

**THE DYNAMIC RELATIONS BETWEEN WORK AND FAMILY
CONFLICTS AND EMOTIONAL EXHAUSTION: ABOVE AND BEYOND THE
STRESSOR-OUTCOME MODEL**

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A Thesis

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ABSTRACT

The Dynamic Relations Between Work and Family Conflicts and Emotional Exhaustion: Above and Beyond the Stressor-Outcome Model

Wendy Glaser

This thesis explored the relations between work and family conflicts, stress appraisal, self-efficacy and emotional exhaustion. More specifically, based on Lazarus and Folkman's (1984) stress-appraisal theory, appraisal of work and family conflicts were proposed to mediate the relationship between perceived work and family conflicts and emotional exhaustion. Additionally, general self-efficacy was examined as a potential moderator of the relationship between work and family conflicts and stress appraisal. Data were collected from a sample of faculty and staff at a large Canadian university (N = 110). Participants received an email inviting them to participate in a two-part survey, which was made available to them online. The results revealed that threat-appraisal mediates the relationship between work and family conflicts and emotional exhaustion. Specifically, work-family conflicts (WFC) are viewed as being threatening to an individual's loved ones' well-being and to his or her self-esteem. In turn, this sense of threat leads an individual to feel emotionally exhausted. Family-work conflicts (FWC) are also seen as being threatening to one's self-esteem, which leads to emotional exhaustion. Self-efficacy did not moderate the relationship between work and family conflicts and stress-appraisal in the proposed ways. Results from the moderation analysis revealed that work-family conflicts are viewed as being threatening to individuals both high and low in self-efficacy. Furthermore, at high levels of family-work conflict, those high in self-efficacy perceived greater threat to their self-esteem than those who were less

self-efficacious. In addition to increasing our knowledge of why work and family conflicts lead to emotional exhaustion, this study raises the idea that individuals view work and family issues differently, and underscores the salience of occupational stress in today's society.

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Occupational stress has been of increasing concern to both employers and employees for over 20 years (for a review, see Jex & Beehr, 1991). Research on this phenomenon has grown dramatically, which is not surprising, given that work often plays an essential role in people's lives. A recent study showed that work stress is on the rise, with half of all Canadian employees experiencing high levels of perceived stress and one quarter feeling "burned out" from their jobs (Duxbury, Higgins & Johnson, 1999). This same study indicated that an inability to successfully balance one's work and family lives is a primary cause of stress (Duxbury et al.). In fact, a recent meta-analysis conducted on work-life balance found that burnout was shown to exhibit the strongest relationship with work-family conflicts among all of the outcomes studied (Allen, Herst, Bruck, & Sutton, 2000). As a source of stress, work and family conflicts affect nearly six million Canadian workers and cost Canada's health care system close to \$426 million to treat per year (Duxbury et al.).

One of the leading models of work stress is the Social Environmental Model developed by Katz and Kahn in 1978. This model describes work stress as the process through which stressors in the objective work environment influence one's perceptions of stress, which in turn generate an individual response and a final outcome. Outcomes of stress include psychological, physical, and behavioural reactions (Jex & Beehr, 1991). The stressor-outcome relationship is moderated by properties of individual themselves, and by their interpersonal relations (Katz & Kahn, 1978). According to Jex and Beehr, researchers have used this model to guide their research on how various work stressors influence individuals' interpretations of and reactions to stress.

Although the Social Environmental Model is useful in that it provides a multi-stage framework through which researchers can understand the stressor-outcome relationship, it does not offer an explanation as to why different individuals will perceive and react to a potentially stressful situation in different ways. In an effort to explain why individuals experience stress differently, Lazarus and his colleagues (Coyne, & Lazarus, 1980; Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986; Lazarus & DeLongis, 1983; Lazarus, & Folkman, 1984) have developed a theory of psychological stress and coping. The authors posit that an individual will appraise a situation as being stressful or not depending on whether the situation is potentially threatening or challenging and whether or not the individual has sufficient resources to manage it. The current study explored the relationship between work and family conflicts and job burnout from the stress-appraisal perspective.

Among the individual characteristics related to the appraisal process that has been examined is Bandura's (1977) concept of self-efficacy. According to Bandura (1994), self-efficacy is viewed as a belief about one's capabilities to exercise control over her own functioning and over events that affect her life. Beliefs about one's self-efficacy are thought to influence the stress-appraisal process such that individuals with a high sense of self-efficacy are less likely to view a situation as being threatening from the start. Although numerous studies have offered support for the moderating effect of self-efficacy and other related variables on the stressor-outcome relationship (e.g., Greenglass & Burke, 2002; Kinnunen, Vermulst, Gerris, & Makikangas, 2003; Westman, 1990; Westman & Etzion, 1995; Westman, Etzion, & Danon, 2001), few studies have examined

self-efficacy in relation to work and non-work related stressors (Jex & Bliese, 1999; Perrewé, Hochwarter, Rossie, Wallace, Maignan, Castro, et al., 2002).

The goal of the current study was to examine the relationship between work and family conflicts, general beliefs of one's self-efficacy and the emotional exhaustion component of burnout. Specifically, based on Lazarus and Folkman's (1984) stress-appraisal theory, general self-efficacy beliefs were thought to moderate the relationship between perceived work and family conflicts, and one's subjective experience of emotional exhaustion.

Work-Family Conflict and Family-Work Conflict

Definition. According to Greenhaus and Beutell (1985), work-family conflict is a type of inter-role conflict in which the role demands stemming from one domain (work or family) are incompatible with role demands stemming from another domain (family or work). This type of inter-role conflict is viewed as being a significant stressor within the stress and coping framework (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). According to the literature, three major forms of work and family conflicts exist (Greenhaus & Beutell, 1985; Parasuraman, Greenhaus, & Granrose, 1992). Time-based conflict arises when time pressures from one role prevent a person from fulfilling expectations of the other role. Strain-based conflict occurs when strain or exhaustion originating from one role interferes with functioning in the other role. Finally, behavior-based conflict is experienced when specific behaviors required in one role interfere with behaviors from another role. Work and family conflicts are considered to be bi-directional in nature in that there is a distinction between one's work interfering with his family (work-family conflict) and one's family interfering with his work (family-work

conflict; Frone, Russell, & Cooper, 1992; Frone, 2003). Evidence for the distinction between work-family conflict and family-work conflict was revealed in a study conducted by Frone et al. (1992) whereby both types of conflict were shown to be associated with unique antecedent conditions. Specifically, job stressors and job involvement were positively related to work-family conflict whereas family stressors and family involvement were positively related to family-work conflict. In addition, empirical support exists for the fact that work-family conflict is more prevalent than family-work conflict (Eby, Casper, Lockwood, Bordeaux & Brinley, 2005).

Based on a recent monograph of work and family research over the last two decades, work and family conflicts are currently seen as multifaceted issues which have been associated with numerous antecedents and consequences (Eby et al., 2005). The authors found that there are three main antecedents of work and family conflicts, namely (a) work domain predictors (e.g., number of hours worked), (b) family domain predictors (e.g., number of children) and (c) individual differences (e.g., Type A personality). In addition, there are three categories of consequences of work and family conflicts, including (a) physical and health outcomes (e.g., psychological distress), (b) work consequences (e.g., turnover intention) and (c) family consequences (e.g., lower family satisfaction). It is important to examine the outcomes of work and family conflicts so that we may better understand how this salient issue affects employees.

Effects of work and family conflicts. As noted, work and family conflicts have been conceptualized as major stressors for working professionals (e.g., Duxbury et al., 1999; Parasuraman et al., 1992). Research studies have offered support for the claim that work and family conflicts negatively affect employees (e.g., Kinnunen, Geurts & Mauno, 2004;

Burke & Greenglass, 2001; Aryee, 1993; Frone et al., 1992; Parasuraman et al., 1992). In fact, like other stressors, work and family conflicts have been associated with numerous negative consequences, ranging from psychological to physiological to behavioral.

Work and family conflicts have been shown to be related to negative health outcomes, such as increased substance abuse (Frone, Russell & Barnes, 1996; Frone, 2000), poor overall physical health (Frone et al., 1996; Frone, Russell, & Cooper, 1997), depression (e.g., Frone et al., 1996; Frone et al., 1997; Kinnunen et al., 2004), anxiety disorders and mood disorders (e.g., Frone, 2000), overall psychological distress (Burke & Greenglass, 1999), decreased general well-being (e.g., Grant-Vallone & Donaldson, 2001) and heightened life stress (e.g., Kelloway, Gottlieb & Barham, 1999; Parasuraman & Simmers, 2001). Work and family conflicts have also been associated with numerous attitudinal outcomes, such as decreased life satisfaction (e.g., Duxbury & Higgins, 1991; Higgins, Duxbury & Irving, 1992; Kossek & Oseki, 1998; Parasuraman et al., 1992; Rice, Frone & McFarlin, 1992), decreased family satisfaction (e.g., Rice et al., 1992), lower parental satisfaction (e.g., Kinnunen & Mauno, 1998), decreased levels of job satisfaction (e.g., Behson, 2002; Bruck, Allen & Spector, 2002; Kinnunen et al., 2004; Kossek & Oseki, 1998; Netemeyer, Boles & McMurrin, 1996; Perrewé, Hochwarter & Kiewitz, 1999; Rice et al., 1992; Thomas & Ganster, 1995), turnover intentions (e.g., Greenhaus, Parasuraman & Collins, 2001) and lower organizational commitment (e.g., Netemeyer et al., 1996).

