 1998).

Similar to dyadic coping, recovery experiences are likely to be dyadic in nature. When individuals are not detached from work, their spouses may be affected in two ways. First, non-

detachment may give rise to negative affect that could manifest itself in the form of negative interactions with spouses. These negative interactions are likely to lead to acerbity between couples and heighten emotional arousal that adversely affects recovery efforts of couples. Second, when individuals experience with poor sleep quality, their spouses are also likely to suffer from poor sleep as well since their spouses' sleep would be likely be interrupted by their constant awakenings.

Given the potential implications that dyadic coping has on psychological detachment and its plausible distal impact on dyadic recovery outcomes, future research should postulate a process model to investigate how dyadic coping would influence couples' psychological detachment from work stressors and the possible distal impact that dyadic coping has on recovery outcomes.

7.5 CONCLUSION

It is not always easy for partners to support and help each other cope with stressors (Pistrang & Barker, 2005). Dyadic coping occurs in the context of an interdependent relationship where each partner has his or her own needs, emotions, and constraints. Individuals often have to balance between providing for their partners' needs while at the same time managing their own needs (Coyne & DeLongis, 1986). Although this act balancing between competing needs is difficult, individuals should bear in mind that sum of a dyad is greater than the sum of its parts. The synergy and collaboration between individuals and their spouses to jointly resolve stressors would positively benefit both parties.

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Appendix 1: Participant Information Sheet and Invitation

The NUS Business School (National University of Singapore) is conducting a study to understand how dual income married couples cope with work stress. We would like to invite you and your spouse to participate in this study. To participate, you and your spouse must meet the following requirement:

- 1) Both one of you must be employed in a full time position.

If you meet the above requirements and are interested to participate in this study, please send an email with the following information to jiaqing.chen@nus.edu.sg

- Your name:
- Your email address:
- Your mobile number:

- Name of spouse:
- Your spouse's email address:
- Your spouse number:

All interested participants and spouses will be briefed over the phone. Details of the briefing will be provided via email.

Please read the information below and be sure that you understand all aspects of this study before deciding whether or not to participate in this research.

If at any time during the course of this study you become uncomfortable or have any feelings or thoughts that make you want to discontinue participation, you may do so at any time without any repercussions to you.

This study is entirely confidential and anonymous. All raw results collected are used only for research purposes and will not be shared with any third parties.

If you have any queries, please feel free to contact me at jiaqing.chen@nus.edu.sg

Principal Investigator

Don J.Q. Chen
Research Scholar
Department of Management and Organization
NUS Business School
National University of Singapore

The purpose of this research:

This research examines how individuals and their partners cope with work stress, and how these coping behaviours impact and affects their functioning.

Who can participate in the research and the duration of participation:

Since we are examining how couples cope with work stress, you and your spouse's participation are essential to the study's success.

Both you and your spouse must be currently employed in a full time job. Both you are required to complete a web-based mobile phone survey every day, for a period of 10 work days. Each survey will take no more than 10-15 minutes to complete.

What will be done if I take part in this research:

You are required to list down a valid email address and a mobile phone number. This email account should be your primary email account that you frequently check. All future correspondents will be sent to you via email to the account that you have listed. The mobile number is required only for the purpose of sending reminder SMSes.

It is crucial that you launch and complete the survey within 3 hours of receiving it.

How will my privacy and the confidentiality of my research records be protected:

We will assign you a unique 5 digit research ID that will be used throughout this study. All data collected will only be identified only by the research ID and not by your name. Also, the phone number you have provided will only be used for us to send you SMS reminders. At no point in time will we call you on your mobile phone and your phone number will only be linked to your research ID, not your name.

Independent investigators who conduct the data analyses will only see the ID and they will not be able to associate your ID with your name or other identities. All personal data you provided will be kept absolutely confidential and will be destroyed once the study is completed.

In line with NUS Research Data Management Policy (Circular Number: DPRT-2011-04) issued by the Office of the Deputy President (Research & Technology) on 20 Dec 2011, the research data (without personal identifiers) used in publications will be retained for a minimum of 10 years.

What are the possible discomforts and risks for participants:

There are no possible discomforts or risks in this study.

