

CULTURE, WORKPLACE STRESS, AND COPING:

A STUDY OF OVERSEAS CHINESE

by

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ABSTRACT

The purpose of this study was to examine Lazarus and Folkman's (1984) stress and coping theory in the context of workplace stress and coping with a focus on the influence of personal and cultural resources on cognitive appraisal, coping strategies, and the well-being of Chinese who are currently employed in professional occupations overseas. The data were collected from a volunteer sample of 228 overseas Chinese professionals (128 men, 100 women, M age = 32.6). Participants completed three sets of questionnaires over a six-week period (2 weeks apart). Specific variables of interest included cultural, social, and personal resources (Chinese collective values, perceived social support and work support, and general self-efficacy), situational appraisals (perceived situational control and self-efficacy), ways of coping (Engagement, Disengagement, and Collective strategies), and changes in short-term outcomes (job satisfaction, somatic symptoms, and depression symptoms). Items that assessed collective ways of coping were developed for this study.

Significant differences were found between men and women in this sample. As such, path analysis (LISREL VIII) was used to test the hypothesized relationships in the model separately for men and women. Based on a zero-order correlation matrix, the results for the initial hypothesized path models indicated a moderate fitting model for men and an inadequate fitting model for women. However, modified models revealed a good model fit for both men and women, $\chi^2(29, N=128)=32.72, p=.29, Q=1.13, RMSR=.05, GFI=.96, \text{ and } CFI=.98$, and $\chi^2(29, N=100)=44.10, p=.04, Q=1.52, GFI=.93, RMSR=.07, \text{ and } CFI=.92$, respectively. The pattern of relationships (path coefficients) provide partial supports for the hypothesized model and Lazarus and Folkman's (1984) theoretical assumptions.

The results of this study were consistent with those obtained by other researchers who found that coping resources are associated with coping strategies and short-term outcomes (e.g., Long, Kahn, & Schutz, 1992; Terry, Tonge, & Callan, 1995). For the men, personal resources of General Self-efficacy were positively related to control appraisal, Work Support predicted Collective coping, and Social Support was associated with a decrease in depressive symptoms. As expected, Disengagement coping was found to have a significant effect on depressive symptoms for the men. For the women, General Self-efficacy and Social Support were associated with perceived self-efficacy, and predicted an increase in job satisfaction and a decrease in depressive symptoms. Self-efficacy appraisal had negative effects on Disengagement coping. As hypothesized, Engagement coping was negatively associated with changes in somatic symptoms, and Disengagement coping predicted changes in both somatic and depressive symptoms. The results of factor analysis supported the development of a Collective coping subscale. Implications of these results and suggestions for future research are discussed.

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CHAPTER I: INTRODUCTION

Research has indicated that the process of working and becoming full participants in a different cultural environment can be stressful (Bhagat et al., 1994; Marsella, 1987; Pinderhughes, 1989). With the increasing ethnic diversity in today's workplace, particular attention has been focused on culturally specific influences on work-related stress appraisals and coping efforts (Bhagat et al.; James, 1994; Marsella, 1994). Although the number of skilled Chinese people working in countries outside of China (i.e., the United States, Canada, and Australia) has been increasing in recent years (Employment and Immigration Canada, 1990; Mak, 1991), few researchers have focused on the experience of work stress and coping of Chinese employed overseas.

Cross-cultural research suggests that cultural values influence people's coping behaviors (e.g., Cross, 1995; Wong, Tjosvold, & Lee, 1992; Yue, 1993), the appraisal of stressors (Aycan & Berry, 1996; Chiu & Kosinski, Jr., 1995; Roseman & Dhawan, 1995), and well-being (Lindy, 1992; Marsella, 1993; Pinderhughes, 1989). Hofstede (1980) and others indicate that individualism and collectivism constitute the most important cultural dimensions that affect an individual's social and work behaviors (e.g., Kagitcibasi, 1987; Triandis 1995). Specifically, empirical evidence indicates that members of individualistic cultures prefer open and active ways of coping, such as direct self-expression and confronting others (Oettingen, Little, Lindenberger, & Baltes, 1994; Rothbaum, Weisz, & Snyder, 1982); whereas members of collectivistic cultures favor indirect approaches that include avoidance, control of internal expectations, and emphasize group cohesion as a means of coping (Bond, Wan, Leung, & Giacalone, 1985; Kashima & Triandis, 1986; Yang, 1986).

Researchers suggest that Chinese collectivism is unique and is strongly grounded in Confucian values (Bond & Hwang, 1987; Chinese Culture Connection, 1987; Chiu & Kosinski

Jr., 1994; Yue, 1993). Although Chinese ways of coping have been examined (e.g., Chan, 1994; Lee, Chan, & Yik, 1992; Lin, 1993), systematic research on the influence of Chinese cultural values within an integrative stress and coping theory is still lacking. In addition, most of the empirical investigations of Chinese coping have been conducted among Chinese children and students (Chataway & Berry, 1989; Huang, Leung, & Wagner, 1994; Yue, 1993; Zheng & Berry, 1991), with little research focused on the experiences of Chinese in the workplace (Chan, 1994; Chiu & Kosinski Jr., 1994), and only a few studies that have exclusively focused on Chinese employed overseas (Chen, 1996; Wong et al., 1992).

The present study is based on Lazarus and Folkman's (1984) transactional theory of stress and coping. This theory has been widely used to investigate variation in responses to stressful life events (e.g., Folkman & Lazarus, 1980), workplace stress (e.g., Long, Kahn, & Schutz, 1992; Portello, 1996; Terry, Tonge, & Callan, 1995; Terry, Callan, & Sartori, 1996), and illness (Smith & Wallston, 1992). More importantly, Lazarus and Folkman's framework has been applied cross-culturally, particularly in research on Chinese stress and coping (e.g., Chan, 1994; Chataway & Berry, 1989; Liang & Bogat, 1994; Yue, 1993). Researchers have begun to test Lazarus and Folkman's (1984) framework and specifically the effects of coping resources on coping strategies and outcomes. According to Lazarus and Folkman, coping resources are defined as relatively stable characteristics of the person's disposition and social environment that can be drawn upon when developing coping responses (Long & Schutz, 1995; Terry et al., 1995). This causal relationship was examined with university students (Terry, 1991) and managers (Long et al., 1992; Terry et al., 1995), and the results consistently support Lazarus and Folkman's theory that a person's coping resources are influential in the prediction of coping.

Terry et al.'s (1995, 1996) and Long et al.'s (1992) models are integrative tests of Lazarus and Folkman's framework that focus on workplace stress and coping. Both studies supported the

causal relationship of coping resources on ways of coping and the influence of coping strategies on the well-being of workers. Thus, the purpose of this study is to test Lazarus and Folkman's stress and coping framework and to extend Terry et al.'s (1995) and Long et al.'s (1992) models by examining the influence of Chinese collectivism values, personal characteristics, and social support on cognitive appraisals, coping strategies (including collective coping), and well-being using a sample of overseas Chinese who are currently employed in professional occupations in individualistic countries, such as the United States, Canada, and Australia (Hofstede, 1980). The phrase "overseas Chinese" has been used literally when referring to people of Chinese origins who live outside of China, including generations of all ages. In the present study, overseas Chinese specifically are first generation Chinese working outside of China, regardless of their age and immigration status.

Background Theory of Stress and Coping

Lazarus and Folkman (1984) provide a useful conceptual framework for understanding stress and coping. Their transactional model of stress and coping is process oriented and concerned with what the person actually thinks and does in a specific situation. According to Lazarus and Folkman's model, psychological stress is defined as a relationship between the person and environment in which demands exceed the person's resources and hinder his or her well-being. The following is a brief outline of Lazarus and Folkman's model, and Figure 1 presents a schematization of their model that consists of coping resources, mediating, and outcome variables.

Recent research has focused on the determination of coping with work-related stress (e.g., Long et al., 1992; Long & Schutz, 1995; Terry, 1991; Terry et al., 1995, 1996). From a theoretical point of view, 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

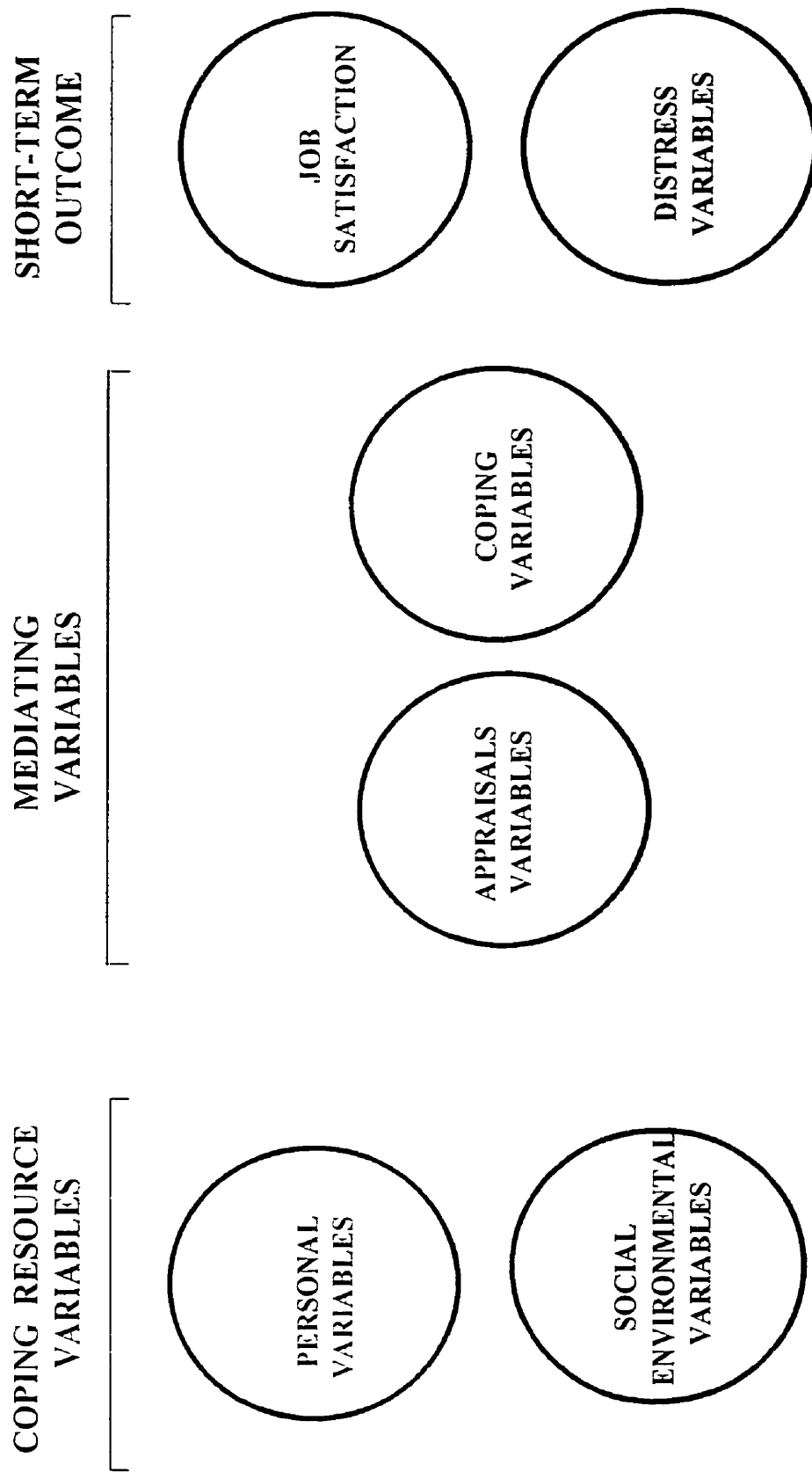


Figure 1. A schematization of Lazarus and Folkman's (1984) stress and coping theory including antecedent, contextual, mediating and short-term outcome variables.

for managing the situation (Lazarus, DeLongis, Folkman, & Gruen, 1985; Terry, 1991, 1994). Personal and social environmental resources are conceptualized as the two primary coping resources that are available to an individual when he or she develops coping strategies in response to stressful events (Lazarus & Folkman, 1984). Researchers have studied several personal resources that include status (socioeconomic and employment status), personality traits (self-esteem), personal characteristics of self agency (general self-efficacy and self-controllability), values, and beliefs; whereas social environmental resources include social support from co-workers, family, or friends (Long et al., 1992; Long & Schutz, 1995; Terry et al., 1995). Empirical evidence from cross-cultural studies further indicates that cultural values affect the appraisal of stress and determine an individual's ways of coping (Chiu & Kosinski Jr., 1994; Liang & Bogat, 1994; Yue, 1993). The resources assessed in this study consist of Chinese collectivism values, general self-efficacy, and social support.

According to Lazarus and Folkman's theory, secondary appraisal involves the assessment of coping options and resources, and predictions of how successful these will be in controlling the stressor and/or the related distress (Folkman, 1984; Lazarus & Folkman, 1984). Findings from empirical research indicate that various coping options are evaluated in the secondary appraisal process, such as altering the situation, accepting it, seeking more information, putting in more effort, or holding back from acting (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Lazarus & Launier, 1978; Terry et al., 1995). The results of cross-cultural research, specific to Asian and Chinese populations, also support the influence of perceived controllability in the determination of coping strategies (Si, Rethorst, & Willimczik, 1995; Tuss, Zimmer, & Ho, 1995; Yan & Gaier, 1994). In addition, research indicates that perceived self-efficacy has an effect that is distinguished from control beliefs on coping responses, particularly in the workplace (Ashford, 1988; Litt, 1988; Terry, 1994; Terry et al., 1995). Thus, secondary appraisals of perceived control

and self-efficacy were examined in the present study of workplace stress and coping.

Coping is the result of an individual's appraisals of the meaning of the stressful event (Lazarus, 1991), and is defined as "constantly changing cognitive and behavioral efforts to manage specific internal and/external demands that are appraised as exceeding the resources of the person" (Lazarus & Folkman, 1984, p. 141). Two primary functions of coping have been identified: the management of the problem causing the distress (problem-focused coping), and regulating one's distress created by the stressor (emotion-focused coping; Folkman & Lazarus, 1980). Lazarus and his colleagues argue that both functions of coping are often used in most stressful situations and that they may either hinder or facilitate each other. Problem-focused strategies include seeking more information, identifying obstacles, and generating solutions to the problem. Emotion-focused coping, by contrast, aims to manage or regulate one's emotions by utilizing strategies such as avoidance, denial, minimization, and positive reappraisal (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Lazarus & Folkman, 1984). Some empirical research suggests that problem-focused coping strategies are related to more effective coping (e.g., Billings & Moos, 1981; Pearlin & Schooler, 1987); whereas other research suggests that the effectiveness of both forms of coping depends not only on the type of coping, but also on the context of the situation (e.g., Fleishman, 1984) and personal resources (e.g., Terry, 1991).

Other researchers, however, have criticized the conceptualization of problem- and emotion-focused coping as the two primary coping functions (e.g., Carver, Scheier, & Weintraub, 1989; Endler & Parker, 1990; Tobin, Holroyd, Reynolds, & Wigal, 1989). Tobin et al. for example, identified two higher order coping factors: (a) Engagement coping is defined as "active efforts to manage both problem- and emotion-focused aspects of the stressful events" (Tobin et al., p. 350), and (b) Disengagement coping--cognitive and behavioral activities that orient attention away from the stressful event. Additional support for engagement and disengagement

coping comes from the work of Kahn (1990, 1992) and Long et al. (1992). Kahn (1990) found that workers 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 situation. Similarly, by using factor analysis, Long et al.'s (1992) results supported the use of engagement and disengagement coping in a stress and coping model for managerial women. Thus, engagement and disengagement coping functions were examined in this study.

According to Lazarus and Folkman's (1984) transactional model, both appraisals and coping strategies are referred to as mediators in the stress and coping process. Mediation has been defined as "the generative mechanism through which the focal independent variable is able to influence the dependent variable of interest... (and) Mediation... is best done in the case of strong relation between a predictor and a criterion variable" (Baron & Kenny, 1986, pp. 1173, 1178). That is, in the model, the relationship between coping resource and outcome variables are mediated by appraisals and coping strategies. Although the mediating effect has been a very important concept in Lazarus and Folkman's model, only a few empirical studies have tested this effect directly (e.g., Terry 1991, 1994).

Lazarus and Folkman's (1984) theory of stress and coping features short-term outcomes such as psychological functioning, somatic health, and social functioning. Empirical research has commonly found that work stress is one of the main factors that affects the well-being of many overseas employees (Mak, 1991; Tabora & Flaskerud, 1994) and minority workers (Erlich & Larcom, 1992; Frone, Russell, & Cooper, 1990; James, 1994). Compared with other populations, higher levels of depression and somatization have been reported among overseas Chinese working in Canada and the United States (e.g., Lin, 1993; Ying, 1988). Research on workplace stress and coping indicates that coping has a direct impact on the well-being of both men and women

employees (Long et al., 1992; Portello, 1996; Terry, 1992; Terry et al., 1995). For example, levels of job satisfaction and distress, including depression and somatic symptoms, have been directly linked to coping strategy use. Active and engagement forms of coping have a positive relationship with job satisfaction, and passive and disengagement forms of coping lead to increased feelings of distress and decreased job satisfaction among workers. In addition to these direct effects on adjustment, research on workplace stress and coping also provides evidence for indirect links between coping resources, situational appraisals, and workers' adjustment. For example, Long et al. (1992) reported that women managers who have stronger agentic traits are likely to use more engagement coping, which in turn predicted more severe daily hassles. Terry et al. (1995) found that employees who lacked confidence in their ability to manage stressful events used low levels of instrumental action and high levels of escapism and self-blaming coping strategies, which in turn, indirectly affected employees' levels of anxiety, depression, and job satisfaction. Therefore, in this study, engagement and disengagement forms of coping were expected to be related to outcomes such as depression, somatic symptoms, and job satisfaction.

Limitations of Existing Coping Research

Although a number of researchers have drawn on Lazarus and Folkman's (1984) theoretical framework in their cross-cultural studies, they have failed to clearly investigate cultural influences in the determination of appraisals in the stress and coping process (Chan, 1994; Chataway & Berry, 1989; Gerdes & Ping, 1994; Lin, 1993). Yue (1993) studied the influence of Confucian values of self-cultivation for Chinese students and provided valuable empirical evidence that illustrates some characteristics of Chinese ways of coping. However, his research focused on very specific values that left the influence of Chinese collectivism on appraisals untested. In addition, Aldwin (1994) integrated the concept of culture in her model of stress and coping, but this model is relatively new and has not been empirically examined. Thus, systematic research on

the influence of cultural values within a stress and coping model is still lacking.

The existing research on workplace stress and coping is also limited in its consideration of cultural influences. Although some researchers included personal beliefs, such as gender role attitudes or general control beliefs, as indicators of coping resources in their model of work-related stress and coping (Long et al., 1992; Long & Schutz, 1995; Terry et al., 1995, 1996), these studies have neglected to examine the role of cultural resources as predictors of appraisals. In addition, although a number of researchers have compared work values across nations and cultures (Cooper & Payne, 1988; Hofstede, 1980; MOW International Research, 1987), the relationship between cultural values and workplace stress and coping has not been studied. Similarly, some researchers have examined specific work values in particular cultures, but made no link to its impact on stress appraisals (e.g., the Chinese Culture Connection, 1987). Although Chiu and Kosinski Jr. (1995) provide an analytical description on Chinese cultural collectivism and work-related stress among Hong Kong Chinese, very little empirical research has been conducted that directly examines the effects of Chinese collectivism values on the experiences of workplace stress and coping (Chiu & Kosinski Jr., 1994; Wong et al., 1992). Moreover, only a few studies have focused exclusively on the stress and coping experiences of overseas Chinese working in professional occupations (e.g., Chen, 1996; Wong et al., 1992).

Current coping measures are limited in their assessment of collective strategies. Traditional coping measures have focused predominantly on individual efforts and largely ignored collective approaches. Cross-cultural research has indicated that interdependence is one of the most significant characteristics of collectivism cultures, and that maintaining harmony and conforming with one's group are common and salient ways of handling conflicts among individuals in collectivistic cultures (Ho & Chiu, 1994; Kashima & Triandis, 1986; Kirkbride, Tang, & Westwood, 1991; Yamaguchi, 1990). Although greater attention has been focused on

investigating the conceptual structure of individualism and collectivism (e.g., Hui, 1988; Singelis, 1994; Triandis, 1995), research on collective ways of coping still remains at a descriptive level (Bond et al., 1985; Kashima & Triandis, 1986; Yang, 1986). Despite the recent development of a measure of relationship-focused coping (empathic and support provision), which addressed the interpersonal aspect of coping (O'Brien, 1992; O'Brien & DeLongis, 1990, 1996) and may capture some of the communal behaviors in collectivism, items in this measure can not fully tap the collective aspect of coping that aims at increasing the power of the individual and reducing the level of stress by utilizing group connections. As such, research is needed to develop an instrument that adequately reflects collective coping strategies.

Finally, prior findings of cross-cultural studies have been based on data collected at one point in time, providing no opportunity to investigate relationships over time (Ekblad, 1996). This is an important consideration given stress and coping are dynamic on-going processes (Lazarus & Folkman, 1984).

These limitations to past research were addressed by focusing exclusively on the workplace stress and coping experiences of overseas Chinese in relation to Chinese collectivism. In addition, a prospective design was employed, in which social and personal resources, appraisals, coping strategies (including collective coping), and outcome variables were assessed on three separate occasions over 6 weeks. Because existing coping measures have been developed based predominantly on an individualistic culture (Lazarus, 1991), collectivistic ways of coping have not been included in the assessment of coping. Therefore, with the aim of extending the model's predictive ability by elucidating collective dimensions of the coping process, collective coping items were identified and included as a component of the coping instrument used in the present study.

Although gender differences in relation to stress and coping have been reported by

researchers, empirical findings have not always been consistent (e.g., Atkinson, Lowe, & Matthews, 1995; Folkman & Lazarus 1980; Long, 1990). For example, some researchers found that women rely more on social support and use more emotion-focused coping than men (e.g., Folkman & Lazarus, 1980; Ptacek, Smith, & Dodge, 1994); others reported no significant gender differences in stress and coping (e.g., Hamilton & Fagot, 1988; Terry et al., 1995). Inconsistent findings have also been reported for research on Chinese stress and coping (Chan, 1994; Gerdes & Ping, 1994; Tang & Lau, 1995). As such, no specific hypotheses were made regarding gender differences in the present study, however, the data were examined in an exploratory manner in order to determine whether gender differences exist in a sample of overseas Chinese professionals in relation to workplace stress and coping.

Purpose of the Present Study

The purpose of this study is to examine a model based on Lazarus and Folkman's (1984) theoretical framework as it applies to overseas Chinese who are employed in professional occupations. Specifically, I have drawn on Terry et al.'s (1995) and Long et al.'s (1992) workplace stress and coping models and examined the influences of cultural resources on appraisal and coping processes. In addition, I developed a collective coping instrument in order to extend the model's predictive ability. The use of path analytical modeling in this study provides a means by which I examined the direction and strength of relationships among variables in order to determine the extent to which Lazarus and Folkman's theoretical assumptions hold in a context specific to overseas Chinese professionals. The selection of variables was guided by this framework and by the results of empirical studies, and consists of: (a) personal, cultural, and social resources, (b) mediating variables, and (c) short-term outcome variables (see Figure 2).

This study focused on the influence of coping resources on the appraisals and coping strategies employed by overseas Chinese professionals. Resource variables included individual

beliefs in Chinese collectivism values, the personality trait of general self-efficacy, and perceived social support. All resource variables were considered predictors of appraisals. Cognitive appraisals (perceived control and perceived self-efficacy), and coping strategies (engagement and disengagement coping that consists of both individual and collective coping aspects) were conceptualized as mediating variables. Short-term outcome indicators were job satisfaction and distress (somatic complaints and depression). Given the limitation in assessing collective aspects of coping, collective coping items were developed for this study.

Although the impact of racialization (i.e., classification and social structures based on the concept of race) on overseas Chinese professionals must not be underestimated, this issue was not addressed within the scope of this study. It is acknowledged, however, that culture is related to ideas about race (Murguia, 1989), and racial discrimination has long been recognized as a common stressor in cross-cultural work environments (Erlick & Larcom, 1992; Gutierrez, Saenz, & Green, 1994; James, 1994). Instead, this study focused on a stress and coping framework and the links between Chinese collectivism and the coping process.

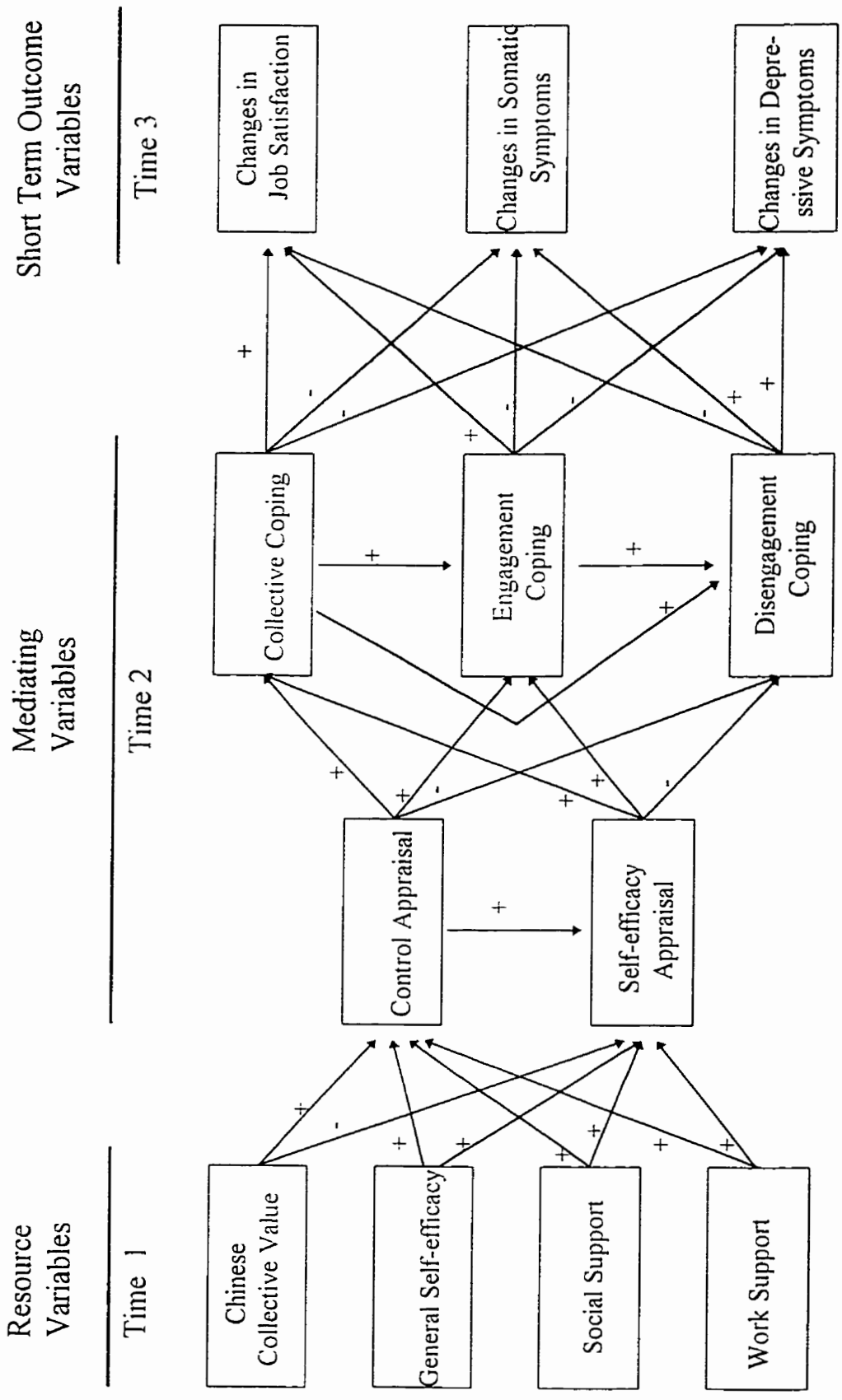


Figure 2. Hypothesized Path Model Representing the Relationships among Resources, Mediating, and Outcome Variables at Time 1, Time 2, and Time 3 for Overseas Chinese professionals (Arrows indicate the direction of the relationships).