Job burnout has also been examined as an outcome of work and family conflicts. Job burnout is defined as a psychological syndrome in response to chronic emotional and interpersonal stressors on the job (Maslach, Shaufeli & Leiter, 2001). Specifically, the

main component of burnout, emotional exhaustion, is thought to be a direct consequence of the stress related to conflicts between the work and family roles (e.g., Burke & Greenglass, 2001; Demerouti, Bakker, & Bulters, 2004; Kinnunen et al., 2003; Posig & Kickul, 2004). Indeed, a meta-analysis conducted by Allen et al. (2000) reported that the relationship between work-family conflict and burnout was the strongest among all of outcomes studied, with a weighted mean correlation of 0.42. Given the changing nature of demographics in Canada, including the influx of women into the workforce, the prevalence of single-parent households and the large number of employees working longer hours, it is no surprise that burnout has been significantly associated with work and family conflicts (Duxbury et al., 1999). Each of these demographic variables has the potential to add significantly to the level of emotional exhaustion commonly experienced by those who suffer from burnout. Whether it be by taking on the added responsibilities associated with a new role or by being forced to juggle numerous demands at once, there is no doubt that today's workers are feeling the strain of work and family conflicts.

Work and Family Conflicts and Emotional Exhaustion

The term "burnout" began to appear in the academic literature around the mid-1970s and was first studied in the context of human service providers, who were found to be especially prone to the symptoms typically associated with this type of outcome (for a review, see Maslach et al., 2001). There are three components of burnout, namely, emotional exhaustion, depersonalization and lack of personal accomplishment.

Emotional exhaustion generally entails feeling used up or drained from work and feeling worn out or fatigued and frustrated with one's job (Maslach & Jackson, 1981). Depersonalization refers to an individual's "attempt to put distance between oneself and

service recipients by actively ignoring the qualities that make them unique and engaging people” (Maslach et al., 2001, p.403). It is believed that this cognitive distancing is an immediate reaction to exhaustion. According to Maslach (2003), individuals develop an indifference towards others when they are exhausted from work, and they use cognitive distancing to escape. This explains the high correlation between the two components commonly found in the literature (Maslach et al., 2001). Lack of personal accomplishment, the third component of burnout, is thought to develop separate from the other two, principally from a lack of relevant resources. Generally, when an employee is faced with a negative stressful situation, her sense of personal effectiveness may lessen as a result (Maslach et al., 2001). In parallel to these three components, job burnout in non-service providers is characterized by emotional exhaustion, cynicism and reduced professional efficacy (Taris, Schreur, & Schaufeli, 1999). According to several researchers, emotional exhaustion is viewed as being the key component of burnout and the one that exhibits the highest reliability and validity as a measure of burnout (i.e., Cordes & Dougherty, 1993; Koeske & Koeske, 1989; Leiter & Maslach, 1988). Although researchers have explored all three components of burnout together, evidence exists which suggests that examining separate components individually is also appropriate (e.g., Posig & Kickul, 2004).

There have been several studies that have explored the antecedents and consequences of emotional exhaustion, including many that have examined work and family conflicts as potential antecedents (e.g., Bacharach, Bamberger & Conley, 1991; Burke, 1993; Burke & Greenglass, 2001; Demerouti et al., 2004; Kinnunen & Mauno, 1998;

Netemeyer et al., 1996; Schaufeli & Greenglass, 2001). Following is a sample of the research that has been conducted on work and family conflicts and burnout.

In an interesting study conducted by Baccarach et al. (1991), emotional exhaustion was shown to be a direct consequence of work-family conflict in a sample of engineers and nurses. The authors explored the relationship between work-role overload, work-role conflict, work-family conflict and emotional exhaustion. Results indicated that work-role overload and work-role conflict predicted work-family conflict and subsequent emotional exhaustion among engineers, whereas only work-role conflict emerged as a significant predictor of work-family conflict among nurses. These results may be indicative of the differences among professions, where work-role overload is seen as expected and routine in nursing, but it is not expected in engineering.

In his examination of work and non-work stressors in dual-earner couples, Aryee (1993) discovered that work-related stressors were significantly related to emotional exhaustion for both married men and women, but only wives experienced emotional exhaustion from non-work related stressors as well. Specifically, work-related stressors such as job ambiguity and lack of career success predicted emotional exhaustion in both husbands and wives, whereas non-work related stressors such as job-parent conflict and quality of spouse experience were related to emotional exhaustion only for wives.

In 1993, Burke explored the levels of burnout among 828 male and female police officers. Each component of burnout was examined separately, but only work interferences with family, not vice versa, were considered. Work-family conflict was significantly related to emotional exhaustion and depersonalization, but not to lack of

personal accomplishment. Work-family conflict was also related to overall levels of burnout, as measured by a total score combining scores from all three components.

In a study conducted by Netemeyer and his colleagues (1996), overall job burnout as measured by the Maslach Burnout Inventory was explored in their development and validation of work-family conflict and family-work conflict scales. Work-family conflict was reported more than family-work conflict, and work-family conflict was more highly correlated with overall burnout scores than family-work conflict in two separate samples.

Kinnunen and Mauno (1998) explored the antecedents and consequences of work-family conflict and family-work conflict among women and men. Their results showed that work-family conflict was associated with emotional exhaustion whereas family-work conflict was not. In fact, not only was work-family conflict found to be more prevalent than family-work conflict for both sexes, but work-family conflict was shown to have negative consequences on well-being experienced both at home and at work.

Burke and Greenglass (2001) collected data from 686 nurses during a time of hospital restructuring and downsizing. Results indicated that work-family concerns were strongly related to burnout, with emotional exhaustion exhibiting the strongest relationship of all three burnout dimensions. In fact, work-family concerns were more strongly related to levels of burnout than were concerns related to restructuring and downsizing. Although family-work conflict was shown to be related to professional efficacy, it was not as strong of a predictor of overall burnout as was work-family conflict.

In 2004, Posig and Kickul conducted a study exploring a model of work-role expectations, work-family conflict and emotional exhaustion in 163 dual-earner couples. Although work-family conflict was shown to be more prevalent than family-work

conflict, gender differences were found with regard to how much each type of conflict contributed to levels of emotional exhaustion. Specifically, work-family conflict and family-work conflict predicted emotional exhaustion in women, whereas only work-family conflict predicted emotional exhaustion in men.

Demerouti et al. (2004) explored the idea that the relationship between work-family conflict and exhaustion may be a reciprocal one. In other words, work-family conflict might lead to emotional exhaustion which in turn leads to increased work-family conflict. Results from their longitudinal study of 831 employees offered support for the hypothesized “loss spiral” theory, which posits that both work-family conflict and emotional exhaustion are causes and consequences of each other.

Based on the literature reviewed, it is clear that the connection between work and family conflicts and the emotional exhaustion component of burnout is a significant one. The research that has been conducted on this relationship reveals a number of pertinent findings. Firstly, work-family conflict is more strongly related to emotional exhaustion than to the other two components of burnout. Secondly, work and family conflicts and emotional exhaustion are positively and significantly related. Lastly, work-family conflict is more highly correlated with emotional exhaustion than is family-work conflict. Despite the large amount of research conducted on this topic there still exists a need to understand why work and family conflicts lead to emotional exhaustion. In the following section, a possible explanation is given that may help to explain this relationship in greater detail.

The Stress-Appraisal Process

Over a number of years, Lazarus and his colleagues developed a model of the psychological stress process called the “Stress-Appraisal” model. This cognitive-phenomenological model emphasizes how individuals evaluate and cope with stressful situations (e.g., Coyne & Lazarus, 1980; Folkman et al., 1986; Lazarus & DeLongis, 1983; Lazarus & Folkman, 1984). According to the model, stress is not defined by either the stressor or the outcome independently, but by the observed stimulus-response relationship that exists. Specifically, psychological stress can be viewed as a transactional process or balance of power between individuals and their environment. Negative psychological stress is experienced when the environmental demands of a situation exceed the resources available to the individual (Coyne & Lazarus, 1980). What is important to consider is not necessarily that individuals experience stress, but why individuals experience stress differently. The authors view cognitive appraisal as an evaluative process whereby individuals determine why and to what extent a situation is stressful. Coping is seen as the process through which individuals manage a stressful situation.

Cognitive appraisal consists of two processes, namely, primary appraisal and secondary appraisal. During primary appraisal, an individual asks the question of “am I in trouble or will I benefit?” If an individual feels that he is in trouble, then the situation will be appraised as being either harmful or threatening. Based on a review of subjects’ responses to open-ended questions, Folkman et al. (1986) discovered that individuals will appraise a situation as being stressful or not depending on what they feel is at stake. Two main factors emerged which explain why an individual would feel stressed by a situation.