What is the compensation for any injury:

No injury is expected as a result of participation in this study.

Will there be reimbursement for participation:

Based on the surveys' participation rate, each couple will be reimbursed up to \$50 worth of NTUC vouchers, as well as, stand a chance to win an additional \$50 voucher via a raffle

How many surveys do I have to do and how long does it take to complete each survey?

Both you and your partner are required to complete a mobile phone survey daily for a period of 10 work days. Each survey will take no more than 10-15 minutes to complete.

What happens if I did not submit my surveys on time?

All participants are required to submit their surveys in a timely manner. All surveys must be completed within 3 hours of receiving the SMS reminder.

All late submissions will be discarded and no reimbursements will be given

Will I be reminded to complete the surveys?

Yes, we will be sending you SMS reminders to remind you to complete the surveys.

What are the possible benefits to me and to others:

Besides the reimbursement, there are no other direct benefits to you by participating in this research project. The knowledge gained will benefit the public in the future by providing insight into how couples manage unemployment and work stress.

Can I refuse to participate in this research:

Yes, you can refuse to participate at anytime during this research project. Your decision to participate in this research is voluntary and completely up to you. You can also withdraw from the research at any time without giving any reasons by informing the principal investigator of your 5 digit ID and all your data collected will be discarded.

However, you will receive no reimbursement if you decide to withdraw from the study.

Whom should I call if I have any questions or problems?

Please contact the Principal Investigator, Don J.Q. Chen at jiaqing.chen@nus.edu.sg for all research-related matters.

For an independent opinion regarding the research and the rights of research participants, you may contact a staff of the National University of Singapore Institutional Review Board (Attn: Mr Chan Tuck Wai, at telephone 6516 1234 or email at irb@nus.edu.sg).

Appendix 2: Questionnaire

Study 1: Alumni Sample – Daily diary survey

• Work stressors

The following statements describe some experiences that people might have at work. Read each statement carefully and indicate the extent you agree/disagree with how each statement describes your experiences at work **TODAY**.

Karasek (1979) – Work overload

1. I feel that I do not have enough time to complete my work.
2. I feel that I have an excessive amount of work to be done.

Riozz et al. (1970) – Role conflict

1. I feel that I have to do things that should have been done differently.
2. I have to work under vague directives or orders

Riozz et al. (1970) – Role ambiguity

1. I feel that I have clearly planned goals and objectives for my job.
2. I know what is exactly expected of me.

• Coping

Individual Coping

The following statements describe some ways that people can use to cope with their work difficulties. Read each statement carefully and ***think about the difficulties you encountered at work today***. Indicate the extent you agree/disagree with how each statement describes the way you cope with your work difficulties **TODAY**.

Carver (1997) – Adapted from a brief COPE scale

Problem-focused (Self)

Active

1. I focused my efforts on doing something to resolve my work difficulties.
2. I tried to improve the situation.

Planning

3. I tried to come up with strategies on what to do about my work difficulties.
4. I thought hard about what steps to take to ease my work difficulties.

Instrumental

5. I asked people who have experienced similar difficulties on what they did.
6. I tried to get advice from someone about what to do.

Emotion-focused (Self)

Emotional

7. I talked to people about how I feel about my work difficulties.
8. I discussed my feeling about my work difficulties with someone.

Positive reframing

9. I look for something good in what has happened.
10. I tried to see my work difficulties in a different light in order to make the situation seem more positive.

Acceptance

11. I have learnt to live with my work difficulties.
12. I have accepted the reality that work difficulties have happened.

Dyadic Coping

The following statements describe some ways that spouses can help each other cope with work difficulties. Read each statement carefully and indicate the extent you agree/disagree with how each statement describes ***the way your spouse help you*** cope with your work difficulties ***TODAY***.

Problem-focused (Spousal)

Active

1. My spouse has focused his/her efforts on doing something to help resolve my work difficulties.
2. My spouse tried to improve my situation.

Planning

3. My spouse tried to come up with strategies on what I should do to resolve my work difficulties.
4. My spouse thought hard about what steps I should take to ease my work difficulties.