CHAPTER II: LITERATURE REVIEW

Lazarus and Folkman's (1984) theoretical model and Terry et al.'s (1995) and Long et al.'s (1992) empirical work form the basis of the proposed relationships among coping resources, appraisals, coping, and short-term outcomes. Evidence is presented that supports the relevance of examining the influence Chinese collectivism values may have on the stress and coping process for overseas Chinese professionals. Relevant stress and coping literature related to the workplace, especially studies of collective cultures and Chinese working overseas offer support for the hypothesized relationships.

Stress Associated with Working in Different Cultural Environment

Considerable research has accumulated that points to the importance of understanding how employees cope with workplace stress in cross-cultural settings. It is recognized that the process of becoming full participants in a different cultural environment can be stressful (Bhagat et al., 1994; Marsella, 1987; Pinderhughes, 1989). Working in new cultures may result in individuals facing difficulties because of ambivalence toward differences (James, 1994; Marsella, 1987) and cultural value conflicts (Aldwin & Greenberger, 1987; Bond, 1988; Leung & Park, 1986). For example, group productivity and personal achievement may be viewed differently by people from different cultures (Kahn & Byosiere, 1991; Marsella, Oliviera, Plummer, & Crabbe, in press). Based on Chinese collective values, for example, loyalty to one's work organization is a moral commitment to the collective goals that emphasize everyone's involvement (Chao, 1990; Yang, 1986). In the work situation, loyalty is conscience-inspired and duty-bound, which constitutes a strong motivation for joint effort and task involvement in order to affect collective goals and the common good. As such, Chinese employees who hold collectivistic values tend to work hard and are unlikely to refuse a work assignment even if it is beyond their ability (Chiu & Kosinski, 1995). At the same time, stress may increase because of frustration with one's inability

to do the work, or because of work overload (Chiu & Kosinski, 1995). Consequently, some Chinese employees may become upset when individuals place personal needs before the needs of the group (Triandis, 1989). Although making personal plans that include taking holidays may be the norm for people in an individualistic culture, some Chinese professionals express concern that such an event would be constructed as putting personal needs above collective needs (see Appendix H, Table 1 for examples of stressors reported by focus group participants in a pilot study for this project).

Additional work-related pressure may also come from the expectations inherent in collectivism ingroups (ingroup is defined here as family, close friends, and their community). Some researchers have found that Chinese place great emphasis on the anticipated reactions of others in deciding what they will do in an encounter (Ying, 1981). For example, Singapore Chinese students ($n=200$) and New Zealand students ($n=200$) were compared on their attributions and achievement perceptions (Ng, McClure, Walkey, & Hunt, 1995). Singapore Chinese students reported experiencing considerable pressure not only because of their personal responsibility but also from the expectation of collective responsibility for the ingroup (Ng et al., 1995). To a certain extent, Chinese people may have a great deal of fear of "losing face" to their ingroups when they can not meet their expected standards (Chung, 1988; Ho, 1986). Therefore, it is very common for Chinese people to work harder in order to save face and to prove their competence in challenging situations (Liang & Bogat, 1994; Ying, 1981). As such, longer working hours are very likely to add physical and emotional stress to the workers (Chiu & Kosinski, 1995). Overseas Chinese may also experience stress when their expectations for feedback at work are not met. For example, little or no feedback by their supervisors or colleagues about their work quality was reported to be one of the major stressors of overseas Chinese professionals (see Appendix H, Table H1 focus group data).

In addition to cultural value conflicts and the pressure of cultural expectations, common difficulties for overseas workers include finding and keeping professional jobs appropriate to their skill levels, especially for overseas Asian professionals (Kim, 1981). In North America, for example, overseas workers may experience changes in employment status due to the lack of recognition of academic and occupational qualifications, especially immigrants from "non-traditional" places such as Asia, the Middle East, or Eastern Europe (Aycan & Berry, 1996; Berry & Kalin, 1995; McDade, 1988). According to the present selection criteria for immigrants to Canada, for instance, high educational attainment and occupational qualifications are required (McDade, 1988). Many overseas Chinese coming to countries such as Canada and the United States with high educational backgrounds and work experience expect that their training and achievements would be equally recognized and used in the new workplace (Mak, 1991). Due to rapid changes in the labor market (Employment and Immigration Canada, 1990), skilled newcomers, however, may not be able to obtain jobs that fully utilize their skills and experiences (Beiser et al., 1988). Many have faced a long waiting process and underemployment (Berry & Kim, 1988; McDade, 1988), which in turn causes frustration, low life/job satisfaction, and emotional distress (Aycan & Berry, 1996; McDade, 1988).

Lack of English language competence (Aycan & Berry, 1996; Chataway & Berry, 1989) and local work experience (Cumming, Lee, & Oreopoulos, 1989) are also common obstacles faced by overseas workers (Beiser et al., 1988; Berry & Kim, 1988; McDade, 1988). Errors in spelling and awkward grammar may be viewed unfavorably and as unprofessional (Lee & Westwood, 1996). As such, overseas qualifications may not be fully recognized, especially in professions such as counselling, law, and teaching where spoken and written English is important and required (Atkin & Kent, 1989; Cumming, Lee, & Oreopoulos, 1989; Mak, 1991). Language difficulties in often take a long time to overcome, thus getting local work experience also becomes difficult for

people who are struggling to be accepted into their profession.

Researchers have linked the stress of working overseas with workers' well-being. Feelings of uncertainty for their future are common for many overseas workers, which in turn, has been found to have a negative impact on their psychological well-being (James, 1994; Lum, 1992; Quick, Murphy, & Hurrell, 1992). For example, Aycan and Berry (1996) found that work status loss and underemployment were significantly related to levels of stress ($r=.32$, $p<.001$), self-concept ($r=-.25$, $p<.01$), and alienation ($r=.29$, $p<.01$) in a sample of Turkish immigrants ($n=110$) in Canada. Other research indicates that cultural minority workers may also experience insensitivity to their values, prejudice, and discrimination (Marsella, 1994). James (1994) indicated that, compared with White American workers ($n=64$), African American employees ($n=38$) reported significant value conflicts, and low levels of social support. Minority workers may rely on defensive behaviors for coping (Goldsmith & Blakely, 1992), which significantly affects their well-being by increasing anger, frustration, depression, and low self-concept (Landy, 1992; Lum, 1992; Marsella, 1993).

Researchers have begun to focus on cultural influences on work stress and coping. However, such research is limited, and the systematic study of culturally specific influences within a stress and coping model are still lacking. Given the fact that the number of skilled Chinese people working in countries outside of China (i.e., the United States, Canada, and Australia) has increased in recent years (Employment and Immigration Canada, 1990; Gannett News Service, 1993; Mak, 1991), understanding cultural influences and determining how overseas Chinese cope as well as how effective these coping efforts are in maintaining their well-being, is important. Thus, the purpose of this study is to test the influence of Chinese cultural values within an integrative workplace stress and coping model for overseas Chinese who are currently employed in professional occupations in countries with individualistic values, such as Canada, the United

States, and Australia (Hofstede, 1980).

A Definition of Culture

Culture is an important concept that has received increasing attention in psychosocial research (e.g., Bond, 1994; Kagitcibasi, 1987; Triandis, 1995). Cross-cultural research indicates that culture affects an individual's view of self (Cross, 1995; Singelis, 1994; Zhang, 1995), perception of social support (Krause & Liang, 1993), appraisal of stressors (Aycan & Berry, 1996; Chiu & Kosinski, 1995; McCrae, 1984), ways of communicating (Singelis & Brown, 1995) and coping strategies (Aldwin, 1994; Cross, 1995; Wong et al., 1992; Yue, 1993).

Culture has been conceptualized in various ways. Some theories emphasize shared attitudes, sense of causality, lifestyles, commitments, and expected resources that shape individual behavior (Goodenough, 1970; Kim & Berry, 1993). Others emphasize shared cognitive systems that provide the standards for perceiving, believing, evaluating, communicating, and acting of a cultural group (Pelto & Pelto, 1975; Shweder & LeVine, 1984). Culture can also be distinguished as objective, which refers to physical objects or the environment (e.g., tools or roads, Herskovits, 1955), or subjective culture, which includes categorizations, beliefs, attitudes, norms, role definitions, or values (Triandis, 1972). In addition, subcultural differences may exist within a culture, such as different regional, socioeconomic, gender, and occupational groups. As such, different values and expectations may affect individuals differently within a culture.

Despite many definitions, culture has been generally conceived of as "the collective programming of the mind which distinguishes the members of one human group from another" (Hofstede, 1980, p. 25). This definition suggests that value systems constitute a major source of cultural differences. In this definition, culture is collectively developed and learned by human groups and this definition was used in the present study.

Individualism and collectivism. In recent years, increasing evidence from both theoretical

and methodological cross-cultural studies suggests that individualism and collectivism constitute the most important dimensions of cultural differences in social and work behaviors (Hofstede, 1980; Kagitcibasi, 1987; Triandis 1995).

As defined by Triandis (1995), dimensions of individualism and collectivism differ in four aspects--the meaning of self, the structure of goals, the behavior functions, and the focus of in-group behaviors. Individualism is described as a social pattern that consists of loosely linked individuals who view themselves as independent of collectives; are primarily motivated by their own preferences, needs, rights, and the contracts they have established with others; give priority to their personal goals over the goals of others; and emphasize rational analyses of the advantages and disadvantages in associating with others. Collectivism, on the other hand, is a social pattern consisting of closely linked individuals who see themselves as parts of one or more collectives (family, co-workers, nation); are primarily motivated by the norms of and duties imposed by those collectives; are willing to give priority to the goals of these collectives over their own personal goals; and emphasize their connections to members of these collectives (see Kim, Triandis, Kagitcibasi, Choi, & Yoon, 1994; Markus & Kitayama, 1991; Triandis, 1995).

Empirical research suggests that individualism is deeply rooted in Western countries such as the United States, Canada, and Australia. Collectivism is found in the East in countries like China, Korea, and Japan (Bond, 1988; Hsu, 1983; Kim, 1987). One well known cross-cultural investigation on individualism and collectivism was conducted by Hofstede (1980). In his survey of work values of more than 116,000 IBM employees across 40 different countries, Hofstede found four relatively independent cultural dimensions: power distance, uncertainty avoidance, individualism versus collectivism, and masculinity versus femininity. Countries like the United States, Canada, and Australia were found to be characterized by individualistic cultural characteristics; whereas cultures in countries like Japan, Korea, and China were collectivistic in

nature (Hofstede, 1980; Triandis, 1990).

Hofstede's dimensions provide an important theoretical framework for the prediction of many kinds of behaviors in cross-cultural contexts (Hofstede, 1980, 1983; Triandis & Albert, 1987). Following Hofstede's (1980, 1983) framework, extensive research has focused on the examination and development of a theory of individualism and collectivism (Hui, 1988; Kim, Triandis, Kagitcibasi, Choi, & Yoon, 1994; Triandis, 1995). Cross-cultural studies often apply the concepts of individualism and collectivism in the analyses of psychological differences (e.g., Chia & Wuensh, 1994, Leung, 1989; Schwartz, 1990), and specific aspects of cognitive and behavioral differences (e.g., Han & Park, 1995; Lau, 1992; Sigelis, 1994).

Researchers have found that individualism and collectivism are key factors that affect individuals' perceptions of stressors (Leung, 1988; McCrae, 1984; Ting-Toomey, 1985). McCrae (1984), for example, argued that cultural norms tend to lead people within a culture to appraise events in a similar fashion, and thereby respond with similar coping mechanisms that may differ from other cultures. For example, people of individualistic cultures may emphasize individual achievement; whereas for people in collectivistic cultures, being different from one's ingroup may be considered threatening. Research also indicates that individualism and collectivism values affect the ways people cope. For example, members of individualistic cultures may prefer open and active ways of coping (Oettingen, Little, Lindenberger, & Baltes, 1994; Rothbaum, Weisz, & Snyder, 1982), whereas members of collectivistic cultures favor inactive coping and may emphasize group cohesion as a means of coping (Bond, Wan, Leung, & Giacalone, 1985; Kashima & Triandis, 1986; Yang, 1986).

Cross (1995) examined the relationships between independent individualism and interdependent collectivism self-views and ways of coping in American students ($n=79$) and East Asian students ($n=71$) from Taiwan, Korea, Peoples of Republic China, PRC, and Japan. The

study found that East Asian students obtained higher scores on interdependent self-view but both groups were similar in their independent self-view. Interestingly, path analysis indicated that an independent self-view positively related to direct ways of coping (active and planning) for both groups of students. An interdependent self-view positively related to increased stress and less use of directive ways of coping for the Asian students only. This study provides some support that East Asian students held both independent and interdependent self-views, and those who placed more importance on the independent self-view used more direct coping strategies when addressing problems related to school. However, confidence in these findings is limited as results were based on a measure (individualism and collectivism) with low reliability that was created with reference to a Japanese perspective of independent and interdependent self-view (Yamaguchi, 1990; 1994). In addition, the relatively small number of students involved in this study may also limit generalizability. Particularly, although collective interdependent value was identified and examined, collective coping was not recognized and included in the study.

Theories of individualism and collectivism have been criticized for being too general and the concepts not distinctive when used to analyze the influence of cultural values within a given culture (Lee, 1994; Schwartz, 1990). Likewise, definitions of individualism and collectivism have been criticized as being misused or overused by simply labelling differences found between cultures (Kagitcibasi, 1990; Lau, 1988; Lee, 1994). In addition, the study of collectivism and individualism is based on the analysis of observed behavior patterns and functions within and between cultures that are theoretically vulnerable to change. It is assumed that individual behavior within cultures is shaped by the social learning process, which is also subject to change. Because of frequent cultural exchanges in today's world, almost no modern society is solely individualistic or collectivistic (Han & Park, 1995). Moreover, individual differences exist within as well as between cultures. As such, researchers have recommended that behavior within particular cultural

groups should be studied (e.g., Han & Park, 1995; Kagitcibasi, 1990; Kagitcibasi & Berry, 1989) to determine which culturally specific values and factors contribute to different behaviors (e.g., Katz, Shope, & Tang, 1993; Lee, 1994; Schwartz, 1990), and to examine the impact of specific cultural dimensions in particular psychological processes (e.g., Cross, 1995; Singelis & Brown, 1995). Taking the critiques and suggestions in all, the current study is specifically focused on understanding the influence of Chinese collectivism on the process of stress and coping. Overseas Chinese professionals were selected as a particular cultural group in order to study their experiences of workplace stress and coping. It must be reiterated that the term collectivism used in this study is not intended to label the "nature" of individuals belonging to a certain culture; rather, these concepts are used to understand a particular value existing in Chinese culture.

Confucianism and Chinese collectivism. Cross-cultural research indicates that Confucianism as a value system is unique to Chinese collectivism and has made a lasting contribution to the Chinese world view, and behavioral and educational norms (Bond & Wang, 1983; Redding & Wong, 1986). Confucius is respected as a Master in Chinese education history, and his golden rules such as "What you do not want done to yourself do not do to others" and "Give prominent place to loyalty and sincerity" are deep-rooted in the minds of many Chinese people (Cheng, 1977; DeBary, 1964; Szalay, Strohl, Fu, & Lao, 1994). From this perspective, understanding Confucianism is necessary in order to understand Chinese collectivism.

Although Taoism and Buddhism constitute some Chinese belief systems, Confucianism is considered as one of the most significant values that is bound up with what it means to be Chinese. Aspects of Confucian values have been characterized with "the creation of dedicated, motivated, responsible, and educated individuals and the enhanced sense of commitment, organizational identity, and loyalty to various institutions" (Kahn, 1979, p. 122). In general, classical Confucian philosophy emphasizes the core of self-cultivation that seeks to promote a

sense of self-control in three areas--self-reflection, the doctrine of the mean, and the value of key relationships. Confucianism holds that by the cultivation of interior goodness and by coupling it with exterior grace through the encouragement of social decorum, society at large would come to manifest the kind of balance, reasonableness, and thoughtfulness typical of the best human beings (Redding, 1990).

Self-reflection means to engage in constant self-examination of one's moral and interpersonal needs as "San Si Ri Ho Xing" (thinking three times before taking action). Self-reflection requires a person to be self-critical in situations where he or she may or may not be responsible for what happened. It also encourages a person to take a constructive assessment of his or her setbacks and misfortunes in life. Self-reflection, on the one hand, promotes self-learning through identifying positive factors or outcomes from one's experiences. On the other hand, it also encourages self-control and self-discipline that restrict expression of emotions and free verbalization, especially in public places. Within Chinese culture, individuals are expected to be self-conscious, to speak carefully, and to behave precisely and properly (Cheng, 1989).

The doctrine of the mean refers to the mean--the middle way, the path between life's extremes. Confucius taught that pride should not be allowed to grow, desire should not be indulged, and pleasure not be pursued to excess. To be equally removed from enthusiasm and indifference was the ideal of behavior for Confucianism. A Chinese person brought up in a Confucian culture should always follow the doctrine of the mean. Thus, the idea that a person should seek a solution without considering the goals and desires of others, may seem to lean too far towards enthusiasm. The rule of doctrine of the mean is believed to promote balance in nature, to smooth conflicts in the world, and to help yield internal harmony and unity in people (Tu, 1979). In practice, the doctrine of the mean involves tolerating differences and processing opposite opinions and conflict situations into coherent wholes (Cheng, 1989).

The value of key relationships is the core of Confucianism. According to Confucianism, the individual is a function of the totality--family, society, and cosmos. As a result, there is no exact Chinese equivalent for the English word "self." In Chinese, the self often means selfishness. Ideally, the Chinese individual always thinks of the effects that her or his actions have on others. Confucianism maintains that one should always consider the effects of his or her actions within key relationships. The central thrust of propriety is actually the achievement and maintenance of harmony. Confucius taught that there were five significant pairs; father and son, husband and wife, older brother/sister and younger brother/sister, elder and younger person, and ruler and subject. For example, in the heart of every Chinese person dwells the concept of filial piety (Bond & Wang, 1983). Image, reputation, and the wealth of one's family are considered as the "face" of the person, and should be safeguarded and upheld at all times by any member of the family. In Confucianism, one achieves one's individuality within the framework of the five relationships. Furthermore, it is a common Chinese saying that in relationships one's every action affects another person. When these relationships are rightly constituted, the health of the entire society is maintained.

The results of empirical research have supported the importance of Confucian influence on contemporary Chinese culture (Chia, Wuensh, Cniders et al., 1994; Chinese Culture Connection, 1987; Chiu & Kosinski, 1994; Szalay et al., 1994). For example, following Hofstede's (1980) cultural dimension framework, a total of 2000 undergraduate university students (50 men and 50 women from each country) of Chinese origin from 22 countries and areas, such as Japan, Taiwan, S. Korea, Hong Kong, and Singapore, participated in the study called the Chinese Culture Connection (1987). Based on the mean scores of each country, an ecological factor analysis was conducted on the 40-item Chinese Value Survey (CVS) developed for the study. Three Chinese societies including Singapore, Taiwan, and Hong Kong scored consistently higher on the CVS

than people from other countries. Factor analysis of the CVS yielded four dimensions: (a) Integration (e.g., tolerance of others, trustworthiness, non-competitiveness), (b) Confucian work dynamism (e.g., ordering relationships, self-cultivation, persistence), (c) Humanheartedness (e.g., courtesy, kindness, patience), and (d) Moral Discipline (e.g., having few desires, moderation, keeping oneself disinterested and pure).

Pan, Chaffee, Chu, and Ju (1994) compared traditional Chinese and American cultural values in samples of citizens from the United States (men=1167, women=1315) and China (men=1060, women =940). The Chinese favored the traditional Confucian values, especially commitment to family and future generations. In both samples, personal connections were considered very important, but the Chinese showed a willingness to use their connections for problem solving, which indicated that strong social support may serve as a coping resource for Chinese. Lee (1993) compared perceived homogeneity and family loyalty among PRC Chinese students ($n=182$) and American students ($n=182$). The PRC Chinese students scored significantly higher in familial loyalty and stability than American students. Regarding interpersonal relationships, Chinese also scored significantly higher on harmony than the Americans (Lee, 1993), which supports the notion that the influence of traditional cultural values remains strong in Chinese culture today (Si, Rethorst, & Willimczik, 1995).

However, one should be cautious in stereotyping Chinese individuals because the cultural value system is also changing (Pan et al., 1994). Recent studies have shown that individualism is more accepted by the younger generation in China (e.g., Chu, 1985; Feather, 1986; Lau, 1988). Using the Chinese Value Survey (CVS, Chinese Culture Connection, 1987) with 512 men and women (18 to 52 years old) in PRC, Garrott (1995) found that items including humbleness, harmony with others, and loyalty to superiors were perceived as having moderate to little importance, and being conservative was ranked as least important at all levels in the survey. The

authors suggested that the recent socioeconomic developments in China may be an explanation, and speculated that Chinese people may have been influenced by individualistic values along with learning economic reform from countries such as the United States, Canada, and Australia.

However, Chinese in their homeland and overseas may express different values. For example, Katz, Juni, Shope, and Tang (1993) investigated current value hierarchies on two groups of Chinese students--students within PRC (men=26, women=32) and overseas Chinese students in the United States (men=40, women=55). The results indicated that the two groups were very different in their beliefs. Interestingly, traditional collectivist values were more salient to the overseas Chinese group than the students in their home land. Conversely, the PRC student group assigned greater importance to individualistic values than the overseas Chinese sample (Katz et al., 1993). Such results challenge traditional stereotypes that depict the Chinese as totally dependent and collectivist in nature. At the same time, the results of this study provide some support for the use of Chinese collectivism as a coping resource in the study of specific cultural value influence. The results of this study further indicated a very important issue that deserves attention in research related to culture. That is, one needs to assess particular cultural values to understand cultural influences. It is too often that researchers build their assumptions and draw their conclusions about cultural influences based only on the cultural origin of the participants, and ignore the possible changes that may or may not occur within a particular group of people. Such conclusion can be misleading. Therefore, it is important for this study to use Chinese collective values to assess this particular cultural influence on overseas Chinese professionals' workplace stress and coping.

In summary, consistent with the review of the literature, culture in the present study was characterized as Chinese collectivism with an emphasis on Confucian values. Overseas Chinese were analyzed as a group, but individual differences were expected. That is, although the values

of Chinese collectivism were expected to be held by the sample as a whole, individual differences in level of belief were expected.

Lazarus's Theory of Stress and Coping

Lazarus and Folkman's (1984) stress and coping model is one of the most frequently applied theoretical approaches in both the workplace and cross-cultural coping literature. According to Lazarus and Folkman (1984), stress is generally described as a "particular relationship 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). Lazarus and Folkman suggest that research needs a theory-driven approach to measure the key inputs in the stress and coping process including, personal belief systems, appraisal, coping, and the outcome of coping. In this process, personal beliefs guide appraisal and coping, cognitive appraisal and coping mediate stressful person-environment relationships, and change the relationship between the person-environment and both immediate and long-range outcomes (Baron & Kenny, 1986; Folkman, Lazarus, Gruen, & DeLongis, 1986).

Coping resources. Lazarus and Folkman's (1984) theory states that psychological stress is a process in which an event/situation is appraised by the person as taxing or exceeding his or her resources and endangering the person's well-being. As indicated by Lazarus (1991), cognitive appraisals "integrate two sets of forces operating in every adaptational transaction, namely, personal agendas (e.g., goals and beliefs) brought to the transaction by the person, and the environmental realities that affect the outcome" (p.4). Folkman and Lazarus (1988) and Lazarus (1990) suggest that one's individual values, beliefs about oneself, and recognition of personal resources, are important to people's commitment and goals, and the ways they typically perceive the world and interact with other conditions to produce outcomes in the coping process.

Based on Lazarus and Folkman's theory, coping resources are relatively stable person and

environmental factors that individuals can draw upon when developing their coping responses (Moos & Billings, 1982; Long & Schutz, 1995; Terry, 1991; Terry et al., 1995). For example, empirical research testing this theory found that personal resources (e.g., personality traits and personal beliefs) and social environmental resources (e.g., social support) are important predictors of coping responses (Frew & Bruning, 1987, Long, 1992; Terry, 1991; Terry et al., 1995). For example, Terry (1991) proposed a coping resources model including (internal) general control beliefs, personality of self-esteem, (low) neuroticism, and (low) denial as personal resources, and social support as an environmental resource. She also tested perceived stress, control beliefs, self-efficacy, and importance as situational appraisal variables. Based on data collected from 138 first year psychology students, the results indicated that coping resources (internal control beliefs, self-esteem, denial, and social support) buffered the negative effects of threat (appraisal of low self-efficacy, low situational control, and high levels of stress) on coping responses (Terry, 1991). Access to supportive social networks is a channel that provides people both information and emotional assistance in the development of coping strategies.

Drawing on Lazarus and Folkman's theory (1984), Long et al. (1992) also tested person resources in their causal model of stress and coping for women in management. Long et al.'s model contained three constructs of coping resources, including Status (marital, parental, and income status), Sex Role Attitudes (beliefs about gender roles), and Agentic Traits (personality variables of instrumentality and general self-efficacy, life orientation, and preventive coping). The data were collected from 230 managerial women over a 1-year period, and from 135 women who remained in the study and completed three additional assessments. The results indicated that personal agency indirectly influenced appraisals of work stress, and that low general self-efficacy resulted in high workplace stress and greater general dissatisfaction. In addition, women managers who had stronger general self-efficacy used more Engagement coping and had higher levels of

subjective distress. This finding, on the one hand, supports Bandura's (1986) theory that people with high confidence in their general coping skills are likely to persist in Engagement coping efforts. On the other hand, this finding also suggests that persistence in the face of an unresolved stressor event may predicate increased distress due to longer exposure to the stressor. Moreover, positive appraisals were found to relate to less frequent use of Disengagement coping, which in turn influenced Engagement coping. These results are consistent with Lazarus et al.'s (1986) findings that planful problem solving and emotional self-control strategies were most often used when the stressor involves a work goal. However, the results of Long et al.'s study are limited to women managers. Although Long et al. examined the influence of general self-efficacy, self-efficacy appraisals were not included in their model.

Empirical evidence from both Long et al. and Terry's work indicates that coping resources have both direct, indirect (mediating) or moderating effects on an individuals' adjustment (Long et al., 1992; Long & Schutz, 1995; Terry, 1991; Terry et al., 1995). Coping resources not only directly influence situational appraisal, but also indirectly affect individual coping and well-being through appraisal. For example, Terry (1994), found that the effects of coping resources (i.e., self-esteem and neuroticism) were mediated by situational appraisals. The effects of self-esteem and neuroticism on self-blame also became non-significant. Moreover, Long et al. (1992) found that coping resources (i.e., agentic traits and sex role attitudes) had both direct and indirect effects on outcome variables. The personal resources of agency directly influenced Engagement coping, but only indirectly influenced appraisal through the variable work environment. Similar results were also obtained from a sample of 153 employees, in that a high level of self-esteem directly affected appraisal of self-efficacy and indirectly affected instrumental coping (Terry et al., 1996).