Firstly, a situation will be viewed as stressful if it is threatening to an individual's sense of self-esteem. Secondly, a situational will be viewed as stressful if it is threatening to the well-being of an individual's loved ones. Both of these factors represent unique stakes that an individual considers during the primary appraisal process and therefore it is reasonable to conclude that they should be studied individually. The other possibility that can occur during a primary appraisal is that an individual will feel that he can benefit from a situation. In this scenario, the situation will be appraised as being challenging, which has potential for personal gain or growth.

During secondary appraisal, an individual asks the question "what, if anything, can be done about the current situation?" Secondary appraisals are viewed as being directly related to the outcome of the stressful situation. For example, an individual will also ask himself "is there something I can do to deal with the work-family conflict that I am experiencing?" The secondary appraisal process is dependent on a number of factors, including characteristics of the individual (e.g., sense of control), beliefs that a given behavior will lead to an outcome, and confidence in one's ability to successfully manage the situation. How a person chooses to cope with a situation is highly influenced by his primary and secondary appraisals and often changes as the encounter evolves (Folkman et al., 1986). Despite the hierarchical categories typically associated with the terms "primary" and "secondary," it is believed that both of these appraisals take place simultaneously (Lazarus & Folkman, 1984).

In this study, primary appraisal of work and family conflicts was proposed to mediate the relationship between perceived work and family conflicts and emotional exhaustion. According to the hypothesized model, work and family conflicts will only lead to

negative outcomes when they are appraised as being threatening, whereas they will not lead to negative outcomes when they are not appraised as being threatening.

Self-efficacy as a Moderator in the Stressor-Outcome Relationship

As previously noted, personal characteristics, such as beliefs about control, are thought to influence the stress appraisal process (Lazarus & DeLongis, 1983). Self-efficacy, a term first coined by Albert Bandura (1977, as cited in Bandura, 1989) is closely related to the appraisal process. Self-efficacy refers to individuals' beliefs about their capability to exercise control over their thoughts, motivations and actions. Self-efficacious individuals approach a potentially threatening situation with the confidence that they can control it successfully (Bandura, 1994). According to Coyne and Lazarus (1980, p.153), "a firm sense of self-efficacy can lead one to appraise transactions as benign or irrelevant that would otherwise be threatening."

A number of studies have examined self-efficacy and various constructs similar or related to self-efficacy as potential moderating or mediating factors in the stressor-outcome relationship (e.g., Greenglass & Burke, 2002; Jex & Bliese, 1999; Kinnunen et al., 2003; Perrewé et al., 2002; Westman, 1990; Westman & Etzion, 1995; Westman et al., 2001). In fact, a few studies have examined the impact of self-efficacy on emotional exhaustion and have found that increased feelings of self-efficacy result in lower levels of emotional exhaustion (e.g., Greenglass & Burke, 2002; Perrewé et. al., 2002). It is important to point out at this time the distinction between one's general feelings of self-efficacy, and the professional efficacy measured as a component of burnout. General feelings of self-efficacy capture individuals' broad beliefs in themselves as capable of succeeding in task demands in a wide array of contexts (Chen, Gully & Eden, 2001),

whereas professional efficacy refers specifically to individuals' beliefs about their capabilities to successfully handle situations pertaining to their work life (Schutte, Toppinen, Kalimo & Schaufeli, 2000; Taris, et al. 1999).

In a study conducted by Greenglass and Burke (2002) on nurses working in a hospital, various individual characteristics, including perceived self-efficacy, were examined as predictors of the three components of burnout. Results indicated that self-efficacy was negatively related to emotional exhaustion and cynicism and positively related to professional efficacy. In other words, high self-efficacy lowered the experience of overall burnout, whereas low self-efficacy put individuals at risk for increased levels of burnout.

Another study examined general self-efficacy beliefs cross-culturally across nine different regions (U.S.A, Germany, France, Brazil, Israel, Japan, Hong Kong, China, and Fiji; Perrewé et al., 2002). Perrewé et al. explored whether feelings of self-efficacy were universally beneficial by testing its mediating role in the relationship between work-related role stressors and emotional exhaustion. For all countries (except France) self-efficacy either partially or fully mediated the relationship between work role conflict and/or work role ambiguity and emotional exhaustion. In addition, self-efficacy was shown to be negatively related to emotional exhaustion in every region studied.

Self-efficacy has also been examined as a moderating variable in other stressor-outcome relationships, such as that between long work hours, work overload and psychological and physical outcomes. For example, Jex and Bliese (1999) examined self-efficacy beliefs in a large sample of over 2000 army soldiers and found that self-efficacy was shown to be a moderator of various stressor-outcome relationships.

Specifically, self-efficacy moderated the relationship between working hours, work overload, task significance and psychological outcomes, as measured by the Global Severity Index. The authors remarked that it is possible that employees who perceive themselves to be self-efficacious are not as likely to appraise a stressor as being threatening. A follow-up study by Jex, Bliese, Buzzell, & Primeau, (2001) went one step further by showing that specific coping styles influence the impact of self-efficacy on stressor-outcome relations.

There have also been several studies that have looked at variables closely related to self-efficacy as potential predictors of outcomes, and emotional exhaustion in particular (Kinnunen et al., 2003; Westman, 1990; Westman & Etzion, 1995; Westman et al., 2001). Most of these studies have focused on individuals' sense of control over their lives or their emotions, which can be seen as being closely related to feelings of self-efficacy.

Mina Westman and her colleagues have contributed a great deal to our knowledge and understanding of the factors that affect the stressor-outcome relationship, specifically emotional exhaustion. Westman (1990) conducted a study in which she examined the moderating effect of the personality characteristic hardiness on the relationship between experienced stress and performance. Westman found that hardy individuals, who perceive events as desirable and controllable, experience less stress and perform at higher levels than non-hardy individuals. In a second study conducted by Westman and Etzion (1995), the authors examined job stress, perceived level of support, sense of control and overall exhaustion in a sample of military officers and their wives. Results indicated that sense of control is more strongly related to lower levels of overall exhaustion than

perceived levels of support from one's family. Interestingly, sense of control was found to be so empowering, that one partner's sense of control contributed to the prediction of the other partner's level of overall exhaustion. Level of overall exhaustion was also found to have a crossover effect from one spouse to the other. In a similar study which examined the crossover of emotional exhaustion between spouses, Westman et al. (2001) looked at the impact that sense of control had on job insecurity and emotional exhaustion. Although emotional exhaustion was not found to crossover between husbands and wives, sense of control was associated with decreased levels of emotional exhaustion for both spouses.

One study examined the role of personality as a moderating factor between work-family conflict and well-being (Kinnunen et al., 2003). The authors sampled 465 working fathers and found that emotional stability, viewed as an individual's sense of control over his emotions, moderated the relationship between work-family conflict and job exhaustion. More specifically, for those low in emotional stability, work-family conflict had a greater impact on job exhaustion than for those high in emotional stability.

Taken together, these articles demonstrate the significant influence that a strong belief in one's level of self-efficacy can have on the stressor-outcome relationship. Specifically, high levels of self-efficacy are shown to be related to low levels of burnout, particularly the emotional exhaustion component. In addition, there is considerable evidence showing that various personal characteristics, closely related to control and efficacy, moderate relevant stress relations. However, there still exists a need to understand how and why self-efficacy beliefs affect the experience of stress. In fact, recently, a call has been made for researchers to examine the moderating effect of

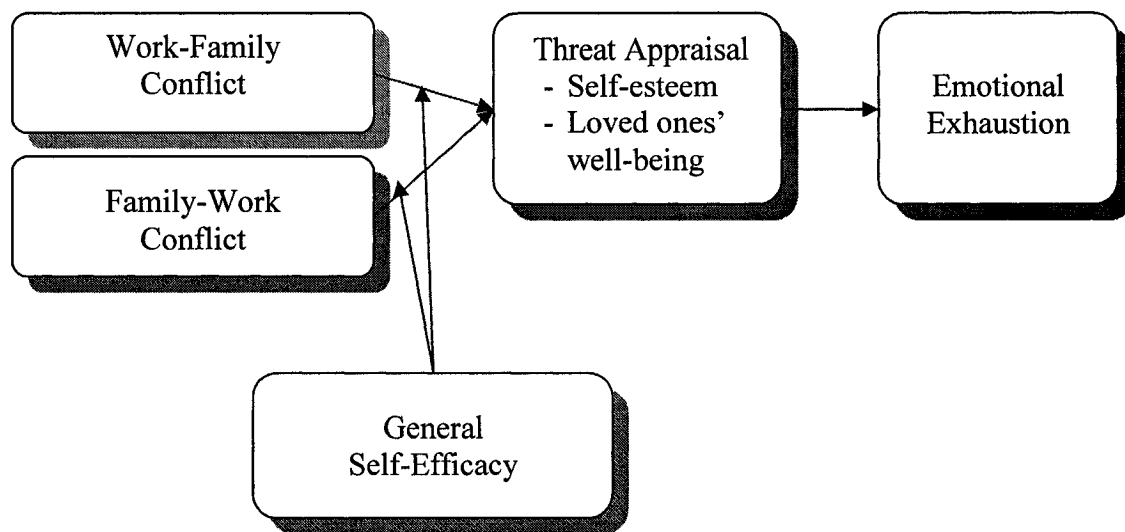
individual characteristics, such as self-efficacy, on various work and non-work related stressors (Allen et al., 2000; Kinnunen et al., 2003).