Instrumental

5. My spouse asked people who had experienced similar work difficulties as I do on what they did and relayed their experiences to me.
6. My spouse tried to give me advice about what to do.

Emotion-focused (Spousal)

Emotional

7. My spouse talked to me about how I feel.
8. My spouse discussed with me about my feelings regarding my work difficulties.

Positive reframing

9. My spouse helped me to look for something good in what has happened.
10. My spouse tried to help me see my work difficulties in a different light and make them seem more positive.

Acceptance

11. My spouse has helped me learnt to live with my work difficulties.
12. My spouse has been helping me accept the reality that I am facing difficulties at work.

• **Daily Distress**

The following statements describe some feelings that people might have towards their work. Read each statement carefully and indicate the extent you agree/disagree with how each statement describes your feelings ***towards your work TODAY***.

Goldberg (1972) Distress

Today, I

1. ... I feel that I cannot overcome my difficulties.

2. ...loss confidence in myself.

- **Work engagement**

The following statements describe some feelings that people might have towards their work. Read each statement carefully and indicate the extent you agree/disagree with how each statement describes your feelings towards your work **TODAY**.

Schaufeli et al., (2006) – Shorten UWES-9

While at work today, I...

1. ...felt bursting with energy. (Vigour)
2. ...felt enthusiastic about what I do. (Dedication)
3. ...am absorbed in what I do. (Absorption)

- **Well-being**

Psychological well-being

The following statements describe some general feelings that people might have about themselves. Read each statement carefully and indicate the extent you agree/disagree with how each statement describes your feelings **AT THE CURRENT** moment.

Ryff (1989) Psychological well-being

1. I am not afraid to voice my opinions even when they are in opposition to the opinions of most people. (Autonomy)
2. It is difficult for me to voice my opinion on controversial issues. (Autonomy) **(R)**
3. In general, I feel that I am in charge of the situation in which I lived. (Mastery)
4. I am quite good at managing the responsibilities of my daily life. (Mastery)
5. I sense that I have developed a lot as a person over time. (Growth)
6. I gave up trying to make big improvements or changes in my life a long time ago. (Growth) **(R)**
7. I feel lonely because I have few people with whom to share my concerns. (Relations) **(R)**
8. Maintaining close relationships has been difficult and frustrating for me. (Relations) **(R)**
9. I feel that I have a sense of direction and purpose in life. (Purpose)
10. I feel that don't have a good sense of what I want to accomplish in life. (Purpose) **(R)**
11. When I look at the story of my life, I am pleased with how things have turn out. (Acceptance)
12. In many ways, I feel disappointed about my achievements in life. (Acceptance) **(R)**

Subjective well-being

The following statements describe some feelings that people might have towards life. Read each statement carefully and indicate the extent you agree/disagree with how each statement describes your feelings about your life **AT THE CURRENT** moment.

Diener et al. (1985) Life satisfaction

At this point in time, I feel that:

1. ...in most ways, my life is close to ideal.

2. ...the conditions of my life are excellent.

Positive and Negative Affect

The following statements describe some emotions that people might have. Read each statement carefully and indicate the extent each statement describes your emotions at the **AT THE CURRENT** moment.

Diener et al (1995) – Affect adjective scale

At the current moment, I feel:

1. Angry
2. Sad
3. Joyful
4. Affectionate

Marital satisfaction

The following statements describe people's attitudes towards their marriage. Read each statement carefully and indicate the extent each statement describes your attitude toward marriage at the **CURRENT** moment.

Schumm et al. (1986) Marital satisfaction scale

1. How satisfied are you with your husband (wife) as a spouse?
2. How satisfied are you with your relationship with your husband (wife)?

Physical well-being

The following statements describe some general discomfort people might experience. Read each statement carefully and indicate the extent that you experience these discomfort **CURRENTLY**.

Terluin et al. (2004) Somatization scale

1. Headache.
2. Bloating feeling in the stomach.
3. Pressure or tight feelings in the chest.

Appendix 3: Extended Satorra-Bentler scaled chi-square difference test

$$cd = (d0 * c0 - d1*c1)/(d0 - d1)$$

where d0 is the degrees of freedom in the nested model;
c0 is the scaling correction factor for the nested model;
d1 is the degrees of freedom in the comparison model;
c1 is the scaling correction factor for the comparison model.