There was some evidence that appraisals moderate the relationship between coping resources and outcome. For example, Terry et al. (1995) found that perceived controllability

moderated the effects of instrumental coping on employees' psychological well-being, which indicates that instrumental coping was most effective when the situational demands were perceived as having some potential for control. In other studies, such moderated effects, however, were not clear (e.g., Terry, 1991). Because of inconsistent findings in moderating effects across studies, no moderating effects were hypothesized in this study.

Together, these studies point to the significance of coping resources in determining the manner in which people appraise situations and cope. They highlight the usefulness of examining specific behavioral and cognitive coping strategies that are influenced by personal and environmental factors specific to the workplace. Combining the models of Long et al. (1992) and Terry (1991), the present study measured coping resources by including variables that investigate the influence of Chinese collectivism, general self-efficacy, and social support specific to overseas Chinese coping with workplace stress.

Situational appraisal. Situational appraisals are an important component of Lazarus and Folkman's (1984) stress and coping theory because an individual's appraisal of the demands and the nature of the situation are presumed to predict coping. Although life events are important, an individual's appraisal of the nature and demands of a stressful encounter are considered to be more influential in the stress and coping process than objective characteristics of the encounter (Lazarus & Folkman). That is, a person's appraisal of the demands and the nature of the situation is more relevant to the prediction of coping than the objective nature of the situation. From this perspective, a person's situational appraisals rather than the nature of the events would predict coping responses.

Two types of cognitive appraisals were identified by Lazarus and Folkman (1984): primary and secondary appraisals. Primary appraisal involves an examination of what the individual has at stake in the encounter (harm/loss, threat or challenge). Secondary appraisal

refers to an individual's assessment about his or her options, resources, and the ways in which they can respond. Based on an individual's secondary appraisals, the stressor may be regarded as controllable or uncontrollable (Carver et al., 1989; Terry, 1995). In the process of secondary appraisal, 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. Based on Lazarus and Folkman's theory of stress and coping, various coping options are evaluated in the secondary appraisal process, such as taking action, re-framing the situations, seeking more information and help, or accepting the circumstances (Folkman, 1984; Folkman, Lazarus, Dunkel-Schetter et al., 1986).

In addition, recent research has indicated that secondary appraisal also involves the individual's beliefs about whether he or she can successfully perform the behaviors necessary to deal with the situation (Bandura, 1986, 1995). Perceived self-efficacy reflects people's appraisal in their coping capabilities over stressful events as well as their level of motivation to perform courses of action required to attain a desired outcome (Bandura, 1986, 1995). Perceived situational self-efficacy has been conceptually and empirically distinguished from perceived control beliefs (Ashford, 1988; Litt, 1988; Terry, 1991, 1994; Terry et al., 1995). That is, although an event may be appraised as controllable, individuals may lack confidence in their personal ability to cope with it. In addition, perceived self-efficacy has been found to relate to personal coping resources, that is, success in coping with high risk situations depends partly on people's beliefs that they operate as active agents of their own actions and that they employ the necessary skills to reinstate control should a slip occur (Schwarzer & Fuchs, 1995).

Cognitive appraisals are a critical component of Lazarus and Folkman's (1984) stress and coping theory. Primary appraisals, however, have been criticized as failing to adequately assess the dynamics in empirical research specific to workplace stress and coping (Dewe, 1993; Long et

al., 1992; Portello, 1996). In contrast, consistent evidence from workplace stress and coping indicates that appraisal of one's controllability and self-efficacy expectancies are related to more Engagement coping (Long et al. 1992; Portello, 1996; Terry, 1991; Terry et al., 1995). Thus, secondary appraisals of perceived controllability and self-efficacy are expected to determinate one's ways of coping in this study.

Coping functions. Coping is process-oriented in that it focuses on what the person actually thinks or does in a specific situation, and how these thoughts and actions may change as the situation unfolds (Folkman, Lazarus, Dunkel-Schetter et al., 1986). According to Folkman and Lazarus (1984), coping and appraisals mutually influence each other because situational appraisals motivate coping attempts, which may change the situation and influence subsequent appraisals.

Folkman and Lazarus (1984) have proposed two main functions of coping: problem-focused and emotion-focused coping. Problem-focused and emotion-focused coping are presumed to be the core functions of coping (Folkman & Lazarus, 1980). Problem-focused coping strategies involve defining the problem, generating alternative solutions, seeking information, 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). Emotion-focused coping is used by individuals to maintain hope and optimism and to avoid acknowledging the worst by utilizing strategies such as avoidance, wishful thinking, selective attention, or positive reappraisal by looking on the bright side of things, and behavioral strategies such as exercising and using medication (Lazarus & Folkman, 1984). In general, a combination of both problem-focused and emotion-focused coping are used by individuals in response to almost every stressful situation (Folkman & Lazarus, 1980, 1985), and the two functions of coping can facilitate or impede each other as a stressful encounter unfolds (Folkman, 1982; Lazarus & Folkman, 1984).

The two functions of coping have been criticized as being too simplistic, and controversy

within the stress and coping literature exists over how best to measure the construct of variant coping activities (Cohen, 1987; Endler & Parker, 1990). Early critics of the two coping functions argued that combining subscales into two broad functions was problematic because emotion-focused and problem-focused coping did not represent homogeneous groups of thoughts or actions (Fleishman, 1984). Emotion-focused coping, for example, ranged from denial of an event to positive reinterpretation of an event. As well, depending on the situation certain strategies served both problem-focused and emotion-focused functions (Folkman & Lazarus, 1988). For example, seeking support serves an emotion-focused function if it helps a person to feel emotionally supported; meanwhile, it may also serve a problem-focused function if it provides advice to help solve the problem. Recently, some researchers have suggested that there are additional coping strategies that individuals use. For example, relationship-focused coping that “taps coping efforts aimed at maintaining and protecting social relationships during times of stress” (O'Brien & DeLongis, 1996, p.776).

O'Brien and DeLongis (1991) developed a new measure of relationship-focused coping that includes strategies of empathic coping and support provision. Using the relationship-focused coping measure with university students ($n=270$), O'Brien's (1992) results revealed sound psychometric properties on this measure. In addition, O'Brien and DeLongis (1996) found that situational factors were linked strongly with the relationship focused (empathic responding) modes of coping. Given the characteristics of interdependent self-view in collectivistic cultures, relationship-focused coping may be an important aspect of coping for people holding collectivistic culture values.

Researchers have further argued that coping strategies can be classified into higher-order categories (Carver et al., 1989; Scheier, Weintraub, & Carver, 1986; Tobin et al., 1989). For example, Tobin et al. (1989), in a sample of 524 students, identified Engagement and

Disengagement coping as higher order tertiary factors. Engagement coping is defined as "active efforts to manage both problem- and emotion-focused aspects of the stressful events" (Tobin et al., 1989, p. 350), and (b) Disengagement coping--cognitive and behavioral activities that orient attention away from the stressful event. Engagement coping includes forms such as expressing oneself or actively promoting connection to others, and Disengagement coping involves efforts such as withdrawing, self-criticism, and wishful thinking. Tobin et al.'s (1989) concept of Engagement and Disengagement behavior parallels Roth and Cohen's (1986) approach/ avoidance categorization of coping.

Researchers have suggested that individuals are capable of both Engagement and Disengagement coping depending on their experiences of the task context (Kahn 1990, 1992; Haney & Long, 1995; Long et al., 1992). For example, based on Lazarus's theoretical framework, Long and Kahn (1992) tested a model of workplace stress and coping with managerial women ($n=249$) using structural equation modeling, and the results supported the use of Engagement and Disengagement coping. In another study, Long (1989) examined the moderating effects of Disengagement coping strategies on the relation of work resources (power, work support) and two work stress outcomes, psychosomatic symptoms and job satisfaction on 83 male managers. As predicted, Engagement coping had overall effects on change in job satisfaction, whereas Disengagement coping moderated relations between power and change in psychosomatic symptoms. Based on the theoretical and empirical significance of Engagement and Disengagement of coping, especially applied to workplace stress and coping, these two functions of coping were used in the present study.

Coping outcomes. Lazarus and Folkman's (1984) theory posits that stress and coping impact one's well-being. Specifically, Lazarus and Folkman identify short-term outcomes such as psychological functioning, somatic health or illness, and social functioning. Empirical research has

operationalized the construct of short term outcome in many ways. For example, measures of ill health (e.g., headaches, sleeplessness), psychological strain or mental health symptoms (e.g., anxiety and depression) are operational definitions of short-term outcomes. Workplace stress and coping research particularly includes job satisfaction to assess short-term outcome (e.g., Long et al., 1992; Terry et al., 1995). Cross-cultural stress and coping research has commonly used similar indices of psychological distress such as depression, somatic symptoms and job satisfaction (e.g., Chan, 1994; Hui, Yee, & Eastman, 1995; Lin, 1993).

Lazarus (1991) argues that the transactional theory of stress and coping predicts the coping process and is based on Western values and social norms. However, Lazarus (1991) also argues that, differences in detail about goal commitments, belief systems, and coping preferences do not obviate the transaction, process, appraisal, and coping theory. An individual's social context is believed to influence the way in which she or he appraises and subsequently copes with a stressful encounter (Compas & Orsan, 1993; Folkman, Lazarus, Dunkel-Schetter et al., 1986; Lazarus & Folkman, 1984). On the one hand, due to differences in social values and sources of stress, the ways of coping may differ from culture to culture (Lazarus, Tomita, Opton, & Kodama, 1966). On the other hand, Lazarus (1991) believes that the meta theoretical and theoretical principles of his stress and coping model are relatively culture free, and can be applied to different cultures, which means the contexts of specific variables (including coping resources, mediating, and outcome variables) may differ according to a cultural selected in a study, the general schematization of his model would not be affected. Lazarus provides a very useful and important conceptual framework for the cross-cultural study of stress and coping. Following this framework, it is possible in the present study to examine, extend, and enrich our knowledge of the coping structure within a cultural context.

Issues in Cross-cultural Coping Research

Lazarus and Folkman's (1984) theoretical framework has been the most frequently used model in cross-cultural research of stress and coping (e.g., Chan 1994; Chataway & Berry, 1989; Yue, 1993). However, there are three major problems existing in current coping research when applied cross culturally. First, cross-cultural studies have often failed to clearly investigate the issue of cultural influences in the determination of appraisals of the stress and coping process (e.g., Chan, 1994; Lin, 1993; Yue, 1993).

For example, Chan (1994) studied Chinese ways of coping by using the Ways of Coping Questionnaire (Lazarus & Folkman, 1984; Lazarus & Folkman, 1988) with Hong Kong Chinese students (men=75, women=167) and teachers (men=180, women=229) with stressful events of daily living. The results showed that planful problem solving was the most frequently used coping strategy, whereas avoidance coping such as resigned distancing and passive wishful thinking were the least used strategies. In addition, Chan's study showed that positive reappraisal and self-control were generally not differentiated from problem solving strategies, and rational problem solving and accepting responsibility were highly correlated coping strategies for the Chinese. Also, differences were found between teachers and students. Students were more likely to use self-blame and avoidance coping strategies than teachers, whereas teachers tended to employ active problem solving and seek social support more than students. Results also indicated that women tended to seek more social support than men, and that men were more likely than women to control feelings. Moreover, according to the results of a factor analysis of the WCQ, only four factors emerged and included Rational Problem-Solving, Resigned Distancing, Seeking Support and Ventilation, and Passive Wishful Thinking. Although the revised scales had 29 items, 22 items overlapped with the original Scale, and some components of the WCQ such as confronting coping (Lazarus & Folkman, 1988; Lazarus & Folkman, 1984) were not included in Chan's revised

coping scales (Chan, 1994). Clearly, such results suggest that the Chinese may organize their coping activities somewhat differently than Western populations (Chan, 1994). The author explained that accepting responsibility and confrontive coping may not be distinctive coping strategies for the Chinese people. Because the influence of cultural factors was not assessed in the study, the cause of the differences in coping remained unanalyzed. Similarly, Lin (1993) focused on coping with acculturation stress by comparing Chinese immigrants (men=30, women=30, average age=31.52) and Caucasians (men=30, women=30, average age=37.67) in Canada. The study found that Chinese respondents reported more use of avoidance coping, and higher levels of depression and somatization than Caucasians.

Traditional coping measures, including the Revised Ways of Coping scale (Lazarus & Folkman, 1984), have focused predominantly on individual efforts and largely ignored collective strategies (Gaberebya & Hwang, 1996; Palsane & Lam, in press; Philips & Pearson, 1996). Cross-cultural research has identified that one of the significant characteristics of collectivism is interdependence between self and groups. People who hold collectivistic values have shown a strong tendency to social conformity, willingness to adjust oneself to ingroup goals, and readiness to receive and provide assistance between ingroup members (Ho & Chiu, 1994; Leung, 1996; Peng & Lachman, 1993). Although research findings have suggested that emphasizing group cohesion as a means of coping is unique to people of collective cultures (e.g., Bond, Wan, Leung, & Giacalone, 1985), these studies are mainly conceptual and descriptive in nature (Bond, Wan, Leung, & Giacalone, 1985; Pennebaker & Harber, 1993).

On the basis of Lazarus and Folkman's (1984) theory, Bhagat et al. (1994), for example, examined organizational stress and coping in 964 white color workers across seven countries including the United States, India, West Germany, Spain, New Zealand, Australia, and South Africa. Problem- and emotional-focused ways of coping (Pearlin & Schooler, 1987) were

measured. The results of regression analysis indicated that problem-focused coping and decision latitude had independent effects on reduced organizational stress, but emotional-focused coping did not have any effect in any of the seven countries. Specifically, Bhagat et al. (1994) found that workers from collectivistic countries like India, Spain, and South Africa have a tendency to focus on problem-focused coping as opposed to emotional-focused coping. However, the authors felt that something was missing in the current coping assessment instruments as Bhagat and his colleagues (1994) concluded that "the measures that normally used to capture the nature of coping are simply not comprehensive enough to capture the whole range of coping strategies and situational specific skills that one might use in these different national contexts" (p.104). Theories of coping are mainly a product of an individualistic world-view, and researchers face the challenge of how to fully measure coping cross-culturally, especially in collective cultures (Gaberebya & Hwang, 1996). Although the recent development of a relationship-focused coping instrument does tap some of the communal behaviors (e.g., Tried to understanding how other people felt; Tried to figure out what makes others people feel better), strategies that reflect aspects of social conformity and group unity in coping are not captured.

Finally, previous cross-cultural research of stress and coping on Chinese samples has mainly focused on populations of children and students (e.g., Chan, 1992; Chataway & Berry, 1989; Huang, Leong, & Wagner, 1994). Very little empirical research has been conducted that focuses on workplace stress and coping of adults (Chiu & Kosinski Jr., 1994; Wong et al., 1992). Despite the fact that overseas Chinese are the fastest growing minority workers in countries such as Canada, the United States, and Australia in recent years, studies of overseas Chinese workers are rare (e.g., Mak, 1991). Moreover, although a few studies have investigated the relationship between cultural values, career choice, and satisfaction among Asian Americans (e.g., Chen, 1996; Hung, 1996), research that examines the stress and coping experiences of overseas Chinese

working in professional occupations is still lacking.

Collective Coping

Both conceptual and empirical cross-cultural research suggests that one of the significant features of collectivism is the interdependence between self and group orientation. Within a collectivistic culture, there is a greater emphasis on the views, needs, and goals of the ingroups such as family members, relatives, close friends, and working unites, rather than of individuals. Social norms and duties are usually defined by the ingroup. Moreover, individuals who hold Chinese collectivism values tend to confirm their personal beliefs and behaviors against ingroup norms. Within a collectivistic culture, people have greater readiness to co-operate a well as to expect assistance from ingroup members (Bond, 1985; Triandis & Marin, 1983).

Collectivistic values influence one's sense of self within social relationships and roles (Hsu, 1971; Ip & Bond, in press; Yang, 1991). Individuals who hold collectivists beliefs believe that social conformity is an effective means of increasing the power of the individual in problem solving and the pursuit of goals (Berry, 1994; Kirkbride, Tang, & Westwood, 1991; Peng & Lachman, 1993). That is, in a conflict situation, for example, one should make a great effort to confirm one's personal opinions with the general views of the collective units, and to strongly adjust oneself to fit the group and environmental needs, rather than trying to change others' views or the environment (Ho & Chiu, 1994; Leung, 1996). Peng and Lachman (1993), for example, compared Chinese Americans and Caucasian Americans (total $n=471$) and found that Chinese Americans responded higher on internal self change to fit the group and lower on external objective change than their counterparts. Such findings support the notion that the Chinese who hold collectivistic values believe that the group is the basic unit of analysis, and there is a need to be ingroup (Triandis, 1994).

Collectivistic values influence behaviors consistent with ingroup. Research indicates that

an emphasis on the maintenance of harmony is expected within collectivistic cultures, and communal sharing behaviors are highly encouraged (Fiske, 1990; Han & Park, 1995; Triandis, 1994). As described by Leung (1996) "if each person follows the norms of the group and acts in the interests of the group, the group would have harmonious and prosperous" (p. 258). In order to promote collective welfare and social harmony, individuals are encouraged to bind themselves through relationships to a common fate (Kim, Triandis, Kagitcibasi, Choi, & Yoon, 1994). As such, people of collectivistic cultures are often encouraged to keep closer relationships and are more co-operative with ingroup members. Very often, people with collectivistic values are emotionally tied and behaviorally inter-related to their ingroups, and thus each person's well-being depends on the results of collective effort.

Research also indicates that collectivists are encouraged to take responsibility together, and very often the entire group is held responsible for both the positive or negative actions of its individual members, especially in conflict situations (Han & Park, 1995; Ho & Chiu, 1994). As described by Ho and Chiu (1994) "one's business is also the business of the group; and friends should be concerned with each other's personal matters" (p. 139). As such, co-operative efforts by members of a group toward achieving collective goals are emphasized more than individual competitiveness (Ho, 1986), and being loyal, making a commitment to collective goals, helping others, and strengthening the unity of collective groups are often used as ways of establishing the self and one's ways of coping (Tu, 1984). There are popular sayings within the Chinese culture, for example, "unity is strength." Researchers indicate that Chinese society has been historically focused on social interests, collective action, and emphasized shared responsibility (Bond, 1988; Li, 1978).

Wong et al. (1992) interviewed 40 overseas Chinese industrial workers in Canada regarding their work goals and how they managed workplace conflicts. LISREL (Jöreskog &

Sörbom, 1988) analysis was used to examine the underlying causal structure between goals (co-operation, competition, and independent), dynamics (concerning self or others), and outcomes (general conflict results). The results indicated that Chinese people who developed co-operative goals were able to discuss issues open-mindedly, which strengthened their work relationships and increased their confidence for further collaboration. Competitive goals were related to negative interactions and outcomes, and weakened their work relationships. The authors indicated that co-operative goals have the most impact on conflict handling for Chinese workers. The findings of this study, however, are limited by the small sample size. In addition, the causal links among the variables were based on cross-sectional data. No value belief was assessed in the study, which leave the influence of Chinese collective cultural value untested.

Researchers have suggested that cultural collectivism tends to make people interdependent and to value their group as the basic unit for survival; individuals contribute to group activities, which reinforces cultural collectivism and rewards the individuals with a sense of belonging and support (Krause, Liang, & Yatomi, 1989; Singelis & Brown, 1995). Thus, collective coping responses are consistent with the collectivistic characteristics that emphasize group effort and the use of “togetherness” as a strength in coping (e.g., Kashima & Triandis, 1986; Lockett, 1988; Yang, 1986). Kirkbrige, Tang, and Westwood (1991) argue that in stressful situations, collectivism has a tendency to locate the importance of the events or issues in relation to their ingroup, organization, or even society at large. That is, when conflicts arise, collectivist tends to recognize if other people in his or her group have been or can be involved. If so, then, it is appropriate for the individual to present and discuss the issue and to ask for help from the group. On the one hand, Kashima and Triandis (1986) argue that the ingroup assistance that is provided within collectivistic cultures is likely to provide support that promotes the well-being of their people. On the other hand, the involvement of one’s ingroup can also create pressure for the

individual.

Cross-cultural studies have indicated that collective ways of coping are also used by people from individualistic cultures. For example, Triandis, Bontempo, Villarel, Asai, and Lucca (1988) studied self and ingroup relationship among samples of students from the United States ($n=91$), Japan ($n=150$) and Puerto Rico ($n=97$) as well as 106 Japanese elders. Although the Japanese were found to be more collectivistic and employed more techniques for getting acceptance by others, higher rates of paying attention to the view of others and seeking conformity by others were found in American students when compared with Puerto Rico students (Triandis, Bontempo, Villarel et al., 1988). Thus, the results of this study provide some evidence that collective coping may be a universal valued coping strategy that needs to be studied further.

Together, these studies point to the importance of collective coping in the study of stress and coping, regardless of cultural orientations. Research on collective coping, however, is far from comprehensive. More work is needed to advance progress, particularly to further understand stressful cross-cultural encounters. The ability to increase the power of the individual and reduce the level of stress by close connection with a group may be a critical determinant of coping efficacy for all people. Given the importance of collective values in stress and coping, successful coping may depend not only on an individual's efforts to solve the problem per se, but also on strengthening and utilizing an individual's relationship with their social cultural group.

In the present study, I developed items that measure the collective aspect of coping (see Appendix L). Collective coping was defined as cognitive and behavioral activities that orient attention in relationships with their ingroup members. Given the limited research on collective coping, the collective coping items developed in this study are mainly based on the conceptual and descriptive literature reviewed above (also see Appendix P for the review of collective coping item resources). Findings from a pilot focus group study relating to collective coping strategies

were also incorporated into the development of collective coping items. Items selected include the domains of seeking support from one's ingroup, emphasizing interpersonal relationships, conforming with one's group norms, and utilizing group action in coping. Results from a pilot questionnaire study ($n=20$) supported the conceptually based collective coping items. Every item was responded to and an internal reliability coefficient alpha of .92 was obtained. Factor analysis was employed for all the coping items, and collective coping was treated as one subscale in coping in the final study.

A Coping Model for Overseas Chinese

The general coping and cross-cultural coping literature provides empirical and theoretical support for the selection of personal resources (personal characteristics), cultural and social resources (Chinese collectivism values and social support), mediating (cognitive appraisal and coping strategies), and outcome variables (job satisfaction, distress symptoms of depression, and somatic complaints). The predicted relationships among the constructs are consistent with Lazarus and Folkman's (1984) theory and with the empirical support of Terry's (1991) and Long et al.'s (1992) models of workplace stress and coping. This model also utilizes relevant research based on other Asian populations due to the limited studies that deal exclusively with the Chinese, especially overseas Chinese.

Personal, Cultural, and Social Resources

Lazarus and Folkman (1984) proposed that the coping strategies a person uses in a particular stressful encounter are influenced by relatively stable characteristics of the individual's disposition and by the social environment. Other researchers also agree that there is a component to coping responses that reflects the person's predisposition to use the specific strategies (Holahan & Moos, 1987; McCrae, 1989). Empirical research on the determination of coping with workplace stress (Long et al., 1992; Long & Schutz, 1995; Terry, 1991; Terry et al., 1995) has

distinguished between personal resources (e.g., personal agency of general self-efficacy) and social environmental resources (e.g., social support). Cross-cultural research supports the influence of Chinese collectivism on the process of stress and coping (Chiu & Kosinski, 1995; Szalay et al., 1994; Yue, 1993). Together, pre-existing cultural values, personal beliefs, and social support are identified as valuable resources for overseas Chinese who are coping with workplace stress in cross-cultural settings.

Chinese collectivism. Research indicates that Chinese collectivism provides a set of internalized cognitive and behavioral norms to use in the process of coping for many Chinese around the world (Chiu & Kosinski, Jr., 1995; Cross, 1995; Wong, Tjosvold, & Lee, 1992). Research on Chinese collectivism indicates that Confucianism values of self-reflection and self-cultivation promote the appraisal of self-control, which directly relates to an individuals' expression of emotions and taking action, encourages the doctrine of the mean in handling conflicts, and supports personal achievement within the framework of key relationships and harmony. Therefore, individuals identified as high in a Chinese collectivism orientation are more likely to perceive personal control in situations. Moreover, they are concerned about others' reactions to their behavior, place emphasis on self-improvement, and are prepared to alter or restrict personal goals or expectations for the sake of internal and interpersonal harmony.

Most empirical research has linked Chinese collectivism with coping in general without testing the mediational function of appraisal. Using the Chinese Value Survey (CVS, Chinese Culture Connection, 1987), for example, Chiu and Kosinski (1994) conducted a study with male Chinese graduate business students ($n=142$) and male White American students ($n=142$). The results of a discriminate functional analysis showed that Chinese students scored higher on Chinese collectivism than their White American counterparts, $F(4, 261)=14.04$, $p<.001$, indicating that male Chinese students tended to be affected by Chinese collectivism more than American

male students. Specific to coping, results of canonical correlation analysis showed that Confucian work dynamism, Moral discipline, and Integration (Subscales from the CVS) were negatively correlated to Competitiveness, and Collaborativeness, and positively correlated to Avoidance and Accommodation assessed by the Thomas-Kilmann's Management-of-Differences Exercise (MODE) scales (Thomas & Kilmann, 1974). Chinese students were found to hold high Chinese collectivism values, and to be less directive, less assertive, and less confrontational in conflict situations than the American students in this sample. The authors indicated that the findings from their sample support the hypotheses that Chinese ways of coping are highly influenced by Chinese collectivism. However, given the fact that only men students were used in this study, the results are limited. This study linked Chinese collective values and coping using cross sectional data, however, the relationships between Chinese collectivism and appraisals and coping strategies were not tested. Replication of the results of the study on different samples of Chinese population and further examining the causal relationship is needed.

Trubisky, Ting-Toomey, and Lin (1991) who studied groups of Chinese students (men=90, women=141) and American students (men=102, women=110), focused on the influence of individualism-collectivism and self-monitoring on general conflict coping styles. These researchers reported significant effects of culture on four coping styles: obliging [$F(2, 10)=78.83$, $p<.001$], avoiding [$F(2, 10)=147.70$, $df=10$, $p<.001$], integrating [$F(2, 10)=53.54$, $df=10$, $p<.001$], and compromising [$F(2, 10)=80.15$, $df=10$, $p<.001$]. The Taiwan respondents' means for obliging style ($M=3.40$, $SD=.66$), avoiding style ($M=3.93$, $SD=.62$), integrating ($M=4.43$, $SD=.53$), and compromising ($M=4.19$, $SD=.63$) were higher than the American students ($M=2.84$, $SD=.57$; $M=2.85$, $SD=.78$; $M=3.99$, $SD=.59$; $M=3.51$, $SD=.66$ respectively) suggesting that coping differences exist between the two groups of students according to their cultural background. No significant differences were found on dominating style between the two samples.

Such results support the notion that collectivist culture tends to emphasize implicit and indirect interactions, and discourages directly voicing one's opinions and feelings (Leung & Lind, 1986; Ting-Toomey, 1988). The results of this study showed that Chinese students used high levels of integrating and compromising styles--active problem solving styles as well. The authors explained that the core of Chinese collectivism--Confucianism task completion and hard work, and mutual face-saving and face-giving may drive the respondents to seek active approaches and to address the need for both parties to manage conflicts. However, one limitation of this study is the use of a student population, and as such, the results may not be generalizable to other populations. In addition, no actual cultural value beliefs were measured in the study, therefore, it is likely that students from both countries hold collectivism and individualism values apart from cultures they come from. Further study is needed to explore differences in coping patterns with non-student population. As well, cultural values beliefs need to be examined as an individual differences variable in relation to stress and coping.

