

DIMENSIONS OF MANAGERIAL AND PROFESSIONAL WOMEN'S STRESS:
INTERPERSONAL CONFLICT AND DISTRESS

by

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ABSTRACT

The purpose of this study was to examine Lazarus and Folkman's (1984) stress and coping framework in the context of work-related interpersonal stressors.

Drawing on Long, Kahn, and Schutz's (1992) stress and coping model for managerial women, I examined the relative influences of individual differences, cognitive appraisals, coping strategies, and the work environment on the experiences of distress for managerial and professional women who reported interpersonal conflicts as a source of occupational stress.

The data were collected prospectively from 157 managerial and professional women (M age 41.2) employed at three provincial universities. Participants completed three sets of questionnaires administered 2-weeks apart. The first set of questionnaires assessed demographic characteristics and dimensions of participants' personality (gender-role orientation and trait anxiety); the second set assessed stress appraisals, coping strategies (engagement and disengagement), the work environment, and experiences of daily hassles; and the third set assessed psychosomatic distress.

Path analysis using LISREL VIII (Jöreskog & Sörbom, 1993) was performed to examine the hypothesized relationships among antecedent, contextual, mediating, and outcome variables central to Lazarus and Folkman's (1984) theoretical framework and Long et al.'s (1992) stress and coping model. Based on the first-order partial correlation matrix, controlling for the effects of negative affective traits, results indicated an overall poor fitting model, $\chi^2(41, N=157) = 124.89, p < .001, Q=3.0, GFI=.90, AGFI=.75, RMSR=.09, CFI=.70, \text{ and } D_z=.75$. The pattern of variable

relationships in the model provides partial support for both the hypothesized model and Lazarus and Folkman's theoretical assumptions.

Within the model, work support was positively related to situational control appraisals and negatively associated with threatening work goal attainment appraisals. Unexpectedly, instrumental personality traits had a positive effect on upsetting appraisals of interpersonal work stressors. As hypothesized, situational control appraisals were negatively associated with disengagement coping and positively related to engagement coping within the model. Threatening work goal attainment appraisals had a positive effect on both engagement and disengagement coping. Additionally, upsetting appraisals predicted both disengagement coping and distress, and positive relationships were found between disengagement coping and daily hassles and between daily hassles and distress within the model. The hypothesized mediational role of cognitive appraisals was not supported in this study. Results also yielded nonsignificant relationships between expressive personality traits and both work support and stressor appraisals. Implications of these results and suggestions for future research are discussed.

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DEDICATION

Cette thèse est dédiée tendrement à ma belle maman, Thérèse, pour sa sagesse, humeur, attitude joyeuse qui m'a inspiré, et surtout pour son amour. C'est elle qui m'a aidé à apprendre que les leçons du coeur sont si importantes, sinon plus importantes, que les leçons du livre.

INTRODUCTION

There is mounting evidence to suggest that interpersonal conflicts and negative interpersonal relationships in the workplace are a prevalent source of stress among employees (see Dewe, 1993; Israel, House, Schurman, Heaney, & Mero, 1989; Ratsoy, Sarros, & Aidoo-Taylor, 1986). More specifically, studies have found that interpersonal conflicts account for greater than 60% of reported workplace stressors among female professionals, managers, administrators, and clerical workers (Long, 1989, 1990; Long, Kahn, & Schutz, 1992). Furthermore, empirical evidence suggests that there is a strong relationship between work-related interpersonal conflicts and various indices of distress, such as negative moods, depression, job dissatisfaction, and symptoms of ill health (Israel et al., 1989; Karasek, Gardell, & Lindell, 1987; Repetti, 1993a, 1993b; Snapp, 1992).

Interpersonal conflict has been examined from several organizational behaviour models and theoretical perspectives (see Deutsch, 1973; Kabanoff, 1988; Musser, 1982). These conflict models focus predominantly on the causes of organizational conflict, rather than on interpersonal conflict as a source of stress to be coped with. Although some of these perspectives offer insight into how employees make sense of (or appraise) work-related conflict, they do not provide an integrative framework from which to understand the relationships among factors that influence the psychosomatic distress of employees who experience work-related interpersonal conflicts.

Despite the prevalence of work-related interpersonal stressors and their

deleterious effects on employees' health, empirical research has failed to examine interpersonal conflicts specifically within a stress and coping theory. Although not the focus of Long et al.'s (1992) stress and coping model, interpersonal conflicts, however, were identified by the majority of managerial women (60%) as their primary source of occupational stress.

The current study was formulated on the basis of both theoretical and empirical support. Lazarus and Folkman's (1984) theory, for example, provides an integrative framework of the stress and coping process. Relatedly, Long et al.'s (1992) model is an integrated test of Lazarus and Folkman's framework for managerial women's work stress. Thus, the purpose of this study was to examine Lazarus and Folkman's framework and to build on Long et al.'s model in the context of interpersonal work stressors in order to determine the relative influences of individual differences, cognitive appraisals, coping strategies, and the work environment on the experience of distress for managerial and professional women who identified interpersonal conflicts as a source of occupational stress.

Background Theory of Stress and Coping

Lazarus and Folkman (1984) provide a useful theoretical framework for understanding the stress and coping process. According to their theory, psychological stress is defined as a relationship between the person and environment in which demands tax or exceed the person's resources and hinder his or her well-being. Lazarus and Folkman's theory is process oriented, focusing on what the person actually thinks and does in a specific stressful situation, and how one's thoughts and

actions change as the situation unfolds. The theory "identifies two processes, cognitive appraisal and coping as critical mediators of stressful person-environment relationships and their immediate and long-term outcomes" (Folkman, Lazarus, Gruen, & DeLongis, 1986, p. 572).

Cognitive appraisals. Appraisals "consist of a continuing evaluation of the significance of what is happening for one's personal well-being" (Lazarus, 1991, p. 144). According to Lazarus and Folkman (1984), cognitive appraisals can be classified as primary and secondary appraisals. Primary appraisals refer to a person's evaluation of the importance of the stressful episode and the extent to which he or she has anything at stake in the encounter. Primary appraisals determine whether an individual's stressful encounter is regarded as significant to his or her well-being; and if so, whether or not it is appraised as mainly threatening (containing possible harm or loss) or challenging (containing potential benefit; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). By contrast, secondary appraisals refer to a person's evaluation of his or her options and resources for dealing with the stressful situation. For example, in the secondary appraisal process, individuals evaluate the extent to which demands of the stressful situations are within their control.

Coping. According to Lazarus and Folkman (1984), coping in response to perceived stress is defined as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). From a theoretical perspective, the manner in which an individual copes with a stressful situation is most strongly

determined by the individual's appraisal of the situational demands and resources for managing them (Lazarus, 1980; Lazarus, DeLongis, Folkman, & Gruen, 1985), although there is no systematic empirical evidence to support this claim (e.g., Long, 1990; Newton & Keenan, 1985; Parkes, 1986; Terry, 1991).

Two primary functions of coping have been identified--managing the person-environment relationship that creates stress (problem-focused coping), and regulating one's emotional response to stress (emotion-focused coping; Folkman; Lazarus, Gruen, et al., 1986; Folkman & Lazarus, 1980). Folkman and her colleagues argue that both functions of coping are often used in most stressful situations and that they may either hinder or facilitate each other. Other researchers, however, have criticized the notion of these two primary coping functions (e.g., Carver, Scheier, & Weintraub, 1989; Endler & Parker, 1990b; Tobin, Holroyd, Reynolds, & Wigal, 1989). Tobin et al., for example, classify coping as two higher-order factors of engagement and disengagement coping. Similarly, Long et al. (1992) identified these two coping factors in their stress and coping model for managerial women.

Limitations of Existing Occupational Stress and Coping Research

Despite the merits of stress and coping theory in helping to understand employees' experiences with work stress, research in this area is limited both conceptually and methodologically. Existing research, for example, has generalized person-environment and distress relationships across a variety of stressors, but has neglected to examine the effects of isolated stressors (e.g., interpersonal conflict) on distress reactions. It has been suggested, however, that treating collective work

stressors as though they are a single stressful event may lead to misleading conclusions about the effects of stressors (Dewe, 1993; Folkman & Lazarus, 1980). Moreover, there is limited occupational stress research that focuses exclusively on the experiences of managerial and professional women.

In addition, it has been argued that work stress research has failed to adequately assess the primary appraisal process (Dewe, 1993; Newton, 1989), thus indicating a need for research that provides a richer understanding of the meanings that individuals give to events (Bhagat & Beehr, 1985). Similarly, traditional coping inventories have been criticized for not clearly reflecting the dynamics and processes specific to interpersonal relationships (see Kramer, 1993). I addressed these various limitations by focusing on the stress and coping experiences of managerial and professional women in the context of a predominant type of occupational stressor; interpersonal conflict. Coping strategies were assessed by a modified instrument relevant to the interpersonal dimension of employment stress and coping. This study also identified which specific appraisals from Long et al.'s (1992) composite appraisal measure were associated with other variables in this interpersonal stress and coping model. Furthermore, for the purposes of exploratory analysis only, primary appraisal items specific to interpersonal work stressors were developed.

Interpersonal Conflict

In the context of this study, interpersonal conflict was defined as the negative interactions based on competing goals or attitudes of any two individuals within a university work setting. Moreover, interpersonal conflict was conceptualized as

occurring in an interactive manner between the manager or professional and another individual at work. This definition is consistent with researchers' descriptions of conflict (see Byrnes, 1986; Rahim, 1985; Volkema & Bergmann, 1989) and lends itself to empirical verification by managers' and professionals' self-report descriptions of interpersonal conflicts experienced at work. Most notably, interpersonal conflict was defined as a source of stress, or stressor. Stressors, according to Lazarus and Folkman (1984), are "specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141).

Present Study

The use of path analytical modelling in this study provided a means by which to examine the direction and strength of variable relationships in order to determine the extent to which Lazarus and Folkman's (1984) theoretical assumptions held in the context of an interpersonal model of stress and coping. The theoretical framework that guided the selection of variables in the model consisted of (a) antecedent variables, (b) contextual variables, (c) mediating variables, and (d) short-term outcome variables (Lazarus & Folkman; see Figure 1).

Antecedent variables included demographic characteristics and personality traits of instrumentality and expressiveness. Contextual variables consisted of daily hassles and work environment constraints and resources, respectively classified as outcomes and predictors of coping (cf. Lazarus & Folkman, 1984; Long et al., 1992). Cognitive appraisals and coping strategies were conceptualized as mediating variables (Lazarus & Folkman), and short-term outcomes consisted of a measure of

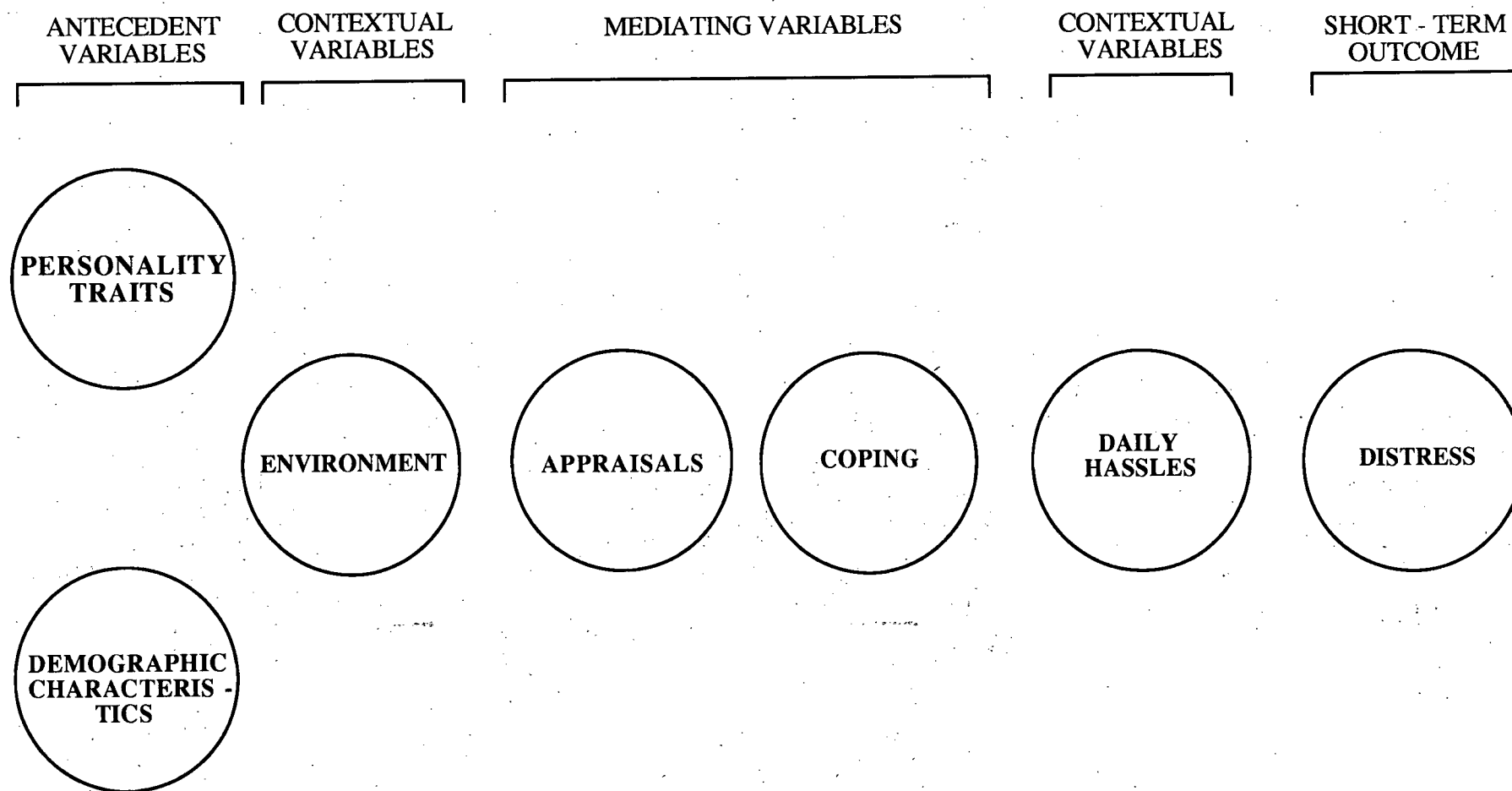


Figure 1. Antecedent, Contextual, Mediating, and Short-term Outcome Variables Representing Lazarus and Folkman's Stress and Coping Theory.

psychosomatic distress symptoms (e.g., depression, anxiety, and somatic complaints).

Long et al.'s (1992) structural equation model (see Appendix A) based on Lazarus and Folkman's (1984) theory of psychological stress and coping examined the stress and coping process of managerial women and provided support for the direct and indirect effects of antecedent, contextual, and mediating variables on the outcome of distress.

An important goal of this study was to draw on Long et al.'s (1992) model by determining the extent to which relationships among constructs hold in the context of interpersonal stressors specifically. This study was also instrumental in both assessing coping strategies relevant to interpersonal work stressors and identifying which specific appraisals were associated with managerial and professional women's process of coping with interpersonal conflict. Moreover, examining the role of expressive personality traits in this interpersonal model of stress and coping helped to address the limited attention given to feminine characteristics and behaviours in organizational research (cf. Marshall, 1993).

LITERATURE REVIEW

In order to more broadly understand managerial and professional women's responses to interpersonal work stressors, stress and coping theory should be examined in an integrative manner. Workplace interpersonal conflict is the focus of this study due to its prevalence and its negative effects on employees (e.g., Dewe, 1993; Israel et al., 1989; Repetti, 1993a, 1993b). Evidence is presented that supports the relevance of examining interpersonal conflict within a theoretical model of stress and coping. Lazarus and Folkman's (1984) stress and coping theory and Long et al.'s (1992) managerial stress and coping model provide the framework from which antecedent, contextual, mediating, and outcome variables are linked in this study. Relevant occupational stress literature offers further support for the hypothesized relationships among variables in this model of interpersonal stress and coping.

Interpersonal Conflict

Researchers have conceptualized interpersonal conflict in various ways. Rahim (1985), for example, defines conflict as "an interactive state manifested in disagreement, differences, or incompatibility, within or between individuals and groups" (p. 81). Similarly, Miller (1991) suggests that interpersonal conflict is characterized by opposition between individuals engaged in the conflictual encounter. Newton and Keenan (1985) describe interpersonal conflict as "negative interpersonal encounters, involving serious disagreements, often with covert and sometime overt hostility" (p. 119), whereas Byrnes (1986) views conflict as "a process in which one or both sides consciously interfere in the goal achievement efforts of the other side"

(p. 47). Relatedly, van de Vliert (1984) contends that conflict between two individuals occurs "when at least one of the parties feels it is being obstructed or irritated by the other" (p. 521). In Volkema and Bergmann's (1989) study of employees' behavioral responses to interpersonal conflict between co-workers, conflict is defined as a "disagreement or controversy in interests, values, goals, or ideas" (p. 759).

Interpersonal conflict in this study was defined as the negative interactions based on competing goals or attitudes between any two individuals within a university setting (e.g., a female manager or professional and her supervisor, colleague, subordinate, faculty member, or client). Interpersonal conflicts may involve, for example, differences in management and communication styles, decision-making processes, organizational procedures, employee rights, hiring practices, and ethical issues. Interpersonal conflict was defined in this manner both because it has elements of other researchers' descriptions of conflict (e.g., Miller, 1991; Rahim, 1985; Volkema & Bergmann, 1989) and because it lends itself to empirical verification by managers' and professionals' self-report descriptions of interpersonal conflicts experienced at work. In the context of this study, interpersonal conflicts, which may be characteristic of either an isolated event or a chronic situation, were conceptualized as stressors that occur in an interactive manner between the manager or professional and another individual at work, and not between two other co-workers in the organization or department. Moreover, consistent with Lazarus and Folkman's (1984) definition of stressors, interpersonal conflict situations were considered those that

cause harm or threat to the manager or professional (e.g., harm to one's self-respect, well-being, achievement of work goals, working relationships, etc.).

Research has shown that interpersonal conflicts and negative interpersonal relationships at work are a prevalent source of stress among employees. Ratsoy et al. (1986), for example, found that among 134 male and female educational personnel, 22% of participants reported that unsatisfactory relationships with supervisors were a source of work stress. In Schwartz and Stone's (1993) study of work and non-work problems among a community sample of male ($N=72$) and female ($N=40$) adult workers, negative interactions with people at work were found to account for the largest proportion of reported work-related problems (75%). Dewe (1993) also found that 47% of male ($N=97$) and female ($N=77$) insurance workers (e.g., clerks, administrators, managers) and construction support staff (e.g., engineers, designers, project developers) reported interpersonal relationships as a source of occupational stress. Furthermore, Israel et al. (1989) found that among male ($N=567$) and female ($N=63$) manufacturing plant workers, interpersonal relationships explained the most variance (28%) for the dependent variable of global job stress.

In addition, McDonald and Korabik (1991) found that a similar proportion of male (12%) and female (11%) middle to upper-level managers reported relationships with others to be a general source of work stress. Forty-five percent of men, compared with only 5% of women, reported that a specific stressful event they had recently experienced at work involved relationships with others. It is noted, however, that 40% of female managers, compared with 11% of male managers, reported that a

recent stressful situation involved managing subordinates. Thus, because interpersonal dynamics are an integral element of managing others, one can speculate that male managers in McDonald and Korabik's study had not actually experienced more situations entailing stressful work relationships than their female counterparts. Moreover, the generalizability of McDonald and Korabik's findings are limited by the small number of male ($N=19$) and female ($N=20$) managers used in their study. Although poor or unsatisfactory relationships with others may not always directly involve interpersonal conflicts specifically, the research presented above provides support for the ubiquity of stressful work-related interpersonal encounters.

There is limited occupational stress research that deals specifically with the experiences of managerial and professional women. However, studies that have focused on female employees suggest that interpersonal conflict is a prevalent source of stress for this group of individuals. Long (1989), for example, found that among women employed in both nontraditional occupations (e.g., professional, administrative, and managerial positions; $N=177$) and traditional occupations (e.g., clerical positions; $N=104$), interpersonal conflicts accounted for 62% of reported work stressors. Similarly, Long et al. (1992) found that 60% of 249 female managers reported interpersonal conflicts as a primary occupational stressor. These findings support results of Long's (1990) study of male ($N=60$) and female ($N=97$) managers, in which women were found to report a greater number (68%) of interpersonal conflicts than men (32%). It is noted, however, that Long (1990) and Long et al. did not classify interpersonal conflicts according to systematic definitional

criteria.

In addition to studies that have illustrated the frequency with which employees experience interpersonal conflicts in the workplace, empirical research has also found a relationship between work-related interpersonal conflict and various indices of psychosomatic distress. Snapp (1992), for example, found that among 200 professional and managerial women, interpersonal conflicts with supervisors and subordinates significantly predicted depression. Similarly, Karasek et al. (1987) reported that among 5000 male and 3700 female white-collar workers, conflicts with one's supervisors predicted psychological strain symptoms (e.g., depression, exhaustion, and job dissatisfaction). Repetti (1993a) also found that among male ($N=40$) and female ($N=12$) air traffic controllers, distressing social interactions with co-workers and supervisors were related to negative moods on a daily basis. Moreover, Repetti (1987) reported that among 70 female bank employees, positive work relationships were associated with fewer symptoms of depression and anxiety and higher self-esteem. In addition, Israel et al. (1989) found that among male and female workers, poor interpersonal relationships at work, especially with supervisors, predicted depression and symptoms of ill physical health.

Despite evidence to support the pervasiveness of work-related interpersonal stressors and their negative effects on employees' experiences of distress, interpersonal conflicts specifically have not been examined within a theoretical model of stress and coping. Existing occupational stress research has examined collective work stressors, but has failed to investigate the processes underlying isolated sources

of stress (e.g., interpersonal conflict).

Organizational behaviour research has examined interpersonal conflict from several theoretical perspectives and models, such as goal interdependence theory (see Deutsch, 1973; Tjosvold, 1988); decisional models (e.g., Musser, 1982); goal-setting models (e.g., Schnake & Cochran, 1985); structural role theory (Kabanoff, 1988); and the prevention-escalation model (van de Vliert, 1984). These models examine the causes of organizational conflict and provide support for the ubiquity of interpersonal conflicts in the workplace, but do not conceptualize interpersonal conflict as a stressor to be coped with. Moreover, although a limited number of organizational conflict models help to address how employees appraise conflict at work, they do not provide a framework from which to examine the relationships among factors that impact on managers' distress reactions. Thus, based on the paucity of research that deals with the impact of interpersonal stressors on employees' psychological functioning, the present research examined work-related interpersonal conflict within an integrative model of stress and coping.

Lazarus and Folkman's Transactional Theory of Stress and Coping

Stress is described as a "particular arrangement between the 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" (Lazarus & Folkman, 1984, p. 19). Coping in response to stress is generally conceived as the cognitive and behavioral efforts to master, manage, tolerate, or reduce the external and/or internal demands that are appraised as taxing or exceeding the person's resources (Lazarus &

Folkman).

Lazarus and Folkman's (1984) transactional theory of stress and coping conceptualizes the coping process as a transaction between the person and his or her environment in which coping occurs. Although interpersonal stressors have not been examined within stress and coping theory, the theoretical framework that Lazarus and his colleagues (e.g., Lazarus & DeLongis, 1983; Lazarus & Folkman) have proposed for understanding the stress and coping process is grounded in empirical research (DeLongis, Folkman, & Lazarus, 1988; Folkman, Lazarus, Dunkel-Schetter, et al., 1986; Kanner, Coyne, Schaefer, & Lazarus, 1981). Lazarus and Folkman's theory consists of two key constructs: cognitive appraisals and coping efforts, which are regarded as mediators of stressful person-environment encounters and their outcomes (Folkman, Lazarus, Gruen, et al., 1986). Mediators are presumed to be generated in the stressful event and change, or mediate, the relationship between antecedent and outcome variables (Lazarus & Folkman). Coping efforts, for example, impact which of the many short- and long-term effects (e.g., morale, health, psychological functioning) occur and thus mediate the stress-outcome relationship (Long & Kahn, 1993). According to Folkman and Lazarus (1985), both appraisals and coping play a critical role in determining psychological and somatic outcomes of stressful encounters.

Cognitive appraisals. Lazarus and his colleagues contend that when an individual encounters a potentially stressful situation, he or she engages in a cognitive appraisal process to determine the meaning or significance of the situation. Lazarus

and Folkman's (1984) theory identifies two types of cognitive appraisals: primary and secondary appraisals.

Primary appraisals refer to the individual's assessment of the importance or significance of the stressful situation to his or her well-being. This process involves an examination of what the individual has at stake in the encounter. Based on a sample of adult community residents who experienced a range of stressors, Folkman and Lazarus (1980) identified six main stakes, including threats to one's self-esteem, financial resources, respect for someone else, and achievement of an important job or work goal. According to Lazarus and Folkman, there are three basic types of primary appraisals: harm-loss, threat, and challenge. In the primary appraisal process, an individual evaluates the extent to which his or her values, goals, or commitments may be harmed or lost, threatened, or challenged in the stressful encounter (Lazarus, 1991). The type of appraisal used by the individual is determined by the interaction between personal resources (e.g., personality traits) and environmental conditions (e.g., type of stressor, environmental constraints or resources). Folkman and her colleagues argue that the more people have at stake in a situation (i.e., the stronger the threatening appraisals), the more likely they are to experience emotions of threat (Folkman & Lazarus, 1985) and to suffer from psychological symptoms (Folkman, Lazarus, Gruen, et al., 1986).

Secondary appraisals refer to the person's assessment of his or her options and resources for coping with the stressful encounter. The individual assesses whether or not the stressful episode is within his or her control and what can be done to

overcome or prevent harm associated with the situation. Moreover, various coping options are evaluated in the secondary appraisal process, such as altering the situation, accepting it, seeking more information, or holding back from acting ineffectively (Folkman, Lazarus, Dunkel-Schetter, et al., 1986; Lazarus & Launier, 1978). Thus, based on one's secondary appraisals, the stressor may be regarded as changeable (e.g., controllable) or unchangeable (e.g., uncontrollable; cf. Carver et al., 1989).

Cognitive appraisals are a critical component of Lazarus and Folkman's (1984) stress and coping theory, although there is little empirical research that has specifically examined the appraisal process in relation to work stress. In particular, occupational stress research has been criticized for not adequately assessing primary appraisals (Dewe, 1993; Newton, 1989). Long et al.'s (1992) use of a composite appraisal measure, for example, failed to identify which specific appraisals were related to other variables in their model. The current study addressed this limitation by examining the relative importance of individual appraisal items to an interpersonal stress and coping model for managerial and professional women.

Moreover, existing primary appraisal items focus on the general coping process rather than on aspects of coping specific to isolated work stressors (e.g., interpersonal conflict). It is possible, however, that primary appraisals of stressful encounters depend on the type of stressful situation experienced and the specific context in which the situation occurs (e.g., work setting). Dewe (1993), for example, found that male and female Australian employees appraised work stressors differently according to the specific type of stressful encounter that they experienced. Although

Dewe's research examined primary appraisals specific to different work stressors, the development of this taxonomy of appraisals is in its preliminary stages and replication is needed on a more representative sample of workers.

Coping functions. Coping, the other critical mediating variable in Lazarus and Folkman's (1984) theory, is what a person thinks or does to deal with a stressful situation. According to Lazarus and Folkman (1984), cognitive appraisals of a potentially stressful encounter are important determinants of how an individual will cope with that situation. Empirical research has found, however, that personality traits and environmental variables are also important predictors of coping responses (Frew & Bruning, 1987; Long, 1990; Newton & Keenan, 1985; Parkes, 1986; Terry, 1991, 1994), which may be attributed in part to the inadequate assessment of work stressor appraisals.

Folkman and Lazarus (1980) have proposed two main functions of coping: problem-focused coping and emotion-focused coping. Problem-focused coping strategies seek to manage or alter the stressful situation and include cognitive and behaviour problem-solving strategies. These strategies involve defining the problem, generating alternative solutions, seeking information, weighing the alternatives regarding costs and benefits, choosing among the possible alternatives, identifying obstacles, and then acting in a specific way to deal with the problem (Folkman, Lazarus, Dunkel-Schetter, DeLongis, et al., 1986; Lazarus & Folkman, 1984). By contrast, emotion-focused coping aims to manage or regulate one's emotions. Emotion-focused coping is largely considered a cognitive process by which one

reduces emotional distress by utilizing strategies such as avoidance, minimization, and positive reappraisal (Folkman, Lazarus, Dunkel-Schetter, et al., 1986; Lazarus, 1985; Lazarus & Folkman, 1984). Folkman and Lazarus (1980) argue that both coping functions are used in almost every stressful situation and that they may either influence each other in a facilitative manner or they may hinder each other.

Folkman, Lazarus, Dunkel-Schetter, et al. (1986) assert that there are three main features of Lazarus and Folkman's (1984) coping framework. First, they propose that coping is process-oriented, focusing on what an individual actually thinks and does in a specific stressful situation, and how these thoughts and actions may change as the situation unfolds. Second, coping is conceived as contextual because it is influenced by the individual's appraisal of the demands in the situation and resources for managing them. Finally, Folkman, Lazarus, Dunkel-Schetter, et al. (1986) contend that stress and coping theory does not make any evaluative assumptions about what constitutes successful or unsuccessful coping; coping refers to the person's efforts to manage demands, regardless of whether or not the efforts are successful.

Coping measurement issues. There are four primary criticisms of existing coping measures. First, emotion-focused items on four published coping scales (Carver et al., 1989, Focus on and Venting of Emotions; Endler & Parker, 1990a, Emotion-Oriented Coping; Moos, 1988, Emotional Discharge; Tobin et al., 1989, Express Emotions) have been found to confound with measures of distress and psychopathology (Stanton, Danoff-Burg, Cameron, & Ellis, 1994). According to

Stanton et al. (1994), confounding coping items include those that reflect the expression of anxiety, hostility, depression, and physical symptoms, rather than the expression of everyday emotions such as frustration and irritation.

Second, Stone, Greenberg, Kennedy-Moore, and Newman (1991) argue that the Revised Ways of Coping Checklist's (Lazarus & Folkman, 1984) 0- to 3-point response key, which assesses the extent to which respondents report using a particular coping strategy, is unclear. More specifically, Stone et al. found that respondents often misinterpreted the meaning of "extent of use," confusing the term with coping response duration, frequency, effort, or usefulness.

Third, controversy within the stress and coping literature exists over how to best measure the construct of coping (see Cohen, 1987, and Endler & Parker, 1990b, for reviews). Lazarus and Folkman (1984), for example, have distinguished between problem- and emotion-focused coping, although researchers using the Revised Ways of Coping Checklist (Lazarus & Folkman) have identified through factor analyses anywhere from five to eight coping subscales (Aldwin & Revenson, 1987; Carver et al., 1989; Folkman & Lazarus, 1985; Folkman, Lazarus, Dunkel-Schetter, et al., 1986; Parkes, 1986). Moreover, other researchers have argued that the problem- and emotion-focused coping scales are too simplistic and that coping strategies can be classified into higher-order categories (Carver et al., 1989; Scheier, Weintraub, & Carver, 1986; Tobin et al., 1989).

Tobin et al. (1989), for example, have proposed a higher-order classification scheme consisting of engagement and disengagement coping. Engagement coping is

defined as "active efforts to manage both problem- and emotion-focused aspects of the stressful event" (Tobin et al., 1989, p. 350), whereas disengagement coping involves cognitive and behavioral activity that orients attention away from the stressful event. Relatedly, Kahn's (1990) conceptual framework of work behaviour suggests that individuals are capable of both engaging (e.g., expressing themselves or actively promoting connection to work and others) and disengaging (e.g., withdrawing or becoming emotionally disconnected from work and others) depending on their experiences of the work context. Tobin et al.'s (1989) and Kahn's (1990) concept of engagement and disengagement behaviour parallels Roth and Cohen's (1986) approach/avoidance categorization of coping. Furthermore, Long et al. (1992) have found support for the use of engagement and disengagement coping in their stress and coping model for managerial women.

A final criticism of coping measurement is that although engagement and disengagement coping appear to form the basis for coping, existing coping inventories generally do not reflect the types of strategies used to deal with interpersonal relationships (Kramer, 1993). Kramer further argues that relationship-focused coping strategies designed to establish or maintain social relationships are needed in stress and coping research that deals with the dynamics of interpersonal stressors. In particular, empirical research has supported the use of forms of relationship-focused coping such as negotiating or compromising strategies. For example, in Aldwin and Revenson's (1987) study of the relationship between coping strategies and psychological symptoms among adult community residents, factor analysis yielded

support for a separate negotiation coping factor, which included problem-focused coping strategies directed toward other people in the problem situation (e.g., bargaining or compromising to attain something positive from the situation). In addition, Pearlin and Schooler (1978) found that women tended to use more negotiating coping strategies than men to deal with daily stressors.

Moreover, strategies characteristic of the interpersonal dimension (e.g., negotiating, compromising, bargaining, or reasoning) are commonly used in workplace interactions (see Rahim, 1983; Wallston, Hoover-Dempsey, Brissie, & Rozee-Koker, 1989) and therefore are particularly relevant to the study of coping in organizational research. Interpersonal coping responses (e.g., negotiating or compromising strategies) seek to satisfy the interests of both individuals involved in a conflictual interaction (cf. Daylen, 1993; Rahim, 1983). Thus, this study incorporated interpersonal coping strategies that reflect the relationship dimension of workplace interactions.

Stress and Coping Model for Managerial Women

A review of the extant occupational stress literature indicates that empirical research based exclusively or predominantly on samples of female employees are limited to a small number of researchers (e.g., Kahn & Long, 1988; Long, 1989; Long et al., 1992; Repetti, 1987). There are even fewer studies that deal specifically with the experiences of female managers or professionals (e.g., Amatea & Fong, 1991; Long, 1990; Long et al., 1992; Snapp, 1992).

The stress and coping model proposed by Long et al. (1992) is one of the few

that has examined managerial women's experiences of occupational stressors within a theoretical model of stress and coping. Long et al. drew on Lazarus and Folkman's (1984) theory in order to examine the direct and indirect effects of antecedent variables (i.e., demographics, sex role attitudes, and agency) and mediating variables (e.g., coping, appraisals, and work environment) on outcome measures (i.e., job and life satisfaction and distress). Using a prospective research design, Long et al. collected data from 249 female managers over a 3-month period, assessed 1-month apart (Long et al.'s stress and coping model for managerial women is depicted in Appendix A). Results indicated that antecedent and mediating latent variables accounted for approximately 50% of the variance in the outcome variables. Moreover, Long and Schutz's (1995) extension of this study, during which data was assessed monthly for 1 year and then 1 year later, provide evidence for both the stability of most construct relationships and the reliability of measures in Long et al.'s model over a 2-year period. It is noted, however, that there may have been other variables (e.g., antecedent) relevant to managerial women's experiences of occupational stress that were not examined in Long et al.'s study.

Long et al.'s (1992) model supports the usefulness of applying Lazarus and Folkman's (1984) theory of stress and coping in order to understand managerial women's experiences with occupational stressors. Their model, however, found weak relationships among select variables (i.e., between sex role attitudes and appraisals, hassles and satisfaction, engagement coping and hassles, and disengagement coping and distress). In addition, although interpersonal conflicts were the most common

source of stress identified (reported by 60% of respondents), Long et al. used a coping instrument that was not specific to interpersonal stressors. Similarly, Long et al.'s composite appraisal measure failed to identify the role of specific appraisals in their model. Furthermore, Long et al.'s results were generalized across more than one type of work stressor. Although studies examining isolated phenomena are limited by their lack of a comprehensive and integrative framework, structural equation models like that of Long et al.'s are generally criticized for their over-inclusive nature and failure to specify particular phenomena.

An important goal of this study was to draw on Long et al.'s model and address the criticisms of structural models by examining the pattern of construct relationships in the context of a specific stressor (i.e., interpersonal conflict). Furthermore, this study developed and utilized a coping instrument specific to interpersonal work stressors. In addition, in response to the limited attention given to more feminine attributes in occupational research (Marshall, 1993), I examined the role of expressive personality traits in managerial and professional women's process of coping with interpersonal work conflicts.

Long et al. (1992) and other stress and coping researchers (e.g., Israel et al., 1989; Karasek et al., 1987; Repetti, 1987) have found support for the relationships among antecedent, contextual, mediating, and outcome constructs central to Lazarus and Folkman's (1984) theoretical framework. The choice of variables in this study was based on Long et al.'s (1992) model, which selected constructs from stress and coping literature, in-depth interviews with professional women, and components of

career development theory related to women's career choices.

The following review of the literature provides empirical and theoretical support for the selection of antecedent (demographic characteristics and personality traits), contextual (environmental characteristics and daily hassles), mediating (cognitive appraisals and coping strategies), and outcome variables (distress symptoms of depression, anxiety, and somatic complaints). I review literature based largely on occupational stress research, however due to the limited research that deals exclusively with female managers and professionals, relevant research based on both men and women is presented.

Antecedent Variables

Demographic characteristics. Several demographic characteristics have been found to be important antecedent variables to the stress and coping process. Empirical research has found, for example, that marital and employment status are related to cognitive appraisals and outcomes of distress. For example, Long et al. (1992) found that female managers ($N=249$) who maintained traditional lifestyles (e.g., married with children) and traditional beliefs (e.g., attitudes towards women's roles) perceived occupational stressors more positively (i.e., less upsetting, more controllable, and less threatening to one's respect for others and to one's work goal attainment) than managers with less traditional lifestyles and beliefs. Career theory suggests that women with traditional life styles may be less invested in their careers (Betz & Fitzgerald, 1987). Thus, as Long et al. posit, married women with children may have less at stake when faced with stressful work situations that are viewed as

relating to employment goals or achievement.

With respect to the effects of marital status on distress, Karasek et al. (1987) reported that single women were more likely to report symptoms of psychological strain (e.g., depression, exhaustion, and job dissatisfaction) and illness-related behaviour patterns (e.g., pill consumption, smoking, and absenteeism) than partnered women. Results were based on multivariate logistic analysis using a sample of male ($N=5000$) and female ($N=3700$) Swedish white-collar workers. Similarly, using multiple regression analysis, Snapp (1992) found that black and white female managers and professionals ($N=200$) without partners reported higher levels of depression than women with partners, which parallels other research that suggests marriage positively impacts some women's distress levels (e.g., Gore & Mangione, 1983; Gove, Hughes, & Style, 1983). Congruent with evidence that supports the positive effects of social support on mental and physical health (Cohen & Wills, 1985), one can speculate that women with partners have access to intimacy and acceptance (i.e., emotional support) in their personal lives, which helps to reduce the negative effects of work stress. It is also possible that women who are married or partnered experience less stress because they have adopted social behaviour that fulfils cultural norms and expectations. Moreover, multiple roles for middle and upper-middle class women can reduce distress by providing individuals with numerous sources of rewards (e.g., income; Thoits, 1983; Verbrugge, 1993).

Other relevant demographic characteristics have also emerged in occupational stress research, such as organizational level, income, and age. First, with respect to

organizational level, Ratsoy et al.'s (1986) study of 134 male and female educational personnel (i.e., supervisors and administrators) revealed that higher organizational level of responsibility was associated with fewer sources of occupational stress (e.g., work load, unsatisfactory supervisory and collegial relationships, lack of respect, job uncertainty, program constraints, inadequate physical resources, and noise).

Similarly, in Davidson and Cooper's (1984) study of 696 female and 185 male managers, descriptive data revealed that junior and middle-level female managers experienced the highest overall levels of both psychosomatic symptoms (e.g., nervousness, tenseness, headaches, exhaustion) and occupational stressors, compared with men and women in all other levels of management. One plausible explanation for these findings is that the lower-levels managers are afforded less authority and control (e.g., decision latitude) in their jobs, which promotes feelings of powerlessness and subsequent distress reactions. Alternatively, as Davidson and Cooper (1984) assert, increased pressure and psychological strain symptoms may be attributed to greater sexual discrimination and fewer career promotion and mobility opportunities experienced by lower-level managerial women.