Compute the Satorra-Bentler scaled chi-square difference (TRd):

$$TRd = (T0*c0 - T1*c1)/cd$$

where T0 and T1 are the MLM, MLR, or WLSM chi-square values for the nested and comparison model, respectively.

Appendix 4: Mplus Syntax for Multilevel CFA

Title:

Multilevel CFA for coping

Data:

File is C:\Users\g0800777\Desktop\alumni.dat;

Variable:

Names are Mobile A1 A2 P1 P2 I1 I2 E1 E2 R1 R2 Acc1 Acc2;

Missing are all (-9999);

USEVARIABLES ARE A1 A2 P1 P2 R1 R2 Acc1 Acc2 I1 I2 E1 E2;

WITHIN = A1 A2 P1 P2 R1 R2 Acc1 Acc2 I1 I2 E1 E2;

CLUSTER = Mobile;

Analysis:

Type = TWOLEVEL;

Model:

%WITHIN%

Active BY A1 A2;

Plan BY P1 P2;

Instrut BY I1 I2;

Emo BY E1 E2;

Reinter BY R1 R2;

Accept BY Acc1 Acc2;

Problem BY Active Plan Instrut; !Two factor model

Emotion BY Reinter Accept Emo; !Two factor model

!One BY Active Plan Reinter Accept Instrut Emo; !One factor model

OUTPUT:

SAMPSTAT;

STAND;

Appendix 5: Mplus Syntax for Multilevel Dual Stage Moderated Mediation

Title:

Multilevel Dual Stage Moderated Mediation

DATA: FILE IS C:\Users\g0800777\Desktop\Data.dat;

Variable:

Names are Mobile predictor moderator(first stage) moderator(second stage)
mediator interaction(first stage) interaction(second stage) dependent control;

Missing are all (-9999) ;

USEVARIABLES ARE predictor moderator(first stage) moderator(second stage)
mediator interaction(first stage) interaction(second stage)
dependent control;

CLUSTER= Mobile;

WITHIN= predictor moderator(first stage) moderator(second stage) mediator
interaction(first stage) interaction(second stage) control

ANALYSIS:

TYPE = TWOLEVEL RANDOM;

Estimator=MLR;

MODEL:

%WITHIN%

s1| mediator ON predictor;

s2| mediator ON moderator(first stage);

s3| mediator ON interaction(first stage);

mediator ON control; !control effect of individual coping

!first stage, regresses mediator on predictor, control, moderator(first stage), and interaction(first stage)

s4| dependent ON mediator;

s5| dependent ON moderator(second stage);

s6| dependent ON interaction(second stage);

dependent ON control; !(control effect of individual coping)

dependent ON predictor(x); !control for main effect of predictor

dependent ON first stage moderator(y); !control for first stage moderation at second stage

!second stage, regresses dependent on mediator, control, moderator(second stage), and interaction(second stage)

```

%BETWEEN%
s1 s2 s3 s4 s5 s6 dependent;
[s3](a1);
[s6](a2);

[s1](b1);
[s4](b2);

s1 WITH s2 s3 s4 s5 s6 dependent; !allow between person portion of random slope to correlate
s2 WITH s3 s4 s5 s6 dependent;
s3 WITH s4 s5 s6 dependent;
s4 WITH s5 s6 dependent;
s5 WITH s6 dependent;
s6 WITH dependent;

MODEL CONSTRAINT:

NEW(ind_h ind_l);
ind_h=(b1+a1*(.84))+(b2+a2*(.84)); !assuming standard deviation of moderators is .84
ind_l=(b1+a1*(-.84))+(b2+a2*(-.84)); !assuming standard deviation of moderators is .84
NEW(Diff);
Diff = ind_h-ind_l; !significance difference indicate moderated mediation

NEW(dir_h dir_l dir_d);
dir_h=x+y*(.84);!direct effect for high group
dir_l=x+y*(-.84);!direct effect for low group
dir_d=dir_h - dir_l;!diff in direct effect b/w two groups

NEW(tot_hh tot_ll tot_d);!name the total effect
tot_hh=dir_h+ind_h;!total effect for high_high group
tot_ll=dir_l+ind_l;!total effect for low_low group
tot_d=tot_hh-tot_ll;!diff in total effect b/w two groups

OUTPUT:
SAMPSTAT;
CINTERVAL;