In this study, self-efficacy was examined as a moderator in the relationship between work and family conflicts and emotional exhaustion. Based on past studies, self-efficacy was hypothesized to influence how individuals will appraise their work-family situations. Specifically individuals who exhibit a high sense of self-efficacy will be less likely to appraise a situation as threatening in the first place, and hence will also be less likely to experience the negative outcome of emotional exhaustion.

The Current Study

The broad goal of the current study was to gain a better understanding of the psychological stress process and its wide ranging influence on working individuals. More specifically, this study examined the impact that self-efficacy has on the relations between work and family conflicts and emotional exhaustion. In order to examine this impact, two relationships were explored. The first relationship viewed stress appraisal as being the mediating variable between work and family conflicts and emotional exhaustion. Examining this relationship helped answer the question ‘why do work and family conflicts lead to emotional exhaustion?’ The second relationship viewed self-efficacy as the moderating variable between work and family conflicts and stress appraisal. Exploring this relationship helped answer the question ‘why do certain individuals perceive work and family conflicts as being stressful whereas others do not?’ (for a diagram, please refer to Figure 1).

Figure 1. Model of the Dynamic Relations Between Work and Family Conflicts and Emotional Exhaustion.



Hypotheses

Direct relationships. Based on the large amount of research that has demonstrated a positive relationship between work and family conflicts and emotional exhaustion, the following two hypotheses were made:

Hypothesis 1a: Work-family conflict will be positively related to emotional exhaustion.

Hypothesis 1b: Family-work conflict will be positively related to emotional exhaustion.

Mediating relationships. It is logical to suppose that when an individual's work interferes with her family, she may fear that her family's well-being will be negatively affected. Part of experiencing work-family conflict is the feeling that you have less time to dedicate to family activities and that you cannot fulfill your family duties. Consequently, your family's well-being may suffer as a result. It is also possible that individuals will perceive this as being stressful and will feel emotionally exhausted from having to deal with this situation. It is important to note at this time the parallel between one's family and one's loved ones. It is reasonable to presume that when an individual thinks about her loved ones she is thinking specifically about her immediate family. Thus, a situation that is threatening to one's family will most likely be associated with one's loved ones, even though the larger category of "loved ones" may also include less immediate family members and/or friends. Based on the above assumptions, the second hypothesis was made:

Hypothesis 2a: Appraisal of a situation as being threatening to one's loved ones will mediate the relation between work-family conflict and

emotional exhaustion. Work-family conflict will be positively related to appraisal of a situation as threatening to one's loved ones, and this type of appraisal will be positively related to the experience of emotional exhaustion.

It is also possible to envision a situation whereby a person's sense of self-esteem will be threatened when his work life interferes with his family life. Having less time to devote to one's family might cause an individual to fear that he will appear uncaring or to question his role as a good parent. It is possible that because of this perceived threat to his self-esteem, he will experience emotional exhaustion as a result. Based on these postulations, the following hypothesis was made:

Hypothesis 2b: Appraisal of a situation as being threatening to one's self-esteem will mediate the relationship between work-family conflict and emotional exhaustion. Work-family conflict will be positively related to appraisal of a situation as being threatening to one's self-esteem, and this type of appraisal will be positively related to the experience of emotional exhaustion.

Additionally, family-work conflicts may have an adverse affect on a person's sense of self-esteem. When individuals' work significantly impacts their sense of self and identity, they may feel poorly about themselves if they cannot devote an appropriate amount of time to this domain. In addition, if an employee feels that her work is lacking because of her family responsibilities she may worry that others at work (e.g., colleagues, supervisors) will lose respect for her. It is not difficult to imagine how this sense of

anxiety and threat could lead to feelings of emotional exhaustion. Based on this rationale, the following hypothesis was made:

Hypothesis 2c: Appraisal of a situation as being threatening to one's self-esteem will mediate the relationship between family-work conflict and emotional exhaustion. Family-work conflict will be positively related to appraisal of a situation as being threatening to one's self-esteem, and this type of appraisal will be positively related to the experience of emotional exhaustion.

When an individual's family interferes with his work, it is difficult to imagine a situation whereby this causes his loved ones' well-being to be threatened. As previously mentioned, family-work conflict involves having less time to devote to work because of an increase in family-related duties. The concept of family-work conflict in itself assumes that an individual's attention is on his family as opposed to his work. Because it is assumed that there is no relationship between family-work conflict and appraisal of a situation as being threatening to ones' loved ones, a mediating relationship was not hypothesized

Moderating relationships. Based on the assumption that work and family conflicts will lead to emotional exhaustion when an individual perceives them to be threatening, it is possible to imagine a scenario whereby an individual who feels confident in her overall capabilities will not perceive these conflicting situations as being threatening from the start. When a person feels strongly about her capacity to overcome obstacles, she may not view work and family conflicts as being threatening to her self-esteem or to her loved ones' well-being. In contrast, when a person does not feel confident about her ability to

overcome challenges, she may indeed view work and family conflicts as being threatening. This postulation holds true for both work-family conflicts and family-work conflicts. Based on these assumptions, the following three hypotheses were made:

Hypothesis 3a: Self-efficacy will moderate the relationship between work-family conflict and appraisal of a situation as being threatening to one's loved ones. When self-efficacy is low, the relation between work-family conflict and appraisal of a situation as being threatening to one's loved ones will be strong. When self-efficacy is high, the relation will be weak.

Hypothesis 3b: Self-efficacy will moderate the relationship between work-family conflict and appraisal of a situation as being threatening to one's self-esteem. When efficacy is low, the relation between work-family conflict and appraisal of a situation as being threatening to one's self-esteem will be strong. When efficacy is high, the relation will be weak.

Hypothesis 3c: Self-efficacy will moderate the relationship between family-work and appraisal of a situation as being threatening to one's self-esteem. When efficacy is low, the relation between family-work conflict and appraisal of a situation as being threatening to one's self-esteem will be strong. When efficacy is high, the relation will be weak.

Since it is assumed that there is no relationship between family-work conflict and appraisal of a situation as being threatening to the well-being of ones' loved ones, a moderating relationship involving self-efficacy was not hypothesized.

Methodology

Sample

The data for this study were collected as part of a larger study conducted at a large Canadian university. The "Making Time for Us" initiative put on by an internal university initiative was presented during May 2005 and was aimed at promoting employee wellness for faculty and staff of the university. Approximately 3,000 individuals from varying ranks and occupations were invited to participate in this study.

Two hundred and ninety three respondents completed Survey I and 334 completed Survey II; of the 627 respondents, 110 respondents completed both surveys. In sum, 517 employees participated in this study, which gives a response rate of approximately 17%. Demographic data were collected only for those participants who responded to Survey I. A demographic section was not included in Survey II because it was not anticipated that individuals would complete the second survey if they had not completed the first one. Table 1 summarizes the demographic distribution of Survey I.

Procedure

A preliminary email was sent from the committee in charge of the initiative to all faculty and staff informing them about "Making Time for Us" and explaining that they would be invited to participate in a study on work-life balance and employee wellness. During the initiative (the week of May 9th), employees received an email announcing the survey, briefly explaining its purpose, and inviting them to participate. The email provided

Table 1

Survey I Demographics

Sex	Age	Living Situation	Position at University	Union Affiliation
65% female	2% between 18-24	20% alone	32% supervisory	15% ACUMAE
	22% between 25-34	7% single adult and dependent		2% CUCEPTFU
	33% between 35-44	28% with spouse/partner		21% CUFA
33% male	29% between 45-54	35% with spouse/partner and dependent	58% non-supervisory	1% CULCU
	12% between 55-64	7% other		15% CUPEU
	1% over 65 years			5% CUPFA
				3% CUSSTS
			18% CUSSU	
			.5% SCOOM	
			9% Non-Union	

a weblink that directed employees to a website where more information about the study, and the survey, were found. The information page on the website reiterated the purpose of the study and stated the conditions of participation. Once participants had read the information about the study, they had the option to continue to the survey (by clicking a button labelled "continue to survey") and were able to complete the survey on-line.

Approximately 2 weeks later, participants received another email informing them that the second survey was available for completion and directing them to the website where the survey was found. On the website, participants were again provided with information about the study and the conditions of participation. They had the option of continuing to the survey or not. By choosing to continue on (clicking on "continue to survey") and then completing the survey, participants were actively indicating their continued consent to participate in the study. Both surveys took approximately 10-15 minutes to complete. Participants received one reminder email for each survey, which was sent one week following the original emails.

For those who did not have access to a computer (roughly 10% of the sample), a paper copy of the survey was sent to their work mailbox, along with an information letter that explained the purpose of the study and the conditions of participation. Paper copies of the surveys included return envelopes that were pre-addressed with the principal investigator's address. The response rate for the paper surveys was very low (7 forms in total) and they were not included in the sample.

Participants were asked to provide their mother's initials and the last four digits of their phone number as a personal identification number (PIN). This PIN ensured that responses from both surveys could be easily connected while maintaining participants'

privacy. Participants were informed that their participation was voluntary and that they could choose not to complete the survey at any time. All data were kept strictly confidential and participants remained anonymous.