Other studies focused on specific Chinese cultural values and coping. Yue (1993), for example, investigated the relationship between Confucian self-cultivation, self-reflection, and coping behaviors of college students ($n=117$) in Beijing, China. Based on structured interviews, the results indicated that the Chinese students' appraisal and coping process was significantly influenced by the Confucian value of self-cultivation and the Taoist value of self-transcendence. Specifically, strategies such as taking self-control, endurance, and even forbearance, making efforts to strive, and seeking unity in dealing with stressful situations are rooted in the Confucian rules (Yue, 1993). Other strategies such as reappraisal of a stressful situation or demand, learning from one's experiences, and using internalized norms of acceptable conduct and appropriate behavior are embedded within Confucian values of self-reflection and self-discipline (Chan, 1989; Yang, 1986; Yue, 1993). As such, hard work, task-related orientation, and self-improvement are

often recognized as ideal ways of coping.

The value of social harmony, a core of Chinese collectivism, has been significantly related to Chinese ways of coping. According to the value of social harmony, one should exercise self-control in order to restore order and harmony in relationships (Tu, 1984). Chinese, in general, have been found to use approaches that short-circuit or diffuse open conflict (Chiao, 1981), and avoid face-to-face confrontation (Bond, Wang, Leung, & Giacalone, 1985). Researchers have found that Chinese children are often discouraged from aggressive behavior in conflict (Ho & Kang, 1984; Ryback, Sanders, Lorentz, & Koestenblatt, 1980), and are rewarded more for their co-operative rather than competitive behavior (Li, Chueng, & Kau, 1979). Direct approaches such as assertiveness and open disagreement may be viewed as confrontational. Consequently, direct approaches can be very uncomfortable for many Chinese (Chiu & Kosinski, 1995; England, 1989; Redding, 1990), that may even cause frustration and stress (Cross, 1995). The focus group study reported here confirmed that making open personal statements in front of others at the workplace was stressful for some overseas Chinese.

Collective ways of coping also reflect harmony and co-operation--the core of Chinese collectivism (James & Khoo, 1991; Luhtanen & Crocker, 1992; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). Such a coping process includes recognizing the importance of ingroup goals, having common attitudes toward the outgroup, and using a group approach to handle difficulties. Research indicates that Chinese prefer to employ group effort or teamwork (social or family groups) for problem solving (Bond, Chiu, & Wan, 1984; Stipek Weiner, & Li, 1989). In his study, Yue (1993) found many Chinese students hold an attitude of "following the flow of the stream" in order to avoid or reduce personal involvement in conflict. Thus, taking advice and seeking confirmation from one's ingroup are recognized ways to utilize the power of unity in problem solving (Yum, 1988).

There are few studies that relate Chinese collectivism to coping appraisals. In their examination of the causal attributions of under-achievement for math performance on students of China ($n=226$), Japan ($n=308$), and the United States ($n=204$), Tuss, Zimmer, and Ho (1995) found two significant differences between students from three nations in their causal beliefs: differences on the locus dimension [$F(2, 150)=6.73, p<.05$], and on the controllability dimension [$F(2, 150)=8.40, p <.05$]. Chinese students perceived the reason for math achievement to be internal and controllable to a greater degree, whereas students from the United States perceived the reason to be external and uncontrollable. These results indicated that perceived control over the determinants of math performance was stronger among Chinese students and Japanese students than Americans students (Tuss et al., 1995). The authors explained that strong internal controllability relating to one's success and lack of success may be rooted in the belief that people should accept responsibility for their performance, especially in failure situations in most Asian cultures. As such, it is likely that making an effort is emphasized to overcome difficulties rather than considering differences in individual abilities (Tuss et al., 1995). As well, Si, Rethorst, and Willimczik (1995) found that in a comparison of PRC Chinese ($n=358$) and German ($n=333$) students, Chinese students perceived the causes for success and failure in sports as more internal and controllable than the German participants. The authors suggested that the Chinese's appraisals of control were influenced by Chinese collectivism values that strongly emphasize an individual's controllability, obligation, and responsibility to the unity of their ingroup.

A common limitation in many of these studies is the use of a Chinese sample to represent the dependent variable cultural influence rather than directly testing collectivism beliefs and individualism beliefs. Findings from such studies can only provide indirect support for the relationships between cultural values and perceived controllability. In addition, the studies focused on control appraisals with very specific task-related performance such as math study and sport.

Whether such relationships will hold in situations that involve other type of stressors than specific tasks is unclear. As such, relationships between Chinese collectivism and control appraisal over a workplace stressor were examined, but the direction of these relationships were only tentatively hypothesized.

Other studies have focused on Chinese collectivism and its association with perceived self-efficacy. Dong (1995) conducted a study on Asian immigrant adolescents ($n=235$) in the United States. Using factor analysis, Dong identified two cultural values that were held by the Asian immigrant adolescents group--original collectivism and host individualism values, indicating that that immigrant groups may develop bicultural value systems when they live in a multi-cultural environment. Dong also found that acceptance of host values had a positive relationship with perceived self-efficacy and self-esteem suggesting that individualism values may affect individuals' perceived self-efficacy more positively than collectivism cultural values. Dong's study pointed to the importance of cultural values in relation to perceived self-efficacy and adaptation. However, the findings from the study of an immigrant adolescent group may be limited when applied to other populations, therefore, further replication of this study is needed.

Research on other cultures also provides information on cultural collectivism and individualism in relation to perceived self-efficacy. Oettingen, Little, Lindenberger, and Baltes (1994) investigated the differences in perceived self-efficacy between children in East ($n=313$) and West Berlin ($n=527$) in a school performance context. The results indicated that compared with West Berlin children, East Berlin children had a lower sense of academic efficacy and believed themselves to have less capability. Oettingen et al. (1994) suggested that cultural differences, the collectivism of East German and individualism of West German, are one of the main effects. It should be noted, however, that children who scored equally high on the intelligence (IQ) test did not differ in their appraisal of self-efficacy (Oettingen et al., 1994). The authors speculated that

high IQ children in the East were more likely to be influenced. However, this assumption needs to be further tested with cultural value beliefs assessed by directly assessing collective beliefs or values.

In summary, Lazarus and Folkman (1984) proposed that by understanding an individual's internalized cultural and social norms, we can begin to understand and predict how individuals will appraise and react to, or cope with, stressors. Consistent with the theoretical function of coping resources (Lazarus & Folkman, 1984; Long et al., 1992; Terry et al., 1995) and with the empirical evidence that demonstrates a link between Chinese collective values and cognitive appraisal, I expect that the relationship between individual levels of Chinese collectivism and well-being will be mediated by appraisals. That is, the well-being of overseas Chinese will be influenced by Chinese collectivism through appraisals -- Chinese collectivism will have significant effects on the appraisal variables, and then appraisals will be significantly related to one's ways of coping which in turn is directly related to the outcome variables. More specifically, I expect that overseas Chinese who place a higher level of importance on Chinese collectivism values will report lower levels of self-efficacy, whereas overseas Chinese who report lower levels in Chinese collectivism will perceive higher levels of self-efficacy.

General self-efficacy. General self-efficacy, as opposed to perceived self-efficacy (situation-specific appraisals of ability, Bandura, 1992), refers to the broad and stable sense of personal agency or competence developed through one's past experiences to deal efficiently with a variety of stressful situations (Jerusalem & Schwarzer, 1986, 1992; Schwarzer & Jerusalem, 1989). People with high general self-efficacy are more likely to experience lower levels of stress and higher levels of perceived control in stressful situations. A strong sense of general self-efficacy has been found to facilitate a process in which higher levels of general self-efficacy are associated with high self-esteem and better performance (Schwarzer, 1993; Yue, 1996). From a

dynamic point of view, people who have coped successfully in the past, were more likely to perceive positive controllability and high perceived self-efficacy, and thus hold high expectations and put greater effort and commitment into dealing with life events in general (Jerusalem & Schwarzer, 1992).

Empirical research supports this notion. Using a sample of 210 adults (108 women and 102 men), Jerusalem and Schwarzer (1992) examined the influence of general self-efficacy in the process of stress appraisal. After nine sequential experimental cycles (each cycle included tasks, feedback, and measure of general self-efficacy), the results indicated that general self-efficacy was an important predictor of situational appraisals. Individuals with low general self-efficacy showed higher levels of perceived stress and lower challenge appraisals, and individuals with low general self-efficacy were especially vulnerable to different demand and failure experiences, and felt more distressed than individuals with high general self-efficacy (Schwarzer, 1992).

Sexton and Tuckman (1991) also investigated the relationship between general self-efficacy and situational self-efficacy with women students' ($n=42$) math performance on three trials. The results of path analysis indicated that general self-efficacy was the basis of the students' appraisal of the level of difficulties in the math tasks. In trial 3, the pattern of determinants of performance changed in that individuals responded more directly to their immediate experiences on the specific task rather than being influenced by their general beliefs of self-efficacy. Sexton and Tuckman (1991) indicated that general self-efficacy and situational self-efficacy are clearly the most important and distinct factors in behavior especially at the initial stage of problem solving. They also concluded that when similar problems were faced over time, previous behaviors may have developed and become automatic actions requiring little cognitive process (Sexton & Tuckman, 1991).

General self-efficacy as a personal resource has been used to study workplace stress and

coping. Long et al. (1992) assessed general self-efficacy in their study which developed a casual model for managerial women ($n=249$) focused on workplace stress and coping. The results provided some evidence that general self-efficacy indirectly influenced appraisal through the construct work environment. Managerial women with low general self-efficacy experienced higher workplace stress. The authors suggested that in order to understand the meanings attributed to a particular work stressor and subsequent coping efforts, it is necessary to understand the work context (both barriers and supports) and one's personal sense of agency (Long et al., 1992).

Although perceived self-efficacy was the focus of Terry et al.'s (1995) study of managers' ($n=153$) adjustment to work stress, they found that generalized (internal) control beliefs--the general beliefs of controllability from past life events--were key in the process of adjusting to workplace stress. Positive relationships were found between generalized control beliefs and the use of instrumental coping strategies as well as increased job satisfaction among the managers.. The results also indicated that general control beliefs were significantly related to situational control beliefs ($r=.33$, $p<.01$) and perceived self-efficacy ($r=.28$, $p<.01$). Terry et al.'s findings suggest that there may be some differences between the function of general self-efficacy and perceived self-efficacy in relation to coping, and therefore, further research is needed.

The construct of general self-efficacy has been used within cross-cultural contexts. For example, the concept of general self-efficacy has been introduced and applied to different cultures such as German, French, Turkish, and Chinese (Schwarzer, 1993; Zhang & Schwarzer, 1995). Using the Chinese version of the General Self-efficacy Scale (Zhang & Schwarzer, 1995), Yue (1996) studied the role of general self-efficacy in relating to perceived test anxiety. A total of 773 junior high school students from Hong Kong participated in the study. The results indicated that general self-efficacy was significantly and negatively correlated with test anxiety ($r=-.35$, $p<.001$) and worry ($r=-.36$, $p<.001$) implying that the more positive feelings a student has towards himself

or herself, the more performance confidence and less stress he or she is likely to perceive (Yue, 1996).

Consistent with Lazarus and Folkman's (1984) concept of coping resources, general self-efficacy can be conceived of as a personal resource or a vulnerability factor in the stress and coping process (Jerusalem & Schwarzer, 1992; Long et al., 1992; Sexton & Tuckman, 1991). That is general self-efficacy determines one's appraisal in stressful encounters and contributes to the forming of behavioral intentions (Schwarzer, 1992). Thus, general self-efficacy was used in this study as a personal resource variable. I expected that the relationship between one's general self-efficacy and well-being would be mediated by appraisal and coping. That is, the well-being of overseas Chinese would be influenced by the level of general self-efficacy through appraisals of control and situational self-efficacy, and that appraisals would have significant effects on the choice of coping strategies that directly related to one's levels of well-being. More specifically, I expected that overseas Chinese with higher levels of general self-efficacy would experience higher perceived self-efficacy and more control over their stressful work situations, than those reporting lower levels of general self-efficacy.

Social support. Social support is defined as accessible societal ties between individuals, groups, and larger communities who provide psychological (e.g., emotional and cognitive appraisal) and material resources (e.g., informational and financial, see Cohen & Wills, 1985; Leavy, 1983). Social support has been viewed as an important social resource in coping (Cohen & Wills, 1985; Lazarus, 1990). Cohen and Wills (1985) suggest that social support promotes positive feelings and enhances self-esteem. Satisfaction with social support may bolster an individual's perceived ability to cope and prevent particular situations from being appraised as highly stressful.

Although a number of dimensions of social support have been investigated in the past,

there appears to be fairly consistent agreement that certain dimensions of support are more important as predictors of adjustment than others. For example, subjective assessments of social support, in general, appear to be more strongly associated with outcome measures than objective assessment such as the social network (George, Blazer, Hughes, & Fowler, 1989). Perceptions of support may be important because individuals are affected by how they interpret their environment, not necessarily by the objective environment (Cross, 1995; Turner, Frankel, & Levin, 1983). In addition, perceptions of support and encouragement from others can reinforce appraisals of perceived control, which plays an important role in maintaining individuals' well-being (Krause, Liang, & Yatomi, 1989).

Social support has demonstrated protective effects for personal well-being (Cohen & Wills, 1985; Lu, 1995). In a study of workplace stress and coping, Amatea and Fong (1991) reported that among professional women ($n=117$), high levels of social support were significantly related to fewer psychological and physical strain symptoms (e.g., depression, headaches, and insomnia). Long et al.'s (1992) study of workplace stress and coping indicated that limited support and greater work demands were associated with increased job dissatisfaction. Similarly, Turnage and Spielberger (1991) found a strong negative relationship ($r=-.66$) between lack of support and job satisfaction among professional workers. Moreover, Terry et al. (1995), in their study of 153 managers, also found a direct positive link between levels of satisfaction in social support and levels of job satisfaction.

Empirical evidence from cross-cultural research has also found links between support, stress, and coping. Lack of neighbourhood attachment, for example, has been found to have a strong effect of increased depression and stress in Chinese-Americans (Cohen & Wills, 1985; Lin et al., 1979). Lu (1995) studied stress and social support of Chinese women homemakers ($n=85$). The results of Pearson correlation coefficients showed that high satisfaction with perceived social

support was negatively related to depression ($r = -.36, p < .001$). Results of hierarchical regression analysis also indicated that social support was negatively related to depression ($\beta = -.33, p < .01$). Liang and Bogat (1994) investigated the influence of social support on stress and coping in a sample of White American students (men=89, women=109) and a sample of 200 students (men=118, women=82) in Nanjing, China. All participants completed measures of daily hassles, social support, psychological adjustment, and locus of control scales with the Chinese versions translated and back translated. The results found fairly comparable levels of support for both groups, although the Chinese students reported less functional support than the American students. The results further indicated that received social support buffered the effect of stress on adjustment for American samples, those individuals who reported greater received support indicated fewer symptoms of negative adjustment, irrespective of stress level. For the Chinese students, perceived availability of support had a positive stress-buffering effects, whereas received support yielded negative buffering effects. Such results suggest that compared with American students, perceiving the availability and the satisfaction of social support may be more beneficial in stress buffering than actually receiving support for Chinese students (Liang & Bogat, 1994). The authors indicated, however, that the results of this study may lack generalizability due to the use of university student samples. In addition, low reliability coefficients on some of the social support subscales for the Chinese sample may also reflect the possibility that items used in the measure may not fully capture the important resources of social support given the measures were developed for a Western population.

Although there is sufficient empirical evidence to guide our understanding of the relationship between social support satisfaction and well-being, less is known about the relationship between support satisfaction and cognitive appraisals. For example, Schwarzer and Leppin (1991), proposed a structural model in which cognitive appraisals of stressful encounters

were dependent on an individual's perception of the existence and quality of his or her social supports. Schwarzer and Leppin (1991) also argued that perceived availability and satisfaction with a social support network acts as a coping option, namely feeling confident to seek help when assistance is needed. Chataway and Berry (1989) studied stress and coping with three groups of Canadian students (Chinese students, $n=42$, French-Canadian students, $n=43$, English students, $n=42$). The results showed that perceived social support and perceived family support were higher for Chinese students, compared with the other two groups. Low satisfaction with perceived support from friends was related to higher perceived stress among Chinese ($r=-.39$, $p<.01$) and English students ($r=-.50$, $p<.001$). The results of multiple regression further indicated that perceived social support of friends was the only variable associated with lower perceived stress for the Chinese students (Beta=.39) and English students (Beta=.50), and perceived family support was the only variable associated with lower perceived stress for the French students (Beta=.38). Such results lend support to a direct relationship between support satisfaction and stress appraisals. The results further suggest that satisfaction with perceived social support from friends is an important factor in the well-being of overseas Chinese. Given the small number of participants involved in this study, a larger overseas Chinese sample is needed to further support these findings.

Research consistently indicates that social support is a very important coping resource that has been used by overseas Chinese. Overseas Asian students, for example, reported that finding friendship, gaining a sense of belonging, and feeling in control were associated with perceiving support from others (Furnham & Alibhai, 1985). As well, findings from Jou and Fukada (1995) indicated that satisfaction with perceived support had positive effects on overseas Chinese students' ($n=92$) adjustment. Based on these findings, in the present study, I assessed the level of social support satisfaction. I hypothesize that higher levels of perceived social support satisfaction

are positively associated with control appraisals and with self-efficacy appraisals in overseas Chinese. Similar to other coping resources variables, I expect that the relationship between individual's satisfaction with social support and well-being are mediated by appraisals and coping. More specifically, I expect that overseas Chinese who report high satisfaction with social support to perceive higher levels of self-efficacy and control than overseas Chinese who report lower levels of satisfaction with social support. Given the fact that interactive or buffer (moderating) effects may occur while mediating functions operate (Holmbeck, 1997), moderated effects between coping resources and appraisals and coping strategies on outcome variables would also be examined.

Summary. Past research has provided some evidence to suggest that cultural and personal resources such as Chinese collectivism, general self-efficacy, and social support satisfaction are important to the stress and coping process. Therefore, I investigated the influence of these personal and social cultural variables on overseas Chinese's perceptions of their stress and coping experiences. More specifically, I predict that Chinese collectivism, general self-efficacy, and social support satisfaction would each be directly related to situational appraisals. Further, I predict that the relationship between appraisal variables and outcomes would be mediated by coping. Given the evidence from past research that coping resources have both direct and indirect effects on individuals' adjustment (Long et al., 1992; Long & Schutz, 1995; Terry et al., 1995), I also propose that resource variables not only directly influence situational appraisals, but also indirectly affect individual coping and well-being through appraisal.

Mediating Variables

Cognitive appraisals. According to Lazarus and Folkman (1984), cognitive appraisals, as mediators, are primary to the stress and coping process because they are the impetus for further coping behavior. Consistent with Lazarus and Folkman's (1984) conceptualization of stress and

coping, a person's appraisals of the demands and controllability of the situation are more predictive of adaptational outcome than objective characteristics of an event.

Although cognitive appraisals have been identified as a critical component of Lazarus and Folkman's (1984) stress and coping model, little empirical research has focused specifically on the appraisal process. Past research on primary appraisals in an occupational context has either inadequately assessed the predictive relationship between primary appraisals and coping (e.g., Dewe, 1993; Newton, 1989), or failed to distinguish specific types of primary appraisals and their influence on coping (e.g., Long et al., 1992). Most cross-cultural research has also failed to adequately assess primary appraisal in relation to coping strategies (e.g., Gibson et al., 1991). Secondary appraisal of perceived control and perceived self-efficacy has been identified as closely associated with instrumental actions and problem-solving (e.g., Haney & Long, 1995; Long et al., 1992; Terry et al., 1995). Findings from cross-cultural research, specific to Chinese, also indicate the importance of secondary appraisals in the coping process (Si, Rethorst, & Willimczik, 1995; Tuss, Zimmer, & Ho, 1995; Yan & Gaier, 1994).

Perceived control. A review of the stress and coping literature suggests that individuals differ in their control attempts and actions in dealing with stress. Perceived control refers to an individual's evaluation of the extent to which the situation can be controlled or changed (Lazarus & Folkman, 1984; Lazarus, 1990). In other words, control appraisals are products of a person's evaluation of a stressful encounter and his or her options to cope with the encounter (Lazarus & Folkman, 1984).

Congruent with the theoretical argument that cognitive appraisals determine coping, empirical evidence has provided support for the relationship between secondary appraisals of control and active forms of coping. Folkman and Lazarus (1980) found that among a community sample of adults ($n=100$), high perceived controllability was associated with greater use of

problem-focused coping, compared with appraisals of uncontrollability over the situations. By contrast, uncontrollable appraisals predicted emotion-focused coping more than controllable appraisals. Folkman and Lazarus' s (1980) findings parallel results reported by Peacock, Wong, and Reker (1993) that individuals who have greater confidence in their ability to control the stressor and have more positive appraisals are less inclined to withdraw from stressful situations and more likely to use active or Engagement forms of coping.

Consistent findings have also been reported by other researchers. Using a sample of 117 university students, for example, Carver et al. (1989) found that perceived controllability of a stressful situation was positively associated with more directive coping strategies (i.e., active coping, planning, suppression of competing activities, and seeking instrumental social support). In contrast, students who appraised their situation as uncontrollable reported greater use of denial and acceptance forms of coping. Similarly, Aldwin (1991) investigated the relationship between perceived control (i.e., attributes of responsibility), coping strategies, and mental health using path analysis for a sample of 228 adults. Consistent with prior empirical research, she found that individuals who reported less perceived control were more likely to report using an escapism coping strategy and were less likely to report the use of instrumental coping.

Research also supports the relevance of perceived situational control in the process of coping with stressors in the work context. For example, in her study of employees' ($n=153$) adjustment to work stress, Terry et al. (1995) found positive relationships between perceived situational control and the use of instrumental coping strategies ($r=.21$, $p<.01$), and negative relationships with escapism ($r=-.20$, $p<.05$), and minimization ($r=-.20$, $p<.05$). In addition, research on workplace stress has linked perceived control with Engagement and Disengagement forms of coping. Long et al. (1992), for example, found that Engagement coping was used more when women managers appraised strong sense of control combined with other appraisal variables

(such as lower levels of loss of respect, threat to goal attainment, and an upsetting episode) at work. Alternatively, lower levels of controllable appraisals were associated with Disengagement coping. Similarly, in their path analysis of coping effectiveness and sport performance on women athletes ($n=178$), Haney and Long (1995) found that high levels of control appraisals were significantly negatively associated with self-criticism and wishful thinking coping ($b=-.30$, $p<.01$) suggesting that the more control the athlete feels, the less Disengagement coping strategies she will use.

Cross-cultural researchers have also focused on the relationship between perceived control and coping. Perceived control has been directly related to Engagement in active problem solving. For Chinese people, perceived control implies that personal satisfaction can be achieved by hard work in order to reach external standards set by parents or society (Eaton, 1994; Si, Rethorst, & Willimczik, 1995). That is, when evaluating themselves, Chinese people tend to believe that putting in more effort will lead to success (Yan & Gaier, 1994). As such, appraised high levels of control are commonly associated with greater efforts to cope with difficult situations.

In studies with Chinese populations (Hess, Chang, McDevitt, 1987; Hua, & Salili, 1996), high perceived control has been found to be directly related to active coping efforts such as problem solving, working harder, and seeking assistance to achieve success. Findings from Chataway and Berry's (1989) study of overseas Chinese students ($n=42$) indicated that Chinese students reported experiencing more stress than English and French students when studying in Canada. Chinese students were found to put in extra effort to maintain their school performance. At the same time, the extra hard work resulted in high level of physical and psychological distress (Chataway & Berry, 1989).

In summary, cross-cultural research provides some support for a relationship between perceived control and the use of certain coping functions. However, this research is limited

because few empirical studies have directly tested the relationship between the perceived control and forms of coping strategies. Findings from the general literature and research conducted in the workplace need to be replicated for different cultural contexts. Given the relationship between perceived controllability and hard work, it is possible that perceived high controllability influences overseas Chinese to use more directive coping that engages them actively in problem solving. Thus, based on the results of prior studies, I expect that high perceived control will be positively related to both individual and collective forms of engagement coping; whereas appraisal of low control will predict the use of both individual and collective forms of disengagement coping strategies among overseas Chinese.

Perceived self-efficacy. According to Bandura (1986), self-efficacy has been proposed as a belief that one can successfully execute specific behaviors that would lead to successful coping. Perceived self-efficacy, as opposed to perceived general self-efficacy, is a situation-specific appraisal of efficacy (Bandura, 1992, 1995; Litt, 1988). Perceived self-efficacy refers to “beliefs in one’s capabilities to organize and execute the courses of action required to manage a prospective situation” (Bandura, 1995, p. 2). An individual's perceptions concerning whether he or she can successfully perform the behaviors necessary to deal with a specific event have been conceptually and empirically distinguished from perceived control in the secondary appraisal process (Litt, 1988; Terry, 1991, 1994; Terry et al., 1995). That is, perceived self-efficacy is different from perceived control, and a person can perceive high controllability but low self-efficacy in a given situation. As Terry et al. (1995) indicated, a person with low self-efficacy may perceive that an event is controllable, yet lack confidence in his or her ability to deal with it.

In relation to perceived self-efficacy and coping, Bandura (1992) claimed that self-efficacious individuals would focus their attention on the requirements of the task, while individuals with low self-efficacy are likely to focus their attention not on the task, but on their

perceived inability to master the situation. Litt (1988) and Terry (1991) suggest that people who believe that they are able to meet the demands of the situation would be engaged in problem-management strategies, whereas people who have low levels of perceived self-efficacy are likely to dwell on their lack of ability, and use strategies that distract them from focusing on managing the problem.

Higher levels of perceived self-efficacy in employees have been positively related to problem-focused coping strategies such as information-seeking, and negatively related to the use of strategies relying on escapism and self-blame (Ashford, 1988; Haney & Long, 1995; Terry, 1991, 1994; Terry et al., 1995). In her longitudinal study (3 waves) of 243 university students, Terry (1994) found that perceived situational self-efficacy predicted the use of self-blame in coping. The author suggested that if a person realizes that an event is amenable to control, yet lacks confidence in his or her ability to take such actions, then self-denigrating strategies will be used. Terry et al. (1995) tested the function of self-efficacy on coping in a work context with managers (men=67, women=86). Positive relationships were found between perceived situational self-efficacy and instrumental action ($r=.36$, $p<.01$) and negative relationships with escapism ($r=-.27$, $p<.01$) and self-blame ($r=-.24$, $p<.01$). Smith (1993) also found that evaluating one's ability to perform a course of action is important for women coping with workplace stress. These results highlight the importance of perceived self-efficacy expectancies in terms of coping.

Perceived self-efficacy has received increasing attention in cross-cultural research. However, using perceived self-efficacy as an appraisal predictor of coping is relatively new in the stress and coping research. Earley (1993, 1994) argued that perceived personal efficacy contributes to productivity for members of collectivist cultures similar to individualistic cultures. Matsui and Onglatco (1992) also argued that low sense of perceived self-efficacy may be just as occupationally debilitating in stressful situations for people from both individualistic and

collectivistic cultures. As indicated by Bandura (1995), the functions of perceived self-efficacy are the same for individuals from any culture despite their collectivism and individualism differences. Thus, perceived self-efficacy is used in this study to predict higher levels of engagement coping and lower levels of disengagement copings for both individual and collective forms of coping.