Second, in terms of income level, Karasek et al. (1987) found that high income predicted fewer physical health problems for male and female white-collar employees. Furthermore, Pearlin and Schooler (1978) found that among 2300 male and female adult community residents, higher income, in addition to higher occupational status and education, were related to greater use of problem-focused coping strategies in response to daily stressors. Similarly, in Menaghan and Merves'

(1984) study, results of multiple regression analysis revealed that male ($N=344$) and female ($N=173$) community resident adults of lower socio-economic status (i.e., lower income), compared with persons of higher-socio-economic status, used fewer direct action and optimistic comparison coping strategies but greater selective ignoring and restriction of expectations coping strategies at work. Income, which is considered a personal resource (Lazarus & Folkman, 1984), is related to positive stressor appraisals (Long et al., 1992) and has been found to promote feelings of self-efficacy (Downey & Moen, 1987). Moreover, efficacious or agentic traits have been associated with greater use of engagement coping forms and less psychosomatic distress (e.g., Long, 1989; Long et al., 1992; Steenbarger & Greenberg, 1990). Given the value of material resources in society, one can speculate that high-income individuals possess greater resources and feelings of control in their lives, which promote positive stressor appraisals and consequently lead to use of directive coping strategies in response to stressful situations.

Finally, with respect to age, in Repetti's (1987) study of female ($N=70$) bank employees, hierarchical regression analysis found that older employees tended to report fewer symptoms of depression and a more positive social environment at work, compared with younger employees. Correlational data from Turnage and Spielberger's (1991) study of 322 male and female managers, professionals, and clerical personnel, revealed that younger employees reported more job-related stressors than older workers, and that younger and less tenured managers and professionals reported less organizational support than older and more experienced

employees. Furthermore, Menaghan and Merves (1984) found that younger men and women, compared with their older counterparts, reported more occupational problems, such as work overload, depersonalization, and an unsatisfactory work environment. Similarly, Osipow, Doty, and Spokane (1985) found through multiple regression analysis that among 310 male and female adults, older individuals experienced less work-related psychological, vocational, physical, and interpersonal strain than their younger counterparts. In addition, Karasek et al. (1987) reported that job dissatisfaction, in addition to respiratory illness and absenteeism, declined with age for male and female white-collar employees, although other illness variables increased with age, such as heart disease, muscular skeletal aches, and pill consumption.

As Osipow et al. (1985) indicated, a plausible explanation for findings that suggest older employees experience less distress is that older employees may learn to deal more effectively with occupational stressors as time progresses, or alternatively, that individuals leave jobs that consistently distress them over time. Moreover, it is possible that older and more tenured (i.e., experienced) employees have the opportunity to develop support networks with colleagues over time, which helps to reduce the negative effects of work-related stress (cf. Amatea & Fong, 1991; Repetti, 1987).

In contrast to these findings, however, hierarchical regression analysis performed in Decker and Borgen's (1993) study of male ($N=79$) and female ($N=170$) workers, revealed that demographic variables of gender, age, education, and

job tenure did not contribute substantially to the variance of either the occupational strain measures (e.g., vocational, psychological, interpersonal, and physical strain) or job satisfaction measures. It is possible that the differences in findings reflect variability in the samples and statistical approaches used in the above studies. Decker and Borgen, for example, used a relatively heterogeneous sample of university, private sector, and government employees in their study. In addition, symptoms of ill physical health, in particular, may be attributed to other factors in the individual's life, and not solely to work-related stressors. Moreover, consistent with Lazarus and Folkman's (1984) theory, it is possible that mediating variables, such as cognitive appraisals or coping strategies, mediate the relationship between antecedents (e.g., demographic characteristics) and short-term outcomes (e.g., distress).

Marital status and income were included in the current model because empirical evidence more consistently supports the relationships between these demographic variables and other constructs relevant to the stress and coping process (e.g., cognitive appraisals, coping strategies, and distress). Long et al. (1992), for example, found that demographic characteristics of marital, parental, and income status were directly related to cognitive appraisals. Moreover, Lazarus and Folkman's (1984) theory suggests a direct link between antecedent (i.e., demographic characteristics) and mediating variables (i.e., appraisals). Thus, it was expected that marital status would have a direct effect on the appraisals of stressful work-related interpersonal conflicts.

Although research suggests a direct link between higher income and forms of

engagement coping (e.g., Menaghan & Merves, 1984; Pearlin & Schooler, 1978), Lazarus and Folkman (1984) assert that coping efforts are determined by appraisals of the stressor. Based on both theoretical arguments regarding the direct effects of antecedent conditions (e.g., demographic characteristics) on appraisals (Lazarus & Folkman) and empirical evidence that supports the relationship between income and stressor appraisals (Long et al., 1992), it was expected that income would be directly related to managerial and professional women's appraisals of interpersonal work stressors.

Furthermore, congruent with the mediating role of cognitive appraisals in the antecedent-outcome relationship (Lazarus & Folkman, 1984), and on the basis of empirical evidence linking marriage to both appraisals and distress (e.g., Karasek et al., 1987; Long et al., 1992; Snapp, 1992) and threatening appraisals to increased distress (e.g., Folkman, Lazarus, Gruen, et al., 1986; Gall & Evans, 1987), it was predicted that the relationship between marital status and distress would be mediated by stressor appraisals.

Personality traits. Gender-role personality traits of instrumentality and expressiveness may influence women's appraisals of work-related stressors (Compas & Orosan, 1993). The term gender-role orientation is used to refer to the extent to which individuals describe themselves according to personality attributes of instrumentality and expressiveness (Bem, 1981; Spence & Helmreich, 1980). Attributes considered instrumental in nature include being independent, goal-oriented, objective, assertive, competitive, and logical; whereas expressive attributes include

such traits as emotionality, nurturance, and sensitivity to others (Bem, 1981; I. Broverman, Vogel, D. Broverman, Clarkson, & Rosenkrantz, 1972; Orlofsky & Stake, 1981).

Instrumentality. Instrumental, or agentic traits have been identified as an important variable in both stress and coping and women's career development research (Betz & Fitzgerald, 1987; Gelso & Fassinger, 1992; Nezu & Nezu, 1987). The construct of agency (e.g., instrumentality), for example, has been linked to strong career motivation and high career aspiration (Fassinger, 1985, 1990). Other personality variables have been incorporated in stress and coping research (e.g., Type A traits, extraversion, control beliefs, denial, neuroticism; Frew & Bruning, 1987; Newton & Keenan, 1985; Parkes, 1986; Terry, 1991), however empirical evidence more strongly supports the relationships between agentic traits and both mediating and outcome variables in the stress and coping process. Agentic traits are particularly relevant to this study given that managerial and professional women's occupational role requires them to adopt agentic and instrumental attributes and behaviours.

Empirical research has found that instrumental personality traits are related to differential coping strategies. For example, in Long et al.'s (1992) structural equation model, female managers with strong agentic personality traits, as measured by the Bem Sex Role Inventory (BSRI; Bem, 1981), the Life Orientation Test (Scheier & Carver, 1985), the General Self-efficacy Scale (Sherer et al., 1982), and a preventive coping scale (Wong & Reker, 1983), were found to more frequently use engagement coping strategies. This finding is consistent with results of Long's (1989) study of

281 women employed in both clerical positions ($N=104$) and managerial, professional, and administrative positions ($N=177$), in which multivariate analysis of variance revealed that high-instrumental women, compared with low-instrumental women, as assessed by the BSRI (Bem, 1981), reported using more problem- relative to emotion-focused coping, and more preventive coping (i.e., strategies designed to reduce distress and the likelihood of potential problems). Similarly, in Long's (1990) study, hierarchical multiple regression analysis revealed that male ($N=60$) and female ($N=97$) managers who attained low BSRI instrumental scores reported using more avoidant coping strategies, compared with high-instrumental managers.

Although Nezu and Nezu (1987) used a sample of male ($N=92$) and female ($N=119$) college undergraduates to study the effects of gender-role orientation on psychological distress, coping strategies, and problem-solving ability, their results patterned those of studies using managerial samples. Specifically, multivariate analysis of variance showed that regardless of gender, persons scoring high on the instrumentality dimension of the BSRI (Bem, 1981), compared with low-instrumental persons, reported using greater active-behavioral and problem-focused coping strategies and fewer avoidant and emotion-focused coping efforts. One can speculate that agentic (e.g., high-instrumental) individuals are likely to use more directive forms of coping due to beliefs about their ability to manage the situation (cf. Terry, 1991).

Although theoretically different, the concept of efficacy expectations (Bandura, 1977) is related to Lazarus and Folkman's (1984) notion of control appraisals, which refers to an individual's beliefs that he or she can control the

demands of the stressful event. Thus, on the basis of Lazarus and Folkman's theory, which asserts that cognitive appraisals determine coping efforts and that antecedent variables (e.g. personality traits) are directly related to cognitive appraisals, it was predicted that instrumentality would be associated with situational control appraisals of interpersonal work stressors. However, given the limited assessment of appraisals in previous work stress research and based on Long et al.'s use of a composite appraisal measure, it was also expected that instrumentality would be directly related to upsetting appraisals, threatening loss of respect for others appraisals, and threatening work goal attainment appraisals.

Empirical research has shown that instrumental personality traits are also associated with contextual or situational variables (e.g., work environment and daily hassles). Long et al. (1992) found, for example, that strong agentic traits were associated with managerial women's perceptions of a more supportive and less demanding work environment. One can speculate that people's perceptions of personal agency reflect how they perceive their work environment. For example, assertive and goal-oriented attributes, characteristic of instrumentality, may facilitate one's ability to manage, delegate, and complete work projects efficiently, which in turn leads to perceptions of a well-functioning work environment.

In addition, Long et al. (1992) found that female managers with strong agentic traits reported fewer daily hassles (i.e., irritating, frustrating, and distressing everyday events; Lazarus, 1981). One can argue that instrumental or agentic persons possess the characteristics (e.g., objectivity) that promote resilience to the experience

of daily frustrations or irritations. Thus, based on both theoretical support (Lazarus & Folkman, 1984) regarding the interaction between individual and contextual variables in the stress and coping process and on empirical support from Long et al., it was predicted that instrumentality would be directly related to work demands, work support, and daily hassles.

Furthermore, there is empirical support for the relationship between instrumentality and outcomes of distress and satisfaction. Long et al. (1992) found, for example, that strong agentic traits were directly related to increased satisfaction, as well as indirectly related to increased satisfaction through a positive work environment. These findings are consistent with results of Long's (1989) study of female workers, in which multivariate analysis of variance revealed that high-instrumental women, compared with low-instrumental women, reported lower levels of trait anxiety, work impairment, and psychological, vocational, interpersonal, and physical strain. In addition, Israel et al.'s (1989) study of the predictors of occupational stress and health among male and female plant workers concluded that weaker agentic traits (e.g., weak mastery and self-esteem), as derived from Pearlin and Schooler's (1978) mastery scale and Rosenberg's (1965) self-esteem index, predicted depression. Similarly, Terry, Tonge, and Callan's (in press) structural equation model of 67 male and 86 female middle managers employed in a large Australian public sector organization, revealed that high levels of self-esteem, as assessed by Rosenberg's measure, were associated with decreased anxiety and depression. Causal inferences about variable relationships in Terry et al.'s model are

precluded, however, due to the cross-sectional design of their study.

These findings parallel conclusions drawn from studies using nonmanagerial samples. For example, in Kahn and Long's (1988) study, stepwise multiple regression analysis results revealed that female clerical workers with weak agentic traits, as assessed by Sherer et al.'s (1982) self-efficacy trait measure, tended to report higher trait anxiety than women with strong agentic traits. In Steenbarger and Greenberg's (1990) study of 105 female nursing students, results of multivariate analysis of variance indicated that high-instrumentality, compared with low-instrumentality, as assessed by the short form of the BSRI (Bem 1981), was associated with significantly lower levels of depression. Similarly, Nezu and Nezu (1987) found that high-instrumental college undergraduates, as assessed by the BSRI, reported lower levels of depression and trait and state anxiety, compared with low-instrumental students.

A possible explanation for these findings is that the work and school environments of individuals who participated in the studies value goal-oriented and competitive behaviour, characteristic of instrumentality, consequently promoting positive adjustment among agentic individuals (cf. Steenbarger & Greenberg, 1990). Alternatively, it is possible that highly instrumental individuals possess the efficacy beliefs that help them to appraise situations more positively (i.e., more controllable and less threatening or harmful), thereby impeding distress and creating healthy adaptation to their environment. Thus, consistent with the theoretical role of appraisals as mediators in the stress and coping process (Lazarus & Folkman, 1984)

and empirical evidence linking instrumentality to decreased distress (e.g., Israel et al., 1989; Long, 1989) and threatening appraisals to increased distress (Folkman, Lazarus, Gruen, et al., 1986; Gall & Evans, 1987), it was expected that the relationship between instrumentality and distress would be mediated by appraisals of the interpersonal work stressor.

Expressiveness. Empirical evidence supports the usefulness of examining instrumental personality traits in stress and coping research. However, characteristics and behaviours more typically feminine in nature are thought to have been overlooked in organizational research (Marshall, 1993), despite arguments that suggest relational skills generally ascribed to women are related to constructive coping and the maintenance of social support networks (Burda, Vaux, & Schill, 1984; Greenglass, 1993a). Long (1990), for example, found that expressiveness, as assessed by the BSRI (Bem, 1981) was the major determinant of problem-reappraisal coping (i.e., coping efforts designed to manage the appraisal of the stressfulness of the situation) for managerial men and women. The role of expressive personality traits, however, was not examined in Long et al.'s (1992) stress and coping model for managerial women.

Additionally, in Burda et al.'s (1984) study of male ($N=67$) and female ($N=66$) university students, one-way analysis of variance found that high-expressive and androgynous (i.e., high levels of both expressiveness and instrumentality) persons, as measured by the BSRI, reported having more sources of social support available to them than either persons who scored high on instrumentality or low on

both expressiveness and instrumentality. One can speculate that individuals who possess expressive traits (e.g., nurturance and sensitivity) place a greater value on maintaining interpersonal relationships (cf. Compas & Orosan, 1993) and utilize relational skills that help them to access and mobilize support resources. Thus, it was predicted that expressiveness would be directly related to work support.

In addition, based on theoretical premises (Lazarus & Folkman, 1984) regarding the effects of antecedent variables on mediating variables, it was advanced that expressive personality traits would be directly related to stressor appraisals. However, given the paucity of stress and coping research that has examined the role of expressive personality traits in the occupational domain, the direction of relationships between expressiveness and specific stressor appraisals was unclear and therefore are not specified.

There is, however, empirical evidence to suggest that expressiveness is related to outcomes of distress and satisfaction. Using multiple regression analysis, Hunt (1993), for example, found that among male ($N=72$) and female ($N=87$) college students, both high-instrumentality and high-expressiveness, as assessed by the short form of the BSRI (Bem, 1981), were associated with less depression and greater life satisfaction, compared with low-instrumental and low-expressive persons. However, only expressive traits were significantly associated with positive affect intensity, a measure of satisfaction and optimism about the future.

Similarly, Steenbarger and Greenberg (1990) reported that high-expressive female student nurses, compared with low-expressive women, reported significantly

fewer hostile distress symptoms and lower overall levels of vocational strain. In addition, Orlofsky and Stake (1981) found that among 176 male and female college students, expressive personality traits were associated with self-perceived effectiveness in, and enjoyment of, social interaction and satisfaction with one's interpersonal relationships. Long (1989), however, failed to support these findings in her study of women workers. The discrepancy in findings may be partially explained by the sample of adult workers in her study, compared with student samples employed in the other studies. More specifically, due to the prevalence of stressful negative relationships and interpersonal conflicts reported by employees (Dewe, 1993; Long, 1990), it is possible that adult workers experience more daily stressors than college undergraduates, which subsequently impact their level of satisfaction with interpersonal relationships.

Summary. In summary, empirical research has found that antecedent variables of instrumentality, expressiveness, and demographic characteristics are relevant to the stress and coping process. The relationships between expressiveness and both coping and distress, however have received little empirical attention. Thus, this study examined the extent to which expressiveness, instrumentality, marital status, and income influenced the reactions of managerial and professional women who identified interpersonal conflicts as an occupational stressor. More specifically, it was expected that women who are married or partnered and who have higher incomes would be more likely to appraise interpersonal work stressors positively (i.e., as more controllable and less upsetting and threatening). It was also predicted that women

with strong agentic (instrumental) traits would appraise interpersonal stressors as more positive (i.e., less upsetting and threatening and more controllable), perceive their work environment as less demanding and more supportive, and report fewer nonwork daily hassles. Moreover, it was expected that the relationships between both marital status and distress and instrumentality and distress would be determined by managerial and professional women's appraisals of stressful interpersonal work conflicts. Finally, it was proposed that expressiveness would be directly related to both stressor appraisals and greater work support.

Contextual Variables

Whereas cognitive appraisals and coping strategies occur in response to a stressor such as interpersonal conflict, contextual or situational variables illustrate the broader context in which the stressor is encountered. According to Lazarus and Folkman (1984), the dynamic interaction between the individual and his or her context is an important element of the stress and coping process. Moreover, an individual's context is believed to influence the manner in which he or she appraises and copes in response to a stressor (Compas & Orosan, 1993; Folkman, Lazarus, Dunkel-Schetter, et al., 1986). Drawing from Long et al.'s (1992) model, contextual variables in this study consisted of environmental characteristics and daily hassles.

Environmental characteristics. Empirical research has provided support for the direct effects of work-related environmental constraints and resources (e.g., work demands, job control, and support) on variables of interest in the stress and coping process (i.e., cognitive appraisals, coping, and outcomes of distress and satisfaction).

Long et al. (1992), for example, found that an unfavourable work environment (i.e., high work demands and weak support), as assessed by the Work Environment Scale (Moos, 1981), was associated with negative stressor appraisals (i.e., more upsetting and threatening appraisals, and less perceived situational control) for managerial women.

In terms of the impact of work environment characteristics on coping, Newton and Keenan (1985) reported that among a sample of 457 engineers, analysis of variance indicated that withdrawal coping efforts, characteristic of disengagement coping, were more frequently used in unsupportive work environments. Greenglass (1993b), using multiple regression analysis, found that among 114 male and female first-line government supervisors, boss support predicted use of both instrumental coping strategies for women and preventive coping for men and women. It is noted, however, that Greenglass failed to specify the gender composition of men and women participants and to provide psychometric information about the support measure used in the study.

Based on the conclusions of these research studies, one can speculate that in unfavourable work environments, employees are unable to access and mobilize organizational resources such as organizational support to deal with work demands. Thus, such individuals may be inclined to appraise work stressors as threatening or uncontrollable and may withdraw from them, perceiving more directive coping strategies to be futile given the poor organizational climate.

With respect to the effects of environmental conditions on outcome variables,

Long et al. (1992) found that work environments characterized by limited support and greater work demands were associated with increased dissatisfaction. Similarly, Karasek et al. (1987) found, through multivariate logistic regression analysis, that high work demands were associated with psychological strain (e.g., depression and exhaustion) among male and female white-collar employees, whereas weak job control was associated with job dissatisfaction and illness-related behaviour patterns (i.e., pill consumption, smoking, and absenteeism). However, the work demands and job control scales used in Karasek et al.'s study, which consist of author-generated questions, are limited by their lack of reported psychometric properties.

Consistent with Long et al.'s (1992) and Karasek et al.'s (1987) conclusions, in Landsbergis' (1988) study, hierarchical multiple regression analysis revealed that among male ($N=13$) and female ($N=276$) hospital employees, psychological strain symptoms (e.g., job dissatisfaction, depression, and psychosomatic symptoms) were significantly higher in jobs characteristic of high levels of work demands and low levels of decision latitude (e.g., autonomy), as assessed by the Job Content Survey (see Karasek et al., 1985). One plausible explanation for the relationship between work demands and distress is that demanding work environments are characterized by pressures and deadlines (cf. Turnage & Spielberger, 1991), which subsequently threaten employees' attainment of work goals and in turn, trigger distress symptoms such as anxiety.

It is noted that Landsbergis (1988) also found that environmental conditions of job insecurity and hazard exposure, in addition to weak supervisor and co-worker

support, were significantly associated with increased psychological strain. These findings illustrate the positive effects of supervisor and co-worker support on psychological functioning and parallel those of other researchers. For example, in Repetti's (1987) study of female bank employees, multiple regression analysis revealed that strong co-worker and supervisor support, as assessed by four factor-analyzed instruments (see Repetti, 1987), was significantly related to lower anxiety and depression and higher self-esteem, although findings revealed that supervisor support had the strongest impact on psychological distress.

In addition, Amatea and Fong (1991) reported that among 117 university-employed professional women, hierarchical multiple regression results indicated that women who experienced high levels of social support and personal control, as well as a greater number of roles, reported significantly fewer psychological and physical strain symptoms (e.g., depression, headaches, and insomnia). Similarly, Terry et al. (in press) found that high levels of social support, as measured by Sarason, Levine, Basham, and Sarason's (1983) Social Support Questionnaire, were linked to increased job satisfaction among male and female middle managers. It is noted, however, that neither Amatea and Fong nor Terry et al. reported the specific type of social support that they assessed in their studies (e.g., co-worker or supervisory support, friend support, or family support).

Consistent with the above results, Turnage and Spielberger (1991) found a strong negative relationship ($r = -.66$) between lack of frequent organizational support, as assessed by the Job Stress Survey (Spielberger, 1991), and job satisfaction among

male and female managers, professionals, and clerical personnel. Turnage and Spielberger's results, however, were based on correlational data; more sophisticated statistical analysis may lend greater confidence to their conclusions. Moreover, Hibbard and Pope (1985) found that adult women ($N=114$) who were employed in jobs with a higher degree of co-worker social support, as assessed by author-generated questions, reported better physical health than persons with low levels of work-related support. Hibbard and Pope, however, did not use a standardized instrument to assess social support, thereby limiting the validity and reliability of findings. Furthermore, one indicator of women's health status in their study was the average number of non-obstetrical hospital days, which may be attributable to factors other than work-related support.

As indicated by the results of numerous studies, environmental variables of co-worker and supervisor support have generally been found to positively affect physical and mental health (see Cohen & Wills, 1985 for a review). Other occupational stress studies, however, have yielded different findings regarding the positive effects of social support. For example, Snapp (1992) found that social support from friends, co-workers, and families did not diminish the effects of interpersonal conflict on depressive symptoms for female managers and professionals. Similarly, Reifman, Biernat, and Lang (1991) studied 200 professional women to assess the effects of social support on physical and depressive symptoms. Analysis of variance revealed that support from friends at work was beneficial only under low levels of stress, and that increased support was associated with more physical and depressive symptoms

under high levels of stress.

One possible explanation for the discrepant results may be due to the manner in which Snapp (1992) and Reifman et al. (1991) operationalized and assessed social support. Snapp, for example, measured social support by items that were developed for her study, but not replicated on other managerial samples. Moreover, the social support measures used in both Snapp's and Reifman et al.'s studies assessed family and co-worker support, whereas the majority of previously described studies that found positive effects of social support assessed only work-related support (i.e., co-worker and/or supervisory support). As Kobasa and Puccetti (1983) claim, marital or family support may not always reduce the negative effects of stress. Thus, it is possible that co-worker or supervisory support yields more beneficial effects than family or marital support when employees are confronted with occupational stressors.

It has been argued that social support buffers against stress by enhancing one's self-worth, promoting positive feelings and connections with others, and providing resources (e.g., advice) to individuals faced with a stressful situation (Cohen & Wills, 1985; Wills, 1990). Such social support resources help individuals to reappraise their threatened self-image attributed to perceived inability to effectively manage the stressor (Cohen & Wills). Thus, social support serves to trigger more positive stressor appraisals and adaptive coping, which in turn inhibits or alleviates psychological distress (e.g., helplessness, anxiety). The relationship between support and self-respect appraisals in Cohen and Wills' framework is consistent with Lazarus' (1991) theoretical propositions regarding the direct effect of environmental conditions

(e.g., work support) on mediating variables (e.g., appraisals). Moreover, there is empirical evidence linking work support to positive appraisals of work stressors (Long et al., 1992). Thus, it was expected that work support would be directly related to managerial and professional women's appraisals of interpersonal work stressors.

Similarly, following Lazarus' (1991) theoretical formulation regarding the relationship between environmental characteristics and appraisals, empirical evidence supporting the direct effects of work demands on stressor appraisals (Long et al., 1992), and an earlier suggestion that work demands threaten the achievement of work goals, it was predicted that work demands would be directly associated with stressor appraisals. One can speculate that interpersonal conflicts, which may involve competing work interests or goals between two individuals (e.g., Volkema & Bergmann, 1989), can both obstruct an employee's ability to complete planned work projects and elevate work pressures, which thus promotes negative (e.g., threatening, upsetting, and uncontrollable) appraisals of interpersonal work stressors.

Daily hassles. Daily hassles also provide a context for stressful events and have been found to influence the stress and coping process. The assessment of daily hassles determines the extent to which sources of daily stress and irritations other than work-related interpersonal stressors, impact managers' and professionals' experiences of distress. There is difficulty, however, in determining where the variable of daily hassles should be placed in Lazarus and Folkman's (1984) theoretical model.

Dohrenwend and Shrout (1985), for example, claim that daily hassles are the result of environmental conditions. Lazarus and Folkman, however, posit that daily hassles

may be both an antecedent and a consequence of appraisals and coping efforts.

Although Long et al. (1992) found that daily hassles as an indicator of work environment resulted in a poorer model fit in their study, Long et al.'s results support the role of daily hassles as an outcome of coping strategies.

Long et al. (1992) found that daily hassles, as assessed by the Hassles Scale (Kanner et al., 1981), had a strong and significant direct effect on distress. Long et al.'s results also revealed a significant but weak negative relationship between daily hassles and satisfaction. It is plausible to assume that daily frustrations and irritations, particularly when experienced over prolonged periods of time, can negatively impact one's adjustment and well-being, leaving an individual vulnerable to distress symptoms like anxiety and depression. Thus, it was expected that managerial and professional women who reported a greater number of daily hassles would experience more distress. Consistent with Long et al.'s findings, I considered daily hassles to be a consequence rather than a predictor of coping strategies.

Mediating Variables

Cognitive appraisals. Cognitive appraisals, in addition to coping strategies, are presumed to act as mediators in the relationship between antecedent and outcome variables (Lazarus & Folkman, 1984). However, appraisals have also been found to directly impact coping and distress. Folkman, Lazarus, Dunkel-Schetter, et al. (1986) found, for example, that primary appraisals of threat, harm, or loss (i.e., stakes) associated with stressful episodes are related to differential coping strategies among adult married couples ($N=85$). For example, when threats to achieving a work goal

were high, multivariate analysis of variance results revealed that more self-control and planful problem-solving coping strategies were used, whereas when the stake was a threat to one's financial resources, more confrontive coping and seeking social support strategies were used.

Additionally, Long et al. (1992) found that when female managers made more positive appraisals of stressful work situations (i.e., appraising the situation as less upsetting, more in the individual's control, and less threatening to one's respect for others and to the attainment of work goals), disengagement coping was used less frequently, which in turn influenced the use of engagement coping. One can argue that managers who have more positive stressor appraisals have greater confidence in their ability to confront and manage the demands of stressful encounters, and therefore are less inclined to withdraw from such situations and more likely to use active or engagement forms of coping.

Furthermore, in Gall and Evans' (1987) study of male ($N=72$) and female ($N=112$) adult community residents, correlational data revealed that situations appraised as undesirable or threatening were negatively related to use of confrontative coping strategies. Similarly, Peacock, Wong, and Reker (1993) found through hierarchical multiple regression that among male and female university students ($N=185$), threatening stressor appraisals predicted increased use of emotion-focused coping strategies. By contrast, appraisals of challenge were related to increased use of problem-focused and preventive coping. Thus, one can speculate that the manner in which an individual appraises a situation (e.g., as threatening versus challenging),

and what specifically is at stake in the situation (e.g., financial resources versus work goals) may precipitate the use of differential coping strategies due to circumstances unique to different types of stressful episodes.

Congruent with the theoretical argument that cognitive appraisals determine coping (Lazarus & Folkman, 1984), empirical evidence has provided support for the relationship between secondary appraisals of control and active forms of coping. Peacock et al. (1993), for example, found that appraised controllability of stressful situations predicted problem-focused coping, whereas appraised uncontrollability predicted use of emotion-focused coping, as well as other forms of coping (i.e., existential and spiritual coping). Similarly, Folkman and Lazarus (1980) found that among a community sample of male ($N=48$) and female ($N=52$) older adults, stressful events that were appraised as controllable (e.g., one in which an individual could change or do something about) were associated with greater use of problem-focused coping compared with situations appraised as uncontrollable (e.g., one that had to be accepted). By contrast, uncontrollable appraisals predicted emotion-focused coping more than controllable situations. Folkman and Lazarus' (1980) findings parallel results reported by Aldwin (1991) on perceived control among older adults.

Although Folkman and Lazarus (1980) based their conclusions on descriptive data only, their findings patterned those of other researchers (e.g., Carver et al., 1989; Terry, 1994). Carver et al. (1989), for example, found that male ($N=45$) and female ($N=72$) college undergraduates who appraised stressful events as controllable more frequently reported using directive coping strategies (e.g., active coping,

planning, suppression of competing activities, and seeking instrumental social support) than students who appraised the situation as uncontrollable.

Additionally, Terry et al. (in press) found that among male and female middle managers, situational control beliefs, as measured by six items developed by Conway and Terry (1992), were associated with low levels of minimization coping strategies and high levels of self-blame coping. Moreover, weak self-efficacy appraisals (i.e., perceived inability to manage the stressor) were associated with decreased instrumental action coping strategies and increased escapism and self-blame coping efforts. These findings are partially supported by results of Terry's (1994) study of male ($N=95$) and female ($N=148$) first-year university students, in which hierarchical regression analysis revealed that controllability appraisals of a stressful event were significant predictors of both instrumental action and self-blame coping strategies. Alternatively, uncontrollable appraisals were significantly associated with seeking support coping strategies. It is noted, however, that in Terry's (1991) earlier study of the predictors of coping behaviour among 138 undergraduate university students, appraisals of control were unrelated to self-blame, instrumental, or social support coping strategies.

There is no clear explanation for the discrepant findings in Terry's (1991, 1994) two studies, although it is possible that the differences may be related to the type of stressors that were examined. Whereas Terry's (1991) earlier study focused specifically on examination stressors, the later study (1994), which required students to identify the most stressful event that they were facing, found that work/study and

interpersonal stressors were the most commonly reported stressor. Thus, conclusions drawn from Terry's (1994) study, which are partially based on interpersonal stressors, are more germane to this present model of interpersonal stress in the workplace. One can speculate that active forms of coping are generally favoured in situations appraised to be controllable because individuals who appraise a stressful situation as within their control likely believe that they can effect desired change. Moreover, as Terry (1994) and Terry et al. (in press) found, appraising a situation as controllable may also lead individuals to assume excessive responsibility for the occurrence of the stressful event, thus triggering reliance on self-blame coping strategies.

Research has also found that appraisals of the stressful episode's importance influences coping. Long (1990), for example, found through hierarchical multiple regression analysis, that appraised importance of the stressful event contributed the largest proportion of the variance in total coping scores. More specifically, greater appraised importance of the stressful situation, as assessed by a 5-point scale, significantly predicted both active problem-solving coping and avoidance coping among managerial men and women. Consistent with this latter finding, Parkes (1986) found through multiple regression analysis that among female student nurses ($N=135$), greater perceived importance of the stressful event, as assessed by a 4-point scale, significantly predicted suppression coping.

In addition to evidence that supports the relationship between cognitive appraisals and coping strategies, empirical research has also found a link between cognitive appraisals and distress. Gall and Evans (1987), for example, reported that

results from stepwise multiple regression analysis indicated that cognitive appraisals of life events were found to be more important determinants of distress than were the frequency of life events and the types of coping behaviours used. Specifically, they found that male and female adults who appraised situations as threatening or undesirable, as creating a need for information, or as not involving a challenge, reported greater depression.

Moreover, Folkman, Lazarus, Gruen, et al. (1986) reported that married couples ($N=85$) who had more at stake across a diversity of stressful encounters were more likely to experience symptoms of psychological distress. However, Long et al.'s (1992) model did not find a direct link between appraisals and distress; rather, results indicated that appraisals indirectly predicted distress through disengagement coping.

It is noted that Folkman, Lazarus, Gruen, et al. (1986), in addition to Gall and Evans (1987) and Parkes (1986), did not focus exclusively on either stressful work episodes or interpersonal stressors, which limits generalizability of findings to work-related interpersonal conflict. Furthermore, results need to be replicated on samples of managers and professionals before they can be generalized to the managerial and professional population.

As indicated earlier, existing stress and coping research is also limited by the lack of refined primary appraisal measures to assess what individuals have at stake in specific stressful situations. For example, Peacock et al. (1993) used only three items to assess primary appraisals, which limits confidence in their findings. In addition,

Gall and Evans (1987) assessed primary and secondary appraisals from several sources, but did not report whether the composition of appraisal items were systematically selected or factor analyzed for their study. Thus, the use of different types of appraisal measures restricts comparability of results across studies.

Moreover, in Long et al.'s (1992) model, the appraisal construct was assessed by two primary appraisal items (i.e., threats to one's respect for others and to the attainment of work goal items) derived from Folkman, Lazarus, Dunkel-Schetter, et al. (1986), and two 5-point appraisal scales measuring the extent to which the stressor was appraised as upsetting and controllable. However, because Long et al. assessed cognitive appraisals in combination, it is difficult to determine whether particular types of appraisals (e.g., threats to goal attainment versus threats to one's respect for others) differentially predict coping strategies. Thus, based on the documented effects of stressor appraisals on inactive or withdrawal forms of coping (Long et al.; Terry et al., in press), it was predicted that each of the stressor appraisals from Long et al.'s final model (i.e., upsetting, situational control, loss of respect for others, and threatening work goal attainment appraisals) would be directly related to disengagement coping.

It is noted that Long et al.'s (1992) failure to find a direct relationship between appraisals and engagement coping is inconsistent with theoretical premises. Rather, results indicated that infrequent use of disengagement coping predicted increased engagement coping. Given that interpersonal conflicts were identified as a primary source of occupational stress, it is possible that Long et al.'s findings were influenced

by their failure to use appraisal and coping measures specific to interpersonal stressors. One can assume, however, that if positive stressor appraisals predict infrequent use of disengagement coping, positive stressor appraisals would predict greater engagement coping. Managers, for example, are likely to use directive coping efforts characteristic of engagement coping when work stressors are appraised as controllable and non-threatening. Thus, on the basis of Lazarus and Folkman's (1984) theory, it was proposed that managerial and professional women's appraisals of stressful interpersonal conflicts would be directly related to use of engagement coping strategies.

Coping strategies. Folkman and Lazarus (1980, 1985) claim that people frequently use numerous types of coping strategies in almost every type of stressful situation. Pearlin and Schooler (1978), however, found that in their study of 2300 men and women, people generally used problem-focused coping strategies less frequently than emotion-focused strategies to manage work-related problems. Pearlin and Schooler interpreted their findings by suggesting that the impersonal and chronic nature of work problems might best be managed by altering their perspective on the situation and changing one's emotional attachment to stressful work situations. Despite Pearlin and Schooler's interpretation, research presented earlier has found that work problems are frequently interpersonal in nature, rather than impersonal (cf. Dewe, 1993; Israel et al., 1989; Long et al., 1992). Thus, had Pearlin and Schooler examined the effects of specific stressful events, they may have reached different conclusions. As discussed earlier, a limitation of existing coping measures is that

they may not adequately assess coping strategies specific to stressful interpersonal relationships.

Empirical research has generally provided support for both the direct and indirect effects of coping strategies on contextual and outcome variables. In terms of the direct effects of coping on contextual variables, Long et al. (1992) found, for example, that disengagement and engagement coping each had a significant direct effect on daily hassles. Long et al. concluded that continued use of engagement or directive coping efforts may lead to increased frustrations (i.e., daily hassles) as a result of longer exposure to the stressor. It is also possible that disengagement or withdrawal coping forms predict greater hassles due the individual's failure to confront and effectively manage the stressor.

With respect to the direct effects of coping on outcome, results from Long et al.'s (1992) prospective study also indicated that disengagement coping, as assessed by Long's (1990) modified version of the Revised Ways of Coping Checklist (Lazarus & Folkman, 1984), had a weak but significant effect on psychosomatic distress, as measured by the Symptom Check List-90-R (Derogatis, 1977). Thus, increased use of disengagement coping was associated with a greater number of distress symptoms (i.e., depression, anxiety, and somatization) assessed one month later. Similarly, using Aldwin and Revenson's (1987) factor analyzed version of Lazarus and Folkman's (1984) Ways of Coping Questionnaire, Terry et al. (in press) found that male and female managers who relied more on escapism and self-blame coping strategies reported greater anxiety and depression. Similarly, greater use of escapism

coping strategies and more infrequent use of instrumental action strategies were associated with increased job dissatisfaction.

Relatedly, Greenglass (1993b) reported that among male and female Canadian supervisors, palliative coping forms (e.g., strategies such as self-blame or wishful thinking), as assessed by Wong and Reker's (1983) Coping Inventory, were significantly associated with outcomes of job anxiety (.66), depression (.48), somatization (.43), general anxiety (.62), and job satisfaction (-.30). By contrast, results showed significant negative relationships between instrumental coping forms (e.g., strategies aimed at solving work problems) and both job and general anxiety (-.34 and -.26, respectively). Similarly, preventive coping (e.g., coping strategies aimed at promoting one's well-being and reducing the probability of potential difficulties) was significantly associated with greater job satisfaction (.28) and less job anxiety (-.49), depression (-.29), somatization (-.27), and general anxiety (-.43). Although some relationships were weak in magnitude, results paralleled Long et al.'s (1992) finding regarding the direct effect of disengagement coping on distress for managerial women.

Additionally, in Decker and Borgen's (1993) study of university employees, correlational data revealed that higher coping scores on each subscale of the Personal Resources Questionnaire of the Occupational Stress Inventory (Osipow & Spokane, 1987) were significantly associated with higher job satisfaction, and lower vocational, psychological, interpersonal, and physical strain. The relationships among coping strategies and job satisfaction, however, were relatively weak (ranging from .13 to

.28). Moreover, hierarchical regression analysis revealed that coping (i.e., recreation, self-care, social support, and rational-cognitive coping strategies) made a significant contribution to both interpersonal and physical strain outcome measures. Decker and Borgen, however, based their findings on an overall coping score and did not indicate whether specific coping strategies predicted strain and job satisfaction. Moreover, the researchers used a trait measure of coping, which assesses relatively stable dispositional coping styles, compared with situation-specific measures (e.g., Lazarus & Folkman, 1984) that assess how one copes with a specific stressor. The type of coping measure used and the method of reporting findings based on overall coping scores differs from procedures commonly used in occupational stress research, thereby making comparability across studies difficult.

Further support for the direct effects of coping is provided Israel et al. (1989), who found through stepwise multiple regression that forms of emotion-focused coping strategies (i.e., sleeping, eating, drinking, or smoking and criticizing self and others), as assessed by a measure derived from Pearlin and Schooler (1978), predicted depression for male and female workers. Similarly, Gall and Evans (1987) reported that stepwise regression analysis revealed that greater use of avoidance coping strategies predicted increased depression among adult community residents. Moreover, using stepwise multiple regression analysis, Menaghan and Merves (1984) found that less use of restricted expectations and more frequent use of optimistic comparison coping strategies were related both to lower levels of occupational distress and reduced distress over time among male and female adults.