Work-family conflict, family-work conflict and appraisal of conflicts were measured in the first survey, whereas general self-efficacy and emotional exhaustion were measured in the second survey.

Measures

Work-family conflict and family-work conflict. Work-family conflict and family-work conflict were each measured using a five-item self-report scale that was developed and validated by Netemeyer et al. (1996). Both scales were shown to exhibit high levels of construct validity, and yield coefficient alpha levels averaging $\alpha = .88$ for work-family conflict scale and $\alpha = .86$ for family-work conflict scale across three different samples (Netemeyer et al., 1996). Response options for both scales are on a 7-point Likert-type scale, ranging from *strongly disagree* (1) to *strongly agree* (7). Examples of items include: “The demands of my work interfere with my home and family life,” for the work-family conflict scale, and “I have to put off doing things at work because of demands on my time at home,” for the family-work conflict scale. In the present study, internal consistencies for these scales were high, with Cronbach’s alpha estimated to be $\alpha = .94$ for the work-family conflict scale and $\alpha = .93$ for the family-work conflict scale.

Emotional exhaustion. Emotional exhaustion was measured using the Emotional Exhaustion component of the MBI (Maslach & Jackson, 1981). The MBI is arguably the most popular measure of burnout and has been widely used. The MBI has been shown to exhibit high factorial validity and internal consistency (Richardson & Martinussen, 2004).

The emotional exhaustion component consists of 9 items; sample items include “I feel emotionally drained from work” and “Working with people puts too much stress on me”. Scale reliability for the emotional exhaustion scale in this sample was shown to be high with Cronbach’s alpha estimated to be $\alpha = .90$.

Stress appraisal. As per the research conducted by Folkman et al. (1986), the stress appraisal process was assessed using a 12-item scale that described various ways in which an individual can evaluate whether there is potential for harm in a stressful situation. Results from their factor analysis showed support for a two factor structure. Nine items loaded clearly onto these two separate factors, while three items did not load onto either. The first stress-appraisal factor included six items which measured threats to an individual’s self-esteem and had a mean coefficient alpha of $\alpha = .78$. The second stress-appraisal factor included three items which measured threats to a loved one’s well-being and had mean coefficient alpha of $\alpha = .76$. The final three items were used individually in the authors’ analysis. Response options for both scales are on a 5-point Likert-type scale ranging from *does not apply* (1) to *applies a great deal* (5). The scale was adapted to measure the extent to which work and family conflicts are threatening to one’s self-esteem and to the well-being of one’s loved ones. A stem for each item was included which stated “If my work and my home life conflict with one another, I think it is possible that...” Examples of items include “I will lose my self-respect” for the threat-esteem scale and “It will cause harm to a loved one’s health, safety, or physical well-being” for the threat-loved-ones scale.

Participants’ responses to Folkman’s 12-item ‘Stress Appraisal’ scale were subjected to a factor analysis in order to determine whether or not the expected two factor model

would in fact emerge as such for the current sample. Two factors were extracted based on the Initial Eigenvalue > 1 criteria (see Appendix) as well as the Scree Plot, from which the Scree factor was counted. The extraction method used was Principal Component Analysis. Two factors, accounting for 57.7 and 9.3 per cent of the total variance, respectively, were extracted and rotated using the Oblimin with Kaiser Normalization criterion. The items and their factor loadings from the Pattern Matrix are reported in Table 2. Consistent with Folkman et al.'s (1986) results, six items loaded clearly onto the threat-esteem factor. In addition, three items loaded clearly onto the threat-loved-ones factor. Although there was support for a two factor structure, contrary to what was found by Folkman et al., an additional two items also loaded clearly onto the threat-loved-ones factor. These items were "I will not achieve an important goal at my job or in my work" and "It will cause harm to my own health, safety, or physical well-being". It is logical why the "harm to own physical well-being" item loaded clearly onto the threat-loved-ones factor because it is directly related to one's health, safety and well-being. However, it is less apparent as to why the "achieve goal at work" item loaded onto this same factor because it is seemingly unrelated. The last item, "It will put a strain on my financial resources" did not load clearly on either factor. In order to remain consistent with Folkman et al.'s original analysis, the last three items were excluded from the data analysis. In the current study, coefficient alphas for the two scales were $\alpha = .94$ for the 6-item threat-esteem scale and $\alpha = .88$ for the 3-item threat-loved-ones scale.

Table 2

Factor Analysis for Stress Appraisal Scale

	Component	
	1	2
1. Lose approval of someone important	.91	-.02
2. Lose self-respect	.86	.00
3. Appear uncaring	.83	.01
4. Appear unethical	.83	-.02
5. Appear incompetent	.79	.00
6. Lose affection of someone important	.79	.06
7. Harm to loved ones' physical well-being	-.14	.98
8. Difficulty getting along in the world	-.04	.89
9. Harm to loved ones' emotional well-being	.06	.85
10. <i>Not achieve goal at work</i>	.11	.67
11. <i>Harm to own physical well-being</i>	.14	.55
12. <i>Strain on finances</i>	.37	.39

Note. $N = 260$. Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization. Pattern Matrix loadings are reported.

Self-efficacy. General self-efficacy was measured using the “New General Self-Efficacy Scale” (NGSE) developed and validated by Chen et al. in 2001. This 8-item scale has been shown to yield high content and predictive validities and a mean coefficient alpha value of .88. The current study yielded a coefficient alpha value of $\alpha = .80$. The NGSE is rated on a 7-point Likert type scale, and response options range from *strongly disagree* (1) to *strongly agree* (7). Example items include “I will be able to achieve most of the goals that I have set for myself” and “I am confident that I can perform effectively on many different tasks.”

Results

Descriptive Statistics

Table 3 provides means, standard deviations, and zero-order correlations for the variables examined. There were a number of interesting results with respect to self-efficacy that should be pointed out. Self-efficacy was found to be moderately and negatively correlated with family-work conflict ($r = -.28, p < .01$), however it was not found to be correlated with work-family conflict. Additionally, self-efficacy was significantly negatively related to threat-esteem ($r = -.20, p < .05$) and only marginally negatively related to threat-loved-ones ($r = -.18, p < .07$). It is also important to note that even though both threat-appraisal scales were highly correlated ($r = .67, p < .01$), results from the factor analysis showed that these scales exhibited two distinct categories.

Analytic Strategy

Mediation. In order to test the mediation effect, both the Baron and Kenny (1986) method as well as the Sobel z-test were used. According to Baron and Kenny, a variable

Table 3

Individual-Level Means, Standard Deviations, and Zero-order Correlations

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Work-Family Conflict	3.76	1.86	(.94)					
2. Family-Work Conflict	2.91	1.70	.62**	(.93)				
3. Self-Efficacy	5.93	.78	-.16	-.28**	(.80)			
4. Emotional Exhaustion	1.85	1.11	.42**	.23*	-.26**	(.90)		
5. Threat Appraisal (esteem)	3.17	1.85	.52**	.54**	-.20*	.46**	(.94)	
6. Threat Appraisal (loved-ones)	3.15	1.82	.45**	.49**	-.18	.38**	.67**	(.88)

Note. $N = 108$. Cronbach's alphas are reported on the diagonal. Range of scores for Work-Family Conflict, Family-Work Conflict, Self-Efficacy = 1 – 7; Emotional Exhaustion = 0 – 6; Threat Appraisals = 1 – 5. * $p < .05$ ** $p < .01$.

functions as a mediator when it meets three conditions: (a) the independent variable is significantly related to the dependent variable, (b) the independent variable is significantly related to the mediator, and (c) when the mediator is significantly related to the dependent variable a previously significant relationship between the independent and dependent variables no longer exists. If these conditions hold, and the independent variable has no effect on the dependent variable when the mediator is controlled for, then statistical mediation is said to exist.

In 1982, Sobel proposed a method for assessing the significance of indirect effects of the independent variable on the dependent variable through the mediator. The significance of the Sobel z-value designates whether the mediational effect is non-existent, partial or full. The first step involves inputting the raw correlations between the independent, mediating and dependent variables. Second, the following two regressions are computed: (a) the mediating variable is regressed on the independent variable, and (b) the dependent variable is regressed on both the independent variable and the mediating variable.

Moderation. Statistically, moderation involves a change in the relationship between the independent and the dependent variables as a function of the moderator variable. In order to determine if moderation exists when both the independent and moderator variables are measured continuously, the following three paths must be tested (Baron & Kenny, 1986); (a) the independent to the dependent variable (b) the moderator variable to the dependent variable, and (c) the interaction of the independent variable and the moderator variable to the dependent variable. A moderator is only identified as such if the last interaction term is found to be significant. Aiken and West (1991) addressed the

issue of exactly what significant interactions signify in multiple regression equations. The authors devised a way to determine the strength and the direction of a significant interaction. Firstly, the independent and moderator variables (i.e., work and family conflicts and self-efficacy) must be centered. Second, the regression equation is restructured to express the regression of the dependent variable (i.e., threat appraisal) on the independent variables at different levels of the moderator (i.e., self-efficacy). The authors specify two levels to use in the analysis, specifically (a) one standard deviation above the mean, and (b) one standard deviation below the mean. The regression equation appears as follows:

$$DV = [b_1 + (b_3 \text{ Mod})] (IV) + [(b_2 \text{ Mod}) + b_0]$$

Each of the levels of the moderator is plugged into the equation and a graphical depiction of the regression equation is derived. At this point it is important to examine if the slope of the regression line for each value of the moderator is significantly different from 0.