Summary. Cognitive appraisal is a process in which a person evaluates whether a particular encounter is relevant to their well-being and whether there are options or resources to deal with the situation (Folkman, Lazarus, Gruen et al., 1986). Both perceived control and perceived self-efficacy have been identified as important types of appraisals in stressful situations, especially in the study of workplace stress and coping. Similar support has also been found from studies with Chinese population. Therefore, on the basis of Lazarus and Folkman's (1984) stress and coping theory and prior empirical evidence, I propose that greater perceived control and perceived self-efficacy will be associated with greater use of engagement coping that focuses on active problem solving. Less perceived control and self-efficacy appraisal is expected to be associated with greater use of disengagement forms of coping. Overseas Chinese who appraise their situation as uncontrollable or lack the ability to cope successfully with a situation are likely to be more inclined to withdraw from the stressful encounter, particularly because they may view more active coping as futile.

Because of the recent development of collective coping items, the pattern of relationships between appraisals of control and self-efficacy and collective coping strategies is less clear. However, according to the definition of engagement and disengagement coping, collective coping was considered as a form of engagement coping. As such, I speculate that control and self-efficacy appraisals would relate to collective coping strategies similar to that of engagement coping.

Coping strategies. Coping has been identified by Lazarus and Folkman (1984) as an

important mediator in the stress process that directly effects outcome variables. Although limited, cross-cultural research also provides support for the use of different types of coping strategies and the subsequent impact on individual well-being among Chinese individuals.

Some researchers found that Chinese individuals prefer using passive or indirect strategies such as avoiding or distancing from the event, blaming oneself or others, accepting or re-interpreting a situation that focuses on the change and control of internal expectations or desires for solving their problems (e.g., Cross, 1995; Bond, Wan, Leung, & Giacalone, 1985; Yang, 1986). Compared with their British counterparts, for example, Hong Kong Chinese were found to favor compromise approaches to conflict rather than direct give-and-take collaboration (Tang & Kirkbridge, 1986). In another study, Leung and Lind (1986) found that North American individuals preferred the adversarial competitive procedures in handling conflicts and Chinese subjects preferred indirect conflict mediation and bargaining. Similar findings were also reported by Lin (1993). In a comparison of Chinese immigrants ($n=60$) and Caucasians ($n=60$) in Canada, Chinese individuals reported more use of avoidance coping, and higher level of depression and somatization than Caucasians.

Others, however, have reported that Chinese ways of coping involve both active and passive coping strategies. For example, it was found that although Chinese ($n=231$) used a more obliging and avoiding style than Americans ($n=212$), significantly higher levels of problem-focused active approaches were also employed by Chinese (Trubisky & Ting-Toomey, 1991). Zheng and Berry (1991) compared coping strategies employed by 68 Chinese students from PRC and Hong Kong with those of 33 non-Chinese Canadian students and also found that the Chinese students were more likely to employ active coping strategies of tension reduction and information-seeking and less passive strategies of wishful thinking and self-blame.

Working hard has been consistently reported as a well used coping strategy among

Chinese (Chiu & Kosinski Jr., 1994; Yue, 1993). Empirical evidence indicates that Chinese students ($n=609$) and teachers ($n=102$) demonstrated a greater tendency to believe that one's ability coupled with strong efforts of working hard and intensive learning were the basic springboards for achievement (Hau & Salili, 1996). Similar findings were that efforts towards self-improvement were strongly emphasized by Chinese (Hess, Chang, & McDevitt, 1987; Ho, 1981; Salili & Hau, 1994, Weiner, 1994). In fact, many Chinese not only engage in hard work, but also expect those in authority and their co-workers to be technically competent and hard working, and prefer to be rewarded for their good working skills and productivity (Broaded, Zhongde, & Inkeles, 1994).

Similarly, research evidence showed that many Asian American students have successful academic achievement despite considerable language and cultural barriers, and they hold the highest proportion of advanced degrees (36%) compared with other immigrant groups (DcVos, 1982). Such results suggest that they may use highly effective coping strategies such as increasing concentration on problem-solving (DcVos, 1982; Yu, 1982). Empirical research also found that overseas Chinese students have a high willingness to utilize counselling services for their academic and vocational difficulties (Atkinson, Lowe, & Matthews, 1995; Chataway & Berry, 1989). As suggested by Cheung, Lee, and Chan (1984) analyzing problems, resetting goals, and working harder are the most active coping strategies that are used by Chinese students when tasks or problems become more salient and challenging. At the same time, persistent hard work may result in some individuals working long hours, having less contact with others, and suffering from high level of distress (Chataway & Berry, 1989).

Using the Ways of Coping Questionnaire (Lazarus & Folkman, 1988; Lazarus & Folkman, 1984), Chan (1994) also found that planful problem solving was the most frequently used coping strategy, and avoidance coping such as resigned distancing and passive wishful thinking were the

least used strategies by 657 Hong Kong Chinese students. The same study also found an overall relationship pattern between passive wishful thinking and emotional problem-solving and psychological distress including depressive mood, anxiety, social dysfunction, and somatic problems. Consistent with some other studies (e.g., Folkman, Lazarus, Gruen, & DeLongis, 1986), problem-focused strategies were only mildly predictive of less psychological distress (Chan, 1994). The author speculated that the weak function of problem-focused coping may have resulted because although some participants identified with active coping strategies, they lacked situational self-efficacy or were indecisive in taking actions to solve the problems (Coyne, Aldwin, & Lazarus, 1981). This finding also provides some support for the important role of self-efficacy in the process of coping, although this appraisal was not measured in this study.

Moreover, the Chinese have been found to use self-directed coping strategies such as controlling oneself, modifying personal expectations, and accepting difficulties (Chan, 1994; Liang & Bogat, 1994). Wu (1982) suggested that the Chinese have and use the ability to "correct the mind and train the temperament" (p. 297) in order to cope. Chan's (1994) findings indicate that the Chinese consider positive reappraisal, accepting responsibility, and self-control to be rational problem solving strategies. Similarly, Cheung, Lee, and Chan (1984) found that cognitive restructuring strategies (e.g., telling oneself to be calm, to accept or forget the problem, and to control one's thought) were frequently used by Hong Kong university students. Yue (1993) also found that Chinese college students ($n=117$) reported using strategies such as exercising self-control, re-appraising a stressful situation or demand, learning from one's experiences, and using internalized norms of acceptable conduct and appropriate behavior as effective ways of coping.

Cross-cultural research suggests that acceptance strategies can be appropriate and effective in coping, depending upon the cultural context (Aldwin & Greeberger, 1987; Ying, 1981). Hwang (1979) found that individuals who adhered to traditional Chinese values used more

acceptance strategies to cope with crowding and showed fewer psychosomatic symptoms than did individuals who adhered to Western values. Some used ignoring or self-explanations to rationalize conflict situations (Hwang, 1979). For many Chinese, making internal efforts such as identifying ones' limitations, modifying ones' expectations, and accepting some external conditions may be more meaningful and workable ways of coping than depending on external assistance for change.

Consistent findings indicate that greater psychological distress among Chinese is related to more frequent use of passive avoidance coping strategies (e.g., Chan, 1992; Chataway & Berry, 1989; Lin, 1993). High anxiety scores were associated with using less active and problem-focused coping strategies among Chinese students in Canada (Chataway & Berry, 1989). Chan (1992) investigated 95 medical students in Hong Kong, using Coping Strategies Scales (Beckham & Adams, 1984), and the results of a multiple regression analysis showed that active problem-focused activities (e.g., took steps to overcome the problem, talked to a friends about the problem, asserted self and took positive action on problem) were significantly predictive of feeling better and lower levels of depression, as assessed by the Beck Depression Inventory (BDI, Beck et al., 1979). Passive strategies captured by items such as "worried about the problem a lot," "hid feelings from others," and "blamed self for the problem" were highly related to feeling worse and higher levels of depression. No significant difference was found between gender in their use of specific coping strategies, although among non-depressed students there was a tendency for females to use more passive strategies than males. The author concluded that taking action on solving problems and seeking support were the most helpful activities, whereas emotional containment, denial, and avoidance was the least helpful coping strategies. However, the findings of the study were limited by the cross-sectional nature of the data. Longitudinal designs were recommended in order to determine the effects of coping on outcomes (Chan, 1992).

Compared with other coping strategies, collective forms of coping have been less

systematically and empirically studied. Existing research on Chinese coping provides some support for the use of collective coping strategies. For example, Yue (1993) found that Chinese college students reported "following the flow of the stream" in seeking conformity and unity in dealing with stressful encounters. High ingroup interaction was found among Chinese students for problem solving (Wheeler, Reis, & Bond, 1989). In a study of 180 married males in Taiwan, Hwang (1978) identified five types of coping strategies including mobilizing personal resources (a reliance on the self), help-seeking from social resources (friends, relatives, officials, and spouse), appealing to the supernatural, adopting a philosophy of doing nothing, and avoidance. Among these coping strategies, Hwang found that emotional discharge was not used much, whereas mobilization of personal resources was the most common coping style in this group. Similar findings were also obtained by Chen (1988) when he studied 85 married males in Shanghai. Getting help from one's spouse was the most important social support, and getting support from one's boss and co-workers at work was the second. These findings need to be replicated given the highly specific sample of married males.

Empirical evidence also found that the Chinese tend to solve their problems within their social group, especially for personal problems (e.g., Atkinson, Lowe, & Matthews, 1995; Leung, 1986; Wheeler, Reis, & Bond, 1989). Wheeler et al. (1989), for example, reported that Hong Kong Chinese students ($n=68$) had longer but fewer interactions with others than students from the United States ($n=96$). High group task interactions that include high self and other disclosure behavior were found between members of Chinese ingroup and close friends (Wheeler, Reis & Bond, 1989). As well, in his study of problem management, Lockett (1988) found that Chinese adults prefer relationship-oriented strategies as ways to seek support from personal, family, and organizational resources for problem solving. Empirical research on overseas Chinese students found that Chinese students often live with other Chinese, speak Chinese most of the time, and

participate in Chinese clubs or groups (Chataway & Berry, 1989). Chao (1990) suggested that such a family-like sense of solidarity may serve to integrate the individuals with a collective work spirit especially in stressful situations.

The Chinese have been found to use strategies such as trying to imagine how others feel and think in order to increase the level of understanding, to reduce tension, and to promote harmony between people (Yue, 1993). These forms of coping have been identified as relationship-focused coping (O'Brien & DeLongis, 1991). According to O'Brien and DeLongis, relationship-focused coping involves interpersonal processes that are aimed at maintaining or enhancing social relationships during a stressful period. Empirical evidence provides support for the association between relationship-focused coping and outcome variables. In a study of stepfamilies, O'Brien, DeLongis, and Campbell (1994) found that wives' use of empathic coping in dealing with parenting and marital stressors was associated with higher levels of marital satisfaction. Further, use of empathic coping was related to a decrease in marital and family tension and negative mood. Wives who engaged in empathic coping not only experienced less personal distress but also felt less interpersonal distress.

Summary. Based on the theoretical premise that coping strategies are directly related to outcome variables (Lazarus & Folkman, 1984), on the empirical research of workplace stress and coping, and research on Chinese stress and coping, I expected that engagement forms of coping (e.g., directly expressing oneself, taking steps to solve problem, working hard, active reappraisal, and accepting or re-interpreting the stressful events) would be significantly positively associated with satisfaction at work, and negatively associated with change in depressive and somatic symptoms. Disengagement modes of coping (e.g., withdrawing, avoiding, self-criticism, and wishful thinking), on the other hand, were hypothesized to be directly related to greater depression and somatic complaints, and less satisfaction at work. Collective coping can be viewed

as a form of Engagement coping by people with collective value beliefs.

Outcome Variables

Stress and coping researchers have found that personal variables (e.g., personality traits and personal agency), cultural variables (e.g., cultural values), social variables (e.g., social support), and mediating variables (e.g., cognitive appraisal, and coping strategies) have direct and indirect impact on one's well-being (Lazarus & Folkman, 1984). Stress and coping research has operationalized the construct of short-term outcome in a number of ways. Subjective well-being has been viewed as consisting of two broad components; an affective component (e.g., anxiety, depression) and a cognitive component (e.g., life and job satisfaction). Previous cross-cultural literature has used a number of short-term outcome variables to measure common distress such as anxiety, negative mood, depression, and somatic symptoms (Aycan & Berry, 1996; Bond, 1991; Chan, 1994; Golding & Burnam, 1990; Hurh & Kim, 1990; Lin, 1993). Work and life satisfaction were also used to measure short-term outcomes (Cohen & Wills, 1985; Hong, 1984; Long et al., 1992; Lu, 1995; Terry et al., 1995).

Depression is the most commonly used variable to assess emotional distress in cross-cultural literature of stress and coping (Fry & Grove, 1982; Lin, Masuda, & Tazuma, 1982; Lin, 1993). For example, in North America, reported depression rates of 39% were found in a sample of Chinese immigrants (Nguyen, 1982), and 65% for depression and anxiety combined in another similar sample (Nguyen, 1984). Chan (1992) found that less depressed Hong Kong Chinese students ($n=95$) used more active problem-focused coping strategies such as seeking support from friends, and taking steps to overcome the problem. Poor emotional regulation, blaming oneself, avoidance, and denial problems were perceived as the least helpful coping strategies, and were used more by more depressed students.

Similar empirical evidence has been reported elsewhere. Chan and Hui (1994) found that

escape-avoidance coping strategies were positively related to depressive mood among school teachers ($n=415$) in Hong Kong. Studies of overseas Chinese had the same results. Ying (1988) examined the level of depression in a Chinese American sample and found that the Chinese immigrants scored significantly higher than the Caucasian sample. Similar findings were also reported by Aldwin and Greenberger (1987), Dion and Giordano (1990), and Lin (1993). Lin (1993) found Chinese adults ($n=60$) scored significantly higher and reported more somatic symptoms than Caucasian Canadians ($n=60$).

Somatic symptoms have been another common and important outcome variable in assessing stress and coping given the characteristics of Chinese emotional presentation. Empirical evidence has indicated that there is a tendency for Asians, including the Chinese, to somatize their psychological distress. It is commonly observed among Chinese that somatic complaints are more prominent (Chang, 1985; Kleinman, 1979) than affective mood expressions. A study by Kleinman (1977) revealed that 88% of the Chinese cases in his sample initially complained only of somatic symptoms compared with only 4% of the Caucasian American sample. In Nguyen's survey (1984) of Asian immigrants and refugees, he found almost all of the sample reported some form of somatic problems.

The tendency of the Chinese and other Asians to somatize their psychological difficulties has been frequently noted in the literature (Dyal & Chan, 1985; Kleinman, 1979; Sue & Sue, 1974), and a variety of social and cultural factors may exert some influence that shapes affective symptoms (Kleinman, 1982; Ying, 1990; Zhang, 1995). For example, traditional Chinese medicine has a strong influence on the concept of somatizing emotional distress (Zhang, 1995). Traditional medical theory associates health with emotional balance, and mental illness with emotional excess. Frequently reported symptoms include dizziness, bitter taste, loose stools, insomnia, frequent dreams, reduced appetite, weakness, amnesia, chest discomfort, hypochondriac pain, and anxiety.

These symptoms are listed in the vegetative substratum of depression in Western diagnosis, but are presented as the main complaints of depression for Chinese. Also, physical complaints are a socially accepted medium of communication of personal distress for Chinese (Cheung, 1986; Kleinman, 1986; Zhang, 1995). Thus, verbal expression of emotions in the Chinese language is still predominantly somatically oriented. Studies show that many emotional expressions in the Chinese language fail to make this distinction clearly (Kwong & Wong, 1981). In addition, overt expression of affection and discussion of psychological issues are usually discouraged in the Chinese culture. Usually, direct verbal expression of emotion is regarded as insensitive and uncouth. As such, help-seeking in the Chinese society is legitimate for bodily complaints but not for psychological complaints (Tseng & Wu, 1985).

Most studies of stress and coping have been based on the assumptions that the effect of stress is negative. Although of equal importance, positive aspects of cognitive job satisfaction have received less attention than measures of affective well-being such as depression and anxiety (Diener, Emmons, Larsen, & Griffin, 1985). Recently, job satisfaction has been used as a positive outcome variable in the workplace and cross-cultural literature (Hui, Yee, & Eastman, 1995; Long et al., 1992; Terry et al., 1995). Long et al. (1992) assessed job satisfaction in a study of stress and coping in managerial women ($n=249$), and found that Disengagement forms of coping were significantly negatively associated with two measures of job satisfaction. In their study of employees' adjustment stress and coping, Terry et al. (1995) found that job satisfaction was significantly positively related to social support ($r=.29$, $p<.01$), internal control beliefs ($r=.21$, $p<.01$), and negatively associated with escapism coping ($r=-.22$, $p<.01$). Similar findings from a study of 662 fleet staff also revealed that instrumental actions have a significant effect on job satisfaction (Terry, Callan, & Sartori, 1996). Job satisfaction has also been used in cross-cultural studies (Hong, 1984; Hui, Yee, & Eastman, 1995). Hong (1984), for example, studied job

satisfaction of Chinese college students ($n=134$) working in the United States, and found that job-controlling involvement was the most important factor that contributed to their job satisfaction although coping was not the focus of his study.

In summary, consistent with theoretical propositions and based on empirical evidence, depressive symptoms, somatic complaints, and job satisfaction were used as outcome measures in the present study. I predicted that disengagement forms of coping would be positively related to depression and somatization and negatively related to job satisfaction, and engagement coping actions would be positively related to feelings of job satisfaction and negatively associated with the outcomes of distress for overseas Chinese.

Gender Differences in the Stress and Coping Process

Although gender differences have been reported in relation to appraisals, type of stressors, ways of coping, and short-term health outcomes (e.g., Billings & Moos, 1984; Jick & Mitz, 1985; Ratner, Bottorff, Johnson, & Hayduk, 1994; Long, 1990), empirical findings have been inconsistent. Jick and Mitz (1985) reviewed 19 empirical studies (from 1976 to 1983) across multiple samples of community adults including workers, housewives, and graduate students. Regardless of employment status, they found that women reported higher rates of psychological distress compared with men, whereas men reported more severe physical illness and had higher death rates compared with women. In a study of middle-aged community residents, Folkman and Lazarus (1980) found gender differences in ways of coping in that men used more problem-focused coping than women, and women employed more emotion-focused coping than men. In addition, they found that men reported more stressors related to work and finances and women experienced more stressors associated with health and family. Given that more men were employed, such findings suggest that gender differences in coping may be the result of differences in the types of stressors perceived by men and women (Billings & Moos, 1984; Folkman &

Lazarus, 1980). When a sample of male ($n=60$) and female ($n=72$) managers was studied, Long (1990) found that women, compared with men, were more likely to use avoidance and problem-reappraisal coping, whereas there were no gender differences with regard to active problem-solving coping. Moreover, in contrast to the men, the women perceived interpersonal conflicts as more stressful than work demands, and they also reported more interpersonal support. The author suggests that women may be more sensitive to interpersonal concerns in general, and thus both interpersonal conflicts and support are more salient to women than to men.

Other researchers have found no significant gender differences in stress and coping (e.g., Hamilton & Fagot, 1988; Terry et al., 1995). Terry and her colleagues (1995), for example, studied male ($n=67$) and female ($n=86$) managers, and found no significant differences in relation to workplace stress and coping assessed by the Ways of Coping Questionnaire (WOCQ; Lazarus & Folkman, 1984). Ptacek, Smith, and Dodge (1994) found that both male and female undergraduate students (men=55, and women=59) were similar in their level of cognitive appraisals when the type of stressors were controlled (a lecture task), and reported almost identical coping patterns (they both used mostly problem-focused coping). In the same study, however, they also found that women reported seeking social support and using emotion-focused coping more so than men; whereas men reported using relatively more problem-focused coping than women. Ptacek et al. concluded that their results did not support gender differences in relation to the types of stressors, but were consistent with the notion that men and women are socialized to cope with stress in different ways.

With regard to cross-cultural studies, researchers have reported that traditional Confucian values reflect male domination and do not favor women. According to Confucian values, for example, male characteristics include personal agency, physical strength, and limited emotional expressiveness, and men are acknowledged for their performance in the workplace. Women, on

the other hand, are characterized as more dependent, feminine, less confrontational, and have major responsibilities for caring for others and for maintaining relationships (Brooded et al., 1994; Ho, 1987; Tang & Lau, 1995; Yan, 1991). In a study of 3 to 7 year-old Chinese children (boys=995, girls=936), boys were found to be more active and persistent than girls, and girls were found to be more emotionally sensitive and more easily distracted than boys (Hsu, 1985).

In recent years, however, along with social and economic changes in China, expectations for men and women have changed (Woo, 1993). Some researchers indicate that gender inequality has changed and that women and men in China have similar social status and opportunities for career choice and economic control (Brooded, Cao, & Inkeles, 1994; Song, 1985; Thompson, 1980; Yang, 1991). For example, Pan et al. (1994) studied employees (women=1060, men=940) in the People's Republic of China, and found that traditional values for men and women in relation to work roles have changed since the government advocated equal status and equal pay for equal work for men and women. The same study also revealed no significant differences between men and women in their view of family, authority, or interpersonal dealings. Others, however, argue that men and women are still significantly different in Chinese culture and society. In a study of gender role and health adjustment, Chinese men ($n=64$) and women ($n=73$) perceived their roles differently regarding masculine and feminine characteristics, although no differences were found on their level of distress in the same study (Tang & Lau, 1995).

Findings from cross-cultural research examining gender differences in stress and coping have also been inconsistent. For example, Shek (1992) compared Chinese working men ($n=500$) and women ($n=500$) on help seeking behaviour, and found that men used higher self-reliance types of coping in marital and occupational domains, and women had a strong tendency to seek help from others when facing stress in all domains. The author concluded that the different coping patterns between men and women may be universal, although no further explanation was given in

the study. Chan (1994) studied Chinese school teachers (men=180, women=229) working in Hong Kong, and found that male teachers tended to be more restricted in expressing emotions, and female teachers tended to seek social support as a coping strategy when coping was assessed by the Chinese version of the Ways of Coping Questionnaire (Lazarus & Folkman, 1988). In a study published in 1981, Chinese women, in general, were described as more likely than men to use emotion-focused coping and report higher levels of anxiety (Dyal & Dyal, 1981). Wang and Wang (1995), however, found that Chinese women studying in mathematics and computer science were significantly more likely than men to utilize task-oriented coping and to report less depressive symptoms than men. As well, in a study of Asian-American students (men=98, women=89), Atkinson and his research team found no significant gender differences in the use of coping strategies (Atkinson, Lowe, & Matthews, 1995). Similarly, no coping differences were found between Beijing Chinese students men ($n=69$) and women ($n=63$) (Gerdes & Ping, 1994). The authors concluded that the lack of gender differences in their study indicates that stereotypical predictions concerning gender differences were not supported.

The findings of gender differences have been explained by two major hypotheses--the socialization hypothesis (e.g., Archer, 1996; Kessler, Brown, & Broman, 1981) and the structural hypothesis (e.g., Folkman & Lazarus, 1980; Kanter, 1977). The socialization hypothesis holds that men and women are socialized to deal with stressful events in different ways. Specifically, it is suggested that because of widely held sex role stereotypes and gender role expectations, men are socialized to a greater extent to deal instrumentally with stress, whereas women tend to be socialized to express emotion, to employ emotion-focused coping strategies, and to seek support from others (Kessler et al., 1981; Mainiero, 1986). The structural hypothesis posits that gender differences in coping may be attributable to differences in the kinds of stressful situations typically encountered by men and women. According to this view, specific types of situations demand

particular methods of coping regardless of gender (Billing & Moos, 1981; Folkman & Lazarus, 1980; Pines & Kafry, 1981).

Although both structural and social theories provide some explanations for gender differences, empirical findings have been inconsistent, especially for Chinese men and women. Given the limited study on stress and coping for overseas Chinese in general, no specific hypotheses were made regarding gender differences in the present study. Thus, the data were examined in an exploratory manner in order to determine whether gender differences exist in a sample of overseas Chinese professionals in relation to workplace stress and coping.

Summary

Cultural values have been identified as a coping resource. Despite the fact that both theoretical and empirical research in stress and coping have indicated the importance of coping resources, cultural influences have not been systematically examined within a theoretical model of stress and coping. Lazarus and Folkman's (1984) transactional stress and coping theory provides a useful framework for examining coping resources.

Based on Lazarus and Folkman's (1984) theory, coping resources have been examined in workplace stress and coping (Long et al., 1992; Terry, 1991; Terry et al., 1995). This provides supportive evidence for the influence of coping resources when applied to employees. Long et al. and Terry et al. did not include cultural values as one of the resources in their models. Existing coping measures are also limited by a lack of items that capture collective aspects of coping strategies. Although an increase in the cultural diversity of today's workforce has raised the issue of the well-being of workers who are coping in a cross-cultural work environment, little empirical work has been focused on overseas Chinese professionals (Aycan & Berry, 1996; Bond, Wan, Leung, & Giacalone, 1985; Chiu & Kosinski, Jr., 1995; Pinderhughes, 1989).

Thus, the purpose of this study was to examine Lazarus and Folkman's (1984) framework

and Long et al.'s (1992), Terry (1991), and Terry et al. (1995) coping resources model in the context of workplace stress by determining through path analytic modelling the pattern of relationships among resources (i.e., Chinese collective values, general self-efficacy, social support), mediating (i.e., cognitive appraisal and coping strategies including collective coping items developed in this study), and outcome variables (i.e., job satisfaction, depression, and somatic symptoms) for overseas Chinese men and women who are currently working in professional occupations in countries identified with individualistic culture (Hofstede, 1980).

CHAPTER III: HYPOTHESES

The following hypotheses and their derivatives are based on the theoretical tenets of Lazarus and Folkman (1984) (see Figure 1), as well as on empirical models of Long et al. (1992), Terry (1991), and Terry et al. (1995).

Hypothesis 1

The model would fit the data (see Figure 2).

The model includes coping resources variables (Chinese collectivism values, general self-efficacy, support satisfaction), appraisals (perceived control and perceived self-efficacy), coping (both individual and collective Engagement and Disengagement coping), and outcome variables (job satisfaction, depression, and somatic symptoms).

Hypothesis 2

Chinese collectivism values would be (a) positively related to control appraisals, and (b) negatively related to self-efficacy appraisal.

Tuss et al. (1995) found that Chinese collective values were directly related to the appraisal of controllability over successful math performance. Similar findings were also reported by Si et al. (1995), that is, Chinese students' appraisals of control were strongly influenced by Chinese collective values. As such, it was expected that overseas Chinese who place a high level of importance on Chinese collectivism values would perceive higher levels of control over a stressful situation.

On the other hand, it is expected that overseas Chinese who place a higher level of importance on Chinese collectivism values would experience lower levels of self-efficacy. Dong (1995) found that collectivism values were directly related to the appraisals of overseas Chinese and affected their well-being in the host cultures. Asian immigrant adolescents in the United States who were characterized by high collectivism values reported less self-efficacy appraisals

and adaptation than those characterized by high individualism values. Oettingen et al. (1994) also reported that collectivism values were associated with low levels of perceived self-efficacy and poor task performance. Thus, one can argue that overseas Chinese professionals who hold high levels of Chinese collectivism values would feel less efficacious when facing a stressful situation at their workplace.

Hypothesis 3

General self-efficacy would be positively related to both (a) control and (b) self-efficacy appraisals.

Previous research has indicated that individuals who report a low personal sense of agency are especially vulnerable to demands and failure experiences, and feel more distressed than individuals with high general self-efficacy (Long et al. 1992; Schwarzer, 1992). High general self-confidence was found to have a positive relationship with situational control beliefs for employees (Terry et al., 1995). More specifically, positive feelings towards oneself were related to more performance confidence perceived by Chinese individuals (Yue, 1996). Therefore, I expect that overseas Chinese with higher levels of general self-efficacy would experience higher self-efficacy appraisal and feel more control over their stressful work situations, than those reporting lower levels of general self-efficacy.

Hypothesis 4

Social support satisfaction would be positively related to both (a) control and (b) self-efficacy appraisals.