By contrast, Amatea and Fong (1991) found that active methods of coping were not significantly associated with decreased psychological health among female professionals. Amatea and Fong, however, attributed these nonsignificant findings to low to moderate overall levels of strain experienced by participants. Moreover, because both Menaghan and Merves (1984) and Amatea and Fong assessed coping strategies by an interview format, psychometric properties (e.g., reliability and validity) of the coping inventories are unavailable.

Finally, Parkes (1990) provides support for both the direct and indirect effects of coping on outcome. Specifically, using hierarchical regression analysis, Parkes (1990) found that among male ($N=93$) and female ($N=171$) teacher trainees, high levels of a form of emotion-focused coping (i.e., suppression) were directly related to poorer general mental health (e.g., greater distress), whereas low levels of a form of problem-focused coping (i.e., direct coping) interacted with work environment characteristics (i.e., high work demands and low social support) in predicting poor mental health.

Because types of coping strategies differ across studies, it is difficult to precisely specify whether the strategies reported reflect either engagement or disengagement coping. Generally, however, active efforts to manage both problems and emotions associated with a stressful encounter characterize engagement coping, whereas cognitive or behavioral activity that orients an individual away from the stressor reflects disengagement coping (Tobin et al., 1989). Similarly, Kahn (1990) distinguishes between engagement (i.e., involving emotional expression or active

connection to work and others) and disengagement work behaviour (i.e., involving withdrawal or emotional disconnection from work and others). Therefore, consistent with Long et al.'s (1992) model, the expected relationships in this study were based on an engagement and disengagement classification of coping.

One possible explanation for findings that suggest disengagement forms of coping are related to distress (e.g., Gall & Evans, 1987; Israel et al., 1989; Long et al., 1992; Terry et al., in press) is that emotional disconnection from another individual or inactive efforts to effect desired changes in a stressful interpersonal encounter likely inhibits positive changes from occurring in the relationship, which may in turn fuel feelings of helplessness and distress. Thus, based on theoretical premises (Lazarus & Folkman, 1984) and empirical support for the direct effects of disengagement coping forms on outcome (e.g., distress), it was expected that disengagement coping would be positively associated with distress symptoms. On the basis of evidence from Long et al.'s model, it was also predicted that both disengagement and engagement coping would be positively related to daily hassles.

A major weakness of existing stress and coping research is its limited use of managerial samples. For example, whereas Menaghan and Merves' (1984) and Gall and Evans' (1987) studies were based on samples of adult community residents, Parkes (1990) and Nezu and Nezu (1987) respectively employed samples of trainee teachers and college students. Results based on nonmanagerial samples, however, precludes generalizability of findings to the management population.

Short-term Outcome Variable

Distress. Antecedent variables (e.g., personality traits and demographic characteristics), contextual characteristics (e.g., environmental conditions and daily hassles), and mediating variables (e.g., cognitive appraisals and coping strategies) have been found to directly or indirectly impact health. Stress and coping research has operationalized the construct of short-term outcome in numerous ways. For example, measures of ill health (e.g., headaches, sleeplessness), job and life satisfaction, or psychological strain or mental health symptoms (e.g., anxiety and depression) are operational definitions of short-term outcomes.

Although occupational stress research studies outcomes such as job or life satisfaction, Lazarus and Folkman (1984) have not focused on these constructs in their theoretical framework. By contrast, Lazarus and Folkman's theory features short-term outcomes such as psychological functioning, somatic health/illness, and social functioning. Relatedly, empirical research has commonly found that interpersonal conflicts and negative social relationships in the workplace relate to similar indices of psychological distress, such as depression, anxiety, and negative moods (e.g., Israel et al., 1989; Karasek et al., 1987; Repetti, 1987, 1993a; Snapp, 1992). Thus, consistent with theoretical propositions and based on empirical evidence, this study examined the effects of antecedent, contextual, and mediating processes on the short-term outcome of distress (i.e., symptoms of anxiety, depression, and somatic complaints).

Further Considerations

Lazarus and Folkman's (1984) theoretical framework posits that personality

and environmental variables influence short- and long-term outcomes, such as psychological strain. However, stress and coping research has also identified negative affectivity, another personality trait, which is thought to influence individuals' self-reports of occupational stressors and perceptions of strain and job satisfaction (Brief, Burke, George, Robinson, & Webster, 1988; Decker & Borgen, 1993; Levin & Stokes, 1989; Parkes, 1990; Schaubroeck, Ganster, & Fox, 1992; Watson, Pennebaker, & Folger, 1987). According to Watson and Clark (1984), negative affectivity is a pervasive disposition to experience a broad range of negative mood states, such as anxiety, anger, and depression.

Evidence has been generally mixed for the importance of including negative affectivity in occupational research. However, a recent review by Burke, Brief, and George (1993) supports the claim that negative affectivity influences the magnitude of correlations between occupational stressors and strains and therefore recommends that the effects of negative affectivity on stressor-strain relationships be accounted for in work stress research. Similarly, based on results of structural equation modelling, Long and Schutz (1995) concluded that appraisals, disengagement coping, and distress may have been influenced in their model by some underlying consistent trait such as negative affectivity. Moreover, studies have found that individuals possessing high levels of negative affectivity are prone to interpersonal difficulties and disputes (Bolger & Schilling, 1991; Bolger & Zuckerman, 1995; Watson & Clark, 1984), thus suggesting the salient role of negative affectivity in research that examines the interpersonal dimension. Consistent with these claims, this study controlled for the

potential effects of negative affectivity on managers' and professionals' self-reports of psychosomatic distress.

Summary

Interpersonal conflict in the workplace has been identified as a common source of stress for female employees. Despite its prevalence as an occupational stressor, interpersonal conflict has not been examined within a theoretical model of stress and coping. Lazarus and Folkman's (1984) transactional stress and coping theory, however, is a useful framework for examining work-related stressors such as interpersonal conflict.

Stress and coping theory and related research has provided theoretical and empirical support for the selection of antecedent, contextual, mediating, and outcome constructs that were used in the present study. Existing occupational stress research, however, has been limited by a lack of refined primary appraisal and coping instruments to measure work-related interpersonal stressors. Moreover, occupational stress research has failed to investigate specific stressors within an integrative stress and coping framework. Long et al.'s (1992) study has helped to address various limitations of existing stress research by testing a stress and coping model to identify the pattern of relationships for a sample of female managers. Long et al., however, did not focus specifically on interpersonal stressors, although interpersonal conflicts emerged as a predominant source of occupational stress for managerial women.

Thus, the purpose of this study was to examine Lazarus and Folkman's (1984) framework and build on Long et al.'s (1992) model in the context of interpersonal

work stressors by determining through path analytic modelling the pattern of relationships among antecedent (i.e., demographic characteristics and personality traits of instrumentality and expressiveness), contextual (environmental characteristics and daily hassles), mediating (i.e., cognitive appraisals and coping strategies), and outcome variables (i.e., distress symptoms) for managerial and professional women who identified interpersonal conflicts as an occupational stressor.

HYPOTHESES

The present study was designed to examine the pattern of relationships among variables that were expected to contribute to the distress of managerial and professional women who experienced stressful interpersonal conflicts at work. On the basis of theoretical and empirical relevance to Lazarus and Folkman's (1984) and Long et al.'s (1992) stress and coping models, 17 hypotheses were developed and tested. An overview of the theoretical and empirical support that guided the development of each hypothesis is described below and a path diagram illustrating the hypothesized relationships is presented in Figure 2.

Hypothesis 1: It was predicted that the model would fit the data.

Using a combination of path analytic fit indices (i.e., the chi-square to degrees of freedom ratio, the Goodness-of-fit Index, the Adjusted Goodness-of-fit Index, the Root Mean Square Residual, the Comparative Fit Index, and the Incremental Fit Index), it was expected that the overall model would yield a significant fit with the data obtained from the sample of managerial and professional women.

Hypothesis 2: It was expected that marital status would be directly related to stressor appraisals.

This hypothesis was based on the purported direct effects of antecedent variables (e.g., demographic characteristics) on mediating variables (e.g., cognitive appraisals) in Lazarus and Folkman's (1984) stress and coping theory. Moreover, empirical findings from Long et al.'s (1992) study supported the proposed relationship between marital status and stressor appraisals. It is noted, however, that marital

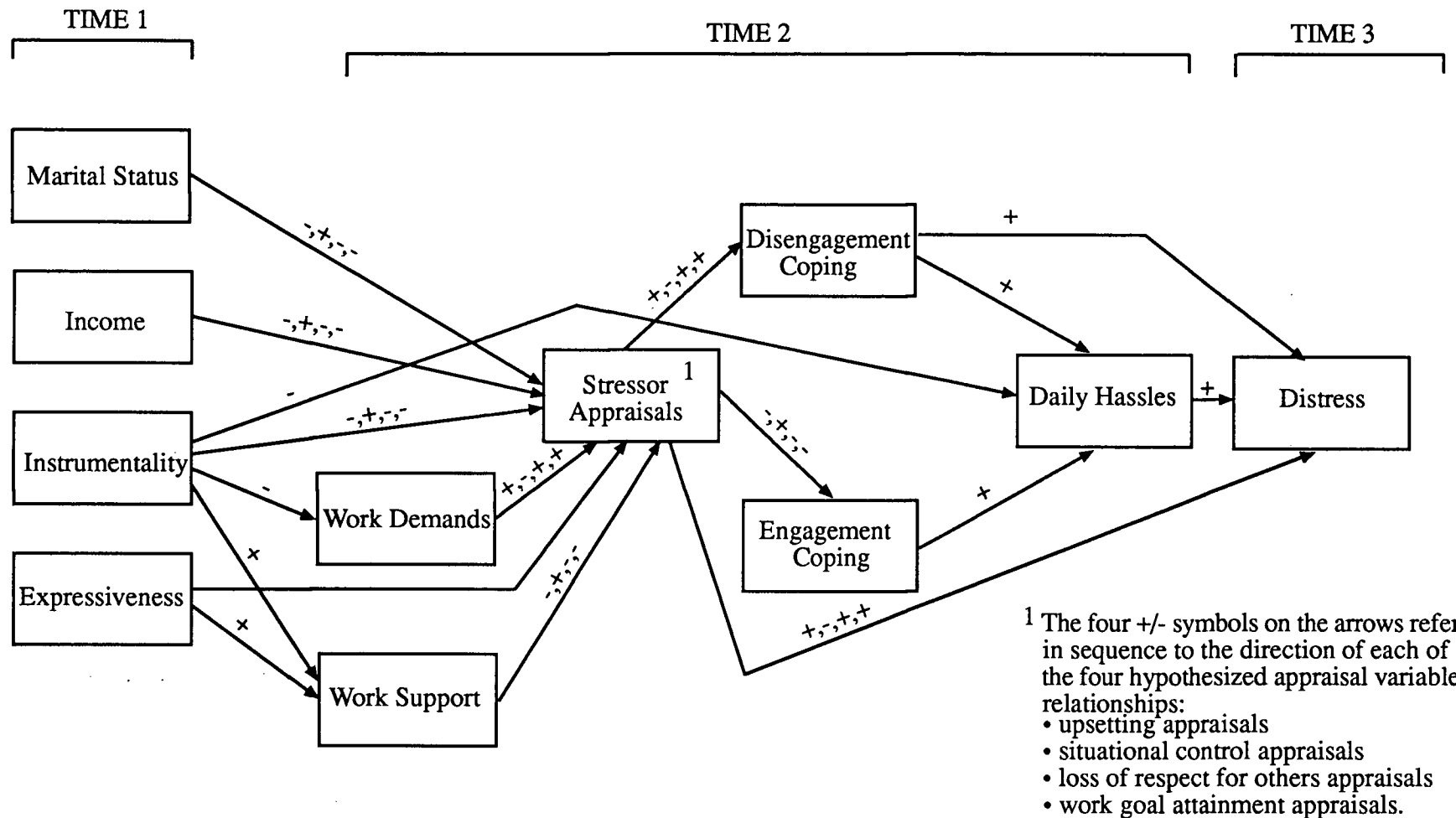


Figure 2. Path Model Representing the Hypothesized Relationships among Antecedent, Contextual, Mediating, and Outcome Variables at Time 1, Time 2, and Time 3. (Arrows indicate the direction of the hypothesized relationships. First-order partial correlation matrix with negative affectivity removed is analyzed. +/- indicates the direction of hypothesized relationships. Marital status refers to married and partnered = 1; not married = 2. Directions of expressiveness-appraisals relationships were not specified.)

status was not examined independently in Long et al.'s model, but was combined with income and parental status to form a composite demographic measure. Long et al. found, for example, that female managers with traditional lifestyles (e.g., married with children) appraised occupational stressors more positively (i.e., less upsetting, more controllable, and less threatening to one's respect for others and to the attainment of work goals) than managers with less traditional lifestyles. It is possible that women with traditional lifestyles (e.g., married with children) are less invested in their careers (Betz & Fitzgerald, 1987) and have less at stake when confronted with stressful work situations perceived as relating to occupational goals or achievement (Long et al.). Thus, on the basis of Lazarus and Folkman's theoretical framework and results of Long et al.'s model, four specific marital status and appraisal relationships were hypothesized (married and partnered=1; not married=2):

- (a) Marital status would be negatively related to upsetting stressor appraisals.
- (b) Marital status would be positively related to appraised control of the interpersonal stressor.
- (c) Marital status would be negatively related to threatening loss of respect for others appraisals.
- (d) Marital status would be negatively related to threatening work goal attainment appraisals.

Hypothesis 3: It was expected that the marital status and distress relationship would be mediated by stressor appraisals.

This hypothesis was based on theoretical premises (Lazarus & Folkman, 1984)

regarding the mediating role of cognitive appraisals in the relationship between antecedent (e.g., demographic characteristics) and outcome variables (e.g., distress). Support for this hypothesis was also drawn from empirical research that suggests married and partnered women have lower levels of psychological strain symptoms such as depression and job dissatisfaction (e.g., Karasek et al., 1987; Snapp, 1992). It is possible that marriage reduces distress by providing middle and upper-middle class working women with numerous rewards from each role that they assume (e.g., income; Thoits, 1983; Verbrugge, 1993) or alternatively that marriage provides a source of social support, which has been shown to alleviate stress (cf. Cohen & Wills, 1985). One can also argue that marriage fulfils cultural expectations and therefore is associated with less distress.

Marital status, however, has also been found to influence upsetting, threatening, and control appraisals (Long et al., 1992) and threatening or undesirable appraisals have been linked to increased distress (Folkman, Lazarus, Gruen, et al., 1986; Gall & Evans, 1987). Based on theory and these empirical findings, the suggestion that marital status is directly related to distress appeared too simplistic. Thus, it was expected that the relationship between marital status and distress would be mediated by stressor appraisals. Consistent with the appraisal construct used in Long et al.'s model, four specific mediating relationships were tested:

- (a) The marital status and distress relationship would be mediated by upsetting stressor appraisals.
- (b) The marital status and distress relationship would be mediated by

situational control appraisals.

(c) The marital status and distress relationship would be mediated by loss of respect for others appraisals.

(d) The marital status and distress relationship would be mediated by work goal attainment appraisals.

Hypothesis 4: It was predicted that income would be directly related to stressor appraisals.

Lazarus and Folkman (1984) have provided support for the relationship between antecedent variables (e.g., demographic characteristics) and cognitive appraisals in the stress and coping process. Congruent with Lazarus and Folkman's theoretical arguments, Long et al. (1992) found that income was directly related to positive stressor appraisals for managerial women (i.e., less threatening and upsetting, and more controllable appraisals). Given the value of income in society and the relationship between income and self-efficacy (Downey & Moen, 1987), it is possible that high-income individuals possess greater control and access to more resources in their lives, which help to promote more positive appraisals of potentially stressful situations. Thus, based on theoretical and empirical support, and drawing on Long et al.'s composite measure of cognitive appraisals, four specific relationships were proposed:

- (a) Income would be negatively related to upsetting stressor appraisals.
- (b) Income would be positively related to appraised situational control.
- (c) Income would be negatively related to threatening loss of respect for

others appraisals.

(d) Income would be negatively related to threatening work goal attainment appraisals.

Hypothesis 5: It was expected that instrumentality would be directly related to stressor appraisals.

This hypothesis was based on Lazarus and Folkman's (1984) theoretical propositions regarding the direct effects of antecedent variables (e.g., personality traits) on mediating variables (e.g., appraisals). One can argue that high-instrumental or agentic individuals have both stronger beliefs in their ability to manage demanding situations and the personal qualities (e.g., objectivity, logic) that help them to appraise stressful situations as less threatening and more controllable. Therefore, in support of Lazarus and Folkman's theoretical framework and based on Long et al.'s (1992) appraisal construct, four specific relationships were hypothesized:

- (a) Instrumentality would be negatively related to upsetting stressor appraisals.
- (b) Instrumentality would be positively associated with appraised situational control.
- (c) Instrumentality would be negatively related to threatening loss of respect for others appraisals.
- (d) Instrumentality would be negatively associated with threatening work goal attainment appraisals.

Hypothesis 6: It was expected that instrumentality would be directly related to work environment characteristics.

This hypothesis was based on Lazarus and Folkman's (1984) theoretical assumptions regarding the interaction between individual (e.g., personality traits) and contextual (e.g., work environment characteristics) variables in the stress and coping process. Furthermore, this hypothesis was empirically supported by Long et al. (1992), who found that managerial women with strong agentic traits viewed the work environment more positively (i.e., more supportive and less demanding). It is possible that people's perceptions of personal agency reflect how they perceive their work environment. One can argue, for example, that instrumental persons possess characteristics such as assertiveness and goal-oriented attitudes, which allow them to complete tasks efficiently and effectively manage and delegate work projects. The ability to perform these functions may help cultivate positive perceptions of the work climate and conditions (i.e., environment). In support of Lazarus and Folkman's theory and Long et al.'s model, two specific relationships were proposed:

- (a) Instrumentality would be negatively related to work demands.
- (b) Instrumentality would be positively related to work support.

Hypothesis 7: It was predicted that instrumentality would be negatively related to daily hassles.

Theoretical support for this hypothesis was provided by Lazarus and Folkman (1984), who acknowledge the interaction between person and contextual variables in the stress and coping process. Moreover, this prediction was empirically supported by Long et al. (1992), who found that managerial women with strong agentic traits reported fewer daily hassles. One can argue that objective and logical attributes,

characteristic of instrumentality, promote resilience to the experience of daily frustrations or irritations.

Hypothesis 8: It was expected that the relationship between instrumentality and distress would be mediated by stressor appraisals.

Given the theoretical significance of cognitive appraisals as mediators in the antecedent-outcome relationship (Lazarus & Folkman, 1984), one can argue that the documented relationship between instrumental personality traits and distress (e.g., Israel et al., 1989; Long, 1989) is influenced by an individual's appraisal of a stressor. It is possible that high-instrumental individuals possess the efficacy beliefs that promote more controllable and less threatening and upsetting stressor appraisals. These positive stressor appraisals may in turn both inhibit instrumental persons' distress and create healthy adjustment to their environment (e.g., interpersonal relationships), as supported by empirical evidence linking threatening appraisals to distress (Folkman, Lazarus, Gruen, et al., 1986; Gall & Evans, 1986). Thus, on the basis of theory and Long et al.'s appraisal construct, the following specific relationships were proposed:

- (a) The instrumentality and distress relationship would be mediated by upsetting stressor appraisals.
- (b) The instrumentality and distress relationship would be mediated by situational control appraisals.
- (c) The instrumentality and distress relationship would be mediated by loss of respect for others appraisals.

(d) The instrumentality and distress relationship would be mediated by work goal attainment appraisals.

Hypothesis 9: It was expected that expressive personality traits would be positively related to work support.

This hypothesis was based on Lazarus and Folkman's (1984) theoretical premises regarding the relationship between antecedent variables (e.g., personality traits) and environmental conditions (e.g., work support). Moreover, empirical research has found that high-expressive male and female university students have access to more sources of social support than low-expressive students (Burda et al., 1984). One can speculate that expressive persons possess interpersonal strengths and value the maintenance of interpersonal relationships, which help them to access support resources. Thus, it was predicted that expressive personality traits would be directly related to increased levels of work-related support.

Hypothesis 10: It was predicted that expressive personality traits would be directly related to stressor appraisals.

This hypothesis was formulated on the basis of theoretical support from Lazarus and Folkman (1984) regarding the direct effects of antecedent variables (e.g., personality traits) on mediating variables. However, based on the limited attention given to expressive personality traits in occupational stress and coping research, the specific directionality of relationships between expressiveness and each of the four stressor appraisals used in the model was unclear at the onset of the study and therefore not specified.

Hypothesis 11: It was expected that work support would be directly related to stressor appraisals.

This hypothesis was based on Lazarus's (1991) theoretical framework, which maintains that environmental conditions are directly related to cognitive appraisals. Moreover, in support of Lazarus' theory, Long et al. (1992) found that negative characteristics of managerial women's work environment (e.g., weak work support and high work demands) were associated with more upsetting and threatening appraisals, and less perceived situational control. Cohen and Wills (1985) and Wills (1990) contend that social support provides individuals who encounter stressful situations with the resources (e.g., acceptance, intimacy, information, and guidance) that help them to reappraise their threatened self-image associated with perceived inability to manage the stressor. Social support, therefore, serves to promote more positive stressor appraisals. Consistent with both Long et al.'s findings, which were based on a composite appraisal measure, and Lazarus' theory, four specific appraisal relationships were proposed:

- (a) Work support would be negatively associated with upsetting stressor appraisals.
- (b) Work support would be positively related to appraised situational control.
- (c) Work support would be negatively associated with threatening loss of respect for others appraisals.
- (d) Work support would be negatively related to threatening work goal attainment appraisals.

Hypothesis 12: It was expected that work demands would be directly related to stressor appraisals.

Lazarus (1991) has provided theoretical support for the effects of environmental variables (e.g., work conditions) on cognitive appraisals in the stress and coping process. Moreover, results of Long et al.'s (1992) managerial model have indicated a direct relationship between demanding work environments and negative stressor appraisals. One can argue that competing work interests or goals characteristic of interpersonal conflict (Volkema & Bergmann, 1989) may both impede one's ability to complete work projects and intensify work demands, which in turn precipitates negative appraisals of stressful interpersonal encounters. Therefore, on the basis of theoretical and empirical support, the following specific relationships were predicted:

- (a) Work demands would be positively associated with upsetting stressor appraisals.
- (b) Work demands would be negatively related to appraised situational control.
- (c) Work demands would be positively associated with threatening loss of respect for others appraisals.
- (d) Work demands would be positively related to threatening work goal attainment appraisals.

Hypothesis 13: It was predicted that daily hassles would be positively related to distress.

This hypothesis was based both on theory, which acknowledges the importance of individuals' interaction with their context in the stress and coping process (Lazarus & Folkman, 1984) and on results of Long et al.'s (1992) model, which found that daily hassles had a strong and significant direct effect on distress. It is plausible to assume that daily frustrations and irritations, particularly when experienced over time, negatively impact one's level of distress and adjustment. Thus, it was hypothesized that managerial and professional women who report a greater number of daily hassles would experience more psychosomatic distress symptoms.

Hypothesis 14: It was predicted that stressor appraisals would be directly related to disengagement coping.

Lazarus and Folkman's (1984) theory maintains that coping strategies are determined by cognitive appraisals. Moreover, empirical research has provided support for the direct effects of appraisals on coping (e.g., Long et al., 1992; Parkes, 1986; Terry, 1994; Terry et al., in press). Long et al., for example, found that more positive stressor appraisals were directly related to less use of disengagement coping among managerial women. One can speculate that employees are more inclined to withdraw from interpersonal encounters appraised as threatening and uncontrollable, perceiving directive efforts to resolve such situations as futile or potentially harmful to the preservation of the relationship. Thus, on the basis of theory and empirical evidence, the following specific relationships were advanced:

- (a) Upsetting stressor appraisals would be positively related to disengagement coping.

(b) Appraised situational control would be negatively related to disengagement coping.

(c) Threatening loss of respect for others appraisals would be positively associated with disengagement coping.

(d) Threatening work goal attainment appraisals would be positively related to disengagement coping.

Hypothesis 15: It was predicted that stressor appraisals would be directly related to engagement coping.

This hypothesis was theoretically supported by Lazarus and Folkman's (1984) stress and coping framework, which asserts that cognitive appraisals determine coping responses. Moreover, partial empirical support for this hypothesis was provided by Long et al. (1992), who found that positive stressor appraisals were related to more infrequent use of disengagement coping, which in turn influenced use of engagement coping. One can speculate that managers who appraise work stressors as controllable and non-threatening are inclined to use active and directive coping strategies in response to them. Thus, on the basis of theory and Long et al.'s latent appraisal construct, the following relationships were proposed:

(a) Upsetting stressor appraisals would be negatively related to engagement coping.

(b) Appraised situational control would be positively related to engagement coping.

(c) Threatening loss of respect for others appraisals would be negatively

associated with engagement coping.

(d) Threatening work goal attainment appraisals would be negatively related to engagement coping.

Hypothesis 16: It was predicted that disengagement coping would be positively related to distress.

This hypothesis was based on Lazarus and Folkman's (1984) theory, which posits that coping is directly related to outcome. Furthermore, numerous research studies have documented the relationship between disengagement forms of coping and distress symptoms (e.g., Gall & Evans, 1987; Israel et al., 1989; Long et al., 1992; Terry et al., in press). One can argue that failure to establish an emotional connection to another individual or to actively manage an undesirable interpersonal episode precludes desired changes from occurring in the relationship, which in turn precipitates distress symptoms (e.g., anxiety and helplessness) associated with the unresolved stressful episode.

Hypothesis 17: It was expected that coping would be positively related to daily hassles.

This hypothesis was based on Lazarus and Folkman's (1984) theory, which acknowledges the critical interplay between individuals and their context in the stress and coping process. Moreover, results of Long et al.'s (1992) model indicated a positive relationship between both engagement and disengagement coping and contextual variables (i.e., daily hassles). Long et al. contend that continued use of engagement coping forms may lead to increased frustration and irritation (i.e., daily

hassles) as a result of prolonged exposure to stressful work situations. It is also possible that disengagement or withdrawal coping strategies are associated with increased hassles due to managers' failure to address and effectively resolve stressful encounters. On the basis of theory and Long et al.'s findings, two specific relationships were proposed:

- (a) Engagement coping would be positively related to daily hassles.
- (b) Disengagement coping would be positively related to daily hassles.

METHOD

Subjects

The sample consisted of 157 university-employed female managers and professionals. Participants were recruited from three universities in British Columbia in order to enhance the sample's diversity while still maintaining consistency with respect to the nature of participants' work environment. Eligibility criteria involved maintaining full-time employment and having had experienced an interpersonal conflict during the previous month with a subordinate, colleague, supervisor, faculty member, or client that was considered stressful (i.e., upsetting and/or important).

Sample Characteristics

Participants ranged in age from 25 to 64 years ($M=41.2$, $SD=9.0$; see Table 1 for complete demographic information). The average number of months that respondents were employed full-time in their current position was 58.8 (4.9 years; range 1 month to 25 years). The sample consisted of directors (11%); managers (13%); coordinators (19%); supervisors (4%); and assistants (15%). The majority of respondents (84%) had college or more formal education. Sixty-four percent of managers and professionals were married and 33% reported having children living with them in their homes. Approximately 15% of respondents reported their combined annual income as \$40,000 CDN or less; 32% reported between \$41,000 and \$60,000; with the balance of 53% reporting above that. The number of staff that respondents reported supervising ranged from 0 to over 34, with the majority of respondents (69%) supervising between 1 and 9 staff members. With respect to

Table 1

Demographic Information of Female Managers and Professionals (N=157)

Variable	<u>M</u>	<u>SD</u>	<u>f</u>	Range	%
Age (years)	41.2	9.0		25-64	
Months Full-time Experience in Current Position	58.8	57.8		1-300	
Marital Status ^a					
Married/Remarried/Living with a partner			100		63.7
Single			32		20.4
Divorced/Separated/Widowed			25		15.9
Education					
Did not Graduate from High School			1		0.6
High School Graduation			25		15.9
College (2-3 year degree)			25		15.9
University (4-5 year degree)			61		38.9
Post-University Degree			45		28.7
Number of Children in the Household					
None			105		66.8
One			24		15.3
Two			21		13.4
Three			5		3.2
Four or More			2		1.3
Number of Employees with Pre-School Age Children in the Household			11		7.0
Combined Annual Income					
Less than \$25,000			2		1.3
\$26,000 - \$ 40,000			21		13.4
\$41,000 - \$ 60,000			50		31.8
\$61,000 - \$ 80,000			28		17.8
\$81,000 - \$100,000			24		15.3
Greater than \$100,000			32		20.4

(table continues)

Variable	<u>M</u>	<u>SD</u>	<u>f</u>	Range	%
Type of Position					
Financial Manager			7		4.5
Human Resources Manager			11		7.0
Other Administrative Service Manager			61		38.9
Professional Staff Employee			77		49.0
Missing			1		0.6
Job Title					
Director			17		10.8
Manager			20		12.7
Coordinator			30		19.1
Supervisor			6		3.8
Assistant			23		14.6
Other ^b			61		38.9
Number of Staff Supervised					
None			32		20.4
1- 5			78		49.7
6- 9			30		19.1
10-14			7		4.5
15-19			4		2.5
25-29			2		1.3
Greater than 34			4		2.5
Amount of Budgetary Control					
Not applicable			54		34.4
Less than \$50,000			17		10.8
\$51,000 to \$300,000			24		15.3
\$301,000 to \$500,000			11		7.0
\$501,000 to \$1,000,000			19		12.1
\$1,001,000 to \$5,000,000			16		10.2
\$5,001,000 to \$8,000,000			6		3.8
Greater than \$8,000,000			8		5.1
Missing			2		1.3

Note. This sample's age compares favourably to that of all full-time University of British Columbia female managers and professionals; full-time experience is less.

^aFor purposes of testing the path model, the divorced/separated/widowed and single categories were collapsed into one group. ^bThe "other" classification could not be categorized further due to wide variability in job titles across the universities.

amount of budgetary control, 34% of respondents reported that they controlled no budget; 11% controlled a budget of less than \$50,000; 15% controlled a budget of between \$51,000 and \$300,000; with the balance of 38% reporting control of a budget greater than \$300,000.

Procedure

Three primary methods were used to recruit participants for the study. First, advertisements were posted in university newsletters to request the participation of university-employed female managers and professionals (see Appendix B). Potential respondents were requested to telephone the researcher to obtain further information about the study. In addition, a canvassing letter was mailed to the work addresses of managerial and professional women employed at the three designated universities. This letter, which was distributed by the university's campus mailing service, was designed to solicit volunteers to participate in the study (see Appendix B). Finally, female pilot study participants ($n=67$) who indicated that they would be interested in participating in subsequent workplace stress studies were contacted by telephone and provided information about the main study.

Meetings were scheduled individually with participants who met the criteria for inclusion in the study. During the meeting, Parts One, Two, and Three of the questionnaire were distributed and participants were given instructions for completing and returning each section of the questionnaire over three time periods (2 weeks apart). In addition, potential respondents were informed of the voluntary nature of their participation and the anonymity of their questionnaire responses. At the

scheduled meeting, participants were also asked to complete Part One of the questionnaire, including (a) covering letter and instruction sheet describing the study and questionnaire instructions; (b) general demographic questions; (c) the Long Form of the Bem Sex-Role Inventory (Bem, 1981); (d) and the Trait Anxiety scale of the State Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983; see Appendix C for Part One of the questionnaire). Participants were asked to seal their completed questionnaire in an attached envelope.

Participants were requested to complete and return Part Two of the questionnaire 2 weeks later. Part Two contained (a) a covering letter; (b) primary and secondary appraisal scales; (c) modified version of the Revised Ways of Coping Checklist (Lazarus & Folkman, 1984); (d) 7 subscales of the Work Environment Scale (Moos, 1981); and (e) the Hassles Scale (Lazarus & Folkman, 1989; see Appendix D for Part Two of the questionnaire). Two weeks later, participants were requested to complete and return Part Three of the questionnaire, which consisted of a covering letter and the Symptom Check List-90-R (Derogatis, 1983; see Appendix E). The measures used at each of the three time periods were selected on the basis of theoretical considerations (Lazarus & Folkman, 1984) and Long et al.'s (1992) model.

As a reminder to complete and return Part Two and Part Three of the questionnaire, participants were contacted by telephone one day prior to the pre-specified return dates for each of these survey sections. Respondents were asked to return Part Two and Part Three of the questionnaire in reply envelopes provided, using the university's internal (campus) mailing system. In order to ensure the

anonymity of participants' responses while still being able to match the three parts of the questionnaire, respondents were asked to generate and write the same six character secret code on each part of the questionnaire. Following completion of the study, participants were entitled to receive a summary report of the study's findings and to participate in a stress management workshop with other university-employed managerial and professional women. In addition, as an incentive for participating in the study, two \$100 cash awards were offered through a random draw (see Appendix E for the summary of results request form and monetary award entry form).

Of 1054 female managers and professionals employed at the three universities (635, 213, and 206, respectively were from the University of British Columbia, University of Victoria, and Simon Fraser University), 164 eligible participants returned questionnaires. Two respondents, however failed to return Parts 2 and 3 of the questionnaire and thus were excluded from the study. Five questionnaires were unusable because they each contained more than 20% of missing data on a measure (two on the coping instrument, two on the hassles scale, and one on the sex-role orientation measure). Therefore, of the returned questionnaires, 157 were used in data analyses (90, 37, and 30, respectively, were from University of British Columbia, the University of Victoria, and Simon Fraser University respondents).

The proportion of respondents from each of the three universities was similar (14%, 17%, and 15%, respectively were from the University of British Columbia, University of Victoria, and Simon Fraser University). The proportion of University of British Columbia (UBC) and University of Victoria (UVic) respondents who had

previously participated in the pilot study was 22% and 57%, respectively ($n_s=20$ and 21, respectively). The vast majority of participants were recruited by the canvassing letters that were distributed to managerial and professional women employed at the three universities.

Pilot Study

A pilot study, which involved several phases, was undertaken to refine the primary appraisal and coping measures that were used in the main study. The original intent of the pilot study was to develop theoretically- and empirically-based primary appraisal and coping items so that subsequent analyses could identify primary appraisal and coping factors specific to managers' and professionals' experiences of stressful interpersonal work conflicts (see Appendix F for details of the pilot study). The pilot study sample consisted of 133 male ($n=56$) and female ($n=77$) managers and professionals employed at two provincial universities in British Columbia. Although the small sample size precluded factor analyses on the appraisal and coping measures, initial stages of the pilot study facilitated development of primary appraisal and coping items relevant to interpersonal stressors (see Appendix G) that were later factor analyzed. The resultant engagement and disengagement coping scales were used in the main study to test the hypothesized path model; the primary appraisal scales were used to test an alternate path model (see Appendix M).

Measures

Demographic characteristics. Each manager and professional was asked to provide the following demographic information: age; marital status (married and

partnered or single, divorced, separated, and widowed); parental status (number of children and presence of pre-school children); education; household income; type of position; job title; employment status (full- or part-time); months in current position; number of staff supervised; and amount of budgetary control.

Instrumental and expressive personality traits. Instrumentality and expressiveness dimensions were measured by the Long Form of the BSRI (Bem, 1981), which requires respondents to rate the extent to which they identify with each of the 20 instrumental, 20 expressive, and 20 filler neutral adjectives. According to Bem (1974), instrumentality and expressiveness are stable attributes than an individual incorporates into his or her identify. It has been argued, however, that the BSRI measures socially desirable instrumental and expressive traits and is related to gender-role preferences that call on instrumental or expressive capacities (Spence & Helmreich, 1980). Respondents were asked to indicate on a 7-point scale ranging from (1) "never or almost never true" to (7) "always or almost always" the degree to which each characteristic was "true of them." The responses on each 20-item instrumental and expressive scale were summed so that the higher the score the greater the attribute.

Bem (1981) reports acceptable psychometric properties for the BSRI with test-retest reliabilities over 1-month periods ranging from .78 to .84. Instrumental and expressive scores derived from the BSRI have also been shown to be uncorrelated (Bem, 1974). The BSRI has adequate construct validity, as demonstrated by several experiments using the instrument to measure instrumental and expressive

characteristics (Bieger, 1988). Moreover, the BSRI-Long form was used in Long et al.'s (1992) stress and coping model as an indicator of agentic personality traits.

Work environment. Managers' and professionals' perceptions of aspects of their work context were assessed by seven subscales of the Work Environment Scale (Moos, 1981). The Work Environment Scale (Moos, 1981) requires respondents to indicate on a true-false basis whether each statement is true of their work environment. Work-related support was assessed by a composite score of three (9-item) subscales: Supervisor Support, Peer Cohesion, and Involvement. Based on the recommendations of Holahan and Moos (1981), Long et al. (1992) used this composite measure to assess relationship aspects of the work environment in their managerial stress and coping model. This 3-subscale relationship dimension has high internal consistency (.88; Billings & Moos, 1981) and is related both to traditional social support measures and to instruments assessing depression and psychosomatic symptoms (Holahan & Moos).

Work demands were measured by a composite score of four (9-item) subscales: Autonomy, Work Pressures, Clarity, and Control. Billings and Moos (1981) report acceptable internal consistency (.77) for this composite measure of work demands and Long et al. (1992) offer support for the use of the four subscales to assess demanding aspects of the work environment.

Responses to each of the subscales were scored and summed (clarity and autonomy subscales were reversed scored so that all subscales were scored in the same direction) so that the higher the average standard score on each composite

measure, the greater the work support and demands. Moos (1981) reports acceptable psychometric properties with 1-month reliabilities for the seven subscales ranging from .69 to .83 and internal consistency coefficients (Cronbach's alpha) ranging from .69 to .84. Moreover, Moos (1991) reports low to moderate intercorrelations among subscales and a number of studies have reported the construct validity of the Work Environment Scale (Moos, 1981; Moos, Clayton, & Max, 1979).

Daily hassles. Daily hassles, considered sources of repetitive frustration and irritation, were assessed by the Hassles scale from the 53-item Combined Hassles and Uplifts Scales measure (Lazarus & Folkman, 1989). The Hassles Scale requires respondents to indicate on a 4-point scale ranging from (0) "none or not applicable" to (3) "a great deal" the degree to which each item has been a hassle for them in the past month (e.g., finances, the environment, social activities). Ten work- and health-related items were removed because they were redundant with items on the appraisal, work environment, and distress measures. Specifically, four health-related items (i.e., hassles concerning sex, the effects of drugs and medications, one's health, and one's physical abilities) and six work-related items (i.e., hassles concerning fellow workers; clients, customers, patients, etc.; one's supervisor or employer; the nature of one's work; one's work load; and meeting deadlines or goals on the job) were excluded. Thus, the cumulative hassles score was based on 43 items. Lazarus and Folkman (1989) report test-retest reliabilities over 1-month periods as .79 for frequency and .48 for severity of hassles.

In addition, for descriptive purposes, respondents were asked to report whether

they had experienced any daily hassles other than those listed on the questionnaire. Only 15% of respondents responded to this item. Examples of additional daily hassles reported by respondents included health and career concerns, traffic frustrations, work pressures, and poor working relationships. The majority of these additional hassles were redundant with items on the appraisal, work environment, and distress measures and therefore were not included in subsequent analyses.

Cognitive appraisals. As a validity check to ensure that participants responded to appraisal items according to a work-related interpersonal stressor, respondents were first required to briefly describe a stressful interpersonal conflict that they had at work during the past two months, and to explain why it was stressful for them. Participants were given instructions as to what constitutes a stressful situation (i.e., that which is troubling or upsetting) and provided with interpersonal conflict examples (e.g., differences in management and communication styles, organizational procedures, or hiring practises). Stressful interpersonal conflicts described by respondents on the questionnaire included those involving verbal criticisms, uncooperative behaviours, ethical concerns, physical threats, and differences in communication style, organizational philosophies, departmental procedures, and decision-making processes (see Appendix I for examples of stressful interpersonal conflict situations reported by managerial and professional women).