The analyses were run with and without the control variables ‘sex’ and ‘living situation’. Results from the analyses including the control variables were shown to be the same as those without the control variables. The analyses reported reflect those performed without the two control variables.

Tests of Hypotheses

Hypothesis 1a stated that work-family conflict will be positively related to emotional exhaustion. This hypothesis was tested by regressing emotional exhaustion onto work-family conflict. As shown in Table 4, Hypothesis 1a was supported.

Table 4

Tests of Threat Appraisals (esteem and loved-ones) as Mediators of Relations Between Work-Family Conflict and Emotional Exhaustion

	Dependent Variables		
	Threat- esteem	Threat- loved-ones	Emotional Exhaustion
Step 1			
Work-Family Conflict	.52**	.45**	.40**
R^2	.27**	.20**	.16**
F for R^2 total (df)	36.95** (1,100)	25.47** (1,100)	19.25** (1,99)
Step 2			
Work-Family Conflict			.23* .30**
Threat-esteem			.34**
Threat-loved-ones			.24*
ΔR^2			.09** .05*
R^2			.25 .21
F for ΔR^2 (df)			11.04** 5.66*
			(1,98) (1,98)
F for R^2 total (df)			16.12** 12.91**
			(2,98) (2,98)

Note. Standardized beta-weights are presented. * $p < .05$ ** $p < .01$

Hypothesis 1b stated that family-work conflict will be positively related to emotional exhaustion. This hypothesis was tested by regressing emotional exhaustion onto family-work conflict. As shown in Table 5, Hypothesis 1b was also supported.

Hypotheses 2a postulated that appraisal of a situation as being threatening to one's loved ones will mediate the relation between work-family conflict and emotional exhaustion. Results from each analysis can be found in Table 4. Once having found support for the first step required for mediation when testing Hypothesis 1a, the subsequent two steps were tested. In step 2, work-family conflict was found to be significantly related to threat-loved-ones. In step 3, the previously significant relationship between work-family conflict and emotional exhaustion was no longer significant when the mediator was included. Additionally, the Sobel z test indicated partial mediation (sobel z-value = 2.14, $p < .05$). Therefore, Hypothesis 2a was supported.

Hypothesis 2b hypothesized that work-family conflict will be positively related to appraisal of a situation as being threatening to one's self-esteem, and this type of appraisal will be positively related to the experience of emotional exhaustion. Results of the following analyses can be found in Table 4. Firstly, work-family conflict was found to be significantly related to emotional exhaustion. Secondly, work-family conflict was shown to be significantly related to threat-esteem. Finally, the previously significant relationship between work-family conflict and emotional exhaustion was no longer significant when the mediator was included. Sobel z test results confirmed this finding (sobel z-value = 2.93, $p < .01$) indicating partial mediation. Based on these results, Hypothesis 2b was supported.

Table 5

*Tests of Threat Appraisal (esteem) as a Mediator of Relations Between
Family-Work Conflict and Emotional Exhaustion*

	Dependent Variables	
	Threat-esteem	Emotional Exhaustion
Step 1		
Family-Work Conflict	.54**	.21*
R^2	.29**	.04*
F for R^2 total (df)	40.65**(1,99)	4.51*(1,98)
Step 2		
Family-Work Conflict		-.06
Threat-esteem		.49**
ΔR^2		.17**
R^2		.22
F for ΔR^2 (df)		.21.09**(1,97)
F for R^2 total (df)		13.26**(2,97)

Note. Standardized beta-weights are presented. * $p < .05$ ** $p < .01$

Hypothesis 2c suggested that family-work conflict will be positively related to appraisal of a situation as being threatening to one's self-esteem, and this type of appraisal will be positively related to the experience of emotional exhaustion. Results are reported in Table 5. Once again, each step required for mediation was shown to be significant. First, family-work conflict was found to be significantly related to emotional exhaustion. Second, family-work conflict was shown to be significantly related to threat-esteem. Third, the previously significant relationship between family-work conflict and emotional exhaustion was no longer significant when the mediator was included. The Sobel z test indicated a full mediation (sobel z-value = 3.70, $p < .01$). Hypothesis 2c was also supported.

Hypotheses 3a stated that self-efficacy will moderate the relationship between work-family conflict and appraisal of a situation as being threatening to the well-being of one's loved ones. Results from Hypothesis 3a are reported in Table 6. The first path between work-family conflict and threat-loved-ones was shown to be significant. The second path between self-efficacy and threat-loved-ones was not found to be significant. Finally, the third path between the interaction variable [(work-family conflict) x (self-efficacy)] and threat-loved-ones was also not shown to be significant. Thus, Hypothesis 3a was not supported.

Hypothesis 3b proposed that self-efficacy will moderate the relationship between work-family conflict and appraisal of a situation as being threatening to one's self-esteem. For results, please refer to Table 6. When tested, the first path between work-family conflict and threat-esteem was found to be significant. In addition, the second path between self-efficacy and threat-esteem was shown to be significant. However, the

Table 6

Tests of Self-Efficacy as a Moderator of Relations Between Work-Family Conflicts and Threat Appraisals (esteem and loved-ones)

Variable	Dependent Variables			
	Threat-esteem		Threat-loved-ones	
	Step 1	Step 2	Step 1	Step 2
Work-Family Conflict	.50**	-.52	.43**	-.51
Self-Efficacy	-.11	-.13	-.10	-.12
Work-Family Conflict x Self-Efficacy		1.03		.95
ΔR^2		.01		.01
R^2	.28	.29	.21	.22
F for ΔR^2 (df)		1.61 (1,96)		1.24 (1,96)
F for R^2 total (df)	19.03** (2,97)	13.30** (1,96)	13.12** (2,97)	9.12** (3,96)

Note. Standardized beta-weights are presented. * $p < .05$ ** $p < .01$

third path between the interaction variable [(work-family conflict) x (self-efficacy)] and threat-esteem was not found to be significant. Hypothesis 3b was also not supported.

Hypothesis 3c predicted that self-efficacy will moderate the relationship between family-work conflict and appraisal of a situation as being threatening to one's self-esteem. Results of these interactions can be found in Table 7. The first path tested, between family-work conflict and threat-esteem was shown to be significant. The second path, between self-efficacy and threat-esteem was also found to be significant. Finally, the path between in the interaction variable [(family-work conflict) x (self-efficacy)] and threat-esteem was shown to be significant. The strength and direction of this interaction were probed by utilizing the Aiken and West (1991) method.

Figure 2 illustrates the interaction by showing the slopes of the regression lines linking family-work conflict to threat-esteem under conditions of high and low self-efficacy (i.e., at one SD above and below the mean). At one SD above the mean, the slope of the line was computed to be 0.789 while at one SD below the mean, the slope of the line was computer to be 0.350. Values for family-work conflict were computed using one SD above the mean and one SD below the mean.

According to the graph, at low levels of family-work conflict highly self-efficacious individuals report lower levels of threat to their self-esteem than those who are low in self-efficacy. Interestingly, at elevated levels of family-work conflict, this relationship becomes paradoxically inverted. Specifically, at high levels of family-work conflict, those with increased levels of self-efficacy actually report a slightly higher sense of threat to their self-esteem than those low in self-efficacy. Since Hypothesis 3c predicted that at