```

Appendix 6: Detailed Correlations between variables and sub-dimensions of variables

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 Work Overload	3.26	.99	(.90)	.29**	-.05	.77**	.29**	.06	.01	-.03	-.10**	.12**
2 Role Conflict	3.05	.76	.46**	(.87)	.13**	.71**	.21**	.05	-.06	-.09*	-.12**	.10**
3 Role Ambiguity	2.29	.63	.06†	.40**	(.79)	.41**	.09*	.07†	-.08*	-.10**	-.04	.11**
4 Daily work hassles	2.87	.59	.74**	.83**	.56**	(.85)	.33**	.09*	-.06	-.10**	-.14**	.17**
5 Distress	2.51	.81	.46**	.40**	.24**	.52**	(.82)	.07†	-.16**	-.23**	-.27**	.25**
6 Somatization	1.37	.59	.18**	.17**	.24**	.26**	.34**	(.83)	-.10**	-.13*	-.11**	.18**
7 Marital Satisfaction	4.11	.73	-.13**	-.07	-.11**	-.14**	-.24**	-.17**	(.95)	.18**	.31**	-.25**
8 Life Satisfaction	3.43	.75	-.14**	-.25**	-.34**	-.31**	-.34**	-.23**	.22**	(.86)	.22**	-.23**
9 PA	3.14	.87	-.14**	-.16**	-.11**	-.19**	-.31**	-.13**	.30**	.34**	(.88)	-.28**
10 NA	1.96	.84	.23**	.18**	.10**	.24**	.40**	.35**	-.27**	-.27**	-.24**	(.87)
11 Autonomy	3.54	.70	-.09†	-.17**	-.20**	-.20**	-.25**	-.14**	.09†	.30**	.17**	-.15**
12 Mastery	3.72	.59	-.05	-.19**	-.41**	-.25**	-.26**	-.28**	.20**	.52**	.22**	-.22**

	11	12	13	14	15	16	17	18	19	20	21	22	23
1 Work Overload	.07 [†]	-.02	-.02	-.01	.08 [†]	.03	.03	.03	.04	.20**	.12**	-.01	-.03
2 Role Conflict	-.05	-.05	-.06	-.08	.01	.03	-.07	-.05	-.01	.17**	.07	.01	-.04
3 Role Ambiguity	-.10**	-.11**	-.08*	-.06	-.10**	-.13**	-.18**	-.15**	-.02	-.01	-.01	.03	.05
4 Daily work hassles	-.02	-.08 [†]	-.08 [†]	-.06	.01	-.01	-.07 [†]	-.06	.03	.21**	.11**	-.03	.02
5 Distress	-.08 [†]	-.21**	-.08 [†]	-.03	-.12**	-.10**	-.19**	-.17**	-.07	.15**	.04	-.05	-.12**
6 Somatization	.04	-.01	-.04	-.15**	-.06	-.05	-.08*	-.15**	-.02	-.01	-.01	.04	-.01
7 Marital Satisfaction	.08*	.11**	.08*	.08 [†]	.10**	.12**	.17**	.16**	.08 [†]	.01	.03	.15**	.18**
8 Life Satisfaction	.13**	.19**	.04	.06	.14**	.08*	.20**	.20**	-.01	.10**	.16**	.09*	.09*
9 PA	.01	.12**	.06	.13**	.09*	.06	.14**	.28**	.15**	.09*	.08*	.12**	.17**
10 NA	-.05	-.15**	-.06	-.15**	-.14**	-.18**	-.22**	-.10**	.03	.08*	-.04	.01	-.03