Previous research has indicated that overseas Asian individuals who reported satisfaction with their social support gained a high sense of belonging, and experienced high control in stressful situations (Furnham & Alibhai, 1985). Cohen and Wills (1985) suggested that social support enhances an individual's sense of self agency and control over stressful encounters. Social

support, therefore, serves to promote more positive stressor appraisals. Particularly, satisfaction with perceived support has found to have positive effects on overseas Chinese's adjustment (Jou & Fukada, 1995).

Hypothesis 5

Work support satisfaction would be positively related to both (a) control and (b) self-efficacy appraisals.

Although there is not an empirical study on a Chinese population that specifically focused on work support and appraisals, Long et al. (1992) found that weak work support (within a work environment latent factor) was associated with more upsetting appraisals and less perceived situational control. Therefore, this hypothesis was based on theory and Long et al.'s findings regarding work support and appraisals.

Hypothesis 6

Situational control appraisal and self-efficacy appraisal would be positively related to each other.

Hypothesis 7

Situational control appraisal would be positively related to (a) collective coping and (b) Engagement coping. In contrast, (c) control appraisal would be negatively related to Disengagement coping strategies.

Control appraisals have been positively associated with Engagement coping efforts (e.g., Haney & Long, 1995), and negatively related to disengagement forms of coping (e.g., escapism, Terry, 1991; Terry et al., 1995). Several studies have found that perceived control has been directly linked to engagement in active problem solving among Chinese individuals (Eaton, 1994; Rethorst, & Willimczik, 1995; Si, Hua, & Salili, 1996), for example, putting in more effort in order to achieve success (Chataway & Berry, 1989; Yan & Gaier, 1994).

Hypothesis 8

Self-efficacy appraisals would be positively related to (a) collective coping and (b) Engagement coping. In contrast, (c) self-efficacy appraisals would be negatively related to Disengagement coping strategies.

Higher levels of self-efficacy appraisals have been positively related to active coping strategies such as information-seeking, and negatively related to the use of strategies such as escapism and self-blame that disengage oneself from the stressful encounters (Ashford, 1988; Haney & Long, 1995; Terry, 1991, 1994; Terry et al., 1995). Although the use of self-efficacy appraisal as a predictor of coping is relatively new in cross-cultural studies, Bandura (1995) and other researchers have argued that the functions of perceived self-efficacy are the same for individuals from any culture despite their collectivism and individualism differences. Thus, overseas Chinese who appraise their situation as controllable or have confidence in their ability to cope successfully with a situation were expected to use more engagement coping strategies that focus on active problem solving. In contrast, appraisals of low perceived control and perceived self-efficacy were expected to be associated with greater use of disengagement forms of coping among overseas Chinese professionals.

Hypothesis 9

Collective coping, would be positively related to (a) Engagement coping and (b) Disengagement coping, and (c) Disengagement coping would be positively related to Engagement coping.

High intercorrelations among coping subscales are common in previous research, and individuals tend to endorse a vast array of coping strategies rather than in one particular form of coping (Folkman & Lazarus, 1980; Folkman et al., 1986; Long et al., 1992).

Hypothesis 10

Collective coping would be (a) positively related to changes (increase) in job satisfaction; (b) negatively related to changes (decrease) in somatic symptoms; and (c) negatively related to changes in depressive symptoms.

Hypothesis 11

Engagement coping would be (a) positively related to changes (increase) in job satisfaction; (b) negatively related to changes (decrease) in somatic symptoms; and (c) negatively related to changes in depressive symptoms.

Based on Lazarus and Folkman's (1984) theory, coping was expected to be directly related to outcome. Terry et al. (1995) found that engagement forms of coping such as instrumental action have a significant effect on job satisfaction. Hong (1984) also found that active controlling involvement at work was the most important factor that contributed to job satisfaction among overseas Chinese students.

Some research findings have shown that active problem solving activities (e.g., took steps to overcome the problem, talked to a friends about the problem, asserted self and took positive action on problem, directly expressing oneself, taking steps to solve problem, working hard, active reappraisal, and accepting or re-interpreting the stressful events) were significantly predictive of feeling better and of lower levels of depression (e.g., Chan, 1992). Others found that persistent engagement in active coping strategies were related to increased daily hassles (Long et al., 1992), and distress (e.g., Chataway & Berry, 1989).

Hypothesis 12

Disengagement coping would be (a) negatively related to changes (decrease) in job satisfaction; (b) positively related to changes (increase) in somatic symptoms; and (c) positively related to changes in depressive symptoms.

Long et al. (1992) found that Disengagement coping strategies were significantly and negatively associated with job satisfaction. Similar findings were also reported by Terry et al. (1995), that is, job satisfaction was significantly negatively associated with escapism coping.

Numerous research studies have documented the relationship between disengagement forms of coping and distress symptoms (e.g., Israel et al., 1989; Long et al., 1992; Terry et al., 1995). Consistent findings indicate that more frequent use of disengagement modes of coping (e.g., withdrawing, avoiding, self-criticism, escape from the situation, and wishful thinking) are associated with greater psychological distress among Chinese (e.g., Chan & Hui, 1994; Chataway & Berry, 1989; Lin, 1993).

Hypotheses 13-16

The relationship between coping resources and outcome would be mediated by appraisals and coping strategies.

Hypothesis 13. The relationship between Chinese collective values and changes in job satisfaction, depression, and somatic symptoms would be mediated by (a) control, (b) self-efficacy, and (c) coping strategies.

Hypothesis 14. The relationship between general self-efficacy and changes in job satisfaction, depression, and somatic symptoms would be mediated by (a) control, (b) self-efficacy, and (c) coping strategies.

Hypothesis 15. The relationship between social support and changes in job satisfaction, depression, and somatic symptoms would be mediated by (a) control, (b) self-efficacy, and (c) coping strategies.

Hypothesis 16. The relationship between work support and changes in job satisfaction, depression, and somatic symptoms would be mediated by (a) control, (b) self-efficacy, and (c) coping strategies.

Theoretically, Lazarus and Folkman (1984) posit that cognitive appraisals are key mediators in the relationship between coping resources (e.g., personal beliefs and characteristics) and outcome variables. Empirical evidence suggests that the relationship between coping resources and outcomes is mediated through control and self-efficacy appraisal (Terry, 1994). In addition, Terry's (1991) work also provides some evidence of a mediating relationship between social support and job satisfaction.

Given the significance of cognitive appraisals as mediators in the stress and coping process (Lazarus & Folkman, 1984), it can be argued that the relationship between support satisfaction and job satisfaction, and support satisfaction and depression and somatic symptoms are influenced by individual's appraisal of the events. However, there is no empirical support for the mediating effect of appraisals on the relationship between Chinese collectivism, general self-efficacy, and job satisfaction, depression, or somatic symptoms as researchers have not investigated the stress and coping process systematically focusing on Chinese population. Therefore, the mediating processes examined in this study were based on theory, and Terry's findings regarding coping resources and appraisals.

CHAPTER VI: METHOD

Participants

The sample consisted of 228 overseas Chinese professionals (100 female and 128 male). Eligibility criteria for inclusion in the study consisted of males and females of Chinese origin who were (a) first generation living in overseas countries that have an individualistic culture, such as the United States, Canada, and Australia (Hofstede, 1980); (b) currently employed (full time or part time) in a professional occupation according to the Dictionary of Canadian Law (Dukelow & Nurse, 1995; e.g., physician, professor, lawyer, engineer, psychologist, researcher, accountant, manager, counsellor, teacher, nurse); and (c) had experienced a stressful situation at work during the data collecting period.

Design and Procedure

Volunteer participants were recruited through e-mail networks. Along with the development of electronic information technology, e-mail and the internet have been increasingly considered a global communication technique that can be employed for education, research, and clinical use (Myers, 1992; Myrick & Sabella, 1995; Stricker, 1996; Travers, 1997). A letter of invitation (see Appendix A) was posted on multiple networks (e.g., provincial, state, regional, country, and World Wide Web sites). In addition, overseas Chinese who participated in an e-mail focus group ($n=20$) pilot study for this project, and who had indicated that they were interested in participating in a larger study on stress and coping in the workplace, were contacted individually by e-mail.

Information about the voluntary nature of their participation and confidentiality issues concerning the study was explained in the posting. No personal e-mail addresses or any other personal information was available in the public sites. That is, each participant sent his or her e-mail response directly to the researcher's own e-mail address. No e-mail group list was developed

specifically for this study. Therefore, participants were not known to each other. Instead, they were only known to myself as I sent or received information to or from the e-mail nets. In addition, a message was posted at the top and end of each section of the questionnaires to remind participants to send their responses only to me (see Appendix B for informed consent sheet).

The same procedure that ensured the anonymity of participants' responses was used for all three assessments. In addition, each set of questionnaires was downloaded once they were received, and given an individualized code. This code was used on each returned questionnaire at each wave of data collection. Thus no names, personal e-mail addresses, or other identifying information remained on the questionnaires once they were received for analysis. Participants were asked to delay their starting time in order to minimize the effects of holidays or other major life events. As a reminder to complete and return each part of the questionnaire, participants were contacted by e-mail one day prior to the return dates for each of the survey sections. Following the completion of the study, participants were entitled to receive a summary report of the study's findings. As an incentive for participating in the study, six \$25 cash awards were also offered through a random draw (see Appendix F for the summary of results request form and monetary award entry form).

The questionnaires were sent to each participant on three assessment periods, 2 weeks apart (3 waves). This prospective procedure minimizes response bias and provides support for the predicted causal direction of the constructs. Different time periods (e.g., 1 month; 2 weeks) for the separate components of the model have been reported by researchers (e.g., Long et al., 1992; Portello, 1996; Terry et al., 1995). I considered 2 weeks between assessments as long enough for a stressor event to have occurred at work. In addition, 2 weeks limits problems with retrospective recall of the events. The first set of questionnaires was distributed when a respondent replied to the invitation to participate in the study. This first set requested demographic information and

coping resources (see Appendix C), specifically: (a) the instructions for Part 1 and demographic questions; (c) the Chinese Value Survey (Chinese Culture Connection, 1987); (d) the Self-Efficacy Scale (Zhang & Schwarzer, 1995); and (e) the Social Support Questionnaire (Sarason, Sarason, Shearin, & Pierce, 1987). In addition, the Hoppock Job Satisfaction Scales (McNichols, Stahl, & Manley, 1978), the Somatization subscale from the Symptoms Check List-90-R (SCL-90-R; Derogatis, 1983), and the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977) were also included in Part 1 in order to obtain change scores when the same set of questionnaires was administered four weeks later during Part 3. A letter was sent (via e-mail) to participants who failed to respond to Part 1 of the questionnaires one week after the questionnaires had been distributed.

The second set of questionnaires were distributed 2 weeks after Part 1, and consisted of appraisal and coping questionnaires. Part 2 contained (see Appendix C) (a) a covering letter and instructions; (b) a control appraisal scale (Terry, 1994); (c) perceived self-efficacy items (Ashford, 1988; Terry, 1994); (d) a modified short version of the Ways of Coping Checklist (Folkman et al., 1986); and (e) collective coping items.

Following the same procedure used in Parts 1 and 2, participants were requested to complete and return Part 3 questionnaires 2 weeks after their Part 2 responses were received. Part 3 included (see Appendix D) (a) a cover letter and instructions; (b) the Hoppock Job Satisfaction Scales (McNichols et al., 1978); (c) the Somatization subscale from the Symptoms Check List-90-R (SCL-90-R; Derogatis, 1983); and (d) the Center for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977).

Although electronic communication is an effective way of saving time, money, and space, and facilitates the involvement of participants who reside some distance away, participation was limited to individuals who have e-mail access. In consideration of this limitation, individuals who

were interested in this study but did not have e-mail access or who preferred not to use e-mail were invited to mail their responses directly to the researcher. Therefore, 16 respondents (5% of the total sample) completed their questionnaires by mail.

All questionnaires used in the study were posted in English to preserve response consistency. In order to eliminate misunderstandings due to language differences, all questionnaires used in this study were translated from English to Chinese and back into English, unless such a procedure had already been undertaken. Two independent bilingual, bicultural Chinese individuals with majors in English and who are currently employed in professional jobs in Canada first translated the English versions of the questionnaires. They focused on identifying any specific phrases, metaphors, or colloquialisms that might be understood differently in the process of translation. This translation was compared with the Chinese version of the questionnaires to determine significant differences between the two translations. The Chinese version was then translated back into English by a second set of two independent bilingual individuals, one holds a law degree from Chinese and Canadian universities and currently is practicing law in Canada; and the other holds a English major in China and a Master's degree in psychology in North America currently working as a psychology researcher in the United States. These procedures ensured that the terms used for each item were culturally appropriate and linguistically correct. Minor modifications made on the final version of the questionnaires included shortening the sentences and altering the word order for some questionnaires. These procedures met Brislin's (1980) guidelines for the preparation of the English version of materials, and the final version of the questionnaires was used in a pilot study. Only minor changes were made after piloting the questionnaires.

Two hundred and fifty Chinese professionals (109 women and 141 men) initially responded to the invitation to participate in the study. Among these participants, two were not

first generation overseas Chinese, two were not working in a professional occupation at the time of the study, and four reported no stressful events during the 2-week period. Therefore, eight respondents were excluded from the study. Of 242 eligible participants, 14 respondents (about 6% of the respondents), however, had greater than 20% missing data. Questionnaire items were either incorrectly filled out or incomplete. Therefore, of the returned questionnaires, 228 remained for data analysis. Demographic information regarding participants who dropped out of the study is summarized in Appendix G.

Pilot Study

A two phase pilot study was conducted. The first phase involved focus group discussions (via e-mail) and identified the stressors and the coping strategies used by Chinese overseas who were currently working in professional occupations (e.g., teaching, researching, and management). Such an approach provided overseas Chinese with the opportunity to describe their workplace stress and coping strategies. Twenty overseas Chinese men ($n=17$) and women ($n=3$) from Canada and the United States participated in the study. Each person responded through e-mail to the questions, "What are some of the stressful things that you have identified as difficulties when you work in an overseas environment?" and "What are some of the ways you have used to deal with your difficulties?" Some respondents replied in short sentences whereas others responded with several pages of comments. From a total of 36 e-mail responses, data were content analyzed and seven stressor themes (e.g., language difficulties in daily conversations, lack of a sense of belonging, and feeling pressured by differences in cultural values and ways of expressing oneself) were identified. Nine coping strategies (e.g., working harder, blaming oneself for not doing a good job, sharing personal difficulties with other overseas Chinese; and joining activities with co-workers after work) were also identified. The results indicated a need to consider stressors and coping strategies relevant to cultural values (see Appendix H for the

summary of phase I focus group study). Based on the focus group data and relevant stress and coping theory and research, especially on people from collectivistic cultures, collective coping items were developed and common types of stressors were identified.

The second phase of the pilot study was undertaken to assess the appropriateness of the measures used in the study, and to refine (clarity, face validity) the collective coping items. Through an e-mail network, 23 (8 women and 15 men) overseas Chinese professionals who were working in Canada and the United States participated in the study (see Appendix H for the summary of phase II pilot study data). Of the 23 respondents, 20 completed all three stages of the project; each stage was spaced 2 weeks apart. Three respondents were unable to identify a stressful event during the 2 weeks between questionnaires Parts 1 and 2. Therefore, these three cases were dropped from the pilot sample after time one data were analyzed. Based on the pilot study data, minor modifications were made on a few items to clarify the questions and to correct typographical errors. Collective coping items were refined; for example, items 35 and 36 were combined into one item: "shared my feelings and experiences in order to help others in my group deal with similar problems" (see Appendix H for the changes made according to the results of the pilot study).

Measures

Demographic information. Demographic information gathered on each participant included the participant's age, gender, education, country of birth, household income, parental and marital status, length of stay overseas, professional status (occupations before and after moving overseas), years (months) employed in their positions, job titles, work status (full or part time), and fluency level in English. In addition, overseas Chinese participants were asked to provide the following information relating to their involvement in social groups (e.g., membership in an overseas Chinese Scholars Association), as well as the frequency of their participation in these

kinds of social activities.

Chinese Value Survey. Chinese collectivism was assessed by the Chinese Value Survey (CVS, Chinese Culture Connection, 1987). The values represent a concept regarded by Chinese social scientists as being of fundamental importance to Chinese culture, and include items such as moderation, filial piety, and saving face. The 40-item CVS was originally developed in Chinese, but has also been translated into English (Chinese Culture Connection, 1987) and used for both Chinese and non-Chinese populations (e.g., Ralston, Gustason, Cheung, & Terpstra, 1993). The English version was used in this study. Participants were instructed to indicate on a 9-point scale how important each concept was to them (9=extreme importance, and 1=no importance at all).

A principal axis factor analysis yielded a four-factor solution: Integration, Confucian Work Dynamism, Human-heartedness, and Moral Discipline (Chinese Culture Connection, 1987). Chinese, Taiwanese, Japanese, South Korean, and Hong Kong respondents obtained the highest scores on the Confucian Work Dynamism factor (from 1.34 to 0.49) among 23 countries involved in the study (Bond & Pang, 1991; Chinese Culture Connection, 1987). This result strongly associates the Confucian value of collectivism with these nations and their surrounding regions. A second-order factor analysis of all four factors indicated that each of these factors tapped one basic dimension of Chinese collectivism, with item loadings ranging from .58 to .88, accounting for 57% of the variance (Chinese Culture Connection, 1987). Therefore, in the present study, the CVS was treated as one basic dimension. The total score ranges from 40 to 360, the higher scores indicating stronger beliefs in Chinese values.

General self-efficacy. General self-efficacy was assessed by the Chinese Self-efficacy Scale (CSS, Zhang & Schwarzer, 1995). This scale was developed as a Chinese version of the General Self-efficacy Scale (Schwarzer, 1993) to assess an individual's level of beliefs in personal agency. The original English version of the scale was translated and back translated into Chinese several

times (Zhang & Schwarzer). In the present study, the English version of the Chinese Self-efficacy Scale was used. Respondents indicated the degree of agreement with the 10 items on a scale ranging from not at all (1) to totally true (4). Responses were summed to yield a measure of self-efficacy beliefs, with scores ranging from 10 to 40. Higher scores indicate more optimistic expectations about the self and a more confident view of an individual's personal ability to cope with challenging demands.

Zhang and Schwarzer (1995) tested the psychometric properties of the CSS on a sample of university students in Hong Kong. Internal consistency (Cronbach's alpha) was .91 for the 10-item scale. A principal component analysis yielded a one-factor solution that accounted for 55% of the total variance. In addition, Zhang and Schwarzer provided evidence for the validity of the CSS. A correlation coefficient, $r=.71$, was obtained between the Chinese and the English versions in a test-retest analysis, with the English version administered 3 weeks before the Chinese version. Moreover, preliminary normative data were provided for the CSS with a z-score mean of 24.56 and a standard deviation of 5.31. Furthermore, Yue (1996) reported an acceptable alpha coefficient (.83) for internal consistency of the CSS. Higher CSS scores have been found to be negatively correlated with test anxiety (Test Anxiety Inventory, Spielberger, 1980), $r=-.35$, $p<.001$; worry, $r=-.36$, $p<.001$; and emotionality, $r=-.32$, $p<.001$, in a sample of 773 Hong Kong students (Yue, 1996).

Social support. Social support was assessed using a 6-item measure of participants' satisfaction with the perceived support available to them (The Social Support Questionnaire, SSQ; Sarason et al., 1987). For each item, participants were asked to identify the individual(s) who provided them with a range of different types of support, for example, "Whom can you count on to console you when you are really upset?" Then, they were required to indicate how satisfied they were with this support on a 6-point scale from (1) very dissatisfied to (6) very satisfied. The

scores of the 6 satisfaction items were summed, with scores ranging from 6 to 36. The higher scores indicate greater support satisfaction.

Separate factor analyses of the two SSQ subscales revealed that the number of supportive individuals and level of satisfaction with social support were two separate dimensions, with only a modest correlation between them ($r=.34$, Sarason et al., 1983). Consistent evidence from cross-cultural research has indicated that perceived support has stress buffer effects in the coping process (Jou & Fukada, 1995, 1996; Liang & Bogat, 1994); therefore, only the support satisfaction subscale was used in the present study. Internal reliability for the 6-item SSQ ranges from .90 to .93 for support satisfaction (Sarason et al., 1987). Terry et al. (1995) reported an alpha reliability coefficient of .90 for support satisfaction in a sample of male and female middle managers. The test-retest reliability coefficient was .83 for the complete subscale over a 4-week interval, and scores have been found to correlate with anxiety, depression, hostility, self-esteem, and optimism (Sarason et al., 1987). This scale was translated into Chinese and then back-translated into English; no changes were made after the translations.

Work support. Given the focus of this study is on workplace stress and coping, it is important to identify levels of perceived support at work. As such, a work support scale was designed for use in the present study that focuses on perceptions of the adequacy of support specifically when facing workplace stress. Modeled after Short and Johnston's (1997) Parent Support Scale, this scale taps three potential sources of support: co-workers, friends, and family members. Participants were asked how often they receive work support (e.g., giving good advice when needed) from these sources. Responses are made on a 5-point scale that ranges from (1) never, to (5) regularly. Participants were also asked to consider the helpfulness of the support received from each of the above sources. Again, a 5-point scale was used, ranging from (1) not at all, to (5) extremely. Only the total score was used in the present study, and the scores range from

5 to 30. High scores indicate greater work support.

Stressful episode. Participants were asked first to briefly identify and describe a stressful incident. This was worded as follows: Please think over the past 2 weeks and recall a situation, event, or incident at work that has been stressful for you and is currently of concern to you. By 'stressful' we mean the most stressful situation that was difficult or troubling for you, either because it upset you or because it took effort to deal with it. Participants were instructed to indicate the type of stressful event they identified from a list of stressors derived from the pilot focus group study (see Appendix H for detail). Participants were also asked to briefly describe the event or situation they identified, and explain why it was stressful to them.

The stressful events were content-analyzed into separate categories for descriptive purposes only. As such, these events were not included in the model. Two independent raters examined the stressful episodes recorded on the questionnaires. Working separately, they classified the episodes into categories with reference made to classification sets developed from the pilot sample of the study. Agreement between the two raters was 88%. The raters reexamined the episodes they did not agree upon, and reached a consensus decision.

Nine types of stressful events were generated from content analysis (see samples of descriptive data in Appendix R). These event categories include uncertainty about feedback on work quality (28% women, 22% men), work overload (14% women, 27% men), unfair treatment (21% women, 13% men), communication difficulties due to language barriers (12% women, 15% men), cultural and work value differences (13% women, 15% men), interpersonal conflict (4% women, 3% men) and misunderstanding (5% for both men and women), under employment (1% women), lack of work support (1% men), and others (2% women).

Control appraisals. With their specific stressor in mind, respondents completed a 6-item control scale (e.g., How much do you feel that the outcome of the situation is beyond your

control?) developed by Conway and Terry (1992). Each item is scored on 5-point scale ranging from (1) not at all, to (5) very much, indicating perceived controllability over the outcome of the event. The scale is composed of equal numbers of direct- and reverse-scored items. The summed scores range from 6 to 30; the higher the score, the greater the perceived control. Conway and Terry reported a Cronbach's alpha of .79 for internal consistency of the control appraisal measure. Terry et al. (1995) found that the 6 items assessing situational control beliefs loaded on a single factor with loadings from .54 to .82.

Self-efficacy appraisal. A second appraisal construct, perceived self-efficacy, which is a measure of an individual's confidence in his or her ability to deal with a specific stressful event, was assessed by three items adopted from Terry, Callan, and Startori (1996): I am confident in my ability to deal with the problem, I have reason to believe I may not able to handle the situation well, and although I may need some assistance, I have little doubt I can deal with the problem well. The scale ranges from (1) not at all, to (5) very much. The summed scale scores range from 3 to 15, higher scores indicate stronger efficacy beliefs. Terry and her colleagues (1996) reported that the three items loaded on a single factor (Varimax rotation) with the average factor loading .81. In addition, they reported a Cronbach's alpha for internal consistency of .77. The control and self-efficacy appraisal scales were translated into Chinese and then back-translated into English. No changes were made to the measure.

Coping strategies. Coping strategies were assessed with a composite coping measure (43 items). Among the items, 24 are from a revised version of the Ways of Coping Scale (WOC; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986), an additional 5 items from the Chinese Ways of Coping scale (Chan, 1994), 3 items from O'Brien and DeLongis' (1996) Relationship-focused Coping, and 11 collective coping items that were developed for this study.

The original version of WOC (Folkman & Lazarus, 1985) contained a total of 67 items

with eight factors, namely, Distancing, Self-controlling, Escape-Avoidance, Accepting Responsibility, Confrontive Coping, Positive Reappraisal, Planful Problem-solving, and Seeking Social Support. For this study, a short form of the WOC was used. The short form includes three items with the highest factor loadings (equal or above .40) from each of the eight subscales of the WOC (Folkman et al., 1986). The short version of WOC has been used in several studies of stress and coping (e.g., Bolger & Zuckerman, 1995; O'Brien & DeLongis, 1996).

An additional four items were included from the Chinese Ways of Coping scale (Chan, 1994). The following items were obtained from the Rational Problem Solving subscale: Went over in my mind what to say or do, Prepared for the worst, Waited to see what would happen before acting, and Tried to see things from another perspective. Chan (1994) reported strong factor loadings (.50 to .61) on these four items. These four items along with the 21-item short version of the WOC were used as individual coping strategies.

The 18 collective coping items include (see appendix L, Table L1) 3 from the subscale Seeking Social Support (Talked to someone about the situation, Talked to someone about how I was feeling, and Talked to someone who could do something concrete about the problem). These items were modified for the present study by replacing the word someone with the phrase someone from my group of people. One item, asked a respected relative/friend for advice was included from the Seeking Social Support subscale of the Chinese Ways of Coping (Chan, 1994). An additional three items were from O'Brien and DeLongis' (1996) relationship-focused coping scale. The three items selected had the highest factor loadings (from .79 to .85) on the scale (Tried to understand the other person's concerns, Tried to understand how the other person felt, and Tried to figure out what would make the other person feel better). The term the other person was replaced with the phrase the other people in my group in order to make the items consistent with the other items measuring collective coping on this instrument. The remaining 11 items were

generated from a literature review and the pilot study results. All items were translated into Chinese and back-translated into English. No changes were made to the items.

Three coping subscales were of interest in this study: (1) Engagement, (2) Disengagement, and (3) Collective coping. Engagement and Disengagement coping items were classified according to Tobin et al.'s (1989) definition and the empirical work of Long et al. (1992, see Appendix O Table O1). The newly developed collective coping subscale was based on a literature review (see Appendix P, Table P1). For all items, participants respond to a 4-point scale measuring the extent to which they used each coping item in response to the specific stressful experience that they described. They were given the following instructions: It is very useful to find out what you did to cope with the particular stressful experience you just described. As you respond to each of the statements, please keep this stressful situation in mind. Please use the 4 point scale, where 0 is not used or does not apply, and 3 is used a great deal. Read each statement carefully, and indicate to what extent you used it in the situation. The higher the score on each coping subscale, the greater the usage of that particular coping effort.

In order to clarify the coping items and determine the final coping structure and subscales in the study, a maximum likelihood analysis using Oblimin rotation with the total 43 coping items was conducted. Previous work has indicated that individuals generally choose a wide variety of coping strategies, rather than one particular set of strategies to the exclusion of others (e.g., Folkman & Lazarus, 1980). Therefore, it was expected that the coping variables would be inter-correlated. When this turns out to be the case, a maximum likelihood analysis with Oblimin rotation is considered to be an appropriate method of extracting factors (Norusis, 1990; Wilkinson, 1989). The factor analysis yielded a three-factor solution, which determined the three coping subscales of Engagement, Disengagement, and Collective coping in the final model analysis (see results section for detailed analysis).