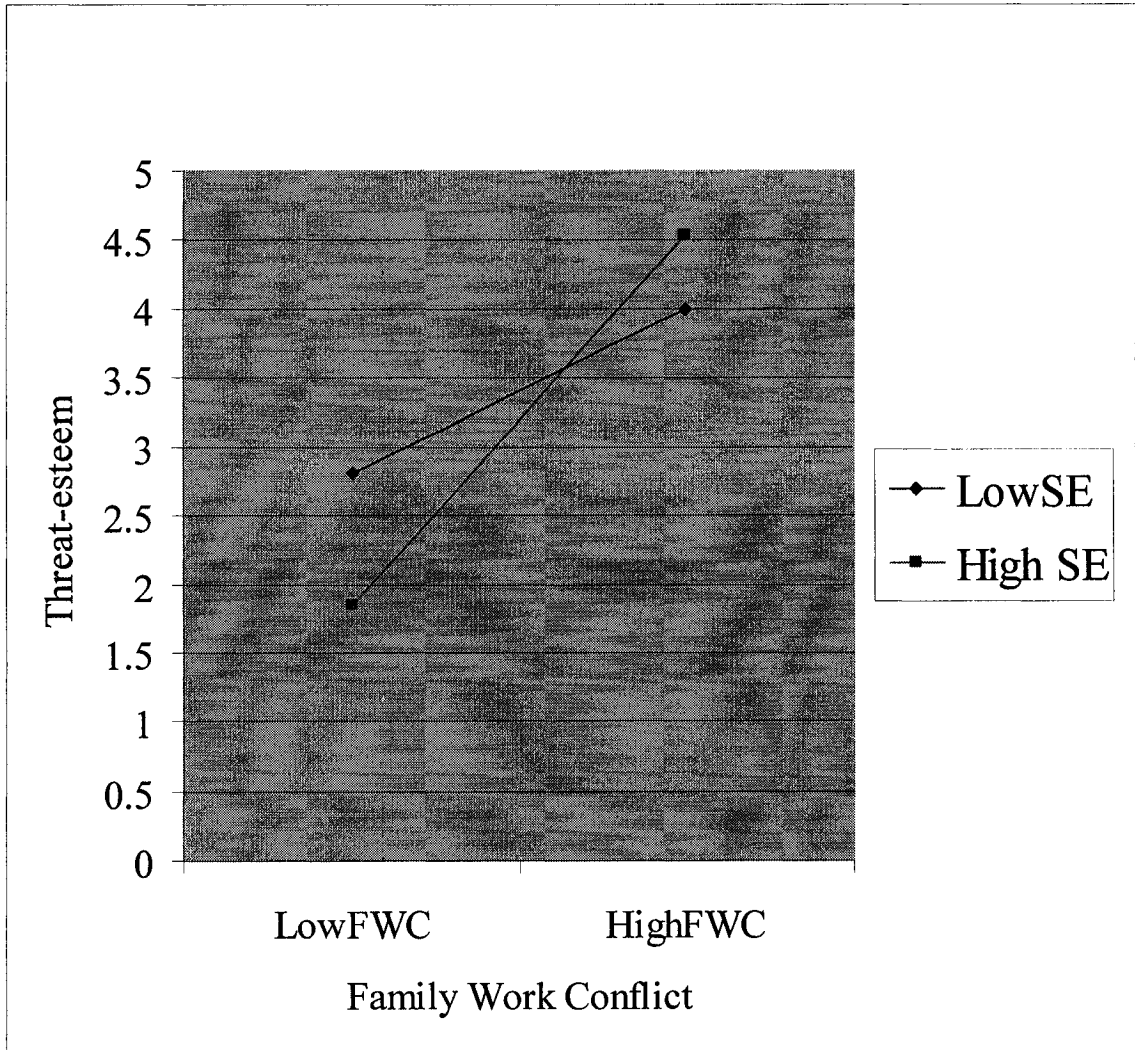
Table 7

*Tests of Self-Efficacy as a Moderator of Relations Between
Family-Work Conflicts and Threat-Appraisal (esteem)*

Variable	Threat-esteem	
	Step 1	Step 2
Family-Work Conflict	.54**	.53**
Self-Efficacy	-.02	-.05
Family-Work Conflict x Self-Efficacy		.18*
ΔR^2		.03*
R^2	.29	.33
F for ΔR^2 (df)		4.36*(1,95)
F for R^2 total (df)	19.99**(2,96)	15.25**(3,95)

Note. Standardized beta-weights are presented. * $p < .05$ ** $p < .01$

Figure 2. Interaction of Family-Work Conflict and Self-Efficacy on Threat-Esteem.



Note. SE = Self-Efficacy

high levels of efficacy, the relationship between family-work conflict and threat-esteem would be weak, it is clear that this hypothesis was not supported.

Exploratory Analyses

A framework for combining mediation and moderation developed by Baron and Kenny (1986) was considered as well. The authors suggested that there could be two possible scenarios when a moderator and a mediator are both present in a model. The first possibility is referred to as “mediated moderation” and occurs when a variable mediates the relationship between the interaction variable and the dependent variable. In this case, threat-esteem would mediate the relationship between [(family-work conflict) x (self-efficacy)] and emotional exhaustion. The second type of relationship that could be present between a moderator and a mediator is called “moderated mediation” and would have been said to exist if the mediational effects of threat appraisal varied across the different levels of self-efficacy. In other words, threat-esteem would mediate the relationship between family-work conflict and emotional exhaustion differently across low and high levels of self-efficacy. Both types of relationships were tested according to Baron and Kenny’s recommendations and neither was found to be significant.

Discussion

The purpose of the present study was to examine the relationship between work and family conflicts and emotional exhaustion. Specifically, it aimed to investigate the role of self-efficacy by posing two questions. Firstly, does appraisal of a situation as being threatening play a mediating role between work and family conflicts and emotional

exhaustion? Secondly, would the relationship between work and family conflicts and stress appraisal differ across various levels of self-efficacy?

Hypothesis 1, which stated that work and family conflicts will be positively related to emotional exhaustion, was supported. Hypothesis 2, which postulated that appraisal of a situation as being threatening will mediate the relationship between work and family conflicts and emotional exhaustion, was also supported. Hypothesis 3, which hypothesized that self-efficacy will moderate the relationship between work and family conflicts and appraisal of a situation as being threatening, was not supported.

Work and Family Conflicts and Emotional Exhaustion

Overall, the results of this study were consistent with previous studies that have examined work and family conflicts and emotional exhaustion. Specifically, the results of this study found that work-family conflicts and family-work conflicts were both positively related to emotional exhaustion (H1a and H1b). These results are consistent with previous research on the work-family interface and emotional exhaustion which indicate that individuals who experienced high levels of work and family conflicts also experienced high levels of emotional exhaustion (Allen et al., 2000; Bacharach et al., 1991; Burke, 1993; Burke & Greenglass, 2001; Demerouti, et al., 2004; Kinnunen & Mauno, 1998; Kinnunen et al., 2003; Netemeyer et al., 1996; Posig & Kickul, 2004). Additionally, the means for work-family conflict (3.76) and family-work conflict (2.91) were significantly different from one another [$t(104) = 5.56, p < .01$] showing that individuals in this sample indicated higher levels of work-family conflict compared to family-work conflict. This finding is consistent with past research conducted by Burke and Greenglass (2001), Eby et al. (2005), Netemeyer et al. (1996), and Posig & Kickul

(2004). Furthermore, results from this study showed that work-family conflict was more highly correlated with emotional exhaustion than was family-work conflict ($Z = 2.44$, $p < .05$, see Table 3), a finding also consistent with past research conducted by Burke and Greenglass (2001), Kinunen and Mauno (1998), and Netemeyer et al. (1996). It was clear that work and family conflicts represented valid concerns for the individuals in this sample.

The Stress-Appraisal Process

With respect to stress-appraisal, the results indicated that the relationship between work and family conflicts and emotional exhaustion is indeed mediated by stress appraisal. More specifically, when one's work interferes with her family, she is likely to view this situation as being threatening to her loved ones' well-being and to her sense of self-esteem. In turn, this sense of threat is likely to lead to her feeling emotionally exhausted (H2a and H2b). The same holds true for an individual whose family is interfering with her work. She will appraise this situation as being threatening to her sense of self-esteem and she will experience emotional exhaustion as a result (H2c). The results of the current study are consistent with Lazarus and his colleagues' original conception of an individual's experience of stress, as well as with their "Stress-Appraisal" model. The results confirm the view that stress is a transactional process that must be examined and defined as such, and not simply as a stressor-outcome relationship. The mediation hypotheses in this study supported Folkman et al.'s (1986) view on primary appraisals, however we did not focus on the secondary appraisal or coping processes. As previously noted, secondary appraisal involves evaluating various coping options to see what can be done about the threatening situation, whereas coping involves

efforts to manage the situation. It would be interesting for future research to examine the role of secondary appraisals and coping styles, and how these two processes affect the relationship between work and family conflicts and emotional exhaustion.

Self-Efficacy as a Moderator of the Relationship Between Work and Family Conflicts and Emotional Exhaustion

With regards to self-efficacy and the moderation analyses, the results suggest numerous interesting findings. Firstly, self-efficacy was found to be significantly negatively related to emotional exhaustion. These results are consistent with past research conducted on self-efficacy and emotional exhaustion (Greenglass & Burke, 2002; Perrewé et al., 2002). Secondly, as previously mentioned, self-efficacy was found to be moderately and negatively related to family-work conflict, but not related to work-family conflict. Results regarding the negative relationship to family-work conflict are consistent with new research conducted by Cinamon (2006) which also found a negative relation between self-efficacy and family-work conflict. The lack of a relationship between work-family conflict and self-efficacy is consistent with the findings of Kinnunen et al. (2003), who failed to find a significant relationship between either type of conflict and the personality factor emotional stability. According to the authors, emotional stability determines how individuals handle or control their emotions. In their study, individuals with high emotional stability viewed themselves as being more resistant to negative affect. This personality factor is similar to self-efficacy in that individuals who are high in self-efficacy believe that they have a greater sense of control over their own emotions, and are less likely to be influenced by extreme negative affect (Bandura, 1994). Future research could be useful to further understand the relationship

between work and family conflicts and self-efficacy, as well as that between work and family conflicts and other personality factors.

The results from the moderation analysis indicate the presence of significantly different relationships than those that were expected. The findings are inconsistent with the proposal that self-efficacy acts as a moderator between work-family conflicts and stress appraisal. Contrary to what was expected, when an individual's work interferes with her family, her level of self-efficacy does not play a role in whether or not she views this situation as being threatening to her loved ones' well-being or to her self-esteem (H3a and H3b). Both people who are high and low in self-efficacy view work-family conflicts as being threatening to their sense of self-esteem as well as to their loved ones' well-being.