As an additional validity check to determine whether the conflictual encounter was perceived as stressful according to Lazarus and Folkman's (1984) definition (i.e., involving harm/loss, threat, or challenge), respondents were requested to indicate "the

primary emotion experienced as a result of the event" (e.g., anger, anxiety, or depression). I reviewed all written responses to determine that the interpersonal stressor reported by respondents met the criteria for interpersonal work conflict. In addition, when respondents expressed uncertainty during telephone conversations and individual meetings about the appropriateness of a particular interpersonal conflict situation, I asked respondents to verbally describe the interpersonal stressor that they experienced to clarify that it fulfilled the study's criteria.

The four appraisals that formed the basis for this study's hypotheses were selected from Long et al.'s (1992) model (i.e., upsetting appraisals, appraised situational control, loss of respect for someone else, and threats to the attainment of work goals). To assess upsetting primary appraisals, respondents were asked to rate on a 5-point scale ranging from (a) "not very upsetting" to (5) "extremely upsetting" the extent to which the stressful conflict situation they described was appraised as upsetting. Appraised situational control of the interpersonal stressor (i.e., secondary appraisal) was assessed by a 5-point item ranging from (1) "no control whatsoever" to (5) "a great deal of control." Appraised loss of respect for others and threats to work goal attainment were assessed respectively by a respect and work goal item, which asked participants to rate on a 5-point scale ranging from (1) "does not apply to me" to (5) "applies a great deal" the degree to which each primary appraisal item applied to them in the stressful interpersonal conflict situation that they described. Pilot study data indicated acceptable endorsement (74% and 51%, respectively) of the respect and work goal attainment items by the subsample of 77 managerial and professional

women.

However, for purposes of further exploratory factor analyses, respondents were asked to respond to each of the 27 primary appraisal stake items that were developed during the pilot study. In order to define the scale, the 27-item measure was submitted to principal components factor analyses. Factor analysis that specified a two-factor solution revealed a clean factor structure for Varimax rotation. The item content of the two factors indicated a "self-interest" stake, which emphasized an interest in oneself and one's achievement, and a "relationship" stake, which reflected an interest both in others and in the preservation of working relationships. Three items that failed to distinguish between factors (i.e., items whose difference in loadings on the two factors was .10 or less) were excluded, and 15 and 9 items respectively were defined to measure the self-interest and relationship stake factors (see Appendix J for factor loadings and deleted items). Results yielded high internal consistency (Cronbach's α) for the self-interest stake scale (.90) and acceptable internal consistency (.73) for the relationship scale. These two primary appraisal stake scales were then used in post-hoc analysis to test an alternate path model.

In addition, a 5-point appraisal item, which assessed the degree of episode importance, was administered in order to later determine whether the upsetting and importance appraisal item scores could be summed. Similarly, two 5-point appraisal items assessed the extent to which the respondent felt in control of her emotions and behaviours associated with the conflict situation (cf. Hart & Cardozo, 1988), and four 5-point items assessed the extent to which the conflict situation was viewed as

changeable or unchangeable (Lazarus & Launier, 1978). These items were administered in order to identify whether the three control items (situational, behavioral, and emotional control) and changeable-unchangeable items could be summed to form a more reliable control appraisal scale.

For descriptive purposes, respondents were requested to indicate the relative position (i.e., supervisor, colleague, subordinate, client, or faculty member) and gender of the person with whom they were in conflict; the frequency with which they regularly experienced conflict with that individual; and the outcome of the stressful episode.

Coping strategies. Coping strategies were assessed by a revised version of the Ways of Coping Checklist (WCC; Lazarus & Folkman, 1984) that was refined by Long et al. (1992) to assess coping strategies relevant to managers' work settings (see Long, 1990 and Long et al., 1992 for a description of procedures used in the coping scale revisions). Respondents were asked to rate on a 4-point scale ranging from (0) "not used" to (3) "used a great deal" the extent to which they used each coping response in the stressful interpersonal conflict situation that they described. Responses to the coping items were scored and summed so that the higher the score, the greater the coping scale usage.

For this study, a 44-item coping scale, which consisted of 33 items (14 and 19 items respectively assessing engagement and disengagement coping strategies) from Long et al.'s model, in addition to 11 interpersonal coping items developed during the pilot study, was submitted to principal components factor analyses to define the scale.

Factor analysis that specified a two-factor solution revealed a clean factor structure for both Varimax and Oblimin rotations. The two factors, engagement coping and disengagement coping, were used as single indicators of coping. All interpersonal coping items loaded on the engagement coping factor, with the exception of one item (i.e., "I did something which I didn't think would work, but at least I was doing something"). Items with weak loadings ($< .30$) and items that failed to distinguish between factors (i.e., items that loaded .30 or greater on both factors) were excluded. Eighteen items each were defined to measure the engagement and disengagement coping factors (see Appendix J for factor loadings and deleted items).

For descriptive purposes, respondents were also invited to provide written comments on the questionnaire about other strategies that they have found useful in coping with interpersonal work stressors. Twenty-two percent of managerial and professional women reported using strategies to manage interpersonal work conflicts in addition to those listed on the coping measure. Examples of additional coping strategies reported by respondents included participating in physical exercise; applying interpersonal and communication skills (e.g., active listening, patience, receptivity to others' perspectives), disengaging from the conflict situation before responding; engaging in mediation or arbitration processes; participating in nonwork activities; confronting the problem immediately; and considering alternate job opportunities.

Consistent with Stanton et al.'s (1994) recommendations, the coping measure used did not contain items that could be confounded with distress or psychopathology (e.g., items reflecting intense emotional expression). Moreover, given that the

proposed study utilized measures based on Lazarus and Folkman's (1984) and Long et al.'s (1992) stress and coping models, the anchors in this study remained unchanged so as not to deviate substantially from the theoretical models. However, in response to Stone et al.'s (1991) criticisms of the revised WCC's (Lazarus & Folkman, 1984) extent ratings, coping scale instructions clarified the intended meaning of extent (i.e., amount) of coping response usage (see Table H2).

Distress. The Symptom Check List-90-R (SCL-90-R; Derogatis, 1983) was used to measure psychological symptoms and somatic health status. To analyze distress, the Depression (13 items), Anxiety (10 items), and Somatization (12 items) SCL-90-R subscales were scored. Respondents were asked to indicate on a 5-point scale ranging from (0) "not at all" to (4) "extremely" the extent to which they felt distressed over the past week by each item that represents a problem or complaint. The responses on each of the three subscales were weighted and summed so that the higher the composite score of the three subscales, the greater the level of distress.

Test-retest reliabilities over 2 weeks have been reported as .68 for the Somatization subscale, .84 for the Depression subscale, and .79 for the Anxiety subscale (Derogatis & Melisaratos, 1983). These indicators of distress support Lazarus and Folkman's (1984) conceptualization of psychological outcomes and are frequently used in stress and coping research. Long et al. (1992), for example, provide support for the use of a composite score from the somatization, depression, and anxiety SCL-90-R subscales to assess managerial women's distress levels.

Negative affectivity. Negative affectivity (NA) was assessed by the 20-item

Trait Anxiety scale (Form Y-2) of the State-Trait Anxiety Inventory (STAI; Spielberger et al., 1983), which has been widely used and validated. Watson and Clark (1984) view this scale as an acceptable measure of the NA construct and a number of researchers have incorporated the measure in studies that have examined the role of NA in occupational stressor-strain relationships (e.g., Chen & Spector, 1991; Schaubroeck et al., 1992). Spielberger et al. describe trait anxiety as a relatively stable individual difference in one's tendency to perceive stressful situations as dangerous and to respond to such events with increased state anxiety.

The 20-item Trait Anxiety scale of the STAI requires respondents to indicate how they generally feel by rating the frequency of their feelings of anxiety on a 4-point scale ranging from (1) "almost never" to (4) "almost always." Reverse scoring 9 anxiety-absent items (e.g., "I feel content"), responses to the 20-item scale were summed so that the higher the score, the greater the level of trait anxiety. Test-retest reliabilities over 20-day periods for the trait anxiety scale range from .76 to .86 and internal consistency coefficients for working adults range from .89 to .96 (Spielberger et al., 1983).

Analysis of Data

In order to determine the extent to which Lazarus and Folkman's (1984) theoretical assumptions held in the context of an interpersonal model of stress and coping, the relations among antecedent, contextual, mediating, and outcome variables were examined using a path analytic statistical procedure. In preparation for the path analysis, the following procedures were followed. First, responses were checked on

each of the measures to determine the extent and pattern of missing data. The total amount of missing data for the sample of 157 managerial and professional women was less than .2% and missing data on any one measure for the entire sample was less than .3%. No consistent patterns of missing data was found, and where appropriate missing values were substituted with group means.

Second, principal components factor analyses specifying two-factor solutions were conducted on both the 44 coping items and 27 primary appraisal stake items to determine the factor structures of the coping and primary appraisal items. Third, chi-square analyses and analyses of variances (ANOVAs) were computed for the three groups of managers and professionals (UBC, SFU, and UVic employees, combining SFU and UVic respondents into one group due to unequal sample sizes) on selected demographic variables to determine whether there were significant differences between the groups that would influence the relationships in the path model variables. The LISREL VIII program was then used to conduct tests of equality of the covariance matrices of the two groups to determine if the samples could be combined for further analyses.

Fourth, path analytic modelling, which provides a method for studying the direct and indirect effects of variables on the basis of theoretical considerations (Pedhazur, 1982) was used to test the model in Figure 2. This type of analysis provides estimates of both path coefficients in the model and of the goodness-of-fit between the model and sample data. Given the controversy concerning the relative utility of a number of fit indices fit (e.g., Bentler, 1990; Hoyle, 1995; Marsh,

Balla, & McDonald, 1988), multiple indices were interpreted in this study to determine model fit. These indices consisted of: the chi-square to degrees of freedom ratio, the probability (p) value associated with the chi-square statistic, the Goodness-of-fit Index (GFI), the Adjusted Goodness-of-fit Index (AGFI), the Root Mean Square Residual (RMSR), Bentler's (1990) Comparative Fit Index (CFI), and Bollen's (1989) Incremental Fit Index (D_2).

A chi-square to degrees of freedom ratio (Q) of 3 or less is considered a good fit by some researchers, while others contend that ratios as high as 5 to 1 represent an acceptable model fit (Bollen, 1989). In interpreting the chi-square statistic, values with a p -value of greater than .05 were accepted as significant. GFI values above .90 are generally considered good, and values above .85 are considered acceptable. The AGFI is the GFI adjusted by the degrees of freedom used in the analysis, and values above .90 are generally deemed acceptable. The RMSR assesses residual variances and covariances, and lower values (e.g., .05) represent a better fitting model. The CFI is a refined version of Bentler and Bonett's (1980) normed fit index that adjusts for degrees of freedom and contains a range of values from 0 to 1.00. CFI values greater than .90 indicate an adequate fit of the model to the data. Finally, Bollen's (1989) D_2 was selected because it considers the model size and lessens the effect of sample size. Bollen suggests that D_2 values above .80 may represent an acceptable model fit.

For the purposes of clarifying the model, the final stage of analysis involved testing the path model with all nonsignificant paths deleted.

RESULTS

Descriptive Statistics - Preliminary Analysis

Of the 157 managerial and professional women who participated in the study, 33.8% reported that the most recent interpersonal conflict that they experienced during the previous two months was with a supervisor; 30.6% with a colleague; 18.5% with a subordinate; 7% with a faculty member; 5.7% with a client; and 4.5% with more than one individual at work. Approximately 46% of respondents reported that the conflict occurred with a male, while 52% of female managers and professionals reported that the conflict was with another woman. With respect to the chronicity of interpersonal work conflict, approximately 34% of respondents reported that they rarely experience conflict with the particular individual they described; 29% reported experiencing monthly conflict with that individual; 24% reported weekly conflict; and 13% reported daily conflict.

Threat emotions (anger, disgust, frustration, and disappointment) were reported by 59.9% of managerial and professional women as the primary emotions associated with the conflict situation; 32.5% of respondents reported harm emotions (worry, fear, anxiety, and tension); and 7.6% of respondents reported loss emotions (loss, depression, guilt). These results indicate that respondents identified interpersonal conflicts as stressful rather than challenging. With respect to the outcome of the stressful interpersonal encounter that respondents described, 17.2% of managerial and professional women reported the conflict situation as unresolved and worse; 22.3% as unchanged; 17.2% as resolved but not to their satisfaction; 15.9%

as unresolved but improved; 19.1% as resolved to their satisfaction; and 8.3% as unresolved but no longer a concern.

On the basis of Lazarus and Folkman's (1984) conceptualization of stressors as both upsetting and important, Pearson product-moment correlations were calculated to determine whether the two items assessing the degree of appraised upset and importance associated with the interpersonal stressor could be summed. A moderate correlation of .67 obtained for the two items failed to support the use of a summed score in further analyses. Similarly, Pearson product-moment correlations were conducted to determine whether scores on the three control items assessing appraised situational, emotional, and behavioral control could be summed to form a control appraisal scale. The highest correlation coefficient obtained between any of the two items was .44. Similarly, weak to moderate correlations were obtained among the four items assessing the extent to which the stressor was appraised as changeable, which has been used to assess control in other studies (e.g., Aldwin, 1991; Carver et al., 1989), and the three control items. These results failed to support the use of a composite measure of control appraisals in the current study.

The next stage of analysis involved computing chi-square tests and ANOVAS for the two groups of university managerial and professional women (UBC, $n=90$; UVic, $n=37$; and SFU, $n=30$, collapsing UVic and SFU respondents into one group due to unequal sample sizes) to identify significant differences between the groups on demographic data that may affect the relationships among the path model variables. Chi-square tests were employed to test for differences on categorical demographic

variables, whereas ANOVAS were used to test for differences between groups on interval demographic variables (i.e., age and months experience).

Chi-square (χ^2) tests of independence indicated that there were no differences between the two groups on characteristics of marital status, $\chi^2(2, N=157) = 4.66, p > .09$; education, $\chi^2(3, N=157) = 1.71, p > .63$; parental status, $\chi^2(2, N=156) = .66, p > .71$; presence of pre-school children, $\chi^2(1, N=157) = .19, p > .65$; income, $\chi^2(4, N=157) = 4.71, p > .31$; type of position, $\chi^2(3, N=156) = 3.87, p > .27$; job title, $\chi^2(5, N=157) = 7.29, p > .19$; number of staff supervised, $\chi^2(3, N=157) = 1.41, p > .69$; and amount of budgetary control, $\chi^2(5, N=155) = 9.69, p > .07$. (Some of the initial categories were collapsed in order to meet the assumptions of chi-square analysis). In addition, the results of one-way ANOVAS revealed nonsignificant differences on characteristics of age, $F(1, 155) = 1.07, p > .29$ and mean levels of months full-time months experience, $F(1, 155) = 3.65, p > .05$. Based on these results, it was concluded that the two groups of university-employed managerial and professional women were not characteristically different from each other (see Table 2 for a demographic comparison of the two groups of managers and professionals).

Descriptive Statistics - Path Model Variables

The means, standard deviations, reliabilities (Cronbach's alpha), and ranges of scores for the path model variables are presented in Table 3 (see Appendix K for the skewness and kurtosis of model variables). As the table illustrates, the Cronbach's alphas for model variables are acceptable, ranging from .61 to .94.

Table 2

Demographic Comparison of Group 1 (University of British Columbia) and Group 2
(Simon Fraser University and University of Victoria) Managers and Professionals

Variable	Group 1 (n=90)			Group 2 (n=67)		
	%			%		
Age (years; <u>M</u> , <u>SD</u> , Range)	40.6	9.0	25-60	42.1	9.1	26-64
Months Full-time Experience in Current Position (<u>M</u> , <u>SD</u> , Range)	51.3	45.0	1-244	69.0	70.7	5-300
Marital Status ^a						
Married/Remarried/Living with a partner	62.2			65.7		
Single	25.6			13.4		
Divorced/Separated/Widowed	12.2			20.9		
Education						
High School Graduation	18.9			13.4		
College (2-3 year degree)	13.3			19.4		
University (4-5 year degree)	40.0			37.3		
Post-University Degree	27.8			29.9		
Number of Children in the Household						
None	64.4			68.7		
One	15.6			14.9		
Two or More	20.0			16.4		
Number of Employees with Pre-School Age Children in the Household	7.8			6.0		
Combined Annual Income						
<\$25,000 - \$ 40,000	14.4			14.9		
\$41,000 - \$ 60,000	30.0			34.3		

(table continues)

	Group 1 (<u>n=90</u>)	Group 2 (<u>n=67</u>)
Variable	%	%
\$61,000 - \$ 80,000	14.4	22.4
\$81,000 - \$100,000	20.0	9.0
Greater than \$100,000	21.1	19.4
Type of Position		
Financial Manager	4.4	4.5
Human Resources Manager	7.8	6.0
Other Administrative Service Manager	44.4	31.3
Professional Staff Employee	42.2	58.2
Missing	1.1	---
Job Title		
Director	10.0	11.9
Manager	16.7	7.5
Coordinator	16.7	22.4
Supervisor	4.4	3.0
Assistant	10.0	20.9
Other	42.2	34.3
Number of Staff Supervised		
None	22.2	17.9
1-5	48.9	50.7
6-9	16.7	22.4
10 or More	12.2	9.0
Amount of Budgetary Control		
Not applicable	37.8	29.9
Less than \$50,000	5.6	17.9
\$51,000 to \$300,000	12.2	19.4
\$301,000 to \$500,000	6.7	7.5
\$501,000 to \$1,000,000	13.3	10.4
\$1,001,000 or More	23.3	13.4
Missing	1.1	1.5

(table continues)

Note. Some of the initial categories were collapsed in order to meet the assumptions of chi-square analysis (i.e., expected group cells with frequencies less than 5).

Dashes indicate not applicable.

^aFor purposes of testing the path model, the divorced/separated/widowed and single categories were collapsed into one group. ^bThe "other" classification could not be categorized further due to wide variability in job titles across the universities.

Table 3

Means, Standard Deviations, and Reliabilities of Path Model Variables (N=157)

Variable	Score Range	<u>M</u>	<u>SD</u>	Reliability (Cronbach's Alpha)
Marital Status	---	1.4	0.5	---
Income	---	3.9	1.4	---
Instrumentality	20-140	102.0	11.5	.83
Expressiveness	20-140	98.1	9.8	.75
Work Demands	0-36	18.8	5.5	.61
Autonomy	0-9	3.1	2.2	.70
Work pressures	0-9	6.9	2.1	.74
Clarity	0-9	5.1	2.5	.75
Control	0-9	3.6	2.1	.64
Work Support	0-27	15.4	6.4	.89
Involvement	0-9	5.9	2.4	.76
Peer cohesion	0-9	4.9	2.5	.74
Supervisor support	0-9	4.6	2.6	.79
Upsetting Episode Appraisals	1-5	3.8	0.9	---
Appraised Situational Control	1-5	2.5	1.1	---
Loss of Respect for Others Appraisals	1-5	3.2	1.5	---

(table continues)

Variable	Score Range	<u>M</u>	<u>SD</u>	Reliability
Threat to Work Goal Attainment Appraisals	1-5	3.6	1.5	---
Engagement Coping	0-54	23.5	9.2	.82
Disengagement Coping	0-54	14.2	7.7	.78
Daily Hassles	0-129	29.4	15.3	.89
Distress	0-35	2.2	1.6	.94
Depression	0-13	12.5	9.5	.91
Anxiety	0-10	6.0	5.5	.84
Somatic symptoms	0-12	7.5	6.4	.79

Note. High scores indicate higher levels of the characteristic as defined by the variable labels. Dashes indicate not applicable. Marital status categories: 1=married and partnered; 2=not married. Income categories: 1=<\$25,000; 2=\$26,000 - \$40,000; 3=\$41,000 - \$60,000; 4=\$61,000 - \$80,000; 5=\$81,000 - \$100,000; 6=>\$100,000.

These reliabilities compare favourably to the internal consistencies of similar variables used in Long et al.'s (1992) stress and coping model. The managerial and professional women in this study reported slightly lower levels of work support and appraised situational control ($M_s = 15.4$ and 2.5 , respectively) compared to Long et al.'s (1992) sample of managerial women ($M_s = 20.3$ and 3.1 , respectively).

Moreover, with regard to psychosomatic distress, women in this study reported greater depression, anxiety, and somatic symptoms ($M_s = 12.5$, 6.0 , and 7.5 , respectively) and more threatening loss of respect for others appraisals ($M = 3.2$) than the women in Long et al.'s study ($M_s = 7.5$, 4.0 , 4.2 , and 2.5 , respectively).

However, managerial and professional women's scores on variables of marital status, income, instrumentality, upsetting and work goal attainment appraisals, engagement and disengagement coping, and daily hassles compared favourably to those of managerial women in Long et al.'s model.

Pooling of Samples

The LISREL VIII (Jöreskog & Sorbom, 1993) computer program was used to perform tests of equality of the covariance matrices (for the UBC and combined UVic and SFU groups) to determine if the samples could be combined for further analyses. The purpose of combining groups was both to increase the sample size for subsequent path analysis and to enhance the generalizability of the model to other samples.

Moreover, as Jöreskog (1971) argues, if results reveal equal covariance matrices, then "every characteristic common to all groups can be obtained from the pooled covariance matrix and - there is no need to analyze each group separately" (p. 419).

Results of the tests of equality of covariances indicated that the two groups could be combined, $\chi^2(105, N=157) = 122.04, p > .11$, and GFI=.88. The chi-square to degrees of freedom ratio (Q) of 1.2:1 indicated a good fitting model.

The covariance and correlation matrices for the two groups of university-employed managerial and professional women are presented in Appendix L. The pooled ($N=157$) zero-order correlation matrix of model variables, including negative affectivity (NA) and age and experience, is also included in Appendix L. The general magnitude of variable relationships was weak to moderate (range .00 to -.67) with the strongest correlations occurring between both income and marital status ($r = -.67$) and work demands and work support ($r = -.60$). Overall, the correlations among variables in this study compared favourably to the correlations of similar variables in Long et al.'s (1992) model.

Given the moderate correlations (e.g., $> .30$; range .00 to .51) between NA and a number of the model variables and based on arguments that NA inflates stressor-strain relationships (e.g., Brief et al., 1988; Burke et al., 1993; Schaubroeck et al., 1992), a first-order partial correlation matrix, controlling for the effects of NA, was computed (see Table 4). This method of partialling out the potential effects of NA on variable relationships in occupational stress research is supported by Chen and Spector (1991).

In some cases, controlling for NA resulted in weaker correlations between variables, whereas in other cases the magnitude of variable relationships remained virtually unchanged or unexpectedly became stronger after removing the effects of

Table 4

First-order Partial Correlation Matrix of Path Model Variables (N=157)

Variable	Marital	Income	Instr	Expres	Upset	Control
Marital	1.00					
Income	-0.67	1.00				
Instr	0.09	-0.02	1.00			
Expres	0.14	-0.19	-0.06	1.00		
Upset	0.14	-0.05	0.19	0.12	1.00	
Control	-0.08	0.09	-0.06	-0.06	-0.27	1.00
Wkgoal	0.01	0.05	0.08	0.08	0.18	-0.18
Respect	0.10	-0.05	-0.02	0.01	-0.02	-0.13
Hassles	0.03	0.01	-0.08	-0.03	0.13	-0.07
Demands	0.22	-0.23	0.00	0.07	0.07	-0.07
Support	-0.13	0.17	-0.02	0.00	-0.12	0.15
Engage	0.07	0.05	0.05	0.19	0.04	0.12
Diseng	0.04	0.03	-0.03	0.12	0.31	-0.29
Distress	0.06	-0.01	0.05	0.11	0.34	-0.19

Variable	Wkgoal	Respect	Hassles	Demands	Support	Engage
Wkgoal	1.00					
Respect	0.01	1.00				
Hassles	0.24	0.09	1.00			
Demands	0.10	0.07	0.10	1.00		
Support	-0.24	-0.12	-0.16	-0.57	1.00	
Engage	0.21	-0.03	0.15	-0.05	-0.05	1.00
Diseng	0.26	0.11	0.31	0.16	-0.19	0.18
Distress	0.27	0.05	0.38	0.11	-0.20	0.04

Variable	Diseng	Distress
Diseng	1.00	
Distress	0.32	1.00

Note. Marital=marital status (1=married and partnered; 2=not married); Instr=instrumentality; Expres=expressiveness; Upset=upsetting appraisals; Control=appraised situational control; Wkgoal=work goal attainment appraisals; Respect=respect for others appraisals; Demands=work demands; Support=work support; Engage=engagement coping; Diseng=disengagement coping. High scores represent high levels of the characteristics as defined by the labels. Income categories: 1=<\$25,000; 2=\$26,000 - \$40,000; 3=\$41,000 - \$60,000; 4=\$61,000 - \$80,000; 5=\$81,000 - \$100,000; 6=>\$100,000. The effects of negative affectivity were removed.

NA. In circumstances where the presence of NA strengthened the correlation between variables (e.g., between disengagement coping and distress and between instrumentality and daily hassles), NA contributed to or helped account for the relationship between the two variables. However, when the inclusion of NA weakened the magnitude of variable relationships (e.g., between instrumentality and upsetting appraisals), one can speculate that NA suppressed the relationship between the two variables.

According to Pedhazur (1982), suppressor variables are correlated with one or more of the predictor variables and suppress, or conceal a relationship between the predictor and outcome variable, thus adding irrelevant variance and weakening the correlation between these two variables. Subsequently, partialling out the effects of a suppressor variable eliminates irrelevant variance and strengthens the predictor-outcome variable relationship. These findings, which indicate that NA both contributes to and suppresses the magnitude of variable relationships, attest to the complex role of NA in the stress and coping process. However, Tzelgov and Henik's (1991) contention that suppressor relationships occur more frequently than is generally believed suggest that the effects of suppressor variables receive limited attention in empirical research.

Path Analysis

Using the first-order partial correlation matrix, the next stage of analysis involved testing the hypothesized stress and coping model seen in Figure 2. A path analytical procedure was used to examine the relationships among antecedent,

contextual, mediating, and outcome variables representing Lazarus and Folkman's (1984) stress and coping framework. This procedure allows the researcher to determine the direct and indirect effects of variables on one another. The LISREL VIII computer program provided estimates of path coefficients in the model and measures of goodness-of-fit between the model and the sample data. The path model was tested incorporating four single-item appraisal variables, respectively assessing upsetting appraisals, situational control appraisals, loss of respect for others appraisals, and work goal attainment appraisals. However, an alternate path model was also tested using primary appraisal stake scales identified through exploratory factor analyses described in Chapter 3 (see Appendices M and N, respectively for alternate path model results and for model fit indices).

Hypothesis 1. It was hypothesized that the model would fit the data. The majority of fit indices indicated a poor model fit, $\chi^2(41, N=157) = 124.89, p < .001, Q=3.0, GFI=.90, AGFI=.75, RMSR=.09, CFI=.70, \text{ and } D_z=.75$. The coefficient of determination, obtained by LISREL VII, suggested that 11.6% of the total variance in the model was accounted for, and the squared multiple correlations for structural equations for the distress variable (.24) indicated that the antecedent, mediating, and contextual variables explained 24% of the variance in the outcome variable. The model fit indices that resulted from path analyses are shown in Appendix N.

The largest modification index (MI) was 56.28 between situational control appraisals and work demands. Similarly large modification indices were found for (a)

upsetting appraisals and work demands (MI=27.39); (b) work goal attainment appraisals and work demands (MI=33.64); (c) loss of respect for others appraisals and work demands (MI=48.17); and (d) work goal attainment appraisals and work support (MI=19.61). Moreover, results indicated large modification indices between work demands and work support (MI=50.49) and between work support and work demands (MI=50.51), indicating a reciprocal relationship between these two work environment variables. Modification indices, according to Hoyle (1995), "provide information about the amount of χ^2 change that would result if parameters that formerly were fixed were free in a specified model" (p. 8); large modification indices (i.e., >9) indicate that the model would fit the data better if the corresponding parameters were introduced to the model.

Consistent with the above findings, a number of appraisal residuals were large (i.e., >3) and were related to the work demands and work support variables. Other large residuals occurred between (a) work support and work demands (-7.01), (b) daily hassles and disengagement coping (3.55), (c) disengagement coping and situational control appraisals (-3.47), and (d) distress and disengagement coping (3.69). Standardized residuals reflect the difference between the hypothesized and observed variable correlations; large standardized residuals indicate that adjustments to specified paths would result in a better fitting model. However, because the path model was not exploratory in nature, modifications to the model were not performed.

Hypotheses 2-17. The remaining hypotheses were tested by determining the significance and direction of the direct path coefficients among variables in the path

model. According to Bollen (1989), a direct effect is the effect of one variable on another that is not mediated by other variables in the path. The direct effect is the influence of one variable on another controlling for the relationships with other variables in the model. T-values were calculated for all of the path coefficients in the model to determine whether path coefficients significantly differ from zero (t-values greater than 2 are considered significant, $p < .05$). The first-order partial correlations were used to assist in the interpretation of results and are discussed only when they are significantly different from the path coefficients.

In order to demonstrate mediation according to Baron and Kenny (1986), three conditions must be met in the following sequence: (a) the predictor variable must be significantly related to the mediating variable, (b) the mediating variable must be significantly related to the outcome variable, and (c) a previously significant relationship between the predictor and outcome variable must become nonsignificant when the significant predictor-mediating relationship is held constant.

In the following section, the results of hypotheses numbered 2-17 are reported (see Table 5 for a summary of the results of these hypotheses). The standardized path coefficients for the hypothesized paths are presented in Figure 3.

Hypothesis 2: Marital status (married and partnered=1; not married=2) would be (a) negatively related to upsetting stressor appraisals, (b) positively related to appraised situational control, (c) negatively related to threatening loss of respect for others appraisals, and (d) negatively related to threatening work goal attainment appraisals.

Table 5

Path Model Coefficients (N=157)

Hypothesis Tested	Path Coefficients (Direct Effects)	T-Values	r ^a
<u>Hypothesis 2</u> ^b			
Marital Status/Upsetting Appraisals	.16	1.50	.14
Marital Status/Control Appraisals	-.02	-.22	-.08
Marital Status/Loss of Respect Appraisals	.11	1.04	.10
Marital Status/Goal Attainment Appraisals	.06	.57	.01
<u>Hypothesis 3</u>			
Marital Status/Distress; Mediating effects ^c Mediated by: (Upsetting Appraisals) (Control Appraisals) (Loss of Respect Appraisals) (Goal Attainment Appraisals)			
<u>Hypothesis 4</u>			
Income/Upsetting Appraisals	.10	.95	-.05
Income/Control Appraisals	.05	.42	.09
Income/Loss of Respect Appraisals	.04	.35	-.05
Income/Goal Attainment Appraisals	.15	1.40	.05
<u>Hypothesis 5</u>			
Instrumentality/Upsetting Appraisals	.18	2.35	.19

(table continues)

Hypothesis Tested	Path Coefficients (Direct Effects)	T-Values	r
Instrumentality/Control Appraisals	-.05	-.65	-.06
Instrumentality/Loss of Respect Appraisals	-.03	-.38	-.02
Instrumentality/Goal Attainment Appraisals	.08	1.05	.08
<u>Hypothesis 6</u>			
Instrumentality/Work Demands	.00	.02	.00
Instrumentality/Work Support	-.02	-.27	-.02
<u>Hypothesis 7</u>			
Instrumentality/Daily Hassles	-.08	-.99	-.08
<u>Hypothesis 8</u>			
Instrumentality/Distress; Mediating effects ^d Mediated by: (Upsetting Appraisals) (Control Appraisals) (Loss of Respect Appraisals) (Goal Attainment Appraisals)	.02	.30	.05
Upsetting Appraisals/Distress	.24	3.22	.34
Control Appraisals/Distress	-.06	-.76	-.19
Loss of Respect Appraisals/Distress	.01	.09	.05
Goal Attainment Appraisals/Distress	.12	1.64	.27

(table continues)

Hypothesis Tested	Path Coefficients (Direct Effects)	T-Values	r
<u>Hypothesis 9</u>			
Expressiveness/Work Support	.00	-.01	.00
<u>Hypothesis 10</u>			
Expressiveness/Upsetting Appraisals	.13	1.61	.12
Expressiveness/Control Appraisals	-.05	-.66	-.06
Expressiveness/Loss of Respect Appraisals	.00	-.01	.01
Expressiveness/Goal Attainment Appraisals	.11	1.36	.08
<u>Hypothesis 11</u>			
Work Support/Upsetting Appraisals	-.12	-1.56	-.12
Work Support/Control Appraisals	.17	2.09	.15
Work Support/Loss of Respect Appraisals	-.12	-1.48	-.12
Work Support/Goal Attainment Appraisals	-.28	-3.63	-.24
<u>Hypothesis 12</u>			
Work Demands/Upsetting Appraisals	-.02	-.25	.07
Work Demands/Control Appraisals	.04	.53	-.07
Work Demands/Loss of Respect Appraisals	-.02	-.22	.07
Work Demands/Goal Attainment Appraisals	-.05	-.62	.10

(table continues)

Hypothesis Tested	Path Coefficients (Direct Effects)	T-Values	r
<u>Hypothesis 13</u>			
Daily Hassles/Distress	.29	3.90	.38
<u>Hypothesis 14</u>			
Upsetting Appraisals/Diseng Coping	.23	3.10	.31
Control Appraisals/Diseng Coping	-.19	-2.48	-.29
Loss of Respect Appraisals/Diseng Coping	.09	1.19	.11
Goal Attainment Appraisals/Diseng Coping	.19	2.50	.26
<u>Hypothesis 15</u>			
Upsetting Appraisals/Engag Coping	.04	.53	.04
Control Appraisals/Engag Coping	.17	2.22	.12
Loss of Respect Appraisals/Engag Coping	-.01	-.12	-.03
Goal Attainment Appraisals/Engag Coping	.23	2.97	.21
<u>Hypothesis 16</u>			
Disengagement Coping/Distress	.12	1.50	.32
<u>Hypothesis 17</u>			
Engagement Coping/Daily Hassles	.10	1.31	.15
Disengagement Coping/Daily Hassles	.29	3.70	.31

Note. Diseng=Disengagement coping; Engag=Engagement coping. Path

coefficients=standardized coefficients. T-values > 2 are significant at $p < .05$. $r > .24$ significant at .001; $r > .19$ significant at .01; $r > .14$ significant at .05.

^a r =First-order partial correlations. ^bMarital status categories: 1=married and partnered; 1=not married. ^cIn order to demonstrate mediation according to Baron and Kenny (1986), there must be significant relationships between the predictor and the mediating variable and between the mediating and the outcome variable. See Hypothesis 2 results for the marital status to appraisals path coefficients. ^dSee Hypothesis 5 results for the instrumentality to appraisals path coefficients.

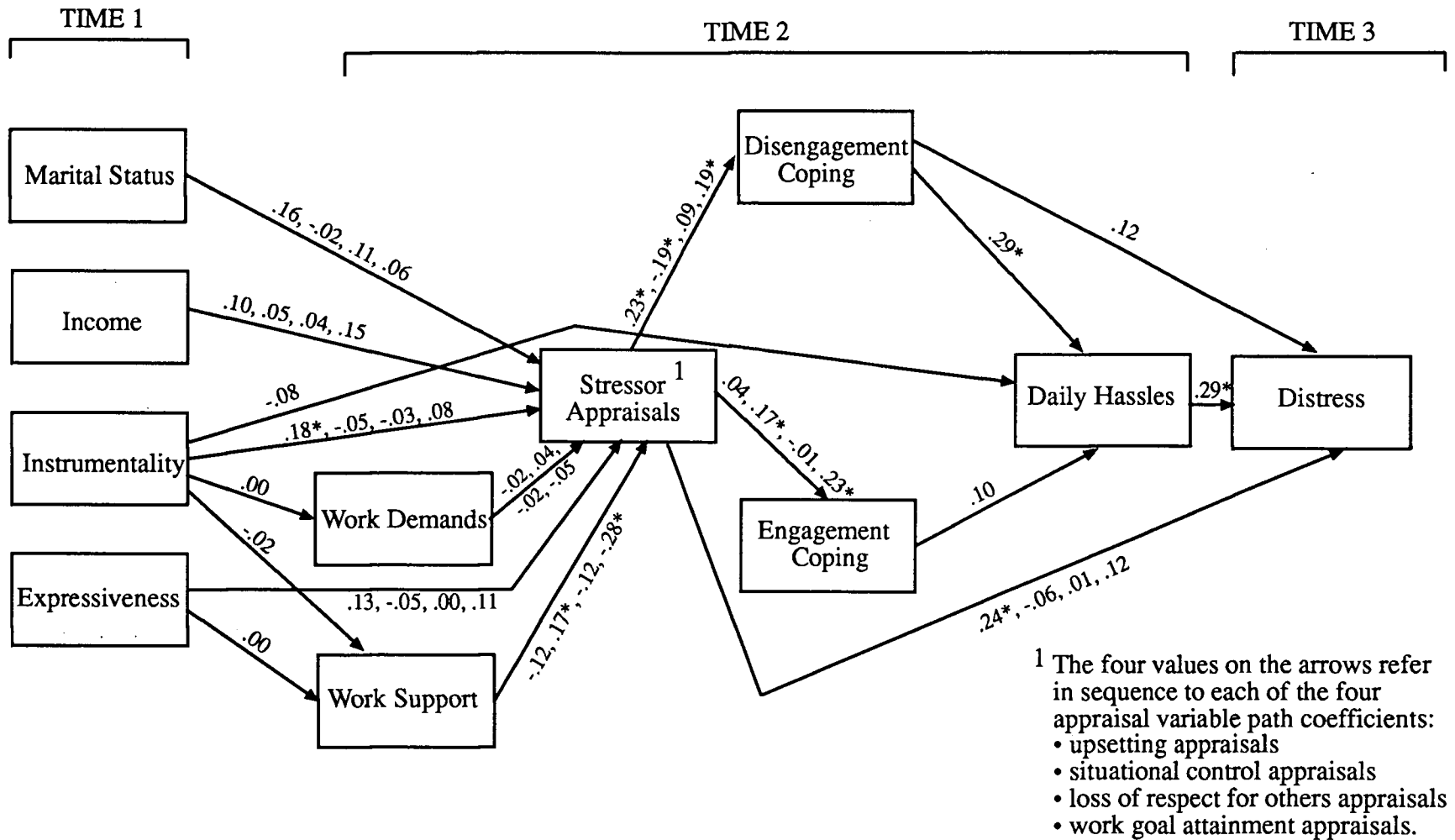


Figure 3. Path Model Representing the Relationships among Antecedent, Contextual, Mediating, and Outcome Variables at Time 1, Time 2, and Time 3. (Arrows indicate the direction of the relationships. First-order partial correlation matrix with negative affectivity removed was analyzed. Standardized LISREL estimates are indicated. Marital status refers to married and partnered = 1; not married = 2. * Indicates significant path coefficients.)

Hypothesis 2 was not supported. The path coefficients from marital status to upsetting appraisals, situational control appraisals, loss of respect for others appraisals, and work goal attainment appraisals were each nonsignificant within the model (β s = .16, -.02, .11, and .06, respectively).

Hypothesis 3: The marital status and distress relationship would be mediated by (a) upsetting stressor appraisals, (b) situational control appraisals, (c) loss of respect for others appraisals, and (d) work goal attainment appraisals.

Results revealed nonsignificant relationships between marital status and each of the four appraisal variables within the model. Given that Baron and Kenny's (1986) first condition for mediation was not met, testing the subsequent conditions for mediation was not warranted. Hypothesis 3, therefore, was not supported.