For descriptive purposes, respondents were invited to provide written comments about other strategies they found useful in coping with work stress. Only nine respondents indicated that they had used coping strategies that were not listed on the questionnaire. Examples of these additional ways of coping include exercise, thinking and planning about the future, finding common ground, and asking for professional help (see Appendix R for detail).

Job satisfaction. Job satisfaction was assessed using the Hoppock Job Satisfaction Scale (HJSS, McNichols et al., 1978). Participants were asked to respond to a 4-item scale assessing satisfaction with their present job and how they feel they compare with others in job satisfaction over the past month. Responses are summed to yield a measure of job satisfaction with scores that range from 4 to 28. Higher scores indicate more satisfaction with a person's job. Factor analysis on the four items yielded a single factor with loadings from .65 to .92 (McNichols et al., 1978). The HJSS was found to be significantly correlated with all five of the Job Descriptive Index subscales (JDI, Smith, Kendall, & Hulin, 1969), in which the HJSS strongly correlated with the work satisfaction subscales of JDI ($r=.73$). In addition, Cronbach's alphas ranged from .75 to .89 among four samples (manager and military personnel) in McNichols et al.'s (1978) study. Moreover, a test-retest reliability of .73 (over 6 months) was reported by Scandura and Graen (1984) and provided further evidence of the stability of the HJSS. The HJSS was translated into Chinese and then back-translated into English with no changes made to the measure.

Somatic symptoms. Somatic symptoms were assessed using the Somatization subscale from the Symptoms Check List-90-R (SCL-90-R; Derogatis, 1983). The Somatization subscale includes 12 items. Participants were asked to respond to a 5-point scale ranging from (0) not at all, to (4) extremely, measuring the extent to which they felt ill over the past 2 weeks for each item that represents a health problem or complaint. Validation procedures have revealed that the subscale has sound psychometric properties. Test-retest stability ($r=.68$) over 2 weeks has been

reported for the Somatization subscale (Derogatis & Melisaratos, 1983). This subscale was used in cross-cultural research on stress and coping, and has reliabilities ranging from .73 to .85 on overseas Chinese samples (e.g., Lin, 1993; Short & Johnston, 1997). The total scores range from 0 to 36, with a higher score reflecting more somatic symptomatology. This scale was translated into Chinese and then back-translated into English. No changes were made to this measure.

Depressive symptoms. Depression was assessed using the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). The CES-D is a 20-item scale scored on a 4-point response ranging from (0) rarely, or none of the time, to (3) most or all of the time. The total scores range from 0 to 60, with a higher score reflecting more depression. The CES-D has good internal consistency with Cronbach's alphas of .85 or greater, and test-retest correlations range from .51 to .67 over 2- to 8-week periods in the general population (Radloff, 1977). The CES-D has been translated into many languages and has been used in cross-cultural studies (Chuo, 1984; Krause & Liang, 1992, 1993; Ying, 1988). In a study of Chinese American adults in San Francisco, for example, Ying (1988) reported an internal consistency alpha coefficient of .77 for the CES-D; the Guttman split-half and Spearman Brown coefficients were both .77. Participants were asked to indicate their symptoms in the past week. This scale was translated into Chinese and then back translated into English. One minor change was made on item 20, in which the phrase do not feel motivated was added to the original wording of could not get going in order to make the expression clearer to the participants.

Assessing change over time. To examine the potential effects of appraisals and coping strategies on changes in outcome over time, the outcome measures of job satisfaction and distress (somatic symptoms and depression) were assessed at Time 1 together with the coping resources measures, as well as at Time 3 (at least 4 weeks between time one and time three).

Assessing change in the outcomes may provide stronger evidence to support the

transactional model developed by Lazarus and Folkman (1984). It has been argued that if the outcome is measured only once, it may reflect the reappraisal of the stressful event after coping strategies are implemented (Wearing & Hart, 1996). The procedure of assessing change in the outcomes was employed to test whether or not participants have maintained, increased, or decreased their well-being as a consequence of coping with a workplace stressor (Hart, Wearing, & Headey, 1995; Townsend, Noelker, Deimling, & Bass, 1989; Valentiner, Holahan, & Moos, 1994).

Change in well being was analyzed using the residuals from the simple regressions of Time 3 outcome measures on job satisfaction, somatic symptoms, and depressive symptoms on Time 1. This approach provides a conservative test of the model by controlling for the influence of initial psychological adjustment on later adjustment (Major, Richards, Cooper, Cozzarelli, & Zubek, 1998; Valentiner, Holahan, & Moos, 1994).

Data Analysis

Preliminary analysis. Participants' data were eliminated from use in the study when they failed to respond to greater than 20% of the items. Responses were checked on each of the measures to determine the extent and pattern of missing data. No consistent pattern of missing data was found, and where appropriate, missing values were substituted with group means. On measures that were more than 80% completed, mean values based on categorical mean scores on the scale were substituted for items not answered. The total amount of missing data for the sample of 228 overseas Chinese professionals was less than 1%. Missing data on any one measure for the entire sample was less than 1%. Questionnaires that had missing demographic data (e.g., age or household income are not given) were included for data analysis.

In preparation for path analysis, the data were checked in two stages. First, outliers were examined. Extreme scores (classified as 3 standard deviations from the mean) on several

continuous variables were re-checked to ensure that they were accurately entered. An additional check eliminated the possibility that a single variable was responsible for the outlier. No one participant was found to consistently have extreme scores. It was then decided that these outliers were sampled from the research population (Tabachnick & Fidell, 1996), and thus they remained in the analysis.

Second, to determine whether the assumptions for linearity, normality, and independence of error (Pedhazur, 1982) were met, box-plots, PP plots of the residuals, and scatter plots were examined for all the variables, including residual scores on the outcomes variables. With the exception of Somatic Symptoms (both time 1 and time 2), the data appeared to meet the assumptions. The somatic symptom data appeared kurtosised, and non-normal. Logarithm transformation was then performed as suggested by Tabachnick and Fidell (1996) to produce normality for the somatic symptom data, and a more normal distribution was created. However, such transformations appeared to make no significant difference in further data analysis. In addition, because the Somatic Symptom Scale is a subscale from a meaningful measure (SCL-90-R; Derogatis, 1983) that has been widely used, data transformation may hinder interpretation of the outcome (Tabachnick & Fidell, 1996). As such, the somatic data were left unchanged.

Gender differences. Although some researchers provide evidence that supports gender differences in stress and coping, inconsistent findings have been reported in cross-cultural studies (e. g., Chan, 1994; Ptacek et al., 1994; Tang & Lau, 1995). Therefore, no hypotheses related to gender differences were posed. However, gender differences were examined in an exploratory fashion, and a series of steps were taken to determinate whether the model should be tested separately for men and women. First, a comparison of demographic characteristics was undertaken employing Chi-square tests of independence (χ^2) and Analysis of Variance (ANOVA). χ^2 tests were employed to test for gender differences on categorical variables such as

demographic and work characteristics, and ANOVA was used to identify significant differences between the men and women on interval variables. Second, a MANOVA was used to test for gender differences on the variables in the model. Third, correlation matrices for the variables in the model were examined as well as the equality of the covariance matrices.

Path analysis. A path analysis using the LISREL VIII (Jöreskog & Sörbom, 1988, 1993) computer program was performed to examine the hypothesized model. Path analysis enables the researcher to identify direct and indirect effects of variables on the basis of knowledge and theoretical considerations (Pedhazur, 1982). Several goodness-of-fit indices were used to support the model, namely Chi-square (χ^2), the Root Mean Residual (RMSR), the Goodness of Fit Index (GFI), and Comparative Fit Index (CFI). At present, there is considerable debate in the literature as to what fit indices should be used to provide support for model fit. The use of multiple indicators of fit was chosen specifically to consider the influence of sample size on some of the indices. For instance, Bollen and Long (1993) recommend against relying exclusively on the chi-square test statistic. Interpreting only the p value associated with the χ^2 is problematic because it is confounded by sample size. Specifically, the χ^2 might lead to the rejection of a theoretically useful model when using large sample sizes and to the acceptance of a meaningless model when sample sizes are small (Bentler & Bonett, 1980). To reduce the sensitivity of the χ^2 statistic to sample size, some researchers divide its value by the degrees of freedom ($\chi^2/df(Q)$). The GFI measures the fit function for the models and indicates how much better the model fit is compared to using no model at all (Jöreskog & Sörbom, 1988). However, the GFI is also influenced by sample size. Therefore, the CFI was chosen to lessen the effect of sample size (Bentler, 1990).

The fit indices provide some index of the departure of the structure from the observed matrix. Several rules of thumb exist to evaluate the various indices. For example, large χ^2 values

correspond to a poor fit, and smaller χ^2 (ideal $\chi^2=0$) indicates that the null hypothesis is not rejected (Anderson & Gerbing, 1988). Some researchers suggest that a Q of 3 or less represents a good fit (Carmines & McIver, 1981), whereas others suggest a ratio as high as 5 to 1 as representative of a good fit (cf. Bollen, 1989). GFI should be between 0 and 1, and the closer to 1, the better the fit; and a good CFI should be greater than .90 (Bentler, 1990; Hoyly & Oanter, 1995; Kline, 1998). The RMSR is a measure that assess residual variances and covariance, and values $<.05$ represent a better fitting model (Byrne, 1989).

Model Modification

In addition, modification indices (MI) were examined based on both theoretical and empirical support, and were accepted only if the resultant changes (χ^2) in the model were significant ($p<.01$). For example, paths were freed one at a time, beginning with the largest and most meaningful MI.

Mediating Effect

The mediating effects were tested using the procedures outlined by Baron and Kenny (1986). To test for mediation, the following three regression models were computed: (a) whether the predictor variables was significantly related to the outcome variable, (b) whether the predictor variables was significantly related to the mediating variable, and (c) whether the mediating variables was significantly related to the outcome variable. To conclude that a mediating effect had occurred a previously significant relationship between predictor and the outcome variable must become nonsignificant when the significant predictor-mediating relationship is held constant. Although the results of testing mediating effects are reported, they are not illustrated on the path model (Figure 2).

CHAPTER V: RESULTS

The results of the study are presented in the following order. First, the demographic characteristics of the participants ($N=228$) are summarized. Second, means and standard deviations of the measures are examined. Next, a preliminary analysis that includes an examination of gender differences, and an analysis of the factor structure of the coping measure is presented. In the final section, the results of the path analysis (analyzed separately for males and females), Hypotheses 1 to 16, and modifications to the model are presented.

Description of Participants

A full description of the demographic data for the sample is provided in Appendix K, Table K1. The mean age was 32.61 years ($SD= 6.66$) ranging from 19 to 61 years. The majority were of Chinese origin born in the People's Republic of China (93%), with the remaining born in Hong Kong, Taiwan, Indonesia, and Singapore. Sixty-eight percent of participants were married, 25% were single, 5% divorced, and 2% were either widowed or not specified. Most participants lived with their families (62%), lived alone (18%), or lived with friends, roommates, or others (20%). More than half of the participants reported having no children (52%), 32% had one child, and 16% had two or more children. The average length of time living overseas was 5.93 ($SD=5.32$) years (ranging from 1 month to 41 years). Most of the participants considered themselves to be Chinese (78%), and 22% identified themselves as Chinese Canadian, Chinese American, Chinese Australian, and so on. With respect to their involvement in overseas Chinese organizations, 53% of respondents were members of an organization. With regard to attendance at social events, 69% attend once a year to weekly, and 31% do not attend any activities at all. Approximately 83% of respondents identified no religion, 8% Christian, 5% Protestant, 2% Buddhist, and 2% Catholic.

The majority of respondents (96%) had a post-secondary education. Ninety-eight percent

reported English as their second language. More than half of participants (55%) indicated that they were fluent in English, 23% were very fluent, and 22% were functional. Seventy-three percent of participants had professional work experience before going overseas. With respect to their occupations at the time of this study, the sample consisted of researchers (47%), engineers (13%), teachers (7%), managers (7%), professors and lecturers (5% and 6%, respectively), and other professionals (15%). Average length of time in their current position was 26 months, with a range from 1 month to 28 years. The majority of participants were working in North America (e.g., the United States =48%; Canada=34%), some were in Australia (5%); whereas the remainder were working in European countries (i.e., Sweden, Finland, the United Kingdom, and Germany). Approximately 47% of respondents reported their annual family income as \$29,000 USD or less; 27% between \$30,000 to \$59,000; and the balance (26%) above \$60,000.

Means and Standard Deviations of Measures

The means, standard deviations, reliabilities (Cronbach alpha), and range of scores for the variables in the model for total sample are presented in Appendix M. For the total sample, the means were similar to published study results reported by other researchers (e.g., Conway & Terry, 1992; McNichols et al., 1978; Sarason et al., 1987) except for general self-efficacy, somatic symptoms, and depressive symptoms. The mean for general self-efficacy was 29.18 ($SD=4.87$), and was higher than the mean score for a sample of Hong Kong Chinese university students ($M=24.56$, $SD=5.30$; Zhang & Schwarzer, 1995). For somatic symptoms, the mean was 6.24 ($SD=5.59$) for Time 1 and 7.10 ($SD=5.31$) for Time 2, both scores were lower than Lin's (1993) study of 60 Chinese Canadian adults ($M_{age=31}$) where the mean was 10.58 ($SD=6.39$). With regard to depressive symptoms, the means were 15.40 ($SD=8.96$) for Time 1 and 15.14 ($SD=8.93$) for Time 2, and both were higher than scores for 360 Chinese-American community-based professional, semiskilled, and unskilled adults ($M=11.55$, $SD=8.23$; Ying, 1988). Except for

the alpha for the self-efficacy appraisal variable for the male group (Cronbach's $\alpha=.52$), other alphas ranged from .69 to .90, and compare favorably to the internal consistencies reported in other studies (e.g., Conway & Terry, 1992; Short & Johnston, 1997; Zhang & Schwarzer, 1995).

Preliminary Analysis

Gender differences. In order to explore whether there are any significant differences between men and women in the sample, a series of analyses were undertaken. First, demographic data were examined using χ^2 and ANOVA (see Tables 1 & 2 for details). The results indicated significant differences between the two groups on educational background, $\chi^2(2, N=228)=12.45$, $p<.01$, current occupation, $\chi^2(2, N=228)=7.693$, $p<.01$, and the stressor types, $\chi^2(2, N=228)=6.64$, $p<.05$. Comparably more overseas Chinese professional men had doctorates or higher education than women. As well, more overseas Chinese professional men were employed as engineers and researchers than women; and women were more likely to work as teachers, librarians, social workers, and psychologists, compared with men. Men more frequently reported work overload than women, and women more frequently reported encountering work-related values and other interpersonal conflicts than men. No significant differences emerged on marital status, living accommodation, number of children, employment before leaving China, country of current employment, level of English fluency, previous occupation, identity at work, importance of identity at work, member of overseas organization, frequency of attending social events, income, and religion.

Given that gender differences were found on the types of stressor, the relationship between type of stressors and gender was examined with the variables in the model. A two-way (gender x stressor) multivariate test (MANOVA) was computed to test the interaction of gender and stressor type on appraisals, coping strategies, and outcome variables. The

Table 1

Demographic Comparison of Men and Women Overseas Chinese Professionals

Variable	Male (n=128)			Female (n=100)						
	<u>M</u>	<u>SD</u>	Range	f	%	<u>M</u>	<u>SD</u>	Range	f	%
Age (years)	33.50	6.69	20-61			31.46	6.47	19-57		
Years of Overseas	6.07	5.28	1-41			5.73	5.4	1-35		
Country of Birth										
People's Republic China				119	93.0				94	94.0
Hong Kong				4	2.3				4	4.0
Indonesia				2	3.1				2	2.0
Singapore				1	.8				—	—
Indonesia				1	.8				—	—
Marital status										
Married				92	71.9				64	64.0
Single				29	22.7				29	29.0
Divorced				6	4.7				6	6.0
Widowed				—	—				1	1.0
Non-specified				1	.8				—	—
Living Accommodations										
Live alone				22	17.2				20	20.0
with own family				84	65.6				58	58.0
with friends				18	14.1				20	20.0
with roommates				2	1.6				2	2.0
Non-specified				2	1.6				—	—
Children										
None				63	49.2				56	56.0
one				40	31.3				32	32.0
two				23	18.0				10	10.0
Three and more				2	1.6				2	2.0
Family Income										
<\$5,000				6	4.7				8	8.0
\$5,000 to \$14,999				22	17.2				20	20.0
\$15,000 to \$29,999				33	25.8				18	18.0
\$30,000 to \$59,999				32	25.0				29	29.0
\$60,000 to \$99,999				17	13.3				12	12.0
\$100,000 to \$149,000				12	9.4				10	10.0
\$15,000 to \$200,000				3	2.3				3	3.0
Over \$200,000				3	2.3				—	—

(table continues)

Variable	Male (n=128)				Female (n=100)			
	M	SD	Range	f %	M	SD	Range	f %
Education								
High School			1	.8			1	1.0
Technical School			1	.8				
Diploma			1	.8			5	5.0
Bachelor			171	.3			22	22.0
Master			56	43.8			52	52.0
Doctorate			29	22.7			13	13.0
Post Doctorate			23	18.0			7	7.0
Level of English								
A little							1	1.0
Functional			32	25.0			19	19.0
Fluent			66	51.6			59	59.0
Very fluent			30	23.4			21	21.0
Member of Overseas Organizations								
Yes			71	55.4			51	51.0
No			55	43.0			49	49.0
Not Indicated			2	1.6			—	—
Attending Social Group Event								
Not at all			34	26.6			37	37.0
Once a year			17	13.3			17	17.0
Twice a year			45	35.2			32	32.0
Monthly			15	11.7			7	7.0
Weekly			17	13.3			7	7.0
Religion								
Catholicism			2	1.6			2	2.0
Protestantism			5	3.9			7	7.0
Buddhism			3	2.3			3	3.0
Christian			7	5.5			10	10.0
None			111	86.7			78	78.0
Stressor Type								
Uncertainty about work quality			28	21.8			28	28.0
Work overload			35	27.4			14	14.0
Unfair treatment			16	12.5			21	21.0
Language barriers			19	14.8			12	12.0
Cultural and work value differences			19	14.8			13	13.0
Interpersonal conflict			4	3.1			4	4.0
Misunderstanding			6	4.7			5	5.0
Under employment			—	—			1	1.0
Lack of work support			1	.8			—	—
Other			—	—			2	2.0

(table continues)

Variable	Male (n=128)			Female (n=100)			f	%	
	M	SD	Range	M	SD	Range			
Country Working at Present									
Canada				46	35.9		32	32.0	
USA				61	47.7		48	48.0	
Australia				7	5.5		5	5.0	
Sweden				7	5.5		6	6.0	
Finland				3	2.3		3	3.0	
UK				2	1.6		5	5.0	
Germany				1	.8		—	—	
Other				1	.8		1	1.0	
Current Occupation									
Professor				8	6.3		1	1.0	
Engineer				19	14.8		10	10.0	
Researcher				67	52.3		39	39.0	
Manager				7	5.5		8	8.0	
Nurse				—	—		1	1.0	
Psychologist				—	—		1	2.0	
Accountant				2	1.6		2	2.0	
Counsellor				—	—		1	1.0	
Lawyer				2	1.6		—	—	
Lecturer				9	7.0		4	4.0	
Social Worker				—	—		3	3.0	
Teacher				4	3.1		12	2.0	
Technician				3	2.3		3	3.0	
Librarian				1	.8		5	5.0	
Analyst				4	3.1		4	4.0	
Other				2	1.6		2	2.0	
Years Worked in current job	2.46	3.37	1-28				1.78	1.69	1-9
Hours worked/week	40.00	15.01	5-80				35.42	13.77	6-60
Previous Occupation									
Student				32	25.0		26	26.0	
Profession				11	8.6		1	1.0	
Engineer				17	13.3		9	9.0	
Researcher				18	14.1		14	14.0	
Manager				4	3.1		1	1.0	
Nurse				—	—		2	2.0	
Doctor				4	3.1		4	4.0	
Accountant				—	—		4	4.0	
Psychologist				1	.8		—	—	
Lawyer				2	1.6		—	—	
Lecturer				24	18.8		18	18.0	
Teacher				5	3.9		11	11.0	
Technician				6	4.7		4	4.0	
Librarian				4	3.1		2	2.0	
Analyst				—	—		1	1.0	
Other				—	—		3	3.0	
Years worked before overseas	3.51	4.05	0-18.1				2.92	3.64	0-15

Note. Dashes indicate not applicable. "Other" = non classified.

Table 2

Chi-square (X^2) test of independence for men (n=128) and women (n=100) on demographic and work characteristics.

Variable	Frequency	Chi-square (X^2) (N=228)	df	p
Education		12.45	2	.01
College	48			
Master degree	108			
Doctorate degree or above	72			
Previous occupation		.56	1	.27
Researcher & Engineer	58			
Social Science Professionals & others	170			
Current occupation		7.69	1	.00
Researcher & Engineer	135			
Social Science Professionals & others	93			
Marital status		1.61	1	.20
Married	156			
Not-married	72			
Living accommodation		1.39	1	.23
Alone	42			
With family or others	186			
Number of children		1.03	1	.30
None	119			
One or more	109			
Worked before leaving China		.50	1	.46
Yes	167			
No	61			
Country works now		.49	1	.48
Canada and the US	187			
Other	41			
Level of English fluency		.80	1	.37
Fluent or above	176			
Less than fluent	52			

(table to be continued)

Variable	Frequency	Chi-square (χ^2) (N=228)	df	p
Identity at work		.12	1	.72
Chinese	178			
Chinese Canadian or others	50			
Important identity at work		.01	1	.90
Chinese	161			
Chinese Canadian or others	67			
Member of overseas Organization		2.85	1	.09
Yes	122			
No	106			
Frequency of attending social event		5.33	1	.06
Not at all	71			
Once a year or more	157			
Income		2.83	4	.58
Less than \$14,999	56			
\$15,000 to \$29,999	51			
\$30,000 to \$59,999	61			
\$60,000 to \$99,999	29			
\$100,000 and above	31			
Religion		3.00	1	.08
Yes	39			
No	189			
Stressor Type		6.64	2	.04
Uncertainty about work quality	56			
Work overload	50			
Interpersonal conflicts on values and other issues	122			

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

results revealed no significant interactions for appraisals, ways of coping, and outcome variables (see Appendix S Table S1 for detail). Therefore, stressor type was not controlled for in the model.

In addition, the results of two one-way ANOVA revealed significant differences on age, $F(1,226)=5.37, p<.02$; and hours worked, $F(1,226)=5.57, p<.02$. Men were older than women (M s for men=33.50, and women=31.46), and worked more hours (M s for men=40.00, and women=35.42). No significant differences were found on years of overseas experience, years of employment before moving overseas, and length in current working positions.

Next, an examination of mean differences on variables in the model was undertaken and revealed statistically significant gender differences on General Self-efficacy and Disengagement coping [ANOVAs, $F(1,226)=5.09, p<.03$, and, $F(1,226)=5.67, p<.02$, respectively]. Men had a higher mean score on General Self-efficacy compared with the women, whereas the women had a higher mean score on Disengagement coping, compared with the men. Significant differences were also found between the two groups on depressive symptoms at Time 2, $F(1,226)=4.80, p<.03$, where the women had higher mean scores than the men (see Tables 3 and 4 for M s and SD s). In addition, an examination of zero-order correlation matrices for the men and women (see Tables 5 and 6 respectively) on variables in the model revealed several differences. In general, for the women, the correlations were stronger (e.g., Chinese collective values and Collective coping, women $r=.27, p<.01$, and men $r=.11, p>.05$; General self-efficacy and self-efficacy appraisal, women $r=.48, p<.001$, and men $r=.21, p<.05$). Control appraisal was significantly and negatively associated with Disengagement coping for the women ($r=-.28, p<.01$), but had a weak association for the men ($r=-.14, p>.05$). One exception to this pattern was the relationship between changes in somatic symptoms and depressive symptoms, which was stronger for men ($r=.34, p<.01$) and weaker for the women ($r=.18, p>.05$). In addition, several variables were related in opposite

Table 3

Means, Standard Deviations, and Reliabilities of Path Model Variables for Men (N=128)

Variable	<u>M</u>	<u>SD</u>	Actual Score Range	Reliability (Cronbach's Alpha)	Skewness	Kurtosis
Chinese Collectivism	248.70	27.97	160-320	0.85	-0.20	0.86
General self-efficacy	29.81	4.79	16-38	0.84	-0.59	0.14
Social support	28.87	5.48	12-36	0.87	-1.14	1.00
Support from work	20.62	3.88	12-30	0.75	0.05	-0.37
Perceived control	19.98	4.58	6-30	0.76	-0.46	-0.18
Perceived self-efficacy	11.13	2.61	4-15	0.52	-0.33	-0.30
Collective coping	17.27	8.18	0-37	0.88	0.12	-0.39
Engagement coping	18.63	6.53	0-32	0.81	-0.32	-0.09
Disengagement coping	8.57	4.56	0-22	0.70	0.27	-0.41
Job Satisfaction						
(time 1) ^a	18.89	3.31	10-27	0.76	-0.35	0.09
(time 2)	18.99	3.13	10-27	0.80	-0.07	0.04
Somatic Symptoms						
(time 1)	5.63	5.18	0-31	0.83	1.68	4.29
(time 2)	6.90	5.33	1-33	0.85	1.65	4.37
Depressive Symptoms						
(time 1)	14.56	8.49	0-42	0.85	0.77	0.19
(time 2)	14.00	8.52	0-45	0.87	0.83	0.87

^aTime 2 score obtained one month after Time 1 assessment.

Table 4

Means, Standard Deviations, and Reliabilities of Path Model Variables for Women (N=100)

Variable	<u>M</u>	<u>SD</u>	Actual Score Range	Reliability (Cronbach's Alpha)	Skewness	Kurtosis
Chinese Collectivism	252.90	32.81	181-325	0.90	-0.04	-0.63
General self-efficacy	28.36	4.86	12-39	0.87	-0.35	0.54
Social support	29.53	5.27	13-36	0.86	-1.30	1.61
Support from work	20.91	3.41	12-30	0.73	0.40	0.41
Perceived self-efficacy	19.27	4.47	8-28	0.71	-0.09	-0.49
Perceived control	10.99	2.61	4-15	0.67	-0.19	-0.67
Collective coping	17.17	9.41	0-39	0.91	0.26	-0.55
Engagement coping	19.07	5.74	5-31	0.74	-0.22	-0.56
Disengagement coping	10.04	4.71	0-23	0.69	0.35	-0.23
Job Satisfaction						
(time 1) ^a	18.41	3.09	10-27	0.78	-0.19	0.40
(time 2)	18.35	3.21	9-27	0.80	-0.29	0.78
Somatic Symptoms						
(time 1)	7.01	6.01	0-27	0.84	1.22	1.26
(time 2)	7.35	5.30	1-24	0.82	1.34	1.53
Depressive Symptoms						
(time 1)	16.47	9.45	0-46	0.87	0.84	0.51
(time 2)	16.59	9.26	0-46	0.87	0.64	0.06

^aTime 2 score obtained one month after Time 1 assessment.