There are several explanations as to why this might be so. Firstly, while a person may feel confident in her overall capabilities, her belief in her specific capacity to overcome work-family conflicts may be less pervasive. Whereas this study looked at individuals' general beliefs in their self-efficacy, it is possible that there exists a specific work-family conflict self-efficacy that considers a person's belief in her capacity to overcome work-family conflicts. It may be the case that the individuals in the current study felt very confident in their ability to overcome obstacles in general, but were less secure in their ability to handle work-family conflict in particular. A study conducted recently by Cinamon (2006) used a self-developed scale to measure an individual's self-efficacy for the management of work-family conflicts. It would be useful for researchers to validate the reliability and validity of this scale so that it can be used in the future to

study in-detail the moderating effects of work-family conflict efficacy on stressor-outcome relationships.

A second possibility as to why self-efficacy did not moderate the relationship between work-family conflict and threat appraisal is because the domain of family may be viewed as being more central to individuals than the domain of work. Because an individual may place more importance on his family, he is likely to feel extremely threatened and stressed at the thought of being taken away from his loved ones. This proposition may be true for all work-family conflicts, regardless of their intensity and of the individual's levels of self-efficacy.

Consistent with what was expected, self-efficacy did moderate the relationship between family-work conflict and appraisal of a situation as being threatening to one's self-esteem (H3c). However, the moderation results were inconsistent with those proposed. Specifically, it was hypothesized that there would be a strong relationship between family-work conflict and threat-esteem when self-efficacy was low, whereas at high levels of self-efficacy, this relationship would be weak. In other words, the slope of the line for those low in self-efficacy would be closer to 1, whereas the slope of the line for those high in self-efficacy would be closer to 0. Interestingly, the results indicated the opposite. At low levels of self-efficacy the slope of the line was 0.350, indicating a weak relationship between family-work conflict and appraisal of a situation as being threatening to one's self-esteem, whereas, at high levels of self-efficacy the slope of the line was 0.780, indicating a strong relationship between family-work conflict and threat to one's self-esteem. The most unexpected finding is that found at high levels of family-work conflict, where those individuals high in self-efficacy perceive family-work

conflicts to be more threatening to their self-esteem than do those who are less self-efficacious.

A possible explanation as to why these unexpected relationships exist involves how controllable individuals perceive situations to be. Low levels of family-work conflict are most likely appraised as being reasonably controllable to individuals who are confident in their capabilities. An example of a reasonably minor family-work conflict would be if a parent has to take time off of work to bring his child to the doctor's office. Highly self-efficacious individuals appraise these conflicts as challenges which can be overcome, not as threats to their self-esteem. However, for individuals who do not have a strong belief in their capacity to overcome obstacles, even low levels of family-work conflict are threatening. High levels of family-work conflict, on the other hand, may be perceived as being uncontrollable, which can be threatening to those individuals with a strong conviction in their ability to overcome obstacles. An example of an extreme family-work conflict would be if a death or illness in the family requires prolonged time off from work. Highly self-efficacious individuals may be especially vulnerable to feeling that their self-esteem is threatened given their lack of control over the situation. Hence, when an individual feels that a serious family issue is making it difficult for him to work, this may lead him to question his sense of self-esteem, specifically his role as a good family member or worker. Conversely, for the individual who has little confidence in his ability to overcome challenges, an extremely difficult family-work conflict might not appear much more threatening than a minor problem, since he may believe it is just one more challenge that he cannot control.

Folkman et al. (1986) touched on the notion of controllability in their study on stress appraisal, coping and encounter outcomes. The authors found that participants coped differently with situations appraised as being unchangeable (e.g., a death in the family) as opposed to changeable (e.g., job loss). The authors described changeable situations as those individuals “thought that they could change or do something about” (p. 994) and unchangeable situations as those individuals “had to accept” (p. 994). In situations perceived as changeable, individuals adopted planful problem-solving coping strategies whereby they accepted responsibility and selectively attended to the encounter’s positive aspects. During situations appraised as unchangeable, individuals adopted less favorable coping strategies such as distancing and escape-avoidance coping. These results are consistent with the explanation that high levels of family-work conflict may be perceived as being uncontrollable, which can be threatening to individuals, even those who are generally self-efficacious. Although the current study did not examine coping strategies, it would be interesting for future researchers to look at the coping strategies adopted by individuals who are both high and low in self-efficacy during controllable and uncontrollable work and family conflicts.

Study Strengths and Limitations

One of the limitations of the current study is its utilization of a cross-sectional design to test causal relationships. Even though the study was divided into two time frames two weeks apart, this does not constitute a longitudinal design. Further studies that are longitudinal in nature are needed, in order to provide more direct evidence of causality among the relationships investigated in the current study. Another limitation of the current study is the homogeneous nature of the participants involved. The majority of the

participants were women (65%), employed in the same Canadian university. When considering the generalizability of these results to individuals elsewhere, it is important to remember that the participants of this study were not a representative sample. A third limitation of the study is the relatively small number of participants who responded to both surveys due to the separation of the survey into two time frames. Due to the relatively small final sample size it was impossible to apply additional statistical methods that would have been appropriate for this study, such as structural equation modeling. However, dividing the survey into two time frames decreased the chance of contamination due to method variance, which could have caused the relationships studied to appear more inflated than they actually are. According to Podsakoff and Organ (1986), collecting the measures at different times “mitigates the problem of transient mood state and common stimulus clues” (p. 540), both of which contribute to the problem of inflated results. In addition, according to Spector (1987), method variance may be a greater concern for single item measures or poorly designed scales, both of which were not applicable to the current study.

Notwithstanding the above mentioned limitations, this study extended the current literature in three meaningful ways. Firstly, as opposed to only focusing on the measured relation between a stressor and an outcome, the current study attempted to uncover the underlying reasons why this relation occurs. Specifically, by examining how a person cognitively appraises a potentially stressful situation, the study sought to further our knowledge of why work and family conflicts will lead to emotional exhaustion. Secondly, although self-efficacy has been explored with respect to emotional exhaustion, it has not been examined as a moderator in the relationship between work and family

conflicts and emotional exhaustion in particular. This study's focus on general self-efficacy as an individual moderating characteristic between work and family conflicts and emotional exhaustion made it a novel one. Lastly, this study was the first of its kind to examine the link between an individual's self-efficacy and his appraisal of a situation as being threatening within the context of work and family conflicts.

Practical Implications

A number of practical implications can be gathered from the current study. The first implication is that work and family conflicts are genuine concerns for working individuals today, and they are highly correlated with the experience of emotional exhaustion. Based on these findings, it would be useful for organizations to try to reduce the amount of perceived stress employees are experiencing by reducing job-related stressors and to implement more family-friendly policies. By reducing the amount of job-related stress caused by role conflict, role ambiguity and work overload, employers can help decrease the occurrence of work and family conflicts (Byron, 2005). Additionally, the presence of supportive coworkers and supervisors, and the availability of flexible work schedules are also associated with fewer work and family conflicts (Byron). The second implication is that because individuals may value their work and their family differently, they will react to work and family conflicts differently as well. It is important for employers to understand that even the most confident, self-efficacious employee will feel that her self-esteem is threatened when there is a pressing family-related issue with which to deal. Managers need to be aware of this reality, and acknowledge employees' feelings when dealing with these difficult issues. Finally, because the results of this study show that self-efficacy has a direct effect on the

experience of emotional exhaustion, it is in a company's best interest to foster a strong sense of self-efficacy in its employees. Managers have the power to act as role models to others, and encourage them to persevere in the face of adversity. According to Bandura (1994), individuals who are successful at building self-efficacy in others raise others' beliefs in their capabilities by structuring situations in ways that bring success and not in ways where they are likely to fail.

Conclusion

The present study examined the relationship between work and family conflicts and emotional exhaustion, and revealed many interesting findings regarding how and why this relationship occurs. By confirming the notion that individuals appraise stressful events as being threatening, the results of this study add to our knowledge of why work and family conflicts lead to emotional exhaustion. Additionally, the results of this study underscore the importance of self-efficacy as an individual characteristic that can lead to a decrease in the experience of emotional exhaustion. Moreover, this study suggests that individuals may view work and family issues differently, such that even the most self-efficacious individuals will experience stress when their work life interferes with their family life. Finally, this study increases our understanding of occupational stress and confirms its role as a multidimensional phenomenon that requires further research and investigation.

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Appendix

Initial Eigenvalues from the Factor Analysis of the Threat Appraisal Scale

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.927	57.723	57.723	6.927	57.723	57.723	6.277
2	1.12	9.332	67.056	1.12	9.332	67.056	5.742
3	0.926	8.017	75.073				
4	0.583	4.86	79.933				
5	0.531	4.424	84.356				
6	0.427	3.555	87.912				
7	0.337	2.809	90.72				
8	0.305	2.545	93.265				
9	0.274	2.284	95.549				
10	0.237	1.975	97.524				
11	0.163	1.355	98.88				
12	0.134	1.12	100				

Note. $N = 260$. Extraction Method: Principal Component Analysis