Hypothesis 4: Income would be (a) negatively related to upsetting stressor appraisals, (b) positively related to appraised situational control, (c) negatively related to threatening loss of respect for others appraisals, and (d) negatively related to threatening work goal attainment appraisals:

Hypothesis 4 was not supported. The path coefficients from income to upsetting appraisals, situational control appraisals, loss of respect for others appraisals, and work goal attainment appraisals were each nonsignificant within the model (β s = .10, .05, .04, and .15, respectively).

Hypothesis 5: Instrumental personality traits would be (a) negatively related to upsetting stressor appraisals, (b) positively associated with appraised situational control, (c) negatively related to threatening loss of respect for others appraisals, and

(d) negatively associated with threatening work goal attainment appraisals.

Although results revealed a significant association between instrumentality and upsetting stressor appraisals within the model ($b = .18$), the relationship was positive. This finding indicates that high-instrumental managerial and professional women appraised stressful interpersonal work conflicts as more upsetting rather than less upsetting as hypothesized. In addition, the path coefficients from instrumentality to situational control appraisals, loss of respect for others appraisals, and threatening work goal attainment appraisals were each weak in magnitude and nonsignificant ($b_s = -.05, -.03, \text{ and } .08$, respectively). Hypothesis 5, therefore, was not supported.

Hypothesis 6: Instrumentality would be negatively related to work demands and positively related to work support.

Hypothesis 6 was not supported. The path coefficients from instrumentality to both work demands and work support were nonsignificant within the model ($b_s = .00$ and $-.02$, respectively).

Hypothesis 7: Instrumentality would be negatively related to daily hassles.

Hypothesis 7 was not supported. The path coefficient from instrumentality to daily hassles was nonsignificant within the model ($b = -.08$).

Hypothesis 8: The instrumentality and distress relationship would be mediated by (a) upsetting stressor appraisals, (b) situational control appraisals, (c) loss of respect for others appraisals, and (d) work goal attainment appraisals.

The path coefficients from instrumentality to upsetting stressor appraisals ($b = .18$) and from upsetting stressor appraisals to distress ($b = .24$) were both

significant within the model. In order to determine the direct effect of instrumentality on distress, it was necessary to rerun the path model with the instrumentality-distress path included. Results yielded a nonsignificant relationship between instrumentality and distress ($b = .02$), thus failing to fulfil Baron and Kenny's (1986) criteria for mediation. Hypothesis 8, therefore, was not supported.

Hypothesis 9: Expressive personality traits would be positively related to work support.

Hypothesis 9 was not supported. The path coefficient from expressiveness to work support was nonsignificant within the model ($b = .00$).

Hypothesis 10: Expressiveness would be directly related to (a) upsetting stressor appraisals, (b) situational control appraisals, (c) loss of respect for others appraisals, and (d) work goal attainment appraisals.

Hypothesis 10 was not supported. The path coefficients from expressiveness to each of the appraisal variables were nonsignificant within the model ($bs = .13, -.05, .00$, and $.11$, respectively).

Hypothesis 11: Work support would be (a) negatively associated with upsetting stressor appraisals, (b) positively related to appraised situational control, (c) negatively associated with threatening loss of respect for others appraisals, and (d) negatively related to threatening work goal attainment appraisals.

Hypothesis 11 was partially supported. Although results revealed nonsignificant relationships between work support and both upsetting appraisals and loss of respect for others appraisals within the model ($bs = -.12$), the path

coefficients from work support to appraised situational control ($b = .17$) and from work support to work goal attainment appraisals ($b = -.28$) were significant. The latter two findings suggest that managerial and professional women who reported greater work-related support appraised stressful interpersonal conflicts as more controllable and less threatening to the attainment of their work goals.

Hypothesis 12: Work demands would be (a) positively associated with upsetting stressor appraisals, (b) negatively related to appraised situational control, (c) positively associated with threatening loss of respect for others appraisals, and (d) positively related to threatening work goal attainment appraisals.

Hypothesis 12 was not supported. The path coefficients from work demands to upsetting appraisals, situational control appraisals, loss of respect for others appraisals, and work goal attainment appraisals were each nonsignificant within the model ($bs = -.02, .04, -.02$, and $-.05$, respectively).

Hypothesis 13: Daily hassles would be positively related to distress.

Hypothesis 13 was supported. Results revealed a significant relationship between daily hassles and distress within the model ($b = .29$), indicating that managerial and professional women who experienced more daily frustrations and irritations reported increased levels of psychosomatic distress (i.e., anxiety, depression, and somatic symptoms).

Hypothesis 14: It was expected that (a) upsetting stressor appraisals would be positively related to disengagement coping, (b) appraised situational control would be negatively related to disengagement coping, (c) threatening loss of respect for others

appraisals would be positively associated with disengagement coping, and (d) threatening work goal attainment appraisals would be positively related to disengagement coping.

Hypothesis 14 was partially supported. Results indicated significant path coefficients from upsetting appraisals, appraised situational control, and work goal attainment appraisals to disengagement coping within the model (β s = .23, -.19, and .19, respectively). Thus, managerial and professional women who appraised interpersonal conflicts as more upsetting and more threatening to the attainment of work goals reported using greater disengagement coping strategies to manage the interpersonal stressor. Furthermore, as hypothesized, women who reported greater appraised control of the interpersonal stressor reported more infrequent use of disengagement coping. Results revealed, however, a nonsignificant relationship between loss of respect for others appraisals and disengagement coping (β = .09).

Hypothesis 15: It was expected that (a) upsetting stressor appraisals would be negatively related to engagement coping, (b) appraised situational control would be positively related to engagement coping, (c) threatening loss of respect for others appraisals would be negatively associated with engagement coping, and (d) threatening work goal attainment appraisals would be negatively related to engagement coping.

Hypothesis 15 was partially supported. The path coefficients from both upsetting appraisals and loss of respect for others appraisals to engagement coping were nonsignificant within the model (β s = .04 and -.01, respectively). However, results indicated a significant relative direct effect between appraised situational

control and engagement coping ($b=.17$), therefore suggesting that managerial and professional women who appraised the stressful interpersonal conflict as controllable relied more on engagement coping strategies. Work goal attainment appraisals were also significantly associated with engagement coping within the model ($b=.23$), although not in the direction hypothesized. Work goal attainment appraisals had a positive direct effect on engagement coping, indicating that more threatening work goal attainment appraisals were associated with greater use of engagement coping for managerial and professional women.

Hypothesis 16: Disengagement coping would be positively related to distress.

Hypothesis 16 was not supported. Although disengagement coping was significantly correlated ($r=.32$, $p < .001$) with distress, the path coefficient ($b=.12$) was nonsignificant at $p < .05$, thus suggesting that the disengagement coping and distress relationship may have been influenced by other factors.

Hypothesis 17: Engagement coping and disengagement coping would both be positively related to daily hassles.

Hypothesis 17 was only partially supported. Although findings indicated a nonsignificant relationship between engagement coping and daily hassles ($b=.10$), disengagement coping was found to have a significant direct effect on daily hassles within the model ($b=.29$). Thus, managerial and professional women who relied more on disengagement coping strategies reported a greater number of daily hassles.

Post-hoc Analysis

In order to more clearly present the final model, the path model with all

nonsignificant paths deleted was analyzed. The majority of fit indices indicated that the model with nonsignificant paths deleted was a poor fit to the data, $\chi^2(74, N=157)=153.72$, $p < .001$, $Q=2.1$, $GFI=.88$, $AGFI=.83$, $RMSR=.11$, $CFI=.71$, and $D_2=.73$. Model fit indices are shown in Appendix N. As a result of removing nonsignificant paths, the following variables were not contained in this final model: marital status, income, expressiveness, work demands, and loss of respect for others appraisals. This model is considered more parsimonious due to its fewer number of paths and larger degrees of freedom. See Figure 4 for the standardized path coefficients for the model with nonsignificant paths removed.

For exploratory purposes, to better understand the role of managerial and professional women's appraisals of interpersonal work stressors, an alternate path model was tested incorporating two primary appraisal stake scales that were developed through factor analysis. Results of the alternate model using the primary appraisal stake scales are presented in Appendices M and N.

In addition, due to the poor model fit and the nonsignificant relationships between a number of variables in the initial model, a path model based on the zero-order correlation matrix, not controlling for the effects of NA, was tested in order to examine the influences of NA in an interpersonal model of stress and coping. Results of the path model based on the zero-order correlation matrix are reported in Appendices N and O.

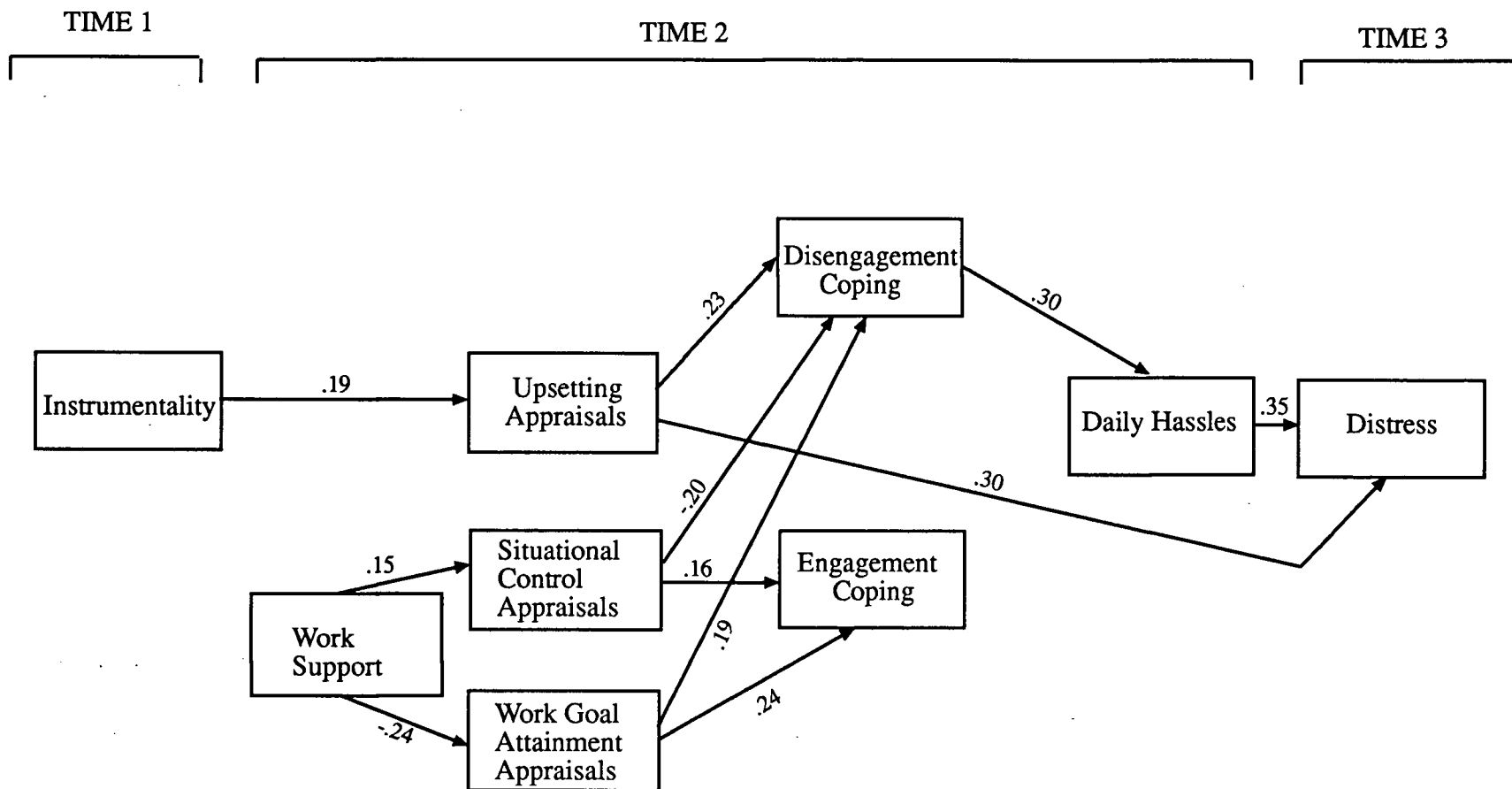


Figure 4. Path Model Representing the Significant Relationships among Antecedent, Contextual, Mediating, and Outcome Variables at Time 1, Time 2, and Time 3 with Nonsignificant Paths Deleted. (Arrows indicate the direction of the relationships. First-order partial correlation matrix with negative affectivity removed was analyzed. Standardized LISREL estimates are indicated.)

DISCUSSION

The results of this study indicate weak support for a model of stress and coping for managerial and professional women who experienced interpersonal conflicts as a source of occupational stress. The hypothesized path model, which included demographic variables (i.e., income and marital status), personality characteristics (i.e., instrumentality and expressiveness), contextual variables (i.e., work demands, work support, and daily hassles), coping strategies, and cognitive appraisals, indicated a poor fit to the data, and accounted for 24% of the variance in the outcome of psychosomatic distress. However, the pattern of relationships for variables in the path model provides partial support for Lazarus and Folkman's (1984) stress and coping framework and builds on Long et al.'s (1992) managerial model in the context of interpersonal work stressors. Furthermore, in view of the minimal empirical attention given to cognitive appraisals, this model clarified the role of specific appraisals associated with managerial and professional women's process of coping with interpersonal stressors.

Given the significant zero-order correlations between NA (i.e., trait anxiety) and numerous variables in the model, Brief et al.'s (1988) suggestions were followed and the effects of NA were partialled out of the path model. Consistent with Lazarus and Folkman's (1984) theoretical assumptions regarding the predictive relationship between antecedent variables (i.e., personality characteristics) and cognitive appraisals, results of the model indicated that instrumentality was significantly related to upsetting appraisals of interpersonal work stressors within the model ($b = .18$),

although not in the direction hypothesized. Specifically, managerial and professional women with strong instrumental personality traits were found to appraise stressful work conflicts as more upsetting rather than less upsetting as expected. One can speculate that women with strong instrumental traits perceive interpersonal conflicts as stressful because their need to act agentially is thwarted in the context of relationships with others, thus precipitating negative appraisals of interpersonal stressors. It is also possible that upsetting stressor appraisals are the result of others' attempts to control the characteristically independent high-instrumental woman within conflictual situations.

The nonsignificant relationship between agentic traits and appraisals in Long et al.'s (1992) study may be attributed in part to their failure to control for the effects of NA in their model. A comparison of the path models based on the zero-order and first-order partial correlation matrices in this study revealed, for example, that the nonsignificant instrumentality-upsetting appraisals relationship ($\beta = .11$) became significant ($\beta = .18$) after removing the effects of NA, thus indicating that the inclusion of NA suppressed and weakened the relationship between these two variables. Given that NA characterizes mood states such as pervasive anxiety, nervousness, and worry, it could be that instrumentality reduces the effects of NA on appraisals. Further research is needed to clarify the complex role of NA in managerial and professional women's experiences of stressful work conflicts, particularly in view of recent studies that indicate the relevance of NA to interpersonal stressors (e.g., Bolger & Schilling, 1991; Bolger & Zuckerman, 1995).

Bolger and Zuckerman found, for example, that individuals with high levels of NA (e.g., neuroticism) reported more frequent interpersonal conflicts, greater propensity to react with anger and depression to interpersonal conflicts, and increased use of confrontive coping strategies in response to conflicts.

Inconsistent with the study's hypotheses and Lazarus and Folkman's (1984) theoretical assumptions, the relationships between expressive personality traits and each of the four appraisal variables (i.e., upsetting, situational control, loss of respect for others, and work goal attainment appraisals) were nonsignificant within the model. Moreover, the nonsignificant expressiveness and work support relationship is in contrast to empirical research that has found that expressive men and women reported accessing more social support than low-expressive persons (Burda et al., 1984). It is noted, however, that Burda et al.'s conclusions were based on a sample of university undergraduate students who reported family and friends as sources of support; their conclusions therefore may not generalize to the managerial and professional population who may also rely on work support from colleagues and supervisors.

The failure to find significant relationships between expressiveness and both appraisals and work support within the model may also indicate that the expressiveness subscale of the BSRI (Bem, 1981) was not a valid means of assessing interpersonal and relational strengths for this sample of managerial and professional women. It is also possible that self-ascribed characteristics assessed by the BSRI do not reflect the characteristics or traits that managerial and professional women draw on to manage interpersonal conflict in the workplace. In contrast, personality

characteristics that facilitate the acquisition and maintenance of relationships, such as those reflected in Hansson, Jones, and Carpenter's (1984) relational competence construct (e.g., intimacy, trust, empathy, interpersonal sensitivity, social confidence) may be more germane to the study of interpersonal stressors.

Neither marital status nor income influenced cognitive appraisals within the main path model. However, results of the alternate path model using primary appraisal stake scales revealed that unmarried (i.e., single, divorced, separated, and widowed) managerial and professional women held significantly more threatening self-interest appraisals, and that women with higher incomes appraised interpersonal work stressors as significantly more threatening to the preservation of working relationships, thus providing partial support for Long et al.'s findings. As Betz and Fitzgerald (1987) suggest, it is possible that women with traditional lifestyles (e.g., married with children) are less invested in their careers and therefore have less at stake when confronted with stressful situations that are appraised as threatening to their occupational achievement (e.g., to their status at work, perceived competency, and attainment of work goals). Moreover, a possible explanation for the significant effect of income on relationship appraisals in the alternate path model is that meeting one's financial needs allows individuals to focus their attention to other aspects of their life such as maintaining interpersonal relationships (e.g., communicating openly with colleagues, working collaboratively with others, and preserving others' self-esteem).

In addition, inconsistent with Long et al.'s (1992) findings, nonsignificant

results were obtained for the hypothesized relationships between instrumentality and both work demands and daily hassles within the main model. It is noted, however, that Long et al. used composite measures to assess each construct of interest (e.g., agentic traits, demographic characteristics, work environment conditions, and appraisals), whereas the current study employed single measures. The discrepant results may reflect the different instruments used in the two studies.

Alternatively, the differences in findings may be a function of having controlled for the effects of NA in this study. For example, an inspection of the path models based on both the zero-order and first-order partial correlation matrices revealed that the significant instrumentality-hassles relationship ($\beta = -.17$) became nonsignificant ($\beta = -.08$) when the effects of NA were removed. As indicated earlier, NA both suppressed and strengthened a number of variable relationships. Given that NA is considered a personality trait that encompasses a range of negative mood states such as anxiety, worry, and pessimism (Watson & Clark, 1984), its effects are particularly relevant to the relationships in the model that involve other personality traits (e.g., instrumentality and expressiveness) and indicators of negative emotions (e.g., distress). In addition, Long and Schutz (1995) contend that the stability of distress and disengagement coping variables in their prospective study was partially a function of some general underlying or higher-order factor or trait, such as NA, that was not accounted for in their model. NA was not included as a variable in the current model because it was related to a number of predictor and outcome variables, thus supporting earlier contentions that NA inflates stressor-strain relationships and

that its effects should be controlled for (e.g., Brief et al., 1988; Burke et al., 1993).

It was hypothesized that both work support and work demands would be directly related to each of the four appraisal variables. Findings indicated that work support was positively related to perceived situational control ($b=.17$) and negatively related to threatening work goal attainment appraisals ($b=-.28$) within the model, although not significantly associated with either upsetting or loss of respect for others appraisals. Thus, managerial and professional women who reported greater work support from colleagues and supervisors appraised stressful interpersonal conflicts as more controllable and less threatening to the achievement of work goals. This finding partially supports Long et al.'s (1992) results, which indicated that an unfavourable work environment (e.g., low support and high demands) was associated with negatively-appraised work stressors for managerial women.

The large modification indices between appraisals and work demands suggest that appraisals were predictors of work demands and that the model may fit better if the path from work demands to appraisals were reversed accordingly. This modification is theoretically justifiable given that Lazarus and Folkman (1984) not only argue that there are reciprocal effects in their stress and coping framework, but also fail to identify the specific placement of contextual variables like environmental characteristics in their stress and coping framework. It is possible, therefore, that appraisals and work demands in the present study are reciprocally related given that they were assessed at the same time period.

In support of Lazarus and Folkman's (1984) theoretical framework regarding

the direct effects of appraisals on coping, both situational control and threatening work goal attainment appraisals were positively associated with engagement coping strategies within the model (β s = .17 and .23, respectively), although it was hypothesized that threatening work goal appraisals would be negatively related to engagement coping. Thus, consistent with previous research linking controllable appraisals to active forms of coping (e.g., Carver et al., 1989; Folkman & Lazarus, 1980), results of this study indicated that managerial and professional women who appraised interpersonal conflicts as controllable but threatening to the attainment of work goals reported increased use of engagement coping strategies to manage interpersonal stressors. One can speculate that when managerial and professional women appraise interpersonal stressors as threatening but controllable, they perceive that they can effect desired changes to the situation, which promotes active efforts to manage the situation.

In addition, consistent with previous empirical findings indicating a relationship between negative stressor appraisals and disengagement coping forms (e.g., Long et al., 1992; Terry et al., in press), upsetting appraisals, situational control appraisals, and work goal attainment appraisals each had a significant effect on disengagement coping within the model (β s = .23, -.19, and .19, respectively). Thus, women who perceived interpersonal stressors as more upsetting, less controllable, and more threatening to the attainment of work goals reported increased use of disengagement coping strategies in response to them. These results suggest that managerial and professional women are likely to withdraw from situations

appraised as threatening and uncontrollable due to perceptions that more directive efforts to manage such episodes would be futile or potentially disruptive (e.g., to the preservation of relationships).

It is interesting to note that threatening work goal attainment appraisals were significant predictors of both engagement and disengagement coping strategies, although loss of respect appraisals were unrelated to either engagement and disengagement coping. Perhaps the coping measure used in this study did not fully capture the coping efforts of managerial and professional when their respect for others was threatened, as suggested by the type of additional interpersonal coping strategies women anecdotally reported using (e.g., active listening and openness to others' perspectives). Alternatively, one can speculate that managerial and professional women may be more invested in achieving work goals than in preserving respect for others, which thus promotes the use of active efforts to manage interpersonal stressors that threaten the attainment of work goals. However, threatening work goal appraisals may also lead to disengagement coping due to perceptions that more persistent and directive coping efforts would be unsuccessful or harmful to the maintenance of relationships with others.

It is possible that individuals first need to cognitively, emotionally, and physically disengage or withdraw (cf. Kahn, 1990) from stressful interpersonal situations in order to prepare themselves (e.g., problem-solve) to actively engage in managing the situation. Further research in this area would help to better understand the temporal pattern of disengagement and engagement coping strategies in response

to threatening appraisals, and the extent to which engagement and disengagement coping strategies are variously influenced by factors such as the degree of threatening work goal attainment appraisals.

Consistent with Long et al.'s (1992) findings, disengagement coping was significantly related to daily hassles within the model ($\beta = .29$), thus suggesting that increased use of disengagement coping strategies in response to interpersonal work stressors was associated with a greater number of nonwork-related daily hassles. It is possible that disengagement or withdrawal coping is related to increased nonwork daily frustrations due to employees' failure to confront and resolve stressful work events (i.e., interpersonal conflict). On the basis of Lazarus and Folkman's (1984) suggestion that daily hassles may reflect failed coping, engagement coping can be construed as more effective due to its nonsignificant relationship with daily hassles within this interpersonal stress and coping model.

Results of the main path model indicated a nonsignificant relationship between disengagement coping and distress ($\beta = .12$), although disengagement coping had a significant direct effect on distress ($\beta = .17$) in the path model based on the zero-order correlation matrix. This latter finding provides support for both Lazarus and Folkman's (1984) framework and previous research (Gall & Evans, 1987; Israel et al., 1989; Long et al., 1992), and indicates that NA strengthened the disengagement coping-distress relationship. However, an inspection of the first-order partial correlation matrix (see Table 4), which revealed a significant relationship between disengagement coping and distress ($r = .32$), suggests that this relationship was

influenced by variables other than NA. For example, disengagement coping was indirectly related to distress through daily hassles as supported by significant relationships in the main model between both disengagement coping and daily hassles and between daily hassles and distress ($\beta = .29$).

It is noted that the sample characteristics of managerial and professional women in this study compared favourably to managerial women in Long et al.'s (1992) model, although women in this study reported slightly lower mean levels of work support and situational control appraisals and higher mean levels of psychosomatic distress symptoms (i.e., depression, anxiety, and somatic complaints) than women in Long et al.'s study. Perhaps these differences reflect the nature of the organizational culture for which managerial and professional women were employed in the two studies (i.e., university institutions in the current study compared with a variety of small and large organizations in Long et al.'s model). One can speculate, for example, that interpersonal conflicts are less controllable in conservative and traditional work settings, characteristic of larger academic institutions, in contrast to smaller or less hierarchical organizations. Alternatively, the difference in findings may reflect the nature of the stressor that was examined in this study compared to Long et al.'s model (interpersonal conflicts versus a combination of work stressors). It is possible, for example, that interpersonal stressors are particularly distressing (cf. Bolger & Schilling, 1991; Bolger & Zuckerman, 1995), reflect weaker work support, and therefore are less controllable.

It is worthy of noting that the disengagement and engagement classification of

coping strategies incorporated in this interpersonal model of stress and coping reflect the types of conflict styles reportedly used by professional men and women ($N=313$) to resolve interpersonal conflicts in Bergmann and Volkema's (1995) study (e.g., discussing the issue, trying to convince, avoiding the person, ignoring or accepting conflict). Interestingly, Bergmann and Volkema found that listening carefully to others was one of the most frequently reported conflict styles used to manage conflicts with supervisors, co-workers, and subordinates. Similarly, anecdotal reports by managerial and professional women in the current study indicated that relational or interpersonal skills (e.g., active listening and openness to others' perspectives) were used to manage stressful interpersonal work conflicts. Future research, therefore, would likely benefit from investigating the role of interpersonal skills and coping strategies in dealing with conflictual work encounters.

Consistent with Bergmann and Volkema's (1995) recommendations, this study examined an integrated model of processes related to interpersonal conflict, such as conflict issues (interpersonal stressor), behavioral responses (coping strategies), and consequences of conflict issues and behaviours (distress outcomes). However, the relative power of conflict parties was not examined in this study, which Bergmann and Volkema recommend future organizational conflict research address.

Mediational Effects

In support of Lazarus and Folkman's (1984) theoretical framework, it was hypothesized that cognitive appraisals would mediate the relationships between marital status and distress and between instrumental personality traits and distress. According

to Baron and Kenny (1986), in order to demonstrate a mediational relationship, three conditions must be met in the following order: (a) a significant relationship between the antecedent and the mediating variable, (b) a significant relationship between the mediating variable and the outcome variable, and (c) that a previously significant relationship between the antecedent and outcome variable becomes nonsignificant when controlling for the significant antecedent-mediating variable relationship.

Results yielded nonsignificant relationships between marital status and appraisal variables in the current study. Similarly, within the alternate path model based on primary appraisal stake scales, although marital status was significantly related to self-interest appraisals ($b=.21$) and self-interest appraisals significantly related to distress ($b=.20$), marital status did not have a significant direct effect on distress. Thus, Baron and Kenny's (1986) conditions for mediation were not met. In terms of the instrumentality and distress mediating hypothesis, despite significant relationships between instrumentality and upsetting appraisals ($b=.18$) and between upsetting appraisals and distress ($b=.24$) in the main model, the association between instrumentality and distress was nonsignificant. A similar pattern of findings emerged in the alternate path model. Neither mediational hypothesis, therefore, was supported by results of the main and alternate path models.

The failure to find mediational effects may be a reflection of the type of antecedent variables used in the main study. One would expect that the mediating role of cognitive appraisals as theorized by Lazarus and Folkman (1984) is a function of the type of traits that predict appraisals of a particular stressor. One fruitful

avenue for future research, therefore, would be to investigate which antecedent variables are related to both appraisals and distress in the context of interpersonal work stressors.

Limitations

The design of this study made it possible to examine Lazarus and Folkman's (1984) theoretical framework and to draw on Long et al.'s (1992) managerial model in the context of a specific work stressor (interpersonal conflict) for female managers and professionals. A primary limitation of this study, however, refers to the characteristics of the sample. The selection of volunteer managerial and professional women employed at three provincial universities restricts the ability to generalize results to the population of university-employed female managers and professionals or to managerial and professional women of other geographic locations and private-sector and government settings. An additional concern about the representativeness of the sample includes the relatively low response rate. Thus, replications of the study with larger and more diverse populations would facilitate generalizability of findings. Furthermore, it is not known whether the use of incentives (i.e., monetary award and workshop invitation) to participants had an effect on the outcome of the study.

In addition, the use of recursive path analysis used in this study limits the examination of reciprocal relationships among variables. The significant correlation between work demands and work support ($r = -.60$), for example, indicates that these two variables may be reciprocally related for this sample of managerial and professional women. In the absence of experimental control, causal inferences about

the variables cannot be made and results may be prone to alternate causal explanations and to the effects of unmeasured variables. One must also consider when interpreting the study's findings that the Type 1 error rate is inflated as a function of multiple paths within the model. Furthermore, given that distress symptoms were not assessed and controlled for at Time 1, it is possible that significant predictor variable-distress relationships within the model were a reflection of participants' generalized tendencies to experience distress over time. Removing the effects of trait anxiety (NA), however, helped to control for temporal consistencies in distress within this sample of managerial and professional women.

In this study, attempts were made to reduce difficulties with recall by administering questionnaires relatively close to the time (i.e., 1-2 months) of the stressful interpersonal conflict. However, this study is restricted in its sole use of self-report measures to assess variables in the model. The single-item appraisal measures, for example, were limited by their lack of sound psychometric properties such as content validity and internal consistency (Cronbach's alpha). A further limitation is that this study's emphasis on interpersonal conflicts primarily with one other individual at work may have been too restrictive given that interpersonal conflicts can influence numerous relationships within an organization. Thus, future research should include conflicts with multiple others as a unit of analysis to gain a more complete knowledge of employees' experiences with stressful work conflicts.

Finally, although one goal of this study was to determine the extent to which relationships in Long et al.'s (1992) structural equation model held in the context of

interpersonal work stressors, the different methodologies used in the two studies limits direct comparisons of results. The constructs in Long et al.'s model, for example, were assessed by a combination of measures, whereas the use of path analysis in this study required that only one measure be used to assess each variable of interest. Moreover, Long et al.'s structural equation model did not control for the effects of NA on variable relationships, although the main path model in the current study supported Burke et al.'s (1993) recommendations by partialling out the potential effects of NA. In addition, whereas data were collected prospectively over three 1-month intervals in Long et al.'s study, questionnaires were administered over three 2-week intervals in the current study. Thus, it is possible that variations in findings between the two studies were influenced by the application of different methods and standardized measures.

Conclusions and Implications for Counselling Research and Practice

In summary, this is one of the few studies that has attempted to determine the extent to which Lazarus and Folkman's (1984) theoretical assumptions hold in the context of a specific work stressor (interpersonal conflict). Drawing on Long et al.'s (1992) stress and coping model for managerial women, this study examined over time the strength and direction of antecedent, contextual, mediating, and outcome variables for a sample of university-employed managerial and professional women who reported stressful work-related interpersonal conflicts.

Although the pattern of variable relationships in the model provides partial support for Lazarus and Folkman's (1984) framework and Long et al.'s (1992) model,

the majority of fit indices used indicated that the model was a poor fit to the data. The development of adequate fit indices to assess the goodness-of-fit of the model to the data is evolving and new information is frequently emerging regarding the relative merits of various fit indices. A recent article by Marsh (1995), for example, proposes that Bollen's (1989) D_2 contains a computational bias and thus should not be used to assess model fit. Given the controversy about the relative utility of fit indices, Marsh supports Bollen and Long's (1992) contention that "no single measure of overall fit should be relied on exclusively" (p. 6) and recommends that model fit be assessed by a variety of indices rather than a single fit index.

Consistent with empirical and theoretical support, controllable and threatening work goal appraisals were each significantly related to engagement coping, and upsetting, controllable, and threatening work goal attainment appraisals each had a significant direct effect on disengagement coping within the model. Moreover, work support was a significant predictor of both situational control and work goal attainment appraisals, and instrumentality was significantly associated with upsetting appraisals for managerial and professional women within the model. In addition, as expected, and consistent with Long et al.'s (1992) findings, path model results yielded significant relationships between disengagement coping and daily hassles and between daily hassles and distress. Finally, upsetting appraisals of the interpersonal stressor were significantly associated with heightened psychosomatic distress for managerial and professional women.

Marital status, income, work demands, and loss of respect for others

appraisals did not play a significant role in the current model. Moreover, results of this interpersonal stress and coping model failed to support the mediating function of cognitive appraisals as postulated by Lazarus and Folkman (1984).

The study was important in that coping strategies specific to interpersonal work stressors (e.g., compromising and reasoning efforts) were incorporated into the measure of coping that paralleled Kahn's (1990) conceptualization of engagement and disengagement work behaviour. However, given that the coping instrument was both developed and used on the same sample of university-employed managerial and professional women, replication of the measure is required. Further research is also needed to more clearly discriminate whether other coping strategies or coping scales are relevant to interpersonal stressors and differentially predict distress (e.g., type and severity of distress outcome) for managerial and professional women. Bolger and Zuckerman (1985), for example, found that confrontive coping strategies in response to interpersonal conflicts were significant predictors of anger and depression for college undergraduates.

In addition, given the paucity of empirical research examining the role of specific stressor appraisals in the stress and coping process, results of this study helped to clarify which cognitive appraisals were predictors and outcomes of other variables in the path model. Moreover, results of exploratory factor analyses provided a stronger understanding of women's appraisal process in response to interpersonal work conflicts. The relationship and self-interest primary appraisal stakes that emerged from factor analysis support contemporary feminist perspectives

(e.g., Lerman, 1986; Miller, 1986) that characterize women's development as an integration of both inner (e.g., individual beliefs and values) and external (e.g., interpersonal relationships) processes. However, given that the role of cognitive appraisals in specific stressful situations is still unclear, replication of this appraisal measure is needed on sufficiently large samples so that more sophisticated analyses (i.e., confirmatory factor analysis) can be conducted.

This study also helped to better understand the role of both expressive personality traits and NA in managerial and professional women's experiences of coping with a particular type of work stressor (interpersonal conflict). Stress and coping research, for example, has tended to generalize results across a variety of work stressors, rather than focusing on predominant stressors such as interpersonal conflict. However, as reported earlier, expressive personality traits, assessed by the BSRI (Bem, 1981) failed to contribute to the stress and coping model, thus indicating that alternate measures to assess women's interpersonal strengths be employed in future research.

Given the difficulties in identifying antecedent variables (e.g., personality traits and resources) specific to interpersonal stressors, this line of research could benefit from the application of qualitative research approaches to isolate other variables that are relevant to managerial and professional women's process of coping with stressful interpersonal work conflicts. Results indicated, for example, that 12% of the total variance was accounted for in the current model, therefore suggesting the presence of other unmeasured factors. For example, personality characteristics that promote the

acquisition and preservation of relationships such as those reflected in Hansson et al.'s (1984) relational competence construct may be particularly relevant to the study of interpersonal conflict. Relatedly, attachment style or behaviour, based on early family experiences, may influence the nature of work relationships (cf. Hazan & Shaver, 1990) and therefore be worthy of examination in an interpersonal model of stress and coping.

Occupational stress and coping research could also benefit from continued use of statistical approaches such as structural equation modelling that take into account the reliability of self-report measures and test the reciprocal nature of relationships. Moreover, although retrospective recall of a single stressful event over the past month is typical in occupational stress and coping research, further studies might consider examining several instances of stressful situations on a more micro-level or daily basis in order to provide a broader understanding of one's manner of coping with chronic stressors (e.g., Bolger, DeLongis, Kessler, & Schilling, 1989).

This study has implications for strengthening both counselling psychology research and practice. Within the counselling psychology field, the theory that most closely illustrates specific factors associated with employees' psychological functioning is the Theory of Work Adjustment (TWA; Dawis & Lofquist, 1984), which identifies person-environment characteristics as determinants of work adjustment. This theory proposes that a strong person-environment correspondence leads to greater satisfaction, which is the primary indicator of work adjustment.

Work adjustment research, however, has both ignored other indicators of work

adjustment (e.g., psychological strain symptoms) and failed to identify which combination of individual and environmental factors influence healthy adjustment to stressful work situations. Tinsley (1993), for example, argues that the TWA (Dawis & Lofquist, 1984) does not fully consider the impact of complex cognitive and personality processes on individuals' work adjustment. Results of the present study suggest that an individual's adjustment to work may be influenced by the manner in which she appraises and responds to work-related interpersonal conflicts. Guided by a stress and coping conceptual framework, this study complements work adjustment research in a prospective examination of the relative direct and indirect effects of cognitive appraisals, coping strategies, individual characteristics and resources, and contextual variables on managerial and professional women's distress.

Moreover, results of this study provide direction for how future occupational stress research should examine the role of NA. Although NA was treated as a confounding factor in this study and its effects removed from the path model, other researchers have examined the main, mediating, and moderating (i.e., interactive) effects of NA in the stress and coping process (e.g., Bolger & Zuckerman, 1995; Parkes, 1986, 1990). Given that results of the path models based on both the first- and zero-order correlation matrices indicated that the inclusion of NA significantly influenced only specific variable relationships within the model (e.g., disengagement to distress, instrumentality to daily hassles), future research might include NA as a variable within an interpersonal stress and coping path model to better understand its impact (e.g., moderating effects) on select variable relationships.

The results of this interpersonal stress and coping model for managerial and professional women also have implications for counselling interventions. Given evidence for the negative effects of work-related interpersonal conflict on well-being (e.g., Repetti, 1987, 1993a; Snapp, 1992), there is a need to more clearly understand the factors that contribute to interpersonal conflicts and the ways in which women cope with conflicts. Of particular importance are stress management programs that encourage managerial and professional women to examine core beliefs, values, and philosophies that underly their appraisals of interpersonal work stressors and subsequent coping efforts. Having a clearer understanding of why interpersonal conflicts are appraised in a particular manner may help individuals to determine to what extent, given the nature of their resources and work context, they are able to modify their negative appraisals.

In circumstances where appraisals are considered changeable, cognitive-behavioral interventions (e.g., Ivancevich, Matteson, Freedman, & Phillips, 1990; Matheny, Aycock, Pugh, Curlette, & Silva Cannella, 1986; Meichenbaum, 1977) may be helpful in altering negative (e.g., upsetting, uncontrollable, and threatening) appraisals, which in turn impact coping efforts and distress outcomes. Within this model of interpersonal stress and coping, for example, upsetting stressor appraisals were associated with distress, and upsetting, uncontrollable, and threatening work goal attainment appraisals were each related to increased use of disengagement coping which, in turn, was indirectly related to distress through daily hassles.

In addition, knowledge of one's level of NA (e.g., anxiety, pessimism,

nervousness, and worry) would be useful information in designing individualized counselling interventions for managers and professionals. Stress management interventions, for example, have been found to be effective in reducing trait anxiety, an indicator of NA (Eppley, Abrams, & Shear, 1989). As results of the path model based on the zero-order correlation matrix revealed, trait anxiety (i.e., NA) strengthened the relationships between disengagement coping and distress and between instrumentality and daily hassles for managerial and professional women.

The current results also suggest that the nature of the work setting plays an integral role in how managerial and professional women perceive interpersonal work conflicts. Organizational procedures and policies that adopt mentoring systems and management sensitivity training programs would be helpful in cultivating supportive working environments that both reduce the prevalence of interpersonal conflict within organizations and facilitate positive (e.g., controllable and less threatening work goal attainment) appraisals of workplace conflict. It is recommended, therefore, that interventions be implemented at both the individual and organizational levels in order to most effectively alleviate the negative effects of workplace interpersonal conflict on managerial and professional women's experience of distress.