Note: These are within-person correlation above the diagonal

	Mean	SD	1	2	3	4	5	6	7	8	9	10
13 Growth	3.67	.60	-.21**	-.17**	-.23**	-.27**	-.35**	-.29**	.33**	.30**	.20**	-.25**
14 Relations	3.68	.80	-.19**	.30**	-.25**	-.32**	-.28**	-.20**	.35**	.30**	.19**	-.28**
15 Purpose	3.62	.71	-.13**	-.29**	-.45**	-.36**	-.32**	-.28**	.28**	.54**	.27**	-.26**
16 Acceptance	3.69	.67	-.11**	-.21**	-.39**	-.29**	-.30**	-.26**	.26**	.57**	.22**	-.28**
17 Psychological Well-being	3.66	.50	-.18**	-.31**	-.44**	-.39**	-.40**	-.32**	.35**	.57**	.29**	-.33**
18 Work Engagement (Day t)	3.26	.73	.05	-.14**	-.29**	-.13**	-.27**	-.18**	.04	.28**	.43**	-.15**
19 Work Engagement (Day t +1)	3.26	.73	.05	-.13**	-.22**	-.10*	-.22**	-.11**	.02	.19**	.40**	-.08†
20 Problem-focused Individual coping	3.53	.55	.23**	.14**	-.16**	.13**	.07†	-.01	.08*	.17**	.28**	.12**
21 Emotion-focused Individual coping	3.55	.54	.16**	.06	-.18**	.05	.01	-.02	.13**	.24**	.28**	.04
22 Perceived Problem-focused Dyadic Coping	2.94	.54	-.03	-.02	-.12**	-.07†	-.05	.10*	.28**	.23**	.33**	.12**
23 Perceived Emotion-focused Dyadic Coping	3.13	.84	-.02	.04	-.07†	-.02	-.14**	.06	.38**	.27**	.36**	.04

Note: These are between-person correlation below the diagonal

	11	12	13	14	15	16	17	18	19	20	21	22	23
11 Autonomy	(.79)	.12**	.15**	.05	.08	.13**	.48**	.13**	-.04	.01	.03	.01	.01
12 Mastery	.33**	(.77)	.18**	.03	.13**	.18**	.50**	.15**	-.01	.03	.06	-.01	-.02
13 Growth	.37**	.44**	(.80)	.18**	.22**	.28**	.60**	.05	.06	.05	.07 [†]	.05	.05
14 Relations	.33**	.28**	.47**	(.81)	.17**	.21**	.52**	.02	.02	-.01	-.01	-.05	-.01
15 Purpose	.34**	.53**	.51**	.51**	(.79)	.29**	.57**	.09*	-.06	.07 [†]	.08*	-.01	.02
16 Acceptance	.36**	.54**	.52**	.48**	.65**	(.77)	.61**	.12**	.06	.03	.03	-.01	-.01
17 Psychological Well-being	.62**	.69**	.74**	.72**	.81**	.80**	(.78)	.17**	.01	.05	.08	-.01	.01
18 Work Engagement (Day t)	.24**	.31**	.20**	.09*	.28**	.22**	.30**	(.80)	.22**	.21**	.17**	.13**	.11**
19 Work Engagement (Day t +1)	.19**	.25**	.20**	.06	.20**	.16**	.24**	.63**	(.80)	.10*	-.04	-.07	-.04
20 Problem-focused Individual coping	.09**	.17**	.08*	.06	.17**	.15**	.16**	.31**	.22**	(.83)	.54**	.16**	.15
21 Emotion-focused Individual coping	.09**	.20**	.11**	.03	.21**	.18**	.18**	.29**	.17**	.71**	(.81)	.16**	.19**
22 Perceived Problem-focused Dyadic Coping	.11**	.07*	.05	.10**	.09**	.08*	.12**	.20**	.13**	.34**	.38**	(.83)	.63**

	11	12	13	14	15	16	17	18	19	20	21	22	23
23 Perceived Emotion-focused Dyadic Coping	19	.12**	.16**	.18**	.14**	.17**	.22**	.20**	.14**	.40**	.43**	.82**	(.84)

†p<.10, *p < .05, **p < .01

Note: Correlations below the diagonal (N=80) are between-person correlations and correlations above the diagonal (N=716) are within-person correlations.