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Appendix A

Figure A1: Stress and Coping Model for Managerial Women

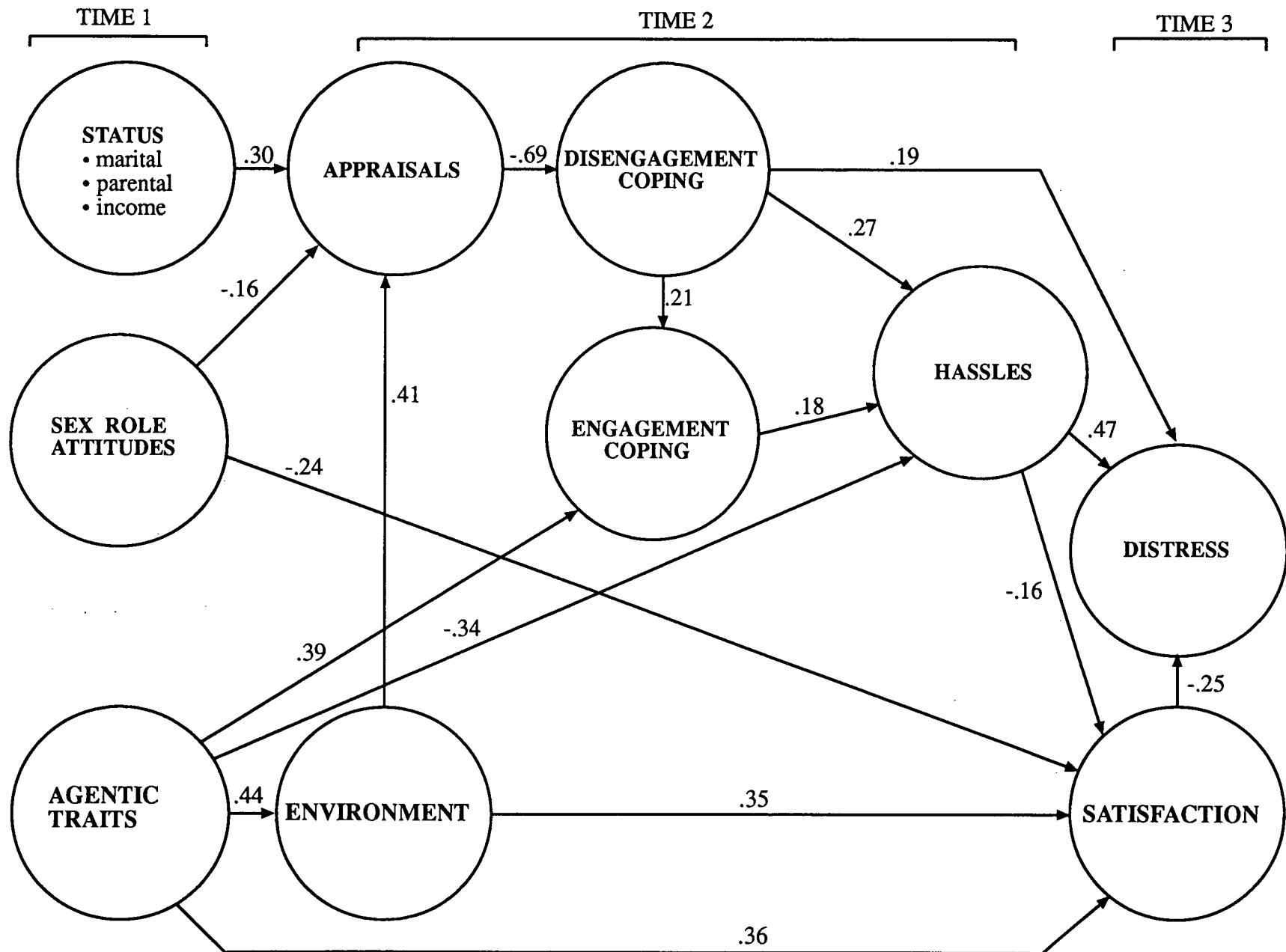


Figure A1. Final Stress and Coping Model for Managerial Women (adapted from Long et al., 1992). (Arrows indicate the direction of relationships among latent variables assessed at three time periods, 1-month apart. Significant paths and standardized LISREL estimates are indicated.)

Appendix B
Advertisement
Canvassing Letter

Appendix C

Covering Letter

Instruction Sheet: Questionnaire Part One

Demographic Questions

The Bem Sex-Role Inventory

The Trait Anxiety Scale of the State-Trait Anxiety Inventory

STRESS AND COPING QUESTIONNAIRE

For purposes of statistical analysis only, please answer the following questions about yourself. Your answers will remain anonymous and strictly confidential. However, this biographical data is crucial to the study. Please answer ALL questions.

Answer the following questions by circling the number next to the most appropriate response, unless otherwise instructed.

- | | |
|---|--|
| <p>1. Are you (circle one only):</p> <p style="margin-left: 40px;">Married/remarried/living with a partner 1</p> <p style="margin-left: 40px;">Single 2</p> <p style="margin-left: 40px;">Divorced/separated/widowed 3</p> | <p>7. Would you describe yourself as a:
(circle one only):</p> <p style="margin-left: 40px;">Financial Manager 1</p> <p style="margin-left: 40px;">Human Resources Manager 2</p> <p style="margin-left: 40px;">Purchasing Manager 3</p> <p style="margin-left: 40px;">Other Administrative Service Manager 4</p> <p style="margin-left: 40px;">Professional Staff employee 5</p> |
| <p>2. What is your age? _____ years</p> | <p>8. What is your job title? _____</p> <p>_____</p> |
| <p>3. What is the highest educational qualification you have obtained?</p> <p style="margin-left: 40px;">Did not graduate from high school 1</p> <p style="margin-left: 40px;">High school graduation 2</p> <p style="margin-left: 40px;">College (2-3 year degree) 3</p> <p style="margin-left: 40px;">University (4-5 year degree) 4</p> <p style="margin-left: 40px;">Post-university degree 5</p> | <p>9. Are you employed <u>full-time</u> (20 hrs + per week) in your present position? (circle one) Yes No</p> |
| <p>4. Number of children in your household:</p> <p style="margin-left: 40px;">None 1</p> <p style="margin-left: 40px;">One 2</p> <p style="margin-left: 40px;">Two 3</p> <p style="margin-left: 40px;">Three 4</p> <p style="margin-left: 40px;">Four or more 5</p> | <p>10. If you answered 'yes' to item 9, please indicate the length of time you have been employed <u>full-time</u> in your present position: _____ months</p> |
| <p>5. Do you have pre-school age children in your household? (circle one) Yes No</p> | <p>11. How many staff do you supervise directly?
(check one):</p> <p style="margin-left: 40px;">_____ None _____ 20-24</p> <p style="margin-left: 40px;">_____ 1-5 _____ 25-29</p> <p style="margin-left: 40px;">_____ 6-9 _____ 30-34</p> <p style="margin-left: 40px;">_____ 10-14 _____ more than 34</p> <p style="margin-left: 40px;">_____ 15-19</p> |
| <p>6. Taking into account all income sources, which of the following income ranges is nearest to your expected <u>gross</u> "household" income for this calendar year?</p> <p style="margin-left: 40px;">Less than \$25,000 1</p> <p style="margin-left: 40px;">\$26,000 to \$40,000 2</p> <p style="margin-left: 40px;">\$41,000 to \$60,000 3</p> <p style="margin-left: 40px;">\$61,000 to \$80,000 4</p> <p style="margin-left: 40px;">\$81,000 to \$100,000 5</p> <p style="margin-left: 40px;">Greater than \$100,000 6</p> | <p>12. What size budget do you control?</p> <p style="margin-left: 40px;">Not applicable 1</p> <p style="margin-left: 40px;">Less than \$50,000 2</p> <p style="margin-left: 40px;">\$51,000 to \$300,000 3</p> <p style="margin-left: 40px;">\$301,000 to \$500,000 4</p> <p style="margin-left: 40px;">\$501,000 to \$1,000,000 5</p> <p style="margin-left: 40px;">\$1,001,000 to \$5,000,000 6</p> <p style="margin-left: 40px;">\$5,001,000 to \$8,000,000 7</p> <p style="margin-left: 40px;">Over \$8,000,000 8</p> |

We would like you to use the following characteristics in order to describe yourself. That is, indicate, on a scale from 1 to 7, how true of you these various characteristics are. Please do not leave any characteristics unmarked. Place appropriate number in the box beside the word.

1	2	3	4	5	6	7
Never or almost never true	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true

Defend my own beliefs	
Affectionate	
Conscientious	
Independent	
Sympathetic	
Moody	
Assertive	
Sensitive to needs of others	
Reliable	
Strong personality	
Understanding	
Jealous	
Forceful	
Compassionate	
Truthful	
Have leadership abilities	
Eager to soothe hurt feelings	
Secretive	
Willing to take risks	
Warm	
Adaptable	
Dominant	
Tender	
Conceited	
Willing to take a stand	
Love children	
Tactful	
Aggressive	
Gentle	
Conventional	
Self-reliant	
Yielding	
Helpful	
Athletic	
Cheerful	
Unsystematic	
Analytical	
Shy	
Inefficient	
Make decisions easily	
Flatterable	
Theatrical	
Self-sufficient	
Loyal	
Happy	
Individualistic	
Soft-spoken	
Unpredictable	
Masculine	
Gullible	
Solemn	
Competitive	
Childlike	
Likable	
Ambitious	
Do not use harsh language	
Sincere	
Act as a leader	
Feminine	
Friendly	

INSTRUCTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then circle the appropriate number to the right of the statement to indicate how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	Almost Never	Sometimes	Often	Almost Always
1. I feel pleasant	1	2	3	4
2. I feel nervous and restless	1	2	3	4
3. I feel satisfied with myself	1	2	3	4
4. I wish I could be as happy as others seem to be	1	2	3	4
5. I feel like a failure	1	2	3	4
6. I feel rested	1	2	3	4
7. I am "calm, cool, and collected"	1	2	3	4
8. I feel that difficulties are piling up so that I cannot overcome them	1	2	3	4
9. I worry too much over something that really doesn't matter	1	2	3	4
10. I am happy	1	2	3	4
11. I have disturbing thoughts	1	2	3	4
12. I lack self-confidence	1	2	3	4
13. I feel secure	1	2	3	4
14. I make decisions easily	1	2	3	4
15. I feel inadequate	1	2	3	4
16. I am content	1	2	3	4
17. Some unimportant thought runs through my mind and bothers me	1	2	3	4
18. I am a steady person	1	2	3	4

		Almost Never	Sometimes	Often	174 Almost Always
19.	I take disappointments so keenly that I can't put them out of my mind	1	2	3	4
20.	I get in a state of tension or turmoil as I think over my recent concerns and interests	1	2	3	4

Thank you for completing Part One of the questionnaire. Please complete and return Part Two in two weeks time.

Appendix D

Covering Letter: Questionnaire Part Two

Primary and Secondary Appraisal Scales

Revised Ways of Coping Checklist (Modified)

The Work Environment Scale

The Hassles Scale

COPING WITH WORK STRESS

Interpersonal conflicts in the workplace are a common source of stress among managers and professionals. The purpose of this section of the questionnaire is to find out the kinds of work-related interpersonal conflicts that trouble employees, and how employees deal with them.

Take a few minutes and think about an interpersonal conflict that you have had at work with a supervisor, colleague, subordinate, faculty member, or client. Please focus on the most stressful conflict you have had with that person during the past two months. By "stressful" we mean a situation with a supervisor, colleague, subordinate, faculty member, or client which was difficult or troubling to you, either because it upset you or because it took effort to deal with it. The interpersonal conflict you identify may have occurred only once or be ongoing. If it is ongoing, please focus on the most recent conflict situation that you have experienced during the past two months.

Interpersonal conflicts may include, for example, differences in management and communication styles, manner of decision-making, company procedures, employee rights, and hiring practises. Interpersonal conflicts are those that threaten or harm you in some manner (e.g., harm your self-esteem, well-being, work goals, working relationships, etc.) The interpersonal conflict you identify must be one in which you were involved, and not one that you witnessed between two other co-workers in your department or organization.

In the space provided below please describe the interpersonal conflict situation (briefly):

1. _____

Please indicate below why this interpersonal conflict was stressful for you:

Please indicate who you were in conflict with in the situation you just described:

(check one) Supervisor _____ Colleague _____ Subordinate _____ Faculty Member _____ Client _____

Please indicate the gender of the person with whom you were in conflict: Male _____ Female _____

To what extent do you regularly experience conflict with this person?

(please circle the correct response)

1	2	3	4
Rarely	Monthly	Weekly	Daily

2. What was the main or primary emotion that you experienced as a result of this event? Write the number 1 next to that emotion. If other emotions were also experienced, number them 2, 3, etc. in their order of importance.

☐ Anger, disgust
☐ Tension, fear or anxiety, worry
☐ Feelings of loss, depression, or guilt
☐ Other (please describe): _____

3. How upsetting was this experience for you?

☐ Not very upsetting
☐ Slightly upsetting
☐ Fairly upsetting
☐ Very upsetting
☐ Extremely upsetting

4. How important did you consider the impact of the conflict situation to be on your day? (please check one response)

☐ Not at all important
☐ Slightly important
☐ Moderately important
☐ Quite important
☐ Extremely important

5. How much control did you feel you had to deal with each of the following?

<u>The situation</u>	<u>Your emotions</u>	<u>Your behaviours</u>
<input type="checkbox"/> No control whatsoever	<input type="checkbox"/> No control whatsoever	<input type="checkbox"/> No control whatsoever
<input type="checkbox"/> Very little control	<input type="checkbox"/> Very little control	<input type="checkbox"/> Very little control
<input type="checkbox"/> Some control	<input type="checkbox"/> Some control	<input type="checkbox"/> Some control
<input type="checkbox"/> A fair amount of control	<input type="checkbox"/> A fair amount of control	<input type="checkbox"/> A fair amount of control
<input type="checkbox"/> A great deal of control	<input type="checkbox"/> A great deal of control	<input type="checkbox"/> A great deal of control

According to your assessment, to what extent is the stressful event described by you

		Not at all				A great deal
1.	one in which you needed to know more before you could act	1	2	3	4	5
2.	one that you could change or do something about	1	2	3	4	5
3.	one that you could accept	1	2	3	4	5
4.	one in which you had to hold yourself back from doing what you wanted to	1	2	3	4	5

STAKES

Please indicate the extent to which each of the following stakes were involved for you in the stressful interpersonal encounter you just described. By stakes, we mean your values, ideals, or goals that were at risk of being threatened, harmed, or lost as a result of the interpersonal conflict, regardless of how you responded to the conflict situation or its outcome. Please circle the appropriate number next to each of the following items.

		Does not apply to me		Applies Somewhat		Applies a Great Deal
1.	I might harm my collaborative working relationship with someone	1	2	3	4	5
2.	I might harm someone's self-esteem	1	2	3	4	5
3.	My suggestions might not be taken seriously	1	2	3	4	5
4.	The work atmosphere might be harmed	1	2	3	4	5
5.	I might appear incompetent	1	2	3	4	5
6.	My department might be unproductive	1	2	3	4	5
7.	I might not achieve an important goal in my job or work	1	2	3	4	5
8.	I might appear unproductive	1	2	3	4	5
9.	I might lose my power to express personal opinions or suggestions	1	2	3	4	5
10.	I might lose respect for someone else	1	2	3	4	5
11.	I might lose status in my job	1	2	3	4	5
12.	I might harm my self-esteem	1	2	3	4	5
13.	I might not trust information provided to me by someone else	1	2	3	4	5
14.	I might not receive recognition in my job	1	2	3	4	5
15.	I might be criticized or falsely accused	1	2	3	4	5
16.	I might fail at my work project(s)	1	2	3	4	5
17.	I might not meet my own expectations	1	2	3	4	5
18.	The clarity and openness of communication within the department might be harmed	1	2	3	4	5
19.	I might harm my emotional well-being	1	2	3	4	5

		Does not apply to me		Applies Somewhat		Applies a Great Deal
20.	Others might harm their emotional well-being	1	2	3	4	5
21.	I might not complete work tasks	1	2	3	4	5
22.	I might lose my self-respect	1	2	3	4	5
23.	I might lose the approval or respect of someone important to me	1	2	3	4	5
24.	I might lose my power to influence others' behaviour or performance	1	2	3	4	5
25.	I might appear to be an uncaring person	1	2	3	4	5
26.	I might not communicate honestly and openly with others at work	1	2	3	4	5
27.	I might not believe that I'm doing something important or worthwhile	1	2	3	4	5

Please check the item below that best describes the outcome of the stressful interpersonal encounter. (Check only one item).

YES

- | | | |
|----|---------------------------------------|-------|
| 1. | Unresolved and worse | _____ |
| 2. | Not changed | _____ |
| 3. | Resolved but not to your satisfaction | _____ |
| 4. | Unresolved but improved | _____ |
| 5. | Resolved to your satisfaction | _____ |
| 6. | Not resolved but no longer a concern | _____ |

COPING

We now want to know how you coped with the conflict situation. Please focus once again on the stressful interpersonal conflict you just described. Below is a list of responses that you may or may not have used in the conflict situation. Please read each response below and indicate by circling the appropriate number, the extent to which you used (i.e., how much you used) each response in the situation you have just described.

		Not Used	Used Somewhat	Used Quite A Bit	Used A Great Deal
1.	Tried to see this as an opportunity to learn new skills	0	1	2	3

		Not Used	Used Somewhat	Used Quite A Bit	Used A Great Deal
2.	Tried to avoid being with people in general	0	1	2	3
3.	Had fantasies or wishes about how things might turn out	0	1	2	3
4.	Criticized or lectured myself	0	1	2	3
5.	Left work as soon as possible for the day	0	1	2	3
6.	Tried to avoid other staff members	0	1	2	3
7.	I went over in my mind what I would say or do	0	1	2	3
8.	Wished that the situation would go away or somehow be over with	0	1	2	3
9.	Expressed my irritation and frustration by swearing, slamming things down, crumpling paper, and so forth	0	1	2	3
10.	Talked to someone about how I was feeling	0	1	2	3
11.	Had a good cry	0	1	2	3
12.	Established some sort of routine	0	1	2	3
13.	I tried to see things from the other person's point of view	0	1	2	3
14.	I expressed anger to the person(s) who caused the problem	0	1	2	3
15.	I daydreamed or imagined a better time or place than the one I was in	0	1	2	3
16.	Tried to get the person responsible to change his or her mind	0	1	2	3
17.	I tried to forget the whole thing	0	1	2	3
18.	Wished that I could change what happened or how I felt	0	1	2	3
19.	Just accepted that it was another job, and got on with it	0	1	2	3
20.	Looked for the silver lining, so to speak; tried to look on the bright side of things	0	1	2	3
21.	Put extra attention on planning and scheduling	0	1	2	3

		Not Used	Used Somewhat	Used Quite A Bit	Used A Great Deal
22.	Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.	0	1	2	3
23.	I tried to keep my feelings from interfering with other things too much	0	1	2	3
24.	I used reason to settle things	0	1	2	3
25.	I thought about how a person I admired would handle this situation and used that as a model	0	1	2	3
26.	Tried to be very organized so that I could keep on top of things	0	1	2	3
27.	Expressed my irritation and frustration to myself	0	1	2	3
28.	Thought how much better things are for me compared to the past or to my peers	0	1	2	3
29.	Came up with a couple of different solutions to the problem	0	1	2	3
30.	Took it out on other people	0	1	2	3
31.	Hoped a miracle would happen	0	1	2	3
32.	Just concentrated on what I had to do next--the next step	0	1	2	3
33.	Simply took one day at a time	0	1	2	3
34.	Tried to think of myself as a winner--as someone who always comes through	0	1	2	3
35.	Slept more than usual	0	1	2	3
36.	I tried to find a solution that was fair to both of us	0	1	2	3
37.	Went along with fate; sometimes I just have bad luck	0	1	2	3
38.	Bargained to get something positive from the situation	0	1	2	3
39.	I met the other person half-way	0	1	2	3
40.	Stood my ground and fought for what I wanted	0	1	2	3
41.	Compromised to get something positive from the situation	0	1	2	3

		Not Used	Used Somewhat	Used Quite A Bit	Used A Great Deal
42.	I did something which I didn't think would work, but at least I was doing something	0	1	2	3
43.	I accepted the next best thing to what I wanted	0	1	2	3
44.	I stated my position directly to the person I was in conflict with	0	1	2	3

Thank you for completing this section of the stress and coping questionnaire. Please write below any other comments you may wish to add, e.g., experiences/techniques you have personally found useful in coping with the interpersonal problems associated with being in a managerial or professional position.

(Questionnaire continues on the next page; Please turn page)

YOUR WORK ENVIRONMENT

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The following statements are about the place in which you work. The statements are intended to apply to all work environments. However, some words may not be quite suitable for your work environment. For example, the term supervisor is meant to refer to the boss, manager, department head, or the person or persons to whom an employee reports. You are to decide which statements are true of your work environment and which are false (during the past month). If you think a statement is true or mostly true of your work environment, circle the letter T (true). If you think the statement is false, or mostly false, circle the letter F (false).

	TRUE	FALSE
1. The work is really challenging.	T	F
2. People go out of their way to help a new employee feel comfortable.	T	F
3. Supervisors tend to talk down to employees.	T	F
4. Few employees have any important responsibilities.	T	F
5. There is constant pressure to keep working.	T	F
6. Things are sometimes pretty disorganized.	T	F
7. There's a strict emphasis on following policies and regulations.	T	F
8. There's not much group spirit.	T	F
9. The atmosphere is somewhat impersonal.	T	F
10. Supervisors usually compliment an employee who does something well.	T	F
11. Employees have a great deal of freedom to do as they like.	T	F
12. There always seems to be an urgency about everything.	T	F
13. Activities are well planned.	T	F
14. People can wear wild looking clothing on the job if they want.	T	F
15. A lot of people seem to be just putting in time.	T	F
16. People take a personal interest in each other.	T	F
17. Supervisors tend to discourage criticisms from employees.	T	F
18. Employees are encouraged to make their own decisions.	T	F
19. People cannot afford to relax.	T	F
20. Rules and regulations are somewhat vague and ambiguous.	T	F
21. People are expected to follow set rules in doing their work.	T	F

		TRUE	FALSE
22.	People seem to take pride in the organization.	T	F
23.	Employees rarely do things together after work.	T	F
24.	Supervisors usually give full credit to ideas contributed by employees.	T	F
25.	People can use their own initiative to do things.	T	F
26.	Nobody works too hard.	T	F
27.	The responsibilities of supervisors are clearly defined.	T	F
28.	Supervisors keep a rather close watch on employees.	T	F
29.	People put quite a lot of effort into what they do.	T	F
30.	People are generally frank about how they feel.	T	F
31.	Supervisors often criticize employees over minor things.	T	F
32.	Supervisors encourage employees to rely on themselves when a problem arises.	T	F
33.	There is no time pressure.	T	F
34.	The details of assigned jobs are generally explained to employees.	T	F
35.	Rules and regulations are pretty well enforced.	T	F
36.	Few people ever volunteer.	T	F
37.	Employees often eat lunch together.	T	F
38.	Employees generally feel free to ask for a raise.	T	F
39.	Employees generally do not try to be unique and different.	T	F
40.	It is very hard to keep up with your work load.	T	F
41.	Employees are often confused about exactly what they are supposed to do.	T	F
42.	Supervisors are always checking on employees and supervise them very closely.	T	F
43.	It is quite a lively place.	T	F
44.	Employees who differ greatly from the others in the organization don't get on well.	T	F

		TRUE	FALSE
45.	Supervisors expect far too much from employees.	T	F
46.	Employees are encouraged to learn things even if they are not directly related to the job.	T	F
47.	You can take it easy and still get your work done.	T	F
48.	Fringe benefits are fully explained to employees.	T	F
49.	Supervisors do not often give in to employee pressure.	T	F
50.	It's hard to get people to do any extra work.	T	F
51.	Employees often talk to each other about their personal problems.	T	F
52.	Employees discuss their personal problems with supervisors.	T	F
53.	Employees function fairly independently of supervisors.	T	F
54.	There are always deadlines to be set.	T	F
55.	Rules and policies are constantly changing.	T	F
56.	Employees are expected to conform rather strictly to the rules and customs.	T	F
57.	The work is usually very interesting.	T	F
58.	Often people make trouble by talking behind others' backs.	T	F
59.	Supervisors really stand up for their people.	T	F
60.	Supervisors meet with employees regularly to discuss their future work goals.	T	F
61.	People often have to work overtime to get their work done.	T	F
62.	Supervisors encourage employees to be neat and tidy.	T	F
63.	If an employee comes in late, s/he can make it up by staying late.	T	F

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HASSLES

Directions:

HASSLES are irritants than can range from minor annoyances to fairly major pressures, problems, or difficulties; they can make you upset or angry. Some hassles occur on a fairly regular basis and others are relatively rare. Some have only a slight effect, while others have a strong effect.

Listed below are a number of ways in which a person can feel hassled. Please think about how much of a hassle each item has been for you **in the past month**. Indicate how much of a hassle the item has been for you in the **past month** by **circling the appropriate number**.

How much of a hassle was this for you in the past month?

		None or Not applicable	Somewhat	Quite A Bit	A Great Deal
1.	Your child(ren)	0	1	2	3
2.	Your parents or parents-in-law	0	1	2	3
3.	Other relative(s)	0	1	2	3
4.	Your spouse	0	1	2	3
5.	Time spent with family	0	1	2	3
6.	Health or well-being of a family member	0	1	2	3
7.	Intimacy	0	1	2	3
8.	Family-related obligations	0	1	2	3
9.	Your friend(s)	0	1	2	3
10.	Enough money for necessities (food, clothing, housing, health care, taxes, insurance, etc.)	0	1	2	3
11.	Enough money for education	0	1	2	3
12.	Enough money for emergencies	0	1	2	3
13.	Enough money for extras (entertainment, recreation, vacations, etc.)	0	1	2	3
14.	Financial care for someone who doesn't live with you	0	1	2	3
15.	Investments	0	1	2	3
16.	Your smoking	0	1	2	3
17.	Your drinking	0	1	2	3
18.	Your physical appearance	0	1	2	3
19.	Exercise(s)	0	1	2	3
20.	Your medical care	0	1	2	3

How much of a hassle was this for you in the past month?

		None or Not applicable	Somewhat	Quite A Bit	A Great Deal
21.	The weather	0	1	2	3
22.	News events	0	1	2	3
23.	Your environment (quality of air, noise level, greenery, etc.)	0	1	2	3
24.	Political or social issues	0	1	2	3
25.	Your neighbourhood (neighbours, setting)	0	1	2	3
26.	Conserving (gas, electricity, water, gasoline, etc.)	0	1	2	3
27.	Pets	0	1	2	3
28.	Cooking	0	1	2	3
29.	Housework	0	1	2	3
30.	Home repairs	0	1	2	3
31.	Yardwork	0	1	2	3
32.	Car maintenance	0	1	2	3
33.	Taking care of paperwork (paying bills, filling out forms, etc.)	0	1	2	3
34.	Home entertainment (TV, music, reading, etc.)	0	1	2	3
35.	Amount of free time	0	1	2	3
36.	Recreation and entertainment outside the home (movies, sports, eating out, walking, etc.)	0	1	2	3
37.	Eating (at home)	0	1	2	3
38.	Church or community organizations	0	1	2	3
39.	Legal matters	0	1	2	3
40.	Being organized	0	1	2	3
41.	Social commitments	0	1	2	3
42.	Your job security	0	1	2	3
43.	Time alone	0	1	2	3

44. HAVE WE MISSED ANY OF YOUR HASSLES?
IF SO WRITE THEM BELOW:

Appendix E

Covering Letter: Questionnaire Part Three

The Symptom Check List-90-R

Summary of Results Request Form

Monetary Award Entry Form

INSTRUCTIONS:

Below is a list of problems people sometimes have. Please read each one carefully, and blacken the circle that best describes **HOW MUCH THAT PROBLEM HAS DISTRESSED OR BOTHERED YOU DURING THE PAST 7 DAYS INCLUDING TODAY**. Blacken the circle for only one number for each problem and do not skip any items. If you change your mind, erase your first mark carefully.

		Not at All	A Little Bit	Moderately	Quite A Bit	Extremely
<i>HOW MUCH WERE YOU DISTRESSED BY:</i>						
1.	Headaches	0	1	2	3	4
2.	Nervous or shakiness inside	0	1	2	3	4
3.	Repeated unpleasant thoughts that won't leave your mind	0	1	2	3	4
4.	Faintness or dizziness	0	1	2	3	4
5.	Loss of sexual interest or pleasure	0	1	2	3	4
6.	Feeling critical of others	0	1	2	3	4
7.	The idea that someone else can control your thoughts	0	1	2	3	4
8.	Feeling others are to blame for most of your troubles	0	1	2	3	4
9.	Trouble remembering things	0	1	2	3	4
10.	Worried about sloppiness or carelessness	0	1	2	3	4
11.	Feeling easily annoyed or irritated	0	1	2	3	4
12.	Pains in heart or chest	0	1	2	3	4
13.	Feeling afraid in open spaces or on the streets	0	1	2	3	4
14.	Feeling low in energy or slowed down	0	1	2	3	4
15.	Thoughts of ending your life	0	1	2	3	4
16.	Trembling	0	1	2	3	4

		Not at All	A Little Bit	Moderately	Quite A Bit	Extremely
17.	Hearing voices that other people do not hear	0	1	2	3	4
18.	Feeling that most people cannot be trusted	0	1	2	3	4
19.	Poor appetite	0	1	2	3	4
20.	Crying easily	0	1	2	3	4
21.	Feeling shy or uneasy with the opposite sex	0	1	2	3	4
22.	Feeling of being caught or trapped	0	1	2	3	4
23.	Suddenly scared for no reason	0	1	2	3	4
24.	Temper outbursts that you could not control	0	1	2	3	4
25.	Feeling afraid to go out of your house alone	0	1	2	3	4
26.	Blaming yourself for things	0	1	2	3	4
27.	Pains in lower back	0	1	2	3	4
28.	Feeling blocked in getting things done	0	1	2	3	4
29.	Feeling lonely	0	1	2	3	4
30.	Feeling blue	0	1	2	3	4
31.	Worrying too much about things	0	1	2	3	4
32.	Feeling no interest in things	0	1	2	3	4
33.	Feeling fearful	0	1	2	3	4
34.	Having to repeat the same actions such as touching, counting, or washing	0	1	2	3	4
35.	Feeling others do not understand you or are unsympathetic	0	1	2	3	4

		Not at All	A Little Bit	Moderately	Quite A Bit	Extremely
36.	Your feelings being easily hurt	0	1	2	3	4
37.	Feeling that people are unfriendly or dislike you	0	1	2	3	4
38.	Having to do things very slowly to insure correctness	0	1	2	3	4
39.	Heart pounding or racing	0	1	2	3	4
40.	Nausea or upset stomach	0	1	2	3	4
41.	Feeling inferior to others	0	1	2	3	4
42.	Soreness of your muscles	0	1	2	3	4
43.	Feeling that you are watched or talked about by others	0	1	2	3	4
44.	Trouble falling asleep	0	1	2	3	4
45.	Having to check and double-check what you do	0	1	2	3	4
46.	Difficulty in making decisions	0	1	2	3	4
47.	Feeling afraid to travel on buses, subways, or trains	0	1	2	3	4
48.	Trouble getting your breath	0	1	2	3	4
49.	Hot or cold spells	0	1	2	3	4
50.	Having to avoid certain things, places or activities because they frighten you	0	1	2	3	4
51.	Your mind going blank	0	1	2	3	4
52.	Numbness or tingling in parts of your body	0	1	2	3	4
53.	Feeling hopeless about the future	0	1	2	3	4
54.	Feeling that people will take advantage of you if you let them	0	1	2	3	4

		Not at All	A Little Bit	Moderately	Quite A Bit	Extremely
55.	A lump in your throat	0	1	2	3	4
56.	Trouble concentrating	0	1	2	3	4
57.	Feeling weak in parts of your body	0	1	2	3	4
58.	Feeling tense or keyed up	0	1	2	3	4
59.	Heavy feelings in your arms or legs	0	1	2	3	4
60.	Thoughts of death or dying	0	1	2	3	4
61.	Overeating	0	1	2	3	4
62.	Feeling uneasy when people are watching or talking about you	0	1	2	3	4
63.	Having thoughts that are not your own	0	1	2	3	4
64.	Having urges to beat, injure, or harm someone	0	1	2	3	4
65.	Awakening in the early morning	0	1	2	3	4
66.	Sleep that is restless or disturbed	0	1	2	3	4
67.	Having urges to break or smash things	0	1	2	3	4
68.	Having ideas or beliefs that others do not share	0	1	2	3	4
69.	Feeling very self-conscious with others	0	1	2	3	4
70.	Feeling uneasy in crowds, such as shopping or at a movie	0	1	2	3	4
71.	Other people being aware of your private thoughts	0	1	2	3	4
72.	Feeling uncomfortable about eating or drinking in public	0	1	2	3	4

		Not at All	A Little Bit	Moderately	Quite A Bit	Extremely
73.	Feeling everything is an effort	0	1	2	3	4
74.	Spells of terror or panic	0	1	2	3	4
75.	Getting into frequent arguments	0	1	2	3	4
76.	Feeling so restless you can't sit still	0	1	2	3	4
77.	Feeling nervous when you are left alone	0	1	2	3	4
78.	Others not giving you proper credit for your achievements	0	1	2	3	4
79.	Feeling lonely even when you are with people	0	1	2	3	4
80.	Feelings of worthlessness	0	1	2	3	4
81.	Shouting or throwing things	0	1	2	3	4
82.	The feeling that something bad is going to happen to you	0	1	2	3	4
83.	Feeling afraid you will faint in public	0	1	2	3	4
84.	Having thoughts about sex that bother you a lot	0	1	2	3	4
85.	The idea that you should be punished for your sins	0	1	2	3	4
86.	Thoughts and images of a frightening nature	0	1	2	3	4
87.	The idea that something serious is wrong with your body	0	1	2	3	4
88.	Never feeling close to another person	0	1	2	3	4
89.	Feelings of guilt	0	1	2	3	4
90.	The idea that something is wrong with your mind	0	1	2	3	4

**REQUEST FOR SUMMARY REPORT OF FINDINGS/
PARTICIPATION IN STRESS MANAGEMENT WORKSHOP**

I wish to receive a summary report of the study's findings:

(please check) Yes _____ No _____

I wish to be contacted about participating in a stress management workshop with other university-employed managerial and professional women:

(please check) Yes _____ No _____

Name: _____

Address: _____

Telephone No. _____

Please mail this form separate from your completed questionnaire using the attached letter-size reply envelope.

Appendix F

Pilot Study Report

Pilot Study Questionnaire

Pilot Study Report

Procedure. The pilot study, which involved several phases, was conducted to refine the primary appraisal and coping instruments that were used in the main study. The pilot study was designed to develop primary appraisal and coping items so that factor analyses could identify primary appraisal and coping factors specific to managers' and professionals' experiences of work-related interpersonal stressors. The first phase of the pilot study involved conducting a focus group discussion, which was taped and later transcribed, with seven university-employed managers and professionals to gain information about how employees appraise and cope with stressful interpersonal conflicts at work. Content analysis was then performed on the focus group transcript to determine which threats, harms, or losses (i.e., primary appraisal stakes) managers and professionals associated with interpersonal conflicts at work, and which coping strategies they used to deal with conflict situations. Based on focus group information and relevant stress and coping and organizational behaviour theory and research, a selection of 42 primary appraisal and 66 coping items were developed (see Appendix G for primary appraisal and coping item sources).

The next phase of the pilot study involved conducting a pre-evaluation group, during which six members of the original focus group were asked to comment on the relevance of primary appraisal and coping items, ease of instructions, and general reactions to the questionnaire. Respondents reported that select primary appraisal and coping items did not accurately reflect their experiences with interpersonal work stressors and that coping scale instructions required further clarification. On the basis of group members' comments and recommendations, primary appraisal and coping

items, in addition to coping questionnaire instructions, were then modified (see Appendix H for reworded items and instructions).

Finally, the researcher contacted representatives from two provincial universities to request permission to distribute questionnaires to university-employed managers and professionals. An advertisement was posted in one university's employee newsletter describing the preliminary study and requesting the participation of managers and professionals. Each university representative provided the researcher with a computer-generated random list of equal numbers of male and female managers and professionals. Using the campus mailing system, questionnaires were distributed to 436 male and female managers and professionals at the University of Victoria (UVic) and three months later, to 400 managers and professionals at the University of British Columbia (UBC; see the attached pilot study questionnaire). Managers and professionals who had not experienced an interpersonal conflict in the past month were asked to complete and return only the demographic questions. Seven weeks after questionnaire distribution at UBC, follow-up letters were mailed to the 400 UBC managers and professionals to invite those individuals who had not yet responded to the questionnaire to do so. Following pilot study analyses, a summary report of the study's findings was sent to those participants who requested one.

Of the 836 questionnaires that were distributed, 243 (123 from UVic and 120 from UBC) were returned resulting in a 29% return rate. Of the returned questionnaires, 133 were used in data analyses (66 and 67, respectively, were from UVic and UBC managerial and professional workers). One-hundred and ten questionnaires were unusable due to failure to provide an appropriate example of an

interpersonal conflict situation (4), or failure to complete appraisal and coping items (106) attributed in part to not having experienced a conflict during the previous month, as reported by a number of respondents who returned only completed demographic information.

Participants. Pilot study participants included 133 male ($N=56$) and female ($N=77$) volunteers in managerial (41%) and professionals (59%) positions from two provincial universities. Eligibility criteria included having experienced an interpersonal conflict with a co-worker, supervisor, subordinate, or faculty member during the past month. Respondents ranged in age from 25 to 61 years ($M=42.2$, $SD=9.1$; see Table F1 for complete demographic information). The average number of months that respondents were employed full-time in their current position was 72.2 (6 years; range 2 months to 26 years). The sample consisted of directors (9%); managers; (15%); coordinators (24%); supervisors (2%); and assistants (12%).

The majority of respondents (90%) had college or more formal education. Sixty-four percent of managers and professionals were married and 41% reported having children living with them in their homes. Approximately 14% of respondents reported their combined annual income as \$40,000 CDN or less; 30% reported between \$41,000 and \$60,000; with the balance of 56% reporting above that. The number of staff that respondents reported supervising ranged from 1 to over 34, with the majority of respondents (60%) supervising between 1 and 9 staff members. With respect to the amount of budgetary control, 28% of respondents reported that they controlled no budget; approximately 11% controlled a budget of less than \$50,000; approximately 20% controlled a budget of between \$51,000 and \$300,000; with the

Table F1

Pilot Study Demographic Information of Managers and Professionals (N=133)

Variable	<u>M</u>	<u>SD</u>	<u>f</u>	Range	%
Age (years)	42.2	9.1		25-61	
Months Full-time Experience in Current Position	72.2	70.5		2-312	
Number of Household Income Earners	1.6	0.6		1-4	
Gender					
Male			56		42.1
Female			77		57.9
Marital Status					
Married			85		63.9
Single			33		24.8
Divorced-Separated-Widowed			15		11.3
Education					
High School Graduation			13		9.8
College			19		14.3
University			49		36.8
Post-University (Graduate) Degree			51		38.3
Missing			1		0.8
Number of Children in the Household					
None			79		59.4
One			24		18.0
Two			23		17.3
Three			2		1.5
Four or More			4		3.0
Missing			1		0.8
Number of Employees with Pre-School Age Children in the Household			13		9.8
Full-time Employment Status			130		97.7

(table continues)

Variable	<u>M</u>	<u>SD</u>	f	Range	%
Combined Annual Income					
\$26,000 - \$ 40,000			18		13.5
\$41,000 - \$ 60,000			40		30.1
\$61,000 - \$ 80,000			29		21.8
\$81,000 - \$100,000			21		15.8
Greater than \$100,000			24		18.0
Missing			1		0.8
Type of Position					
Financial Manager			10		7.5
Human Resources Manager			9		6.8
Purchasing Manager			1		0.8
Other Administrative Service Manager			32		24.1
Professional Staff Employee			78		58.6
Missing			3		2.3
Job Title					
Director			12		9.0
Manager			20		15.0
Coordinator			32		24.1
Supervisor			3		2.3
Assistant			16		12.0
Other			46		34.6
Missing			4		3.0
Number of Staff Supervised					
None			29		21.8
1- 5			61		45.9
6- 9			18		13.5
10-19			11		8.3
20-34			9		6.8
Greater than 34			4		3.0
Missing			1		0.8
Amount of Budgetary Control					
Not applicable			37		27.8
Less than \$50,000			14		10.5
\$51,000 to \$300,000			26		19.5
\$301,000 to \$500,000			11		8.3

(table continues)

Variable	<u>M</u>	<u>SD</u>	<u>f</u>	Range	%
\$501,000 to \$1,000,000			13		9.8
\$1,001,000 to \$5,000,000			14		10.5
\$5,001,000 to \$8,000,000			9		6.8
Greater than \$8,000,000			8		6.0
Missing			1		0.8

balance of 41% reporting control of a budget greater than \$300,000.

Preliminary descriptive analysis. Managers and professionals who returned usable questionnaires ($N=133$) were compared on demographic information with those who returned unusable or incomplete questionnaires ($N=110$). Chi-square tests of independence revealed that there were no differences in the proportion of male and female managers with usable and unusable data by gender, $\chi^2(1, N=243) = 1.21$, $p > .26$; education, $\chi^2(3, N=242) = .62$, $p > .88$; income, $\chi^2(4, N=242) = 3.94$, $p > .40$; type of position, $\chi^2(4, N=235) = 3.48$, $p > .47$; parental status, $\chi^2(3, N=242) = 2.14$, $p > .53$; job title, $\chi^2(5, N=235) = 6.59$, $p > .24$; and number of staff supervised, $\chi^2(4, N=242) = 7.79$, $p > .09$. In addition, ANOVA indicated that the groups did not differ on age, $F(1, N=241) = 2.76$, $p > .09$.

ANOVA revealed, however, that the groups differed on months of experience, $F(1, N=232) = 4.0$, $p < .05$. Moreover, significant differences emerged on characteristics of marital status, $\chi^2(2, N=243) = 7.60$, $p < .03$, and amount of budgetary control, $\chi^2(6, N=241) = 16.55$, $p < .02$. A visual inspection of frequency data revealed that a greater number of respondents who returned usable questionnaires were single and divorced, separated, or widowed, with less job tenure and greater budgetary control, compared with those who returned unusable data. Although there is no systematic evidence to suggest that respondents who returned usable questionnaires differ from those who returned unusable data, it is possible that marital status, tenure, and amount of budgetary control are associated with the frequency with which managers and professionals experience interpersonal conflicts at work.

The first stage of analysis compared the two groups (UBC and UVic) of

managers and professionals on demographic information. Chi-square tests of independence revealed that there were no differences between UVic ($N=66$) and UBC ($N=67$) respondents by gender, $\chi^2(1, N=133) = .06, p > .79$; education, $\chi^2(3, N=132) = 5.95, p > .10$; income, $\chi^2(4, N=132) = 6.55, p > .15$; type of position, $\chi^2(4, N=130) = 3.10, p > .53$; job title, $\chi^2(5, N=129) = 5.34, p > .37$; number of staff supervised, $\chi^2(3, N=132) = .82, p > .84$; and amount of budgetary control, $\chi^2(4, N=132) = 7.29, p > .11$. In addition, ANOVA revealed that the groups did not differ on age, $F < 1$, or mean levels of months of experience, $F(1, N=126) = 3.06, p > .07$. However, significant differences emerged on characteristics of marital status, $\chi^2(2, N=133) = 14.40, p < .0008$, and parental status, $\chi^2(2, N=132) = 8.0, p < .02$, with a greater number of UVic versus UBC managers and professionals reporting being married and having more children living with them. These results, however require replication on a larger sample before firm conclusions can be established. Despite noted differences in marital and parental status between UVic and UBC respondents, it was concluded that the two groups of university-employed managers and professionals were generally not characteristically different from each another.

Data analysis. Preliminary analysis on the pilot study data included descriptive data, such as means, medians, standard deviations, frequencies, and Pearson product-moment correlations. In addition, the data was examined to determine whether there were any consistent patterns of missing data across or within respondents on the coping and appraisal scales. A minimal number of missing items were randomly scattered throughout the cases, for which group means were inserted.

Item-scale correlations, histograms, and frequencies were then conducted to determine whether any appraisal items could be dropped from the item pool. A visual inspection of the item-scale correlation matrix, however, failed to discriminate irrelevant items (i.e., items that correlated less than .30 with their intended subscale). The skewness and kurtosis of item histograms, in addition to the frequency of item endorsements were then examined. Non-endorsement rates for primary appraisal items were calculated by summing the frequency of responses on values (1) and (2) on each item's 5-point scale. Primary appraisal items that were weakly endorsed by respondents were systematically dropped from the item pool. Specifically, 2 items were dropped at a 95% non-endorsement rate; 0 items at a 90% non-endorsement rate; 3 items each at 85% and 80% non-endorsement rates; 2 items at a 75% non-endorsement rate; and 3 and 2 items respectively at 70% and 65% non-endorsement rates. A total of 15 items were dropped, resulting in 27 primary appraisal stake items. Although the small pilot study sample precluded further factor analyses on the 27 primary appraisal stake items, these items were later used in the main study.

With respect to coping item analysis, the initial intent of the pilot study was to conduct confirmatory factor analysis (CFA) on 65 of the 66 coping items administered to pilot study respondents. The remaining coping item (i.e., "I tried something entirely different from any of the above") was administered solely for descriptive purposes to determine whether managers and professionals reported using any coping strategies other than those listed on the questionnaire. The goal of factor analysis was to determine whether a separate interpersonal coping factor would emerge from the data or whether items dealing with the interpersonal dimension would be subsumed

under either an engagement or disengagement coping factor. The 65 coping items that were to be factor analyzed consisted of 32 engagement and disengagement coping items used in Long et al.'s (1992) model and 33 items that were developed during initial stages of the pilot study. The newly developed items characterized engagement, disengagement, and interpersonal forms of coping specific to interpersonal stressors. However, the small sample size prevented CFA on the 65 coping items.

Similarly, the small pilot study sample size precluded CFA on the original engagement (14) and disengagement (19) coping items from Long et al.'s model, in addition to the 11 interpersonal coping items that were developed during initial stages of the pilot study. This composition of 44 coping items, however, was later incorporated and factor analyzed in the main study. Pilot study analysis yielded high internal consistency coefficients (Cronbach's alpha) for the composition of engagement (.85) and disengagement (.86) coping items, and an acceptable internal consistency coefficient (.77) for the composition of interpersonal coping items.

The final stage of the pilot study involved reviewing completed questionnaires for respondents' comments regarding the clarity and relevance of items and instructions. Based on respondents' comments and suggestions, minor changes were then made to the questionnaire for the main study (e.g., the definition of interpersonal conflict was refined and conflicts with one's work clients were included as appropriate examples of stressful interpersonal conflicts).

STRESS AND COPING QUESTIONNAIRE

For purposes of statistical analysis only, please answer the following questions about yourself. Your answers will remain anonymous and strictly confidential. However, this biographical data is crucial to the study. Please answer ALL questions.

Answer the following questions by circling the number next to the most appropriate response, unless otherwise instructed.

1. Are you: Male Female (please circle)
2. Are you (circle one only):

Married/remarried/living with a partner	1
Single	2
Divorced/separated/widowed	3
3. What is your age? _____ years
4. What is the highest educational qualification you have obtained?

Did not graduate from high school	1
High school graduation	2
College (2-3 year degree)	3
University (4-5 year degree)	4
Post-university degree	5
5. Number of children in your household:

None	1
One	2
Two	3
Three	4
Four or more	5
6. Do you have pre-school age children in your household? (circle one) Yes No
7. Taking into account all income sources, which of the following income ranges is nearest to your expected gross "household" income for this calendar year?

Less than \$25,000	1
\$26,000 to \$40,000	2
\$41,000 to \$60,000	3
\$61,000 to \$80,000	4
\$81,000 to \$100,000	5
Greater than \$100,000	6
8. Number of income earners in your household: _____
9. Would you describe yourself as a: (circle one only):

Financial Manager	1
Human Resources Manager	2
Purchasing Manager	3
Other Administrative Service Manager	4
Professional Staff employee	5
10. What is your job title? _____
11. Are you employed full-time (20 hrs+ per week) in your present position? (circle one) Yes No
12. If you answered 'yes' to item 11, please indicate the length of time you have been employed full-time in your present position: _____ months.
13. How many staff do you supervise directly? (check one):

_____ None	_____ 20-24
_____ 1-5	_____ 25-29
_____ 6-9	_____ 30-34
_____ 10-14	_____ more than 34
_____ 15-19	
14. What size budget do you control?

Not applicable	1
Less than \$50,000	2
\$51,000 to \$300,000	3
\$301,000 to \$500,000	4
\$501,000 to \$1,000,000	5
\$1,001,000 to \$5,000,000	6
\$5,001,000 to \$8,000,000	7
Over \$8,000,000	8

Coping with Work Stress

Interpersonal conflicts in the workplace are a common source of stress among employees. The purpose of this questionnaire is to find out the kinds of interpersonal conflicts at work that bother employees, and how employees deal with them.

Take a few minutes and think about an interpersonal conflict that you have had at work with a supervisor, co-worker, subordinate, or faculty member. Please focus on the most stressful conflict you have had with that person during the past month. By "stressful" we mean a conflict situation with a supervisor, co-worker, subordinate, or faculty member which was difficult or troubling to you, either because it upset you or because it took effort to deal with it. The interpersonal conflict you identify may have occurred only once or be ongoing. If it is ongoing, please focus on the most recent conflict situation that you have experienced.

Interpersonal conflicts may include, for example, differences in management and communication styles, decision making processes, departmental or organizational procedures, employee rights, and hiring practises. The interpersonal conflict you identify must be one in which you were involved, and not one that you witnessed between two other co-workers in your department or organization.

If you did not experience a conflict with a supervisor, co-worker, subordinate, or faculty member in the past month, please return the entire questionnaire package in the inter-university envelope provided with page 1 completed.

In the space provided below please describe the interpersonal conflict situation (briefly):

1. _____

Please indicate below why this interpersonal conflict was stressful for you:

Please indicate who you were in conflict with in the situation you just described:

(check one) Supervisor _____ Co-worker _____ Subordinate _____ Faculty Member _____

Please indicate the gender of the person with whom you were in conflict: Male _____ Female _____

To what extent do you regularly experience conflict with this person?

(please circle the correct response)

1	2	3	4
Rarely	Daily	Weekly	Monthly

To what extent is this person in conflict with other employees in the organization or department?

(please circle the correct response)

1	2	3	4
Rarely	Daily	Weekly	Monthly

2. How important did you consider the impact of the conflict situation to be on your day? (please check one response)

☐ Not at all important
☐ Slightly important
☐ Moderately important
☐ Quite important
☐ Extremely important

3. What was the main or primary emotion that you experienced as a result of this event? Write the number 1 next to that emotion. If other emotions were also experienced, number them 2, 3, etc. in their order of importance.

☐ Anger, disgust
☐ Tension, fear or anxiety, worry
☐ Feelings of loss, depression, or guilt
☐ Other (please describe): _____

4. How upsetting was this experience for you?

☐ Not very upsetting
☐ Slightly upsetting
☐ Fairly upsetting
☐ Very upsetting
☐ Extremely upsetting

5. How much control did you feel you had to deal with each of the following?

<u>The situation</u>	<u>Your emotions</u>	<u>Your behaviours</u>
<input type="checkbox"/> No control whatsoever	<input type="checkbox"/> No control whatsoever	<input type="checkbox"/> No control whatsoever
<input type="checkbox"/> Very little control	<input type="checkbox"/> Very little control	<input type="checkbox"/> Very little control
<input type="checkbox"/> Some control	<input type="checkbox"/> Some control	<input type="checkbox"/> Some control
<input type="checkbox"/> A fair amount of control	<input type="checkbox"/> A fair amount of control	<input type="checkbox"/> A fair amount of control
<input type="checkbox"/> A great deal of control	<input type="checkbox"/> A great deal of control	<input type="checkbox"/> A great deal of control

According to your assessment, to what extent is the stressful event described by you

		Not at all			A great deal
1.	one in which you needed to know more before you could act	1	2	3	4 5
2.	one that you could change or do something about	1	2	3	4 5
3.	one that you could accept	1	2	3	4 5
4.	one in which you had to hold yourself back from doing what you wanted to	1	2	3	4 5

STAKES

Please indicate the extent to which each of the following **stakes** were involved **for you** in the **stressful interpersonal encounter** you just described. By **stakes**, we mean your values, ideals or goals that were at risk of being threatened, harmed, or lost in the conflict situation, regardless of how you responded to the situation or its outcome. Please **circle** the appropriate number next to each of the following items.

	Does not Apply to Me		Applies Somewhat		Applies a Great Deal
1. I might harm my collaborative working relationship with someone	1	2	3	4	5
2. I might harm someone's self-esteem	1	2	3	4	5
3. I might not find my work interesting or challenging	1	2	3	4	5
4. My suggestions might not be taken seriously	1	2	3	4	5
5. The work atmosphere might be harmed	1	2	3	4	5
6. I might appear incompetent	1	2	3	4	5
7. I might appear unethical	1	2	3	4	5
8. I might fail at an important goal in my job or work	1	2	3	4	5
9. My department might be unproductive	1	2	3	4	5
10. I might not share information with someone else	1	2	3	4	5
11. Someone might ignore me	1	2	3	4	5
12. I might appear unproductive	1	2	3	4	5
13. I might lose my power to express personal opinions or suggestions	1	2	3	4	5
14. I might lose autonomy in my job	1	2	3	4	5
15. I might lose respect for someone else	1	2	3	4	5
16. Others might harm their physical safety	1	2	3	4	5
17. I might harm my physical safety	1	2	3	4	5
18. I might lose status in my job	1	2	3	4	5
19. I might lose a job promotion	1	2	3	4	5
20. I might harm my self-esteem	1	2	3	4	5

		Does not Apply to Me		Applies Somewhat		Applies a Great Deal
21.	I might not trust information provided to me by someone else	1	2	3	4	5
22.	I might fail at my job	1	2	3	4	5
23.	I might not receive recognition in my job	1	2	3	4	5
24.	I might be criticized or falsely accused	1	2	3	4	5
25.	I might fail at my work project(s)	1	2	3	4	5
26.	I might not meet my own expectations	1	2	3	4	5
27.	The clarity and openness of communication within the department might be harmed	1	2	3	4	5
28.	I might harm my emotional well-being	1	2	3	4	5
29.	Others might harm their emotional well-being	1	2	3	4	5
30.	I might not receive feedback about my job performance	1	2	3	4	5
31.	I might lose a pay raise	1	2	3	4	5
32.	I might harm my physical health	1	2	3	4	5
33.	I might lose my job	1	2	3	4	5
34.	I might lose my self-respect	1	2	3	4	5
35.	I might lose the approval or respect of someone important to me	1	2	3	4	5
36.	I might lose my power to influence others' behaviour or performance	1	2	3	4	5
37.	I might not complete work tasks	1	2	3	4	5
38.	I might lose the affection of someone important to me	1	2	3	4	5
39.	I might appear to be an uncaring person	1	2	3	4	5
40.	I might not communicate honestly and openly with other people at work	1	2	3	4	5
41.	I might not believe that I'm doing something important or worthwhile	1	2	3	4	5
42.	I might strain my financial resources	1	2	3	4	5

Please check the item below that best describes the outcome of the stressful interpersonal encounter. (Check only one item).

YES

- | | | |
|----|---------------------------------------|-------|
| 1. | Unresolved and worse | _____ |
| 2. | Not changed | _____ |
| 3. | Resolved but not to your satisfaction | _____ |
| 4. | Unresolved but improved | _____ |
| 5. | Resolved to your satisfaction | _____ |
| 6. | Not resolved but no longer a concern | _____ |

COPING

We now want to know how you coped with the conflict situation. Please focus once again on the stressful interpersonal conflict you just described. Below is a list of responses that you may or may not have used in the conflict situation. Please read each response below and indicate by circling the appropriate number, the extent to which you used each response in the situation you have just described.

	Not Used	Used Somewhat	Used Quite A Bit	Used A Great Deal
1. Tried to see this as an opportunity to learn new skills	0	1	2	3
2. I turned to work or other substitute activities to take my mind off things	0	1	2	3
3. Tried to avoid being with people in general	0	1	2	3
4. Had fantasies or wishes about how things might turn out	0	1	2	3
5. Criticized or lectured myself	0	1	2	3
6. Left work as soon as possible for the day	0	1	2	3
7. Tried to avoid other staff members	0	1	2	3
8. Accepted it, since nothing could be done	0	1	2	3
9. Got advice and suggestions from someone else	0	1	2	3
10. Followed the proper channels of procedure to "cover myself"	0	1	2	3

		Not Used	Used Somewhat	Used Quite A Bit	Used A Great Deal
11.	Analyzed all the negative consequences so that I was prepared for the worst	0	1	2	3
12.	I went over in my mind what I would say or do	0	1	2	3
13.	Accepted sympathy and understanding from someone	0	1	2	3
14.	Wished that the situation would go away or somehow be over with	0	1	2	3
15.	Expressed my irritation and frustration by swearing, slamming things down, crumpling paper, and so forth	0	1	2	3
16.	Requested help from people who have the power to do something for me	0	1	2	3
17.	Talked to someone about how I was feeling	0	1	2	3
18.	Had a good cry	0	1	2	3
19.	Tried to see the humorous aspects of the situation	0	1	2	3
20.	Tried to find out more about the situation--sought out additional information	0	1	2	3
21.	I got used to the idea that it happened	0	1	2	3
22.	I tried to see things from the other person's point of view	0	1	2	3
23.	Established some sort of routine	0	1	2	3
24.	I expressed anger to the person(s) who caused the problem	0	1	2	3
25.	I daydreamed or imagined a better time or place than the one I was in	0	1	2	3
26.	Tried to get the person responsible to change his or her mind	0	1	2	3
27.	I tried to forget the whole thing	0	1	2	3
28.	Talked about the situation with someone else	0	1	2	3
29.	Wished that I could change what happened or how I felt	0	1	2	3

		Not Used	Used Somewhat	Used Quite A Bit	Used A Great Deal
30.	Just accepted that it was another job, and got on with it	0	1	2	3
31.	Looked for the silver lining, so to speak; tried to look at the bright side of things	0	1	2	3
32.	Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.	0	1	2	3
33.	Worked on changing policies that caused this situation	0	1	2	3
34.	I tried to keep my feelings from interfering with other things too much	0	1	2	3
35.	Put extra attention on planning and scheduling	0	1	2	3
36.	I used reason to settle things	0	1	2	3
37.	I thought about how a person I admired would handle this situation and used that as a model	0	1	2	3
38.	Tried to be very organized so that I could keep on top of things	0	1	2	3
39.	Tried to get additional people involved in the situation	0	1	2	3
40.	Expressed my irritation and frustration to myself	0	1	2	3
41.	Thought how much better things are for me compared to the past or to my peers	0	1	2	3
42.	Came up with a couple of different solutions to the problem	0	1	2	3
43.	Took it out on other people	0	1	2	3
44.	Just concentrated on what I had to do next—the next step	0	1	2	3
45.	Told myself that time takes care of situations like this	0	1	2	3
46.	I asked people who have had similar experiences what they did	0	1	2	3
47.	I apologized or did something to make up	0	1	2	3
48.	Hoped a miracle would happen	0	1	2	3

		Not Used	Used Somewhat	Used Quite A Bit	Used A Great Deal
49.	Simply took one day at a time	0	1	2	3
50.	Tried to think of myself as a winner--someone who always comes through	0	1	2	3
51.	Slept more than usual	0	1	2	3
52.	I tried to find a solution that was fair to both of us	0	1	2	3
53.	Went along with fate; sometimes I just have bad luck	0	1	2	3
54.	Drew on past experiences: I was in a similar situation before	0	1	2	3
55.	Bargained to get something positive from the situation	0	1	2	3
56.	Took some immediate action on the basis of my present understanding of the situation	0	1	2	3
57.	I met the other person half-way	0	1	2	3
58.	Tried to separate myself as much as possible from the person (or people) who created this situation	0	1	2	3
59.	Stood my ground and fought for what I wanted	0	1	2	3
60.	I jogged or exercised	0	1	2	3
61.	Compromised to get something positive from the situation	0	1	2	3
62.	I gave in to the other person's wishes	0	1	2	3
63.	I did something which I didn't think would work, but at least I was doing something	0	1	2	3
64.	I accepted the next best thing to what I wanted	0	1	2	3
65.	I stated my position directly to the person I was in conflict with	0	1	2	3
66.	I tried something entirely different from any of the above. (Please describe):	0	1	2	3

Thank-you for your time and effort in completing this questionnaire. Your participation in this study will contribute to the field of knowledge about employees' experiences with work stress. **Please enclose your completed questionnaire in the envelope provided and place it in your department's on-campus (or internal) mail slot.**

Please write below any comments you may wish to add. We are particularly interested in any reactions you may have to the questionnaire items. Please include your telephone number below if you feel comfortable in our contacting you to discuss your comments about the questionnaire items.

REQUEST FOR REPORT OF FINDINGS/PARTICIPATION IN FUTURE STUDIES

I wish to receive a summary report of the study's findings:

(please check) Yes _____ No _____

I am willing to be contacted in the future about other studies on Work Stress and Coping:

(please check) Yes _____ No _____

Name: _____

Address: _____

Telephone No. _____

Please mail this form to the following address:

Jacqueline Portello
Department of Counselling Psychology
Faculty of Education
University of British Columbia
5780 Toronto Road
Vancouver, B.C. V6T 1L2

Appendix G

Table G1: Primary Appraisal Item Sources

Table G2: Engagement Coping Item Sources

Table G3: Disengagement Coping Item Sources

Table G4: Interpersonal Coping Item Sources

Table G1

Primary Appraisal Item Sources

The items listed below are numbered as they appear on the pilot study appraisal questionnaire (see Appendix F).

Appraisal Item	Source
1. I might harm my collaborative working relationship with someone.	Deutsch's (1973) goal interdependence theory suggests that competing work goals, characteristic of interpersonal conflict, can threaten or harm the quality of one's working relationships. Item reflects Compas' (1991) category of affiliation stressor appraisals.
2. I might harm someone's self-esteem.	Based on focus group discussion with university-employed managers and professionals about their appraisals of stressful interpersonal work conflicts.
3. I might not find my work interesting or challenging.	Item reflects a threat to achievement-related work values addressed by Locke and Taylor (1991). According to Locke and Taylor, people seek to fulfil personal values at work, but experience stress when the attainment of values are threatened (e.g., by negative workplace interactions).
4. My suggestions might not be taken seriously.	Based on focus group discussion.
5. The work atmosphere might be harmed.	Based on focus group discussion.

(table continues)

Appraisal Item	Source
6. I might appear incompetent.	<p>Item loaded on a self-esteem primary appraisal factor in Folkman, Lazarus, Dunkel-Schetter, et al.'s (1986) stress and coping study of adult community residents.</p> <p>Variations of this item (i.e., "feeling that you had lost your credibility;" "you being made to look silly") loaded on a credibility factor in Dewe's (1993) study of work stressor appraisals.</p> <p>Based on focus group discussion.</p>
7. I might appear unethical.	<p>Item loaded on a self-esteem appraisal factor in Folkman, Lazarus, Dunkel-Schetter, et al.'s (1986) study.</p> <p>Item was administered to managerial women in Long et al.'s (1992) study, but not included in their final model.</p>
8. I might fail at an important goal in my job or work.	<p>Item identified through factor analysis by Folkman, Lazarus, Dunkel-Schetter, et al. (1986).</p> <p>Item was used to assess managerial appraisals in Long et al.'s (1992) final stress and coping model.</p> <p>Variation of this item (i.e., "you feeling you would not achieve an important goal") loaded on an achievement factor in Dewe's (1993) principal components</p>

(table continues)

Appraisal Item	Source
	analysis of work-related stressor appraisals. In particular, interpersonal stressors predicted threats to achievement appraisals.
	Item reflects a threat to achievement-related work values posited by Locke and Taylor (1991).
	Based on focus group discussion.
9. My department might be unproductive.	Based on focus group discussion.
10. I might not share information with someone else.	Item reflects Locke and Taylor's (1991) social relationships work values.
11. Someone might ignore me.	Based on Compas' (1991) category of affiliation stressor appraisals.
	Item reflects Locke and Taylor's (1991) classification of social relationships work values.
12. I might appear unproductive.	Based on Locke and Taylor's (1991) sense of purpose work values.
13. I might lose my power to express personal opinions or suggestions.	Based on focus group discussion.
14. I might lose autonomy in my job.	Based on Locke and Taylor's (1991) achievement-related work values.
15. I might lose respect for someone else.	Item identified through principal components factor analysis by Folkman, Lazarus, Dunkel-

(table continues)

Appraisal Item	Source
	Schetter, et al. (1986).
	Item was administered to managers in Long et al.'s (1992) study, but not used to assess appraisals in their final model.
16. Others might harm their physical safety.	Based on focus group discussion.
17. I might harm my physical safety.	Variation of this item (i.e., "I might harm my own health, safety, or physical well-being") identified through factor analysis by Folkman, Lazarus, Dunkel-Schetter, et al. (1986).
	Above variation of the item was administered to managerial women in Long et al.'s (1992) study, but not included in their final model.
18. I might lose status in my job.	Item reflects a threat to material work values formulated by Locke and Taylor (1991).
19. I might lose a job promotion.	Based on Locke and Taylor's (1991) classification of material work values.
20. I might harm my self-esteem.	Based on focus group discussion.
21. I might not trust information provided to me by someone else.	Based on focus group discussion.
22. I might fail at my job.	Item reflects a threat to achievement-related work values formulated by Locke and Taylor (1991).

(table continues)

Appraisal Item	Source
23. I might not receive recognition in my job.	Based on Compas' (1991) achievement-power category of stressor appraisals.
24. I might be criticized or falsely accused.	Based on focus group discussion.
25. I might fail at my work project(s).	Based on Locke and Taylor's (1991) category of achievement-related work values.
26. I might not meet my own expectations.	Variation of this item (i.e., "you failing to meet your own expectations") loaded on an achievement factor in Dewe's (1993) examination of work stressor appraisals.
	Based on focus group discussion.
27. The clarity and openness of communication within the department might be harmed.	Based on focus group discussion.
28. I might harm my emotional well-being.	Based on focus group discussion.
29. Others might harm their emotional well-being.	Based on focus group discussion.
30. I might not receive feedback about my job performance.	Based on focus group discussion.
31. I might lose a pay raise.	Based on Locke and Taylor's (1991) classification of material work values.
32. I might harm my physical health.	Variation of this item (i.e., "I might harm my own health, safety, or physical well-being") identified through factor analysis by Folkman, Lazarus, Dunkel-

(table continues)

Appraisal Item	Source
33. I might lose my job.	<p>Schetter, et al. (1986).</p> <p>Above variation of this item was administered to managers in Long et al.'s (1992) study, but not included in their final model.</p> <p>Based on focus group discussion.</p> <p>Item reflects a threat to Locke and Taylor's (1991) material work values.</p>
34. I might lose my self-respect.	<p>Based on focus group discussion.</p> <p>Item loaded on a self-esteem appraisal factor in Folkman, Lazarus, Dunkel-Schetter, et al.'s (1986) study.</p> <p>Used in Long et al.'s (1992) final model to assess managerial women's appraisals of work stressors.</p>
35. I might lose the approval or respect of someone important to me.	<p>Based on focus group discussion.</p> <p>Item loaded on a self-esteem factor in Folkman, Lazarus, Dunkel-Schetter, et al.'s (1986) study.</p> <p>Item was administered to female managers in Long et al.'s (1992) study, but not included in their final model.</p> <p>Variation of this item (i.e., "feeling that you would lose the respect of someone important to you") loaded</p>

(table continues)

Appraisal Item	Source
36. I might lose my power to influence others' behaviour or performance.	on a credibility factor in Dewe's (1993) study of work stressor appraisals. Item reflects Compas' (1991) achievement-power category of stressor appraisals. Kabanoff's (1988) structural role theory suggests that respected or liked employees' potential to influence or exert power over others risks being threatened by negative workplace interactions (e.g., interpersonal conflicts).
37. I might not complete work tasks.	Based on focus group discussion.
38. I might lose the affection of someone important to me.	Item loaded on a self-esteem appraisal factor in Folkman, Lazarus, Dunkel-Schetter, et al.'s (1986) study. Item was administered to managerial women in Long et al.'s (1992) study, but not included in their final model.
39. I might appear to be an uncaring person.	Item loaded on a self-esteem appraisal factor in Folkman, Lazarus, Dunkel-Schetter, et al.'s (1986) study. Item was administered to managers in Long et al.'s (1992) study, but not used in their final model.
40. I might not communicate honestly and openly with other people at work.	Based on focus group discussion.

(table continues)

Appraisal Item	Source
41. I might not believe that I'm doing something important or worthwhile.	Item reflects a threat to sense of purpose work values formulated by Locke and Taylor (1991). Based on focus group discussion.
42. I might strain my financial resources.	Item identified through factor analysis by Folkman, Lazarus, Dunkel-Schetter, et al. (1986). Item was administered to managers in Long et al.'s (1992) study, but not used in their final model. Item reflects Locke and Taylor's (1991) material work values.

Table G2

Engagement Coping Item Sources

The items listed below are numbered as they appear on the pilot study coping questionnaire (see Appendix F).

Coping Item	Source
1. Tried to see this as an opportunity to learn new skills.	Variation of Latack's (1986) item (i.e., "Try to see this situation as an opportunity to learn and develop new skills"). Item loaded on the Engagement coping factor in Long et al.'s (1992) stress and coping model for managerial women.
9. Got advice and suggestions from someone else.	Variation of Dewe's (1992) item (i.e., "Get advice and suggestions from someone else at work"). Wallston et al. (1989) found that professional women frequently reported consulting with others to acquire needed resources in the workplace.
10. Followed the proper channels of procedure to "cover myself".	Modification of Dewe's (1992) item (i.e., "Follow the proper channels of procedure to "cover yourself").
11. Analyzed all the negative consequences so that I was prepared for the worst.	Variation of Dewe's (1992) item (i.e., "Analyze all the negative consequences so that you are prepared for the worst").
16. Requested help from people who have the power to do something for me.	Past tense of Latack's (1986) item.

(table continues)

Coping Item	Source
19. Tried to see the humorous aspects of the situation.	Past tense of Dewe's (1992) item.
20. Tried to find out more about the situation--sought out additional information.	Past tense of Dewe's (1992) item.
23. Established some sort of routine.	Dewe (1985). Item loaded on the Engagement coping factor in Long et al.'s (1992) model.
28. Talked about the situation with someone else.	Modification of Dewe's (1992) item (i.e., "Talk about the situation with someone else at work").
30. Just accepted that it was another job, and got on with it.	Dewe (1985). Item loaded on the Engagement coping factor in Long et al.'s (1992) model.
31. Looked for the silver lining, so to speak; tried to look at the bright side of things.	Item from Lazarus and Folkman's (1984) Ways of Coping Checklist. Item loaded on the Engagement coping factor in Long et al.'s (1992) model.
33. Worked on changing policies that caused this situation.	Variation of Latack's (1986) item (i.e., "Work on changing policies which caused this situation").
34. I tried to keep my feelings from interfering with other things too much.	Lazarus and Folkman (1984). Item loaded on the Engagement coping factor in Long et al.'s (1992) model.

(table continues)

Coping Item	Source
35. Put extra attention on planning and scheduling.	Latack (1986). Item loaded on the Engagement coping factor in Long et al.'s (1992) model.
37. I thought about how a person I admired would handle this situation and used that as a model.	Lazarus and Folkman (1984). Item loaded on the Engagement coping factor in Long et al.'s (1992) model.
38. Tried to be very organized so that I could keep on top of things.	Past tense of Latack's (1986) item. Item loaded on the Engagement coping factor in Long et al.'s (1992) model.
39. Tried to get additional people involved in the situation.	Past tense of Latack's (1986) item. Based on Wallston et al.'s (1989) study, which found that professional women frequently enlist the help of others at work to acquire needed resources.
41. Thought how much better things are for me compared to the past or to my peers.	Menaghan and Merves (1984). Item loaded on the Engagement coping factor in Long et al.'s (1992) model.
42. Came up with a couple of different solutions to the problem.	Lazarus and Folkman (1984). Item loaded on the Engagement coping factor in Long et al.'s (1992) model.

(table continues)

Coping Item	Source
44. Just concentrated on what I had to do next--the next step.	Lazarus and Folkman (1984). Item loaded on the Engagement coping factor in Long et al.'s (1992) model.
45. Told myself that time takes care of situations like this.	Past tense of Latack's (1986) item.
46. I asked people who have had similar experiences what they did.	Past tense of Carver et al.'s (1989) item.
47. I apologized or did something to make up.	Lazarus and Folkman (1984).
49. Simply took one day at a time.	Dewe (1985). Item loaded on the Engagement coping factor in Long et al.'s (1992) model.
50. Tried to think of myself as a winner--someone who always comes through.	Past tense of Latack's (1986) item. Variation of this item (i.e., "Thought of myself as a winner--someone who always comes through") loaded on the Engagement coping factor in Long et al.'s (1992) model.
54. Drew on past experiences: I was in a similar situation before.	Lazarus and Folkman (1984).
56. Took some immediate action on the basis of my present understanding of the situation.	Modification of Dewe's (1992) item (i.e., "Take some immediate action on the basis of your present understanding of the situation").
59. Stood my ground and fought for what I wanted.	Lazarus and Folkman (1984).

(table continues)

Coping Item	Source
<hr/>	
60. I jogged or exercised.	Item loaded on the Engagement coping factor in Long et al.'s (1992) model. Lazarus and Folkman (1984).
66. I tried something entirely different from any of the above.	Lazarus and Folkman (1984). Item was included to assess use of coping strategies other than those identified in the pilot study questionnaire. Managers' and professionals' responses to this item may not necessarily reflect engagement coping forms.

Table G3

Disengagement Coping Item Sources

The items listed below are numbered as they appear on the pilot study coping questionnaire (see Appendix F).

Coping Item	Source
2. I turned to work or other substitute activities to take my mind off things.	Modification of an item from Lazarus and Folkman's (1984) Ways of Coping Checklist (i.e., "Turned to work or substitute activity to take my mind off things"). Past tense of Carver et al.'s (1989) item.
3. Tried to avoid being with people in general.	Modification of Dewe's (1985) item (i.e., "Avoided being with people in general"). Variation of this item (i.e., "Avoided being with people in general") loaded on the Disengagement coping factor in Long et al.'s (1992) stress and coping model for managerial women.
4. Had fantasies or wishes about how things might turn out.	Lazarus and Folkman (1984). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
5. Criticized or lectured myself.	Lazarus and Folkman (1984). Item loaded on the Disengagement coping factor in Long et al.'s

(table continues)

Coping Item	Source
	(1992) model.
6. Left work as soon as possible for the day.	Variation of Dewe's (1985) item (i.e., "Left work as soon as possible").
	Variation of this item (i.e., "Left work as soon as possible") loaded on the Disengagement coping factor in Long et al.'s (1992) model.
7. Tried to avoid other staff members.	Variation of Dewe's (1985) item (i.e., "Avoided other staff members").
	Modification of this item (i.e., "Avoided other staff members") loaded on the Disengagement coping factor in Long et al.'s (1992) model.
8. Accepted it, since nothing could be done.	Lazarus and Folkman (1984).
12. I went over in my mind what I would say or do.	Lazarus and Folkman (1984).
	Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
13. Accepted sympathy and understanding from someone.	Lazarus and Folkman (1984).
14. Wished that the situation would go away or somehow be over with.	Lazarus and Folkman (1984).
	Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.

(table continues)

Coping Item	Source
15. Expressed my irritation and frustration by swearing, slamming things down, crumpling paper, and so forth.	Dewe (1985). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
17. Talked to someone about how I was feeling.	Lazarus and Folkman (1984). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
18. Had a good cry.	Dewe (1985). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
21. I got used to the idea that it happened.	Past tense of Carver et al.'s (1989) item.
25. I daydreamed or imagined a better time or place than the one I was in.	Lazarus and Folkman (1984). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
27. I tried to forget the whole thing.	Lazarus and Folkman (1984). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
29. Wished that I could change what happened or how I felt.	Lazarus and Folkman (1984). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.

(table continues)

Coping Item	Source
32. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.	Lazarus and Folkman (1984). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
40. Expressed my irritation and frustration to myself.	Dewe (1985). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
43. Took it out on other people.	Lazarus and Folkman (1984). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
48. Hoped a miracle would happen.	Lazarus and Folkman (1984). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
51. Slept more than usual.	Lazarus and Folkman (1984). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
53. Went along with fate; sometimes I just have bad luck.	Lazarus and Folkman (1984). Item loaded on the Disengagement coping factor in Long et al.'s (1992) model.
58. Tried to separate myself as much as possible from the person (or people) who created this situation.	Modification of Latack's (1986) item (i.e., "Separate myself as much as possible from the people

(table continues)

Coping Item	Source
62. I gave in to the other person's wishes.	who created this situation"). Based on Wallston et al.'s (1989) finding regarding the frequency with which professional women report using compliance strategies to gain resources from others at work.

Table G4

Interpersonal Coping Item Sources

The items listed below are numbered as they appear on the pilot study coping questionnaire (see Appendix F).

Coping Item	Source
22. I tried to see things from the other person's point of view.	Item from Lazarus and Folkman's (1984) Ways of Coping Checklist. Item loaded on one of O'Brien and DeLongis' (1991) Relationship-Focused coping scales that was developed on university undergraduates.
24. I expressed anger to the person(s) who caused the problem.	Lazarus and Folkman (1984). Item loaded on the Negotiation coping factor in Aldwin and Revenson's (1987) stress and coping study of adult community residents.
26. Tried to get the person responsible to change his or her mind.	Lazarus and Folkman (1984). Item loaded on the Negotiation coping factor in Aldwin and Revenson's (1987) study.
36. I used reason to settle things.	Variation of an item developed by Daylen (1993) to assess interpersonal coping strategies in marital relationships (i.e., "Try to use reason to settle things"). Wallston et al. (1989) found that reasoning strategies are frequently used by professional women when

(table continues)

Coping Item	Source
52. I tried to find a solution that was fair to both of us.	<p>interacting with others at work.</p> <p>Pearlin and Schooler (1978) found that a variation of this item (i.e., "Sit down and talk things out") loaded on a Negotiation marital coping factor in their stress and coping study of adult community residents.</p> <p>Variation of an item developed by Daylen (1993) to assess interpersonal (e.g., compromising) coping strategies in response to marital tension (i.e., "Try to find a solution that was fair to both of you").</p> <p>Modification of an item used to assess Positive Relationship-Focused coping in Kramer's (1993) study of caregiver coping in marital relationships (i.e., "I tried to find a solution that was fair to all involved").</p>
55. Bargained to get something positive from the situation.	<p>Variation of Lazarus and Folkman's (1984) item (i.e., "Bargained or compromised to get something positive from the situation"). Original item was divided into two separate items for this study.</p> <p>Wallston et al. (1989) found that professional women frequently use bargaining strategies to obtain resources from others in the workplace.</p>

(table continues)

Coping Item	Source
57. I met the other person half-way.	<p>Aldwin and Revenson (1987) found that a variation of this item (i.e., "Bargained or compromised to get something positive from the situation") loaded on the Negotiation coping factor in their study.</p> <p>Modification of an item developed by Daylen (1993) to assess interpersonal coping efforts in marital relationships (i.e., "Try to meet the other person half-way").</p> <p>Variation of Kramer's (1993) Positive Relationship-Focused coping item (i.e., "I tried to meet my husband half-way").</p>
61. Compromised to get something positive from the situation.	<p>Variation of Lazarus and Folkman's (1984) item (i.e., "Bargained or compromised to get something positive from the situation").</p> <p>Modification of this item loaded on the Negotiation coping factor in Aldwin and Revenson's (1987) study. See item #55 above.</p> <p>Variation of this item (i.e., "Try to find a fair compromise in marriage problems") loaded on the Negotiation coping factor in Pearlin and Schooler's (1978) study.</p> <p>Wallston et al. (1989) found that professional women often employ compromising strategies in work relationships to obtain needed</p>

(table continues)

Coping Item	Source
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63. I did something which I didn't think would work, but at least I was doing something.	resources from others. Lazarus and Folkman (1984). Item loaded on the Negotiation coping factor in Aldwin and Revenson's (1987) study.
64. I accepted the next best thing to what I wanted.	Lazarus and Folkman (1984). Item reflects a form of compromising, which is characteristic of interpersonal coping.
65. I stated my position directly to the person I was in conflict with.	Wallston et al. (1989) found that professional women frequently reported using directive strategies at work to negotiate for resources.

Appendix H

Table H1: Reworded Primary Appraisal Items

Table H2: Reworded Coping Scale Instructions

Table H3: Reworded Coping Items

Table H1

Reworded Primary Appraisal Items

This table illustrates primary appraisal item wording changes following the comments of pre-evaluation group members during initial stages of the pilot study. The following three items were changed at the recommendation of group members that the wording remain more general. Specifically, members commented that conflicts with a supervisor, colleague, subordinate, or faculty member do not only involve threats to the relationship with these individuals, but also to the relationships with other employees in the organization. The reworded items are numbered below as they appear on the pilot study appraisal questionnaire (see Appendix F).

	Original Wording	Rewording
1.	I might harm my collaborative working relationship with a supervisor, colleague, subordinate, or faculty member.	I might harm my collaborative working relationship with someone.
21.	I might not trust information provided to me by a supervisor, colleague, subordinate, or faculty member.	I might not trust information provided to me by someone else.
40.	I might not communicate honestly and openly with a supervisor, colleague, subordinate, or faculty member.	I might not communicate honestly and openly with other people at work.

Table H2

Reworded Coping Scale Instructions

The table below describes changes that were made to coping scale instructions during the development of both the pilot and main study questionnaires. Pilot study questionnaire instructions were first modified at the recommendation of pre-evaluation group members that coping items more explicitly refer to coping responses used to deal with a specific interpersonal work stressor. Subsequently, in response to Stone et al.'s (1991) suggestions, coping scale instructions in the main study questionnaire were refined to clarify the meaning of "extent of coping response use". The revised instructions are worded below as they appear on the pilot and main study questionnaires (see Appendices F and D, respectively).

Original Wording (Long et al., 1992): We want to know how you coped with the event you just described. Please read each item below and indicate, by circling the appropriate category, to what extent you used it in the situation you have just described.

Reworded Coping Instructions (Pilot Study Questionnaire): We now want to know how you **coped** with the conflict situation. **Please focus once again on the stressful interpersonal conflict you just described.** Below is a list of responses that you may or may not have used in the conflict situation. Please read each response below and indicate by circling the appropriate number, the extent to which you used each response in the situation you have just described.

Reworded Coping Instructions (Main Study Questionnaire): We now want to know how you **coped** with the conflict situation. **Please focus once again on the stressful interpersonal conflict you just described.** Below is a list of responses that you may or may not have used in the conflict situation. Please read each response below and indicate by circling the appropriate number, the extent to which you used (i.e., **how much you used**) each response in the situation you have just described.

Table H3

Reworded Coping Items

To ensure verb tense consistency among coping items, numerous items (not listed below) were reworded to reflect coping responses in the past tense. The following coping items were reworded based on the suggestions of pre-evaluation group members in the pilot study. Specifically, group members commented that items numbered 3, 7, and 58 below should be prefaced with the word "tried" to more accurately reflect their attempted (versus successful execution) of coping responses to deal with interpersonal work stressors. Item #6 was reworded to clarify group members' confusion about whether the item involved a specific time frame. In addition, reworded items numbered 9 and 28 reflect group members' comments regarding their use of both work and nonwork counsel and support to deal with stressful work conflicts. The items listed below are numbered as they appear on the pilot study coping questionnaire (see Appendix F).

Original Wording	Rewording
3. Avoided being with people in general (Dewe, 1985).	Tried to avoid being with people in general.
6. Left work as soon as possible (Dewe, 1985).	Left work as soon as possible for the day.
7. Avoided other staff members (Dewe, 1985).	Tried to avoid other staff members.
9. Get advice and suggestions from someone else at work (Dewe, 1992).	Got advice and suggestions from someone else.

(table continues)

Original Wording	Rewording
28. Talk about the situation with someone else at work (Dewe, 1992).	Talked about the situation with someone else.
58. Separate myself as much as possible from the people who created this situation (Latack, 1986).	Tried to separate myself as much as possible from the person (or people) who created this situation.

Appendix I

Examples of Stressful Interpersonal Conflicts

The following list is a random selection of stressful interpersonal conflict situations that managerial and professional women in the current study reported having experienced at work. The interpersonal conflict examples appear below as they were described by respondents on the coping questionnaire.

1. "My colleague has obtained a grant which I think puts him in a conflict of interest with our institution and sours my relationship with the external community because he has created conflicts with our colleagues in other institutions. He is promoting himself and not what we do."
2. "I formally challenged a committee decision because I thought it was an inequitable and unfair/unjustified decision which was based on favouritism and old hierarchies/traditions."
3. "My colleague threatened (physically) and verbally intimidated someone I supervise and I had to ask her to stop, leave the area, and come back when she had calmed down. Then she threatened me, following me into my office and again, I asked her to leave."
4. "The situation is one of my lack of respect for my supervisor's ability to do his job without errors, serious delays, or unless I continue covering for him."
5. "My supervisor deliberately misinterpreted comments I made and proceeded to treat me like a child and attack my self-esteem and work."
6. "My new manager does not communicate his issues/concerns and when I take on something which I have always done in the past he takes offense, becomes childish and tight lipped about it. But he does not make a decision or do the task."
7. "I was caught 'in the middle' between my immediate supervisor and another superior over a procedure and had to go against my instincts to comply with my supervisor."
8. "I had to ask someone to do some extra work due to a deadline being moved up. While she didn't look happy about it she agreed right away but spent the rest of the day slamming doors and muttering under her breath."
9. "A colleague, who's position I was taking over, blatantly disliked me, my race and on one specific occasion snapped at me to leave her alone."
10. "We are colleagues in a team (supposedly) environment but my colleague does

not appear to me to have the necessary cooperative attitude in striving to resolve the issue that has university and team consequences and denies the urgency by not reassigning staff, and not sharing information fully."

11. "Manner of decision-making of colleague who has influence in key aspects of work I do, is incongruent with my theoretical/philosophical orientation re. operation of the work setting."

12. "Being left out of decision-making and information necessary to do my job. Having my supervisor take over tasks without communicating to me."

13. "A person I work with recently took credit for a project which I alone had worked on for several months. This was done in a meeting situation."

14. "Difference of opinion re. procedure, what the person was responsible for and what responsibilities could be shared; the need for flexibility and task-sharing."

15. "When the funding for my position was in jeopardy the departmental administrator was unwilling to fight for it."

16. "A project manager criticized and demeaned my work in e-mail copied to the entire project team with whom I work."

17. "My position allows me to make independent decisions regarding policies and regulations - i.e., how they are interpreted and applied. A decision I made was reversed by my supervisor without explanation."

18. "As part of my job I have to query unusual expenditures and I had such; tried to discuss it/explain why to a faculty member. He is arrogant and a controller - 'don't you dare question me' attitude. I am faculty."

19. "A co-worker and his supervisor tried to exclude me from a project we had been working on for over a year."

20. "Questioning and insinuating that work performance was inappropriate. Poor communication and double messages. Confrontational attitude."

Appendix J

Table J1: Primary Appraisal Item Factor Loadings

Deleted Primary Appraisal Items

Table J2: Coping Item Factor Loadings

Deleted Coping Items

Table J1

Primary Appraisal Item Factor Loadings

The number in parentheses () after each primary appraisal item corresponds to the question on the pilot study appraisal questionnaire (see Appendix F).

Factor	Loading	Item
Self-interest stake	.55	My suggestions might not be taken seriously. (4)
	.74	I might appear incompetent. (6)
	.53	I might not achieve (fail at) an important goal in my job or work. (8)
	.75	I might appear unproductive. (12)
	.64	I might lose my power to express personal opinions or suggestions. (13)
	.80	I might lose status in my job. (18)
	.69	I might harm my self-esteem. (20)
	.75	I might not receive recognition in my job. (23)
	.52	I might be criticized or falsely accused. (24)
	.55	I might fail at my work project(s). (25)
	.49	I might not meet my own expectations. (26)
	.50	I might harm my emotional well-being. (28)
	.67	I might lose my self-respect. (34)
	.53	I might lose the approval or respect of someone important to me. (35)

(table continues)

Factor	Loading	Item
Self-interest stake	.71	I might not believe that I'm doing something important or worthwhile. (41)
Relationship stake	.65	I might harm someone's self-esteem. (2)
	.55	I might harm my collaborative working relationship with someone. (1)
	.53	The work atmosphere might be harmed. (5)
	.39	My department might be unproductive. (9)
	.35	I might lose respect for someone else. (15)
	.66	The clarity and openness of communication within the department might be harmed. (27)
	.71	Others might harm their emotional well-being. (29)
	.57	I might appear to be an uncaring person. (39)
	.48	I might not communicate honestly and openly with others at work. (40)

Deleted Primary Appraisal Items

I might not trust information provided to me by someone else. (21)

I might not complete work tasks. (37)

I might lose my power to influence others' behaviour or performance. (36)

Table J2

Coping Item Factor Loadings

The number in parentheses () after each coping item corresponds to the question on the pilot study coping questionnaire (see Appendix F).

Factor	Loading	Item
Engagement Coping	.55	Tried to see this as an opportunity to learn new skills. (1)
	.56	I tried to see things from the other person's point of view. (22)
	.33	Tried to get the person responsible to change his or her mind. (26)
	.54	Looked for the silver lining, so to speak; tried to look on the bright side of things. (31)
	.48	Put extra attention on planning and scheduling. (35)
	.43	I tried to keep my feelings from interfering with other things too much. (34)
	.61	I used reason to settle things. (36)
	.34	I thought about how a person I admired would handle this situation and used that as a model. (37)
	.48	Tried to be very organized so that I could keep on top of things. (38)
	.50	Thought how much better things are for me compared to the past or to my peers. (41)
	.53	I met the other person half-way. (57)

(table continues)

Factor	Loading	Item
<hr/>		
Engagement Coping		
	.66	Came up with a couple of different solutions to the problem. (42)
	.34	Just concentrated on what I had to do next--the next step. (44)
	.33	Tried to think of myself as a winner--as someone who always comes through. (50)
	.64	I tried to find a solution that was fair to both of us. (52)
	.58	Bargained to get something positive from the situation. (55)
	.64	Compromised to get something positive from the situation. (61)
	.34	I stated my position directly to the person I was in conflict with. (65)
Disengagement Coping		
	.55	Tried to avoid being with people in general. (3)
	.51	Had fantasies or wishes about how things might turn out. (4)
	.41	Criticized or lectured myself. (5)
	.45	Left work as soon as possible for the day. (6)
	.58	Tried to avoid other staff members. (7)
	.57	Wished that the situation would go away or somehow be over with. (14)
	.62	I daydreamed or imagined a better time or place than the one I was in. (25)

(table continues)

Factor	Loading	Item
<hr/>		
Disengagement Coping		
	.51	Had a good cry. (18)
	.34	I tried to forget the whole thing. (27)
	.33	Wished that I could change what happened or how I felt. (29)
	.43	Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc. (32)
	.31	Expressed my irritation and frustration to myself. (40)
	.34	Took it out on other people. (43)
	.41	Hoped a miracle would happen. (48)
	.45	Simply took one day at a time. (49)
	.45	Slept more than usual. (51)
	.45	Went along with fate; sometimes I just have bad luck. (53)
	.42	I did something which I didn't think would work, but at least I was doing something. (63)

Deleted Coping Items

The number in parentheses () after each of the following deleted coping items corresponds to the question on the pilot study coping questionnaire (see Appendix F).

Disengagement Coping Items

I went over in my mind what I would say or do. (12)

Expressed my irritation and frustration by swearing, slamming things down, crumpling paper, and so forth. (15)

Talked to someone about how I was feeling. (17)

Engagement Coping Items

Established some sort of routine. (23)

Just accepted that it was another job, and got on with it. (30)

Stood my ground and fought for what I wanted. (59)

Interpersonal Coping Items

I expressed anger to the person(s) who caused the problem. (24)

I accepted the next best thing to what I wanted. (64)

Appendix K

Skewness and Kurtosis of Path Model Variables

Skewness and Kurtosis of Path Model Variables (N=157)

Variable	Skewness	Kurtosis
Marital Status	.58	-1.69
Income	.16	-1.13
Instrumentality	-.32	-.22
Expressiveness	-.44	.82
Work Demands	.03	-.41
Work Support	-.07	-.94
Upsetting Episode Appraisals	-.24	-.28
Appraised Situational Control	.56	-.38
Loss of Respect for Others Appraisals	-.24	-1.37
Threat to Work Goal Attainment Appraisals	-.62	-.99
Engagement Coping	.37	-.21
Disengagement Coping	.89	.89
Daily Hassles	.71	.17
Distress	.94	.51

Note. Marital status categories: 1=married and partnered; 2=not married. Income categories: 1 = < \$25,000; 2 = \$26,000 - \$40,000; 3 = \$41,000 - \$60,000; 4 = \$61,000 - \$80,000; 5 = \$81,000 - \$100,000; 6 = > \$100,000.

Appendix L

- Table L1: Covariance Matrix for Group 1 (University of British Columbia Managers and Professionals)
- Table L2: Correlation Matrix for Group 1 (University of British Columbia Managers and Professionals)
- Table L3: Covariance Matrix for Group 2 (Simon Fraser University and University of Victoria Managers and Professionals)
- Table L4: Correlation Matrix for Group 2 (Simon Fraser University and University of Victoria Managers and Professionals)
- Table L5: Zero-order Correlation Matrix (Pooled Sample)

Table L1

Covariance Matrix for Group 1 (University of British Columbia Managers and Professionals; n=90)

Variable	Marital	Income	Instr	Expres	Upset	Control
Marital	0.24					
Income	-0.50	1.94				
Instr	1.02	-0.53	126.15			
Expres	0.08	-1.37	-1.93	88.67		
Upset	0.01	0.09	1.15	1.18	0.66	
Control	0.00	0.07	0.46	0.28	-0.16	1.17
Wkgoal	-0.10	0.14	1.65	0.56	0.14	-0.24
Respect	0.06	0.06	-1.48	-0.27	-0.17	-0.07
Hassles	-0.31	-0.21	-48.51	-8.03	2.14	-1.48
Demands	0.27	-1.16	-5.05	2.76	0.66	-1.09
Support	0.22	0.81	6.59	1.55	-0.21	1.35
Engage	0.07	0.35	19.37	23.07	0.33	2.83
Diseng	0.01	0.67	-8.26	3.77	1.76	-2.05
Distress	-0.07	0.09	-2.59	-0.90	0.55	-0.39

Variable	Wkgoal	Respect	Hassles	Demands	Support	Engage
Wkgoal	2.15					
Respect	-0.01	2.39				
Hassles	6.44	5.54	218.41			
Demands	0.57	0.37	11.10	31.49		
Support	-1.92	-1.77	-15.66	-23.76	41.92	
Engage	2.20	-0.74	5.11	-6.34	5.31	92.00
Diseng	2.93	0.68	47.04	11.25	-11.24	6.36
Distress	0.65	0.06	11.23	2.47	-2.55	-1.60

Variable	Diseng	Distress
Diseng	55.89	
Distress	5.92	2.73

Note. Marital=marital status (1=married and partnered; 2=not married);

Instr=instrumentality; Expres=expressiveness; Upset=upsetting appraisals;

Control=appraised situational control; Wkgoal=work goal attainment

appraisals; Respect=respect for others appraisals; Demands=work demands;

Support=work support; Engage=engagement coping; Diseng=disengagement coping.

High scores represent high levels of the characteristics as defined by the

labels. Income categories: 1=<\$25,000; 2=\$26,000 - \$40,000; 3=\$41,000 -

\$60,000; 4=\$61,000 - \$80,000; 5=\$81,000 - \$100,000; 6=>\$100,000.

Table L2

Correlation Matrix for Group 1 (University of British Columbia Managers and Professionals; n=90)

Variable	Marital	Income	Instr	Expres	Upset	Control
Marital	1.00					
Income	-0.73	1.00				
Instr	0.19	-0.03	1.00			
Expres	0.02	-0.10	-0.02	1.00		
Upset	0.02	0.08	0.13	0.15	1.00	
Control	0.00	0.05	0.04	0.03	-0.18	1.00
Wkgoal	-0.14	0.07	0.10	0.04	0.12	-0.15
Respect	0.08	0.03	-0.08	-0.02	-0.14	-0.04
Hassles	-0.04	-0.01	-0.29	-0.06	0.18	-0.09
Demands	0.10	-0.15	-0.08	0.05	0.15	-0.18
Support	0.07	0.09	0.09	0.03	-0.04	0.19
Engage	0.02	0.03	0.18	0.26	0.04	0.27
Diseng	0.00	0.06	-0.10	0.05	0.29	-0.25
Distress	-0.08	0.04	-0.14	-0.06	0.41	-0.22

Variable	Wkgoal	Respect	Hassles	Demands	Support	Engage
Wkgoal	1.00					
Respect	0.00	1.00				
Hassles	0.30	0.24	1.00			
Demands	0.07	0.04	0.13	1.00		
Support	-0.20	-0.18	-0.16	-0.65	1.00	
Engage	0.16	-0.05	0.04	-0.12	0.09	1.00
Diseng	0.27	0.06	0.43	0.27	-0.23	0.09
Distress	0.27	0.02	0.46	0.27	-0.24	-0.10

Variable	Diseng	Distress
Diseng	1.00	
Distress	0.48	1.00

Note. Marital=marital status (1=married and partnered; 2=not married); Instr=instrumentality; Expres=expressiveness; Upset=upsetting appraisals; Control=appraised situational control; Wkgoal=work goal attainment appraisals; Respect=respect for others appraisals; Demands=work demands; Support=work support; Engage=engagement coping; Diseng=disengagement coping. High scores represent high levels of the characteristics as defined by the labels. Income categories: 1=<\$25,000; 2=\$26,000 - \$40,000; 3=\$41,000 - \$60,000; 4=\$61,000 - \$80,000; 5=\$81,000 - \$100,000; 6=>\$100,000.

Table L3

Covariance Matrix for Group 2 (Simon Fraser University and University of Victoria Managers and Professionals; n=67)

Variable	Marital	Income	Instr	Expres	Upset	Control
Marital	0.23					
Income	- 0.38	1.81				
Instr	- 0.59	1.43	143.56			
Expres	1.25	-3.34	7.07	107.18		
Upset	0.13	-0.31	0.95	-0.10	0.83	
Control	-0.12	0.32	0.80	-0.41	-0.47	1.37
Wkgoal	0.16	0.01	0.02	1.50	0.37	-0.40
Respect	0.09	-0.33	1.29	0.65	0.17	-0.39
Hassles	1.41	-1.63	-30.12	-32.39	3.13	-5.30
Demands	1.02	-2.88	-8.33	-2.67	0.43	-0.63
Support	-1.34	2.70	3.13	5.54	-1.77	1.72
Engage	0.52	1.62	-0.61	15.47	-0.33	0.06
Diseng	0.52	-1.18	-23.41	1.27	3.04	-4.49
Distress	0.24	-0.46	-2.74	0.74	0.51	-0.73

Variable	Wkgoal	Respect	Hassles	Demands	Support	Engage
Wkgoal	2.16					
Respect	0.07	2.15				
Hassles	4.34	-3.44	253.59			
Demands	1.31	0.72	28.06	27.65		
Support	-2.86	-0.14	-36.66	-17.33	38.95	
Engage	3.22	0.06	12.41	-2.09	-8.05	75.11
Diseng	2.95	1.78	55.37	9.92	-15.03	8.96
Distress	0.59	0.14	15.40	1.67	-3.58	0.37

Variable	Diseng	Distress
Diseng	63.27	
Distress	5.28	2.47

Note. Marital=marital status (1=married and partnered; 2=not married); Instr=instrumentality; Expres=expressiveness; Upset=upsetting appraisals; Control=appraised situational control; Wkgoal=work goal attainment appraisals; Respect=respect for others appraisals; Demands=work demands; Support=work support; Engage=engagement coping; Diseng=disengagement coping. High scores represent high levels of the characteristics as defined by the labels. Income categories: 1=<\$25,000; 2=\$26,000 - \$40,000; 3=\$41,000 - \$60,000; 4=\$61,000 - \$80,000; 5=\$81,000 - \$100,000; 6=>\$100,000.

Table L4

Correlation Matrix for Group 2 (Simon Fraser University and University of Victoria Managers and Professionals; n=67)

Variable	Marital	Income	Instr	Expres	Upset	Control
Marital	1.00					
Income	-0.59	1.00				
Instr	-0.10	0.09	1.00			
Expres	0.25	-0.24	0.06	1.00		
Upset	0.29	-0.25	0.09	-0.01	1.00	
Control	-0.22	0.20	0.06	-0.03	-0.44	1.00
Wkgoal	0.22	0.00	0.00	0.10	0.28	-0.23
Respect	0.13	-0.17	0.07	0.04	0.13	-0.23
Hassles	0.18	-0.08	-0.16	-0.20	0.22	-0.28
Demands	0.41	-0.41	-0.13	-0.05	0.09	-0.10
Support	-0.45	0.32	0.04	0.09	-0.31	0.24
Engage	0.12	0.14	-0.01	0.17	-0.04	0.01
Diseng	0.14	-0.11	-0.25	0.02	0.42	-0.48
Distress	0.31	-0.22	-0.15	0.05	0.35	-0.40

Variable	Wkgoal	Respect	Hassles	Demands	Support	Engage
Wkgoal	1.00					
Respect	0.03	1.00				
Hassles	0.19	-0.15	1.00			
Demands	0.17	0.09	0.34	1.00		
Support	-0.31	-0.02	-0.37	-0.53	1.00	
Engage	0.25	0.00	0.09	-0.05	-0.15	1.00
Diseng	0.25	0.15	0.44	0.24	-0.30	0.13
Distress	0.26	0.06	0.62	0.20	-0.37	0.03

Variable	Diseng	Distress
Diseng	1.00	
Distress	0.42	1.00

Note. Marital=marital status (1=married and partnered; 2=not married); Instr=instrumentality; Expres=expressiveness; Upset=upsetting appraisals; Control=appraised situational control; Wkgoal=work goal attainment appraisals; Respect=respect for others appraisals; Demands=work demands; Support=work support; Engage=engagement coping; Diseng=disengagement coping. High scores represent high levels of the characteristics as defined by the labels. Income categories: 1=<\$25,000; 2=\$26,000 - \$40,000; 3=\$41,000 - \$60,000; 4=\$61,000 - \$80,000; 5=\$81,000 - \$100,000; 6=>\$100,000.

Table L5

Zero-order Correlation Matrix (Pooled Sample; N=157)

Variable	Marital	Age	Income	Exper	Instr	Expres
Marital	1.00					
Age	-0.03	1.00				
Income	-0.67	0.09	1.00			
Exper	-0.04	0.43	0.01	1.00		
Instr	0.06	-0.05	0.02	-0.16	1.00	
Expres	0.12	0.13	-0.17	0.17	0.02	1.00
Upset	0.14	0.01	-0.07	-0.02	0.11	0.08
Control	-0.09	0.05	0.12	0.06	0.05	0.00
Wkgoal	0.01	-0.08	0.04	-0.11	0.06	0.07
Respect	0.10	0.05	-0.05	-0.12	-0.02	0.01
Hassles	0.05	-0.03	-0.04	-0.03	-0.23	-0.12
Demands	0.22	-0.06	-0.25	-0.08	-0.10	0.01
Support	-0.14	0.06	0.19	0.03	0.07	0.05
Engage	0.06	0.23	0.07	0.15	0.10	0.22
Diseng	0.06	0.13	-0.01	0.13	-0.17	0.04
Distress	0.08	0.06	-0.07	-0.05	-0.14	-0.01
NA	0.06	0.01	-0.11	-0.03	-0.36	-0.20

Variable	Upset	Control	Wkgoal	Respect	Hassles	Demands
Upset	1.00					
Control	-0.30	1.00				
Wkgoal	0.19	-0.19	1.00			
Respect	-0.02	-0.12	0.01	1.00		
Hassles	0.20	-0.18	0.24	0.08	1.00	
Demands	0.12	-0.14	0.11	0.06	-0.22	1.00
Support	-0.16	0.21	-0.25	-0.11	-0.26	-0.60
Engage	0.01	0.16	0.20	-0.03	0.06	-0.09
Diseng	0.35	-0.36	0.26	0.10	0.43	0.25
Distress	0.38	-0.30	0.26	0.04	0.53	0.24
NA	0.19	-0.27	0.06	0.00	0.46	0.29

Variable	Support	Engage	Diseng	Distress	NA
Support	1.00				
Engage	-0.01	1.00			
Diseng	-0.26	0.11	1.00		
Distress	-0.29	-0.05	0.45	1.00	
NA	-0.25	-0.16	0.38	0.51	1.00

Note. Marital=marital status (1=married and partnered; 2=not married);

Exper=months full-time experience in current position;

Instr=instrumentality; Expres=expressiveness; Upset=upsetting appraisals;

Control=appraised situational control; Wkgoal=work goal attainment

appraisals; Respect=respect for others appraisals; Demands=work demands;

Support=work support; Engage=engagement coping; Diseng=disengagement coping; NA=negative affectivity. High scores represent high levels of the characteristics as defined by the labels. Income categories: 1=<\$25,000; 2=\$26,000 - \$40,000; 3=\$41,000 - \$60,000; 4=\$61,000 - \$80,000; 5=\$81,000 - \$100,000; 6=>\$100,000.

Appendix M

Alternate Path Model Representing the Relationships
among Antecedent, Contextual, Mediating, and Outcome
Variables at Time 1, Time 2, and Time 3 Using Primary
Appraisal Stake Scales

An alternate path model was tested substituting the work goal attainment and loss of respect for others appraisal items with two primary appraisal stake scales that were developed through exploratory factor analyses, respectively assessing "self-interest" and "relationship" stakes. Consistent with the initial model using single appraisal items, the majority of alternate path model fit indices indicated a poor fit to the data, $\chi^2(41, N=157)=144.05, p < .001, Q=3.5, GFI=.89, AGFI=.71, RMSR=.10, CFI=.68, \text{ and } D_2=.72$. The squared multiple correlation for distress (.25) was similar to that of the initial model (.24), although the coefficient of determination for the structural equations indicated that a slightly larger amount of total variance (16.3%) was accounted for in the alternate model than in the initial model (11.6%).

With respect to the results of specific hypotheses, the alternate path model compared favourably to the initial model, with the exception of four main differences. Specifically, self-interest appraisals were significant predictors of distress ($b=.20, t\text{-value}=2.69$) within the alternate path model. In addition, alternate model results revealed that unmarried (i.e., single, divorced, separated, and widowed) managerial and professional women held significantly more threatening self-interest appraisals ($b=.21, t\text{-value}=2.02$) and that women with higher incomes appraised interpersonal work stressors as significantly more threatening to their relationships with others ($b=.31, t\text{-value}=2.92$). Results of the initial model, however, indicated nonsignificant relationships between work goal attainment and loss of respect appraisal items and distress, marital status, and income. Furthermore, whereas self-interest appraisals had a nonsignificant direct effect on engagement coping in the alternate

model ($b=.11$, $t\text{-value}=1.45$), results of the initial model indicated a significant positive relationship between threatening work goal attainment appraisals and engagement coping. The standardized path coefficients for the alternate path model are presented in Figure M1.

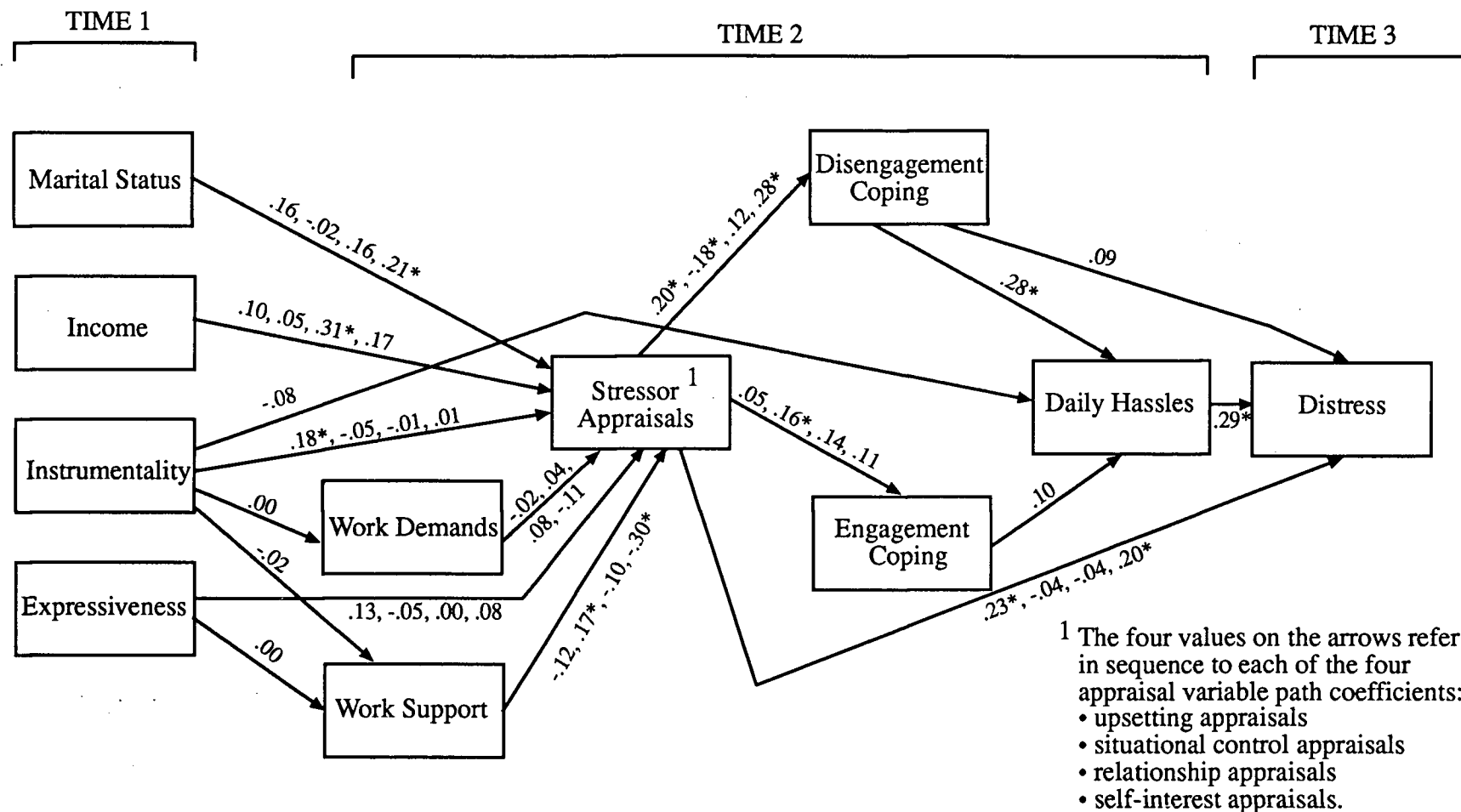


Figure M1. Alternate Path Model Representing the Relationships among Antecedent, Contextual, Mediating, and Outcome Variables at Time 1, Time 2, and Time 3 Using Primary Appraisal Stake Scales. (Arrows indicate the direction of the relationships. First-order partial correlation matrix with negative affectivity removed was analyzed. Standardized LISREL estimates are indicated. Marital status refers to married and partnered = 1; not married = 2. * Indicates significant path coefficients.)

Appendix N

Fit Indices for Path Models

Fit Indices for Path Models (N=157)

	Model	Chi-square	df	p	Q	GFI	AGFI
1.	Path Model	124.89	41	< .001	3.0	.90	.75
2.	Path Model with Nonsignificant Paths Deleted	153.72	74	< .001	2.1	.88	.83
3.	Path Model Using Primary Appraisal Stake Scales	144.05	41	< .001	3.5	.89	.71
4.	Path Model based on the Zero-order Correlation Matrix	153.42	41	< .001	3.7	.88	.70

	Model	RMSR	CFI	D _L	R ²	Total Coefficient of Determination
1.	Path Model	.09	.70	.75	.24	.12
2.	Path Model with Nonsignificant Paths Deleted	.11	.71	.73	.22	.04
3.	Path Model Using Primary Appraisal Stake Scales	.10	.68	.72	.25	.16
4.	Path Model based on the Zero-order Correlation Matrix	.11	.70	.73	.35	.10

Note. df=degrees of freedom; Q=Chi-square to degrees of freedom ratio; GFI=Goodness-of-fit Index; AGFI=Adjusted Goodness-of-fit Index; RMSR=Root Mean Square Residual; CFI=Comparative Fit Index; D_L=Incremental Fit Index; R²=Squared multiple correlations for Distress statistics from LISREL VIII. Total Coefficient of Determination statistic from

LISREL VII. With the exception of the zero-order correlation matrix path model, all indices were calculated from the analyses of the first-order partial correlation matrix, controlling for the effects of negative affectivity.

Appendix O

Path Model Representing the Relationships among
Antecedent, Contextual, Mediating, and Outcome
Variables at Time 1, Time 2, and Time 3 based on the
Zero-order Correlation Matrix

A path model based on the zero-order correlation matrix, not controlling for the effects of NA, was analyzed. Consistent with the initial model based on the first-order partial correlation matrix, the majority of fit indices indicated a poor fit to the data, $\chi^2(41, N=157)=153.42$, $p < .001$, $Q=3.7$, $GFI=.88$, $AGFI=.70$, $RMSR=.11$, $CFI=.70$, and $D_2=.73$. The squared multiple correlation for distress (.35) was higher than that of the initial model (.24), although the coefficient of determination for the structural equations indicated that a similar amount of variance (10%) was accounted for in this model compared to the initial model (11.6%).

With respect to the results of specific hypotheses, this path model compared favourably to the initial model, with the exception of three main differences. Specifically, consistent with Long et al.'s (1992) model, results revealed significant path coefficients from disengagement coping to distress ($b=.17$, $t\text{-value}=2.19$) and from instrumentality to daily hassles ($b=-.17$, $t\text{-value}=-2.33$) compared to the nonsignificant relationships between these variables in the initial model. However, results of the initial model revealed a significant positive relationship between instrumentality and upsetting stressor appraisals when partialling out the effects of NA. The instrumentality-upsetting appraisals relationship was nonsignificant in the path model based on the zero-order correlation matrix ($b=.11$, $t\text{-value}=1.37$). These differences in findings between the two models likely reflect the role of NA in both contributing to and suppressing variable relationships, as suggested in the Results chapter. The standardized path coefficients for the zero-order correlation matrix path model are presented in Figure O1.

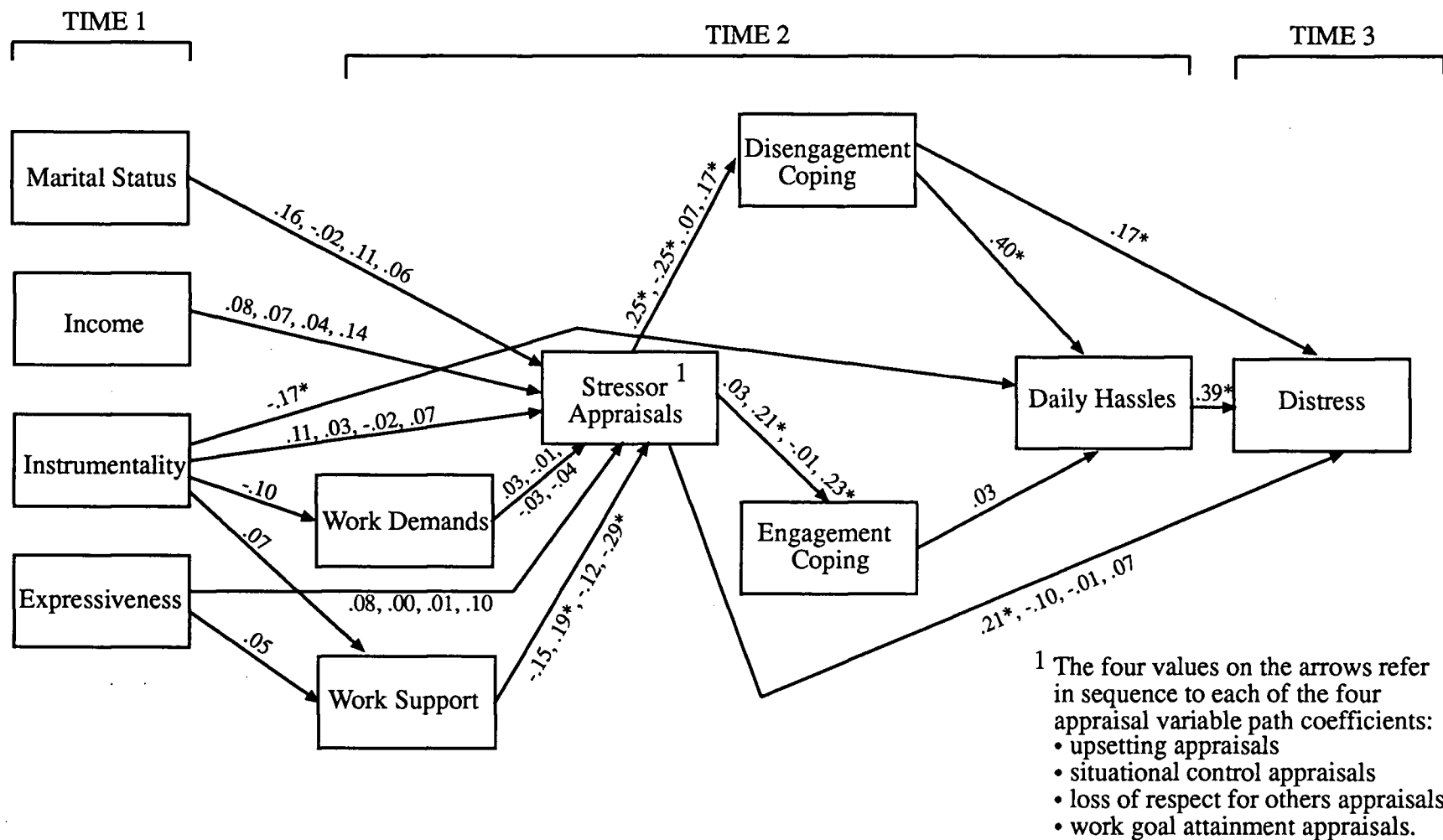


Figure O1. Path Model Representing the Relationships among Antecedent, Contextual, Mediating, and Outcome Variables at Time 1, Time 2, and Time 3 based on the Zero-order Correlation Matrix. (Arrows indicate the direction of the relationships. Standardized LISREL estimates are indicated. Marital status refers to married and partnered = 1; not married = 2. * Indicates significant path coefficients.)