Table 5

Pearson Product-Moment Correlation Matrix of Path Model Variables for Men (N=128)

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1 Chinese Collective Value	1.00											
2 General Self-efficacy	.22**	1.00										
3 Social Support	.15	.32***	1.00									
4 Work Support	.26**	.07	.52***	1.00								
5 Control Appraisal	.04	.17	.06	.12	1.00							
6 Self-efficacy Appraisal	.09	.21*	.15	.22*	.54***	1.00						
7 Collective Coping	.11	.07	.04	.23**	.05	.12	1.00					
8 Engagement Coping	.24**	.22*	.09	.16	.12	.19*	.45***	1.00				
9 Disengagement Coping	.17	.03	-.01	-.02	-.14	-.09	.40***	.33***	1.00			
10 Changes in Job Satisfaction	-.18*	-.06	.09	.05	-.01	-.01	.00	.06	-.12	1.00		
11 Changes in Somatic Symptoms	-.01	-.10	-.01	.04	-.08	-.11	-.07	-.06	.06	-.04	1.00	
12 Changes in Depressive Symptoms	.12	-.05	-.22*	-.16	-.13	-.25**	.11	.06	.18*	-.16	.34***	1.00

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 6

Pearson Product Moment Correlation Matrix of Path Model Variables for Women (N=100)

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1 Chinese Collective Value	1.00											
2 General Self-efficacy	-.00	1.00										
3 Social Support	.13	.15	1.00									
4 Work Support	.00	.14	.24**	1.00								
5 Control Appraisal	.10	.07	.04	.07	1.00							
6 Self-efficacy Appraisal	.08	.48***	.28**	.20*	.51**	1.00						
7 Collective Coping	.27**	-.11	.04	.17	.07	-.02	1.00					
8 Engagement Coping	.14	-.07	.07	.19	-.01	-.01	.51***	1.00				
9 Disengagement Coping	.14	-.20*	-.21**	.12	-.28**	-.29**	.32**	.53***	1.00			
10 Changes in Job Satisfaction	.11	.24**	.26**	.17	.11	.25**	-.06	-.18	-.13	1.00		
11 Changes in Somatic Symptoms	.01	-.12	.04	-.08	-.02	-.14	-.01	-.12	.12	-.12	1.00	
12 Changes in Depressive Symptoms	-.18*	-.14	-.34***	-.07	-.09	-.31**	.17	.18	.28**	-.27**	.18	1.00

*p<.05, **p<.01, *** p<.001

directions. For example, Chinese values and changes in depressive symptoms were negatively related for the women ($r = -.18, p < .05$), but were positively related for the men ($r = .12, p > .05$). For the men, General Self-efficacy was positively associated with Engagement coping ($r = .22, p < .05$), whereas for the women, General Self-efficacy was negatively related to Engagement coping ($r = -.07, p > .05$).

Finally, using the LISREL VIII program (Jöreskog & Sörbom, 1993), a test of the equality of the covariance matrices for the men and the women was performed to determine if the samples could be combined for further analyses. The results indicated that the two groups should not be combined for further analysis, $\chi^2 (78, N=228) = 118.46, p < .01$. Thus, based on the zero-order correlations and these results, the hypothesized model was tested separately for males and females.

Structure of coping. A factor analysis was conducted on the data from the full sample ($N=228$) to examine the hypothesized factor structure of Engagement, Disengagement coping (Long et al., 1992; Tobin et al., 1989), and collective coping. A total of 42 coping items were entered into the factor analysis, no items were deleted because of low endorsement, and items with low loadings ($< .40$) were deleted one at a time. Thirty-three items (13 collective, 11 Engagement, and 9 Disengagement coping) were retained, and all items were loaded equal or greater than .40.

The analyses indicated a three-factor solution, namely, Collective, Engagement, and Disengagement coping. The Collective coping factor was the first factor extracted, accounting for 24% of the coping variance. The Engagement and Disengagement coping factors resembled previous factor analysis results (e.g., Long et al., 1992; Portello, 1996; Tobin et al., 1989). Because 13 collective coping items loaded separately (loadings $> .50$), there is initial support for the existence of a new coping subscale. Collective coping was used as a single subscale for this

study. The three-factor solution, which together accounted for 38% of the variance, was retained for further analyses as it yielded clear and interpretable results on both conceptual and empirical grounds (see Appendix Q for detail). Item-analysis further supported this three factor solution and indicated acceptable internal consistency for each subscale (Cronbach's alpha = .90 for collective, .78 for Engagement, and .70 for Disengagement coping). The percentage of common variance for the subscales was 40% (Collective), 33% (Engagement), and 27% (Disengagement). The intercorrelations between the three factors were positive and moderate, and indicate the possible path links between these coping variables in the model. As such, the relationship between Collective coping, Engagement coping, and Disengagement coping were included in the path model. The items, their factor loadings, the intercorrelations among the three coping subscales, and deleted items are presented in Appendix N.

Path Analysis

The hypothesized path model was tested separately for the men and women. Using the zero-order correlation matrices, the next stage of analysis involved testing the hypothesized stress and coping model seen in Figures 3 and 4. A path analytical procedure was used to examine the relationships among personal resources, mediating, and outcome variables. This procedure allows the researcher to determine the direct and indirect effects of variables on one another.

Hypothesis 1. It was hypothesized that the model would fit the data. The pattern of relationships in the model provides partial support for both the hypothesized model and theoretical assumptions. For men, the results indicated that the model did not fit the data well, $\chi^2(33, N=128)=67.08, p<.001, Q=2.03, GFI=.92, RMSR=.08, \text{ and } CFI=.83$. The coefficient of determination for changes in job satisfaction, somatic symptoms, and depressive symptoms, obtained by LISREL VII, suggested that causal antecedents and mediating variables explain approximately 9.3% the variance in the outcome variables.

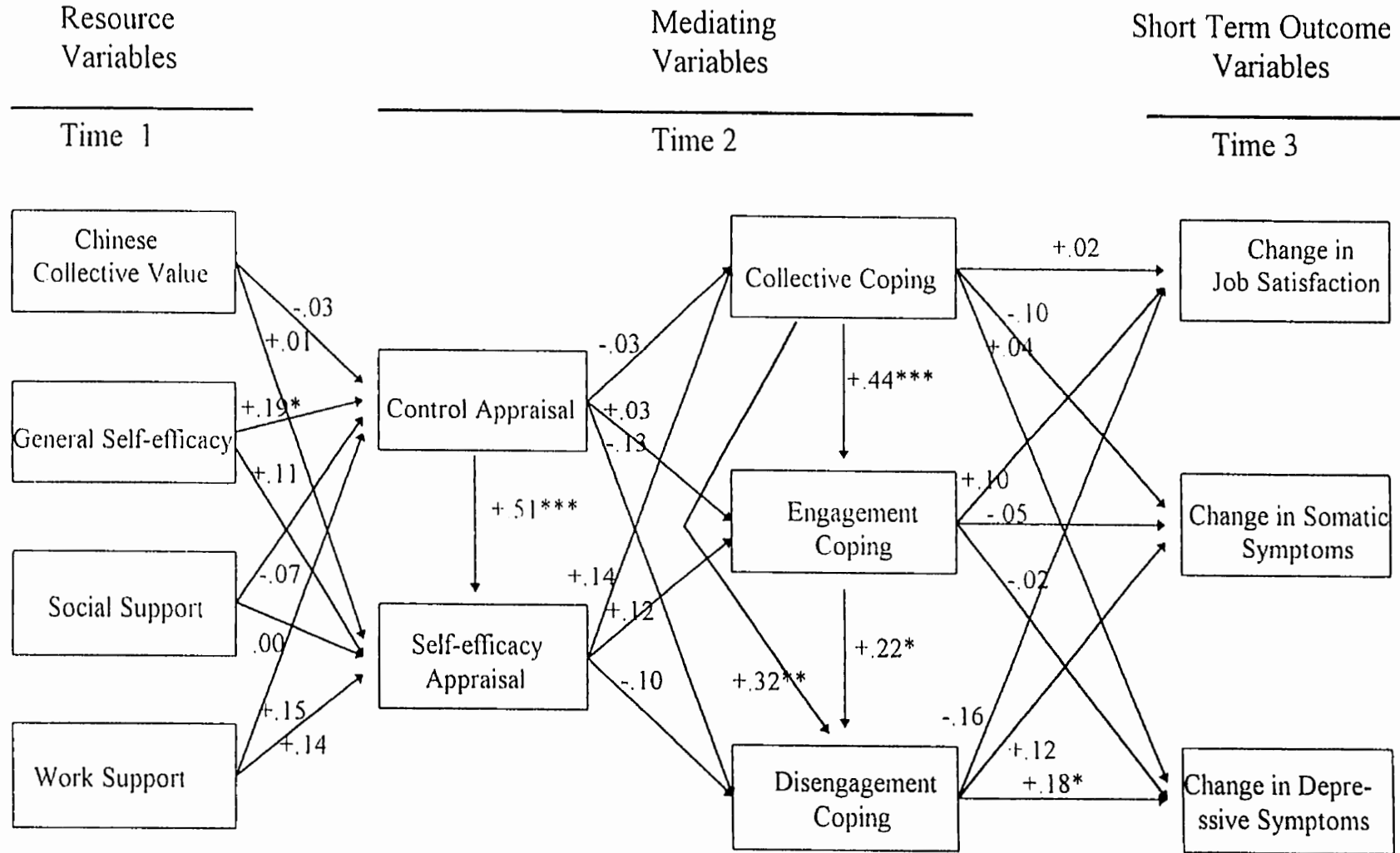


Figure 3. Initial Path Model Representing the Relationships among Resources, Mediating, and Outcome Variables at Time 1, Time 2, and Time 3 for Overseas Chinese professional Men (N=128). (Arrows indicate the direction of the relationships. Standardized LISREL estimates are indicated) *p<.05, **p<.01, ***p<.001.

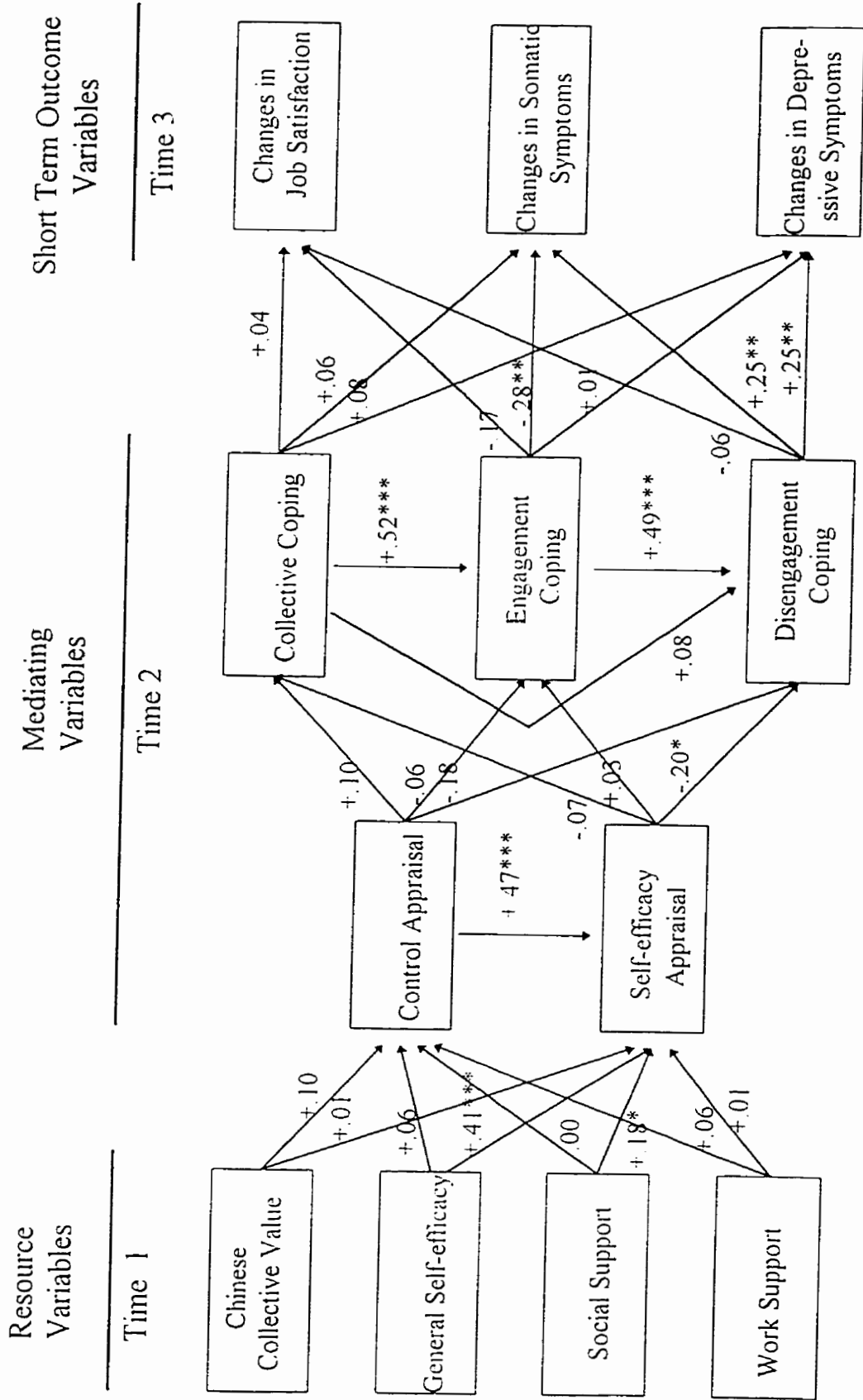


Figure 4. Initial Path Model Representing the Relationships among Resources, Mediating, and Outcome Variables at Time 1, Time 2, and Time 3 for Overseas Chinese professional Women (N=100). (Arrows indicate the direction of the relationships. Standardized LISREL estimates are indicated) *p<.05, **p<.01, ***p<.001.

Similar to men, partial support for the women's model was found, $\chi^2(34, N=100) = 100.16, p < .001, Q = 2.95, GFI = .87, RMSR = .14, \text{ and } CFI = .65$. The coefficient of determination for changes in job satisfaction, somatic symptoms, and depressive symptoms, obtained by LISREL VII, suggested that causal antecedents and mediating variables explain approximately 33% the variance in the outcome variables. The model fit indices for male and female groups are shown in Table 7.

Hypotheses 2-12. The remaining hypotheses were tested by determining the statistical 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 relationship 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 1.96, and 2.58 are considered to be significant, $p < .05$, and $p < .01$, respectively). Bivariate correlations were used to assist in the interpretation of results and are discussed only when they were significantly different from the path coefficients. In the following section, the results of hypotheses numbered 2 to 12 are reported (see Table 8 for the summary of the results of the hypotheses for the men and women, respectively).

Hypothesis 2: Chinese collectivistic values would be (a) negatively related to self-efficacy appraisal, and (b) Chinese collectivistic values would be related to control appraisals.

Hypotheses 2a and 2b were not supported. Path coefficients from Chinese collectivistic values to self-efficacy appraisals and to control appraisal were weak and nonsignificant for both the men and women (both $\beta_s = .01$; $\beta = -.03$ and $\beta = .10$, respectively).

Hypothesis 3: General self-efficacy would be positively related to (a) control, and

Table 7

Fit Indices for Path Models

	Initial Model		Modified Model	
	<u>Men (N=128)</u>	<u>Women (N=100)</u>	<u>Men (N=128)</u>	<u>Women (N=100)</u>
Overall model fit				
Chi-square	7.08	75.01	32.72	44.10
<u>df</u>	33	33	29	29
<u>p</u>	<.001	<.001	.29	.04
<u>Q</u>	2.03	2.28	1.13	152
GFI	.92	.89	.96	.93
RMSR	.08	.10	.05	.07
CFI	.83	.78	.98	.92
Structural relations Coefficient of determination				
	.09	.33	.22	.50
Squared multiple correlation				
Control Appraisal			.04	.02
Self-efficacy Appraisal			.33	.50
Collective Coping			.06	.08
Engagement Coping			.25	.27
Disengagement Coping			.23	.39
Changes in Job Satisfaction			.03	.16
Changes in Somatic Symptoms			.02	.06
Changes in Depressive Symptoms			.19	.17

Note. Q =Chi-square to degrees of freedom ratio; GFI=Goodness-of-fit Index; RMSR=Root Mean Square Residual; CFI=Comparative Fit Index.

Table 8

Path Model Coefficients (Hypotheses 2 to 12)

Hypothesis Tested	<u>Women (N=100)</u>			<u>Men (N=128)</u>		
	Path Coefficients (Direct Effects)	t-Values	r	Path Coefficients (Direct Effects)	t-Values	r
<u>Hypothesis 2</u>						
Chinese Collectivism Values						
/Control Appraisals	.10	1.00	.10	-.03	-.36	.04
/Self-efficacy Appraisal	.01	.14	.08	.01	.18	.09
<u>Hypothesis 3</u>						
General Self-efficacy						
/Control Appraisals	.06	.57	.08	.19	1.99	.17
/Self-efficacy Appraisals	.41	5.46	.47	.11	1.33	.21
<u>Hypothesis 4</u>						
Social Support Satisfaction						
/Control Appraisals	.00	.04	.04	-.07	-.64	.06
/Self-efficacy Appraisals	.18	2.36	.28	.00	.04	.15
<u>Hypothesis 5</u>						
Work Support						
/Control Appraisals	.06	.61	.07	.15	1.41	.12
/Self-efficacy Appraisals	.07	.90	.20	.14	1.58	.22

(table continues)

Hypothesis Tested	<u>Women (N=100)</u>			<u>Men (N=128)</u>		
	Path Coefficients (Direct Effects)	t-Values	r	Path Coefficients (Direct Effects)	t-Values	r
<u>Hypothesis 6</u>						
Control Appraisal / Self-efficacy Appraisal	.47	6.36	.51	.51	6.74	.54
<u>Hypothesis 7</u>						
Control Appraisal /Collective Coping	.01	.86	.07	-.03	-.25	.05
/Engagement Coping	-.06	-.63	-.01	.03	.33	.12
/Disengagement Coping	-.18	-1.96	-.28	-.13	-1.37	-.14
<u>Hypothesis 8</u>						
Self-efficacy Appraisal /Collective Coping	-.07	-.56	-.02	.14	1.27	.12
/Engagement Coping	.03	.31	-.01	.12	1.22	.19
/Disengagement Coping	-.20	-1.71	-.29	-.10	-1.06	-.09
<u>Hypothesis 9</u>						
Collective Coping /Engagement Coping	.52	5.88	.51	.44	5.46	.45
/Disengagement Coping	.08	.82	.32	.32	3.60	.40

(table continues)

Hypothesis Tested	<u>Women (N=100)</u>			<u>Men (N=128)</u>		
	Path Coefficients (Direct Effects)	t-Values	r	Path Coefficients (Direct Effects)	t-Values	r
<u>Hypothesis 10</u>						
Collective Coping						
/Job Satisfaction	.04	.36	-.06	.02	.17	.00
/Somatic Symptoms	.06	.48	-.01	-.10	-.92	-.07
/Depression Symptoms	.08	.73	.17	.04	.41	.11
<u>Hypothesis 11</u>						
Engagement Coping						
/Disengagement Coping	.49	5.24	.53	.22	2.44	.33
/Job Satisfaction	-.17	-1.43	-.18	.10	1.02	.06
/Somatic Symptoms	-.28	-2.16	-.12	-.05	-.50	-.06
/Depression Symptoms	.01	.05	.18	-.02	-.15	.06
<u>Hypothesis 12</u>						
Disengagement Coping						
/Job satisfaction	-.06	-.48	-.13	-.16	-1.66	-.12
/Somatic Symptoms	.25	2.12	.12	.12	1.20	.06
/Depression Symptoms	.25	2.14	.28	.18	1.96	.18

Note. Path Coefficients=standardized coefficients. t-Values>2 are significant at p <.05.

r= Pearson Product Moment Correlations. r >.24 significant at .001; r >.19 significant at .01; r >.14 significant at .05

(b) self-efficacy appraisals.

Hypothesis 3a was supported for the men ($b=.19$, $p<.05$) but not for the women ($b=.06$, $p>.05$). Hypothesis 3b was partially supported. Although path coefficients were both positive between general self-efficacy and self-efficacy appraisals, the path coefficients were statistically significant for the women ($b=.41$, $p<.01$), but not for the men ($b=.11$, $p>.05$).

Hypothesis 4: Social support satisfaction would be positively related to (a) control, and (b) self-efficacy appraisals.

Hypothesis 4a was not supported. Path coefficients from social support values to control appraisal were weak in magnitude and nonsignificant for both the men and women ($b=-.07$, and $b=.00$, respectively). Hypothesis 4b was supported for the women but not for the men. The path coefficient between perceived social support and self-efficacy appraisal was positive and significant for the women ($b=.18$, $p<.05$), but was nonsignificant for the men ($b=.00$).

Hypothesis 5: Work support satisfaction would be positively related to (a) control, and (b) self-efficacy appraisals.

Hypothesis 5a and 5b were not supported. Although the path coefficients were both positive between work support and appraisal of control and self-efficacy, they were nonsignificant for the men ($b=.15$, and $b=.14$ respectively) and the women ($b=.06$, and $b=.07$, respectively).

Hypothesis 6: Situational control and self-efficacy appraisal would be positively related to each other.

Hypothesis 6 was supported. The path coefficients were positive and significant for both the men and women ($b=.51$, and $b=.47$, $ps<.01$, respectively).

Hypothesis 7: Situational control appraisal would be (a) positively related to Collective coping, (b) positively related to Engagement coping, and (c) negatively related to Disengagement coping strategies.

Hypothesis 7a was not supported. Path coefficients were not significant between control appraisal and collective coping for both the men and the women ($\beta = -.03$, and $\beta = .10$, respectively). Hypothesis 7b was also not supported as path coefficients from control appraisal to Engagement coping were nonsignificant for both the men and the women ($\beta = .03$, and $\beta = -.06$, respectively). Hypothesis 7c was not supported. Path coefficients were negative but nonsignificant between control appraisals and Disengagement coping for the men and women, respectively ($\beta = .13$, $\beta = -.18$).

Hypothesis 8: Self-efficacy appraisals would be (a) positively related to Collective coping, (b) positively related to Engagement coping, and (c) negatively related to Disengagement coping strategies.

Hypothesis 8a was not supported. Path coefficients were nonsignificant between self-efficacy appraisal and Collective coping for both the men and women ($\beta = .14$, and $\beta = -.07$, respectively). Hypothesis 8b was not supported as path coefficients were nonsignificant between self-efficacy appraisals and Engagement coping for both men and women ($\beta = .12$, and $\beta = .03$, respectively). Hypothesis 8c was partially supported. Although a nonsignificant path coefficient was revealed between self-efficacy appraisals and Disengagement coping for the men ($\beta = -.10$), the path coefficient was significant for the women ($\beta = -.20$).

Hypothesis 9: Collective coping would be (a) positively related to Engagement coping strategies, (b) positively related to Disengagement coping strategies, and (c) Engagement coping would be positively related to Disengagement coping.

Hypothesis 9a was supported. The results revealed a positive and statistically significant association between Collective coping and Engagement coping for both male and female groups ($\beta = .44$, and $\beta = .52$, $p < .001$ respectively). However, hypothesis 9b was only partially supported. Path coefficients revealed a positive and statistically significant association between Collective

coping and Disengagement coping for the men ($b=.32$, $p<.01$), but not for the women ($b=.08$).

Hypothesis 9c was supported by both male and female groups. Path coefficients were both positive and significant between Engagement and Disengagement coping for the men and women ($b=.22$, $p<.05$, and $b=.49$, $p<.001$, respectively).

Hypothesis 10: Collective coping would be (a) positively related to changes (increases) in job satisfaction; (b) negatively related to changes (decreases) in somatic symptoms; and (c) negatively related to changes in depressive symptoms.

Hypothesis 10a was not supported. Path coefficients were nonsignificant between Collective coping and changes in job satisfaction for both the men and women ($b=.02$ and $b=.04$, respectively). Hypothesis 10b was not supported. Path coefficients revealed negative but nonsignificant associations between Collective coping and the changes in somatic symptoms for the men ($b=-.10$), and positive but nonsignificant associations for the women ($b=.06$). Hypothesis 10c was also not supported. Path coefficients revealed nonsignificant associations between Collective coping and changes in depressive symptoms for both the men and the women ($b=.04$, and $b=.08$, respectively).

Hypothesis 11: Engagement coping would be (a) positively related to changes (increases) in job satisfaction; (b) negatively related to changes (decreases) in both somatic symptoms and (c) depressive symptoms.

Hypothesis 11a was not supported. Path coefficients were nonsignificant between Engagement coping and changes in job satisfaction for the men ($b=.10$), and nonsignificant for the women ($b=-.17$). Hypothesis 11b was partially supported. As expected, path coefficients revealed negative associations between Engagement coping and changes of somatic symptoms for both groups, and was significant for the women ($b=-.28$, $p<.05$); however, the relationship was nonsignificant for the men ($b=-.05$). Hypothesis 11c was not supported. Path coefficients between

Engagement coping and changes in depressive symptoms were nonsignificant for both the men and women ($b=-.02$, and $b=.01$, respectively).

Hypothesis 12: Disengagement coping would be (a) negatively related to changes (decreases) in job satisfaction, (b) positively related to changes (increases) in both somatic and (c) depressive symptoms.

Hypothesis 12a was not supported. Path coefficients revealed negative but nonsignificant associations between Disengagement coping and the change of job satisfaction for both groups ($b=-.16$, and $b=-.06$, respectively). Hypothesis 12b was partially supported. Path coefficients for the relations between Disengagement Coping and changes in somatic symptoms were positive for both groups, and significant path coefficients were revealed for the women ($b=.25$, $p<.05$), but were nonsignificant for the men ($b=.12$). Hypothesis 12c was supported. Path coefficients were positively associated between Disengagement coping and changes in depressive symptoms for both groups. Significant path coefficients were revealed for the men ($b=.18$, $p<.05$), and the women ($b=.25$, $p<.05$).

Indirect effect: Hypotheses 13-16. The following hypotheses related to mediating effects. According to Baron and Kenny (1986), in order to demonstrate mediation, three conditions must be met in the following sequence: (a) the predictor variables (i.e., Chinese collective value, general self-efficacy, social support satisfaction, and work support) must be significantly related to the outcome variables (i.e., changes in job satisfaction, somatic symptoms, and depressive symptoms), (b) the predictor variables must be significantly related to the mediating variables (i.e., control appraisal, self-efficacy appraisals, collective coping, Engagement coping, and Disengagement coping), and (c) the mediating variables must be significantly related to the outcome variable (i.e., changes in job satisfaction, somatic symptoms, and depressive symptoms). Finally, a previously significant relationship between predictor and the outcome variable must

become nonsignificant when the significant predictor-mediating relationship is held constant. Perfect mediation holds if the coefficient of the direct relationship is reduced to zero. Partial mediation holds if the coefficient of the direct relationship is reduced in size but is still different from zero when the mediator is controlled (Baron & Kenny, 1986).

Hypothesis 13: The relationship between Chinese collectivism and changes in job satisfaction, depression, and somatic symptoms would be mediated by (a) control and (b) self-efficacy appraisals, and (c) coping strategies.

Hypotheses 13a, 13b and 13c were not supported because the coefficients between Chinese collectivistic values, control, and self-efficacy appraisal variables for both groups were nonsignificant.

Hypothesis 14: The relationship between General Self-efficacy and changes in job satisfaction, depression, and somatic symptoms would be mediated by (a) control and (b) self-efficacy appraisals, and (c) coping strategies.

Hypothesis 14a was not supported for both groups. Although a significant coefficient ($b=.19$, $p<.05$) was found between General Self-efficacy and control appraisals for the men, no significant direct effects were found between General Self-efficacy and any of the outcome variables ($b=-.06$; $-.10$; $-.03$, $ps>.05$, for changes in job satisfaction, somatic symptoms, and depressive symptoms, respectively). For the women, nonsignificant path coefficients were revealed between General Self-efficacy and control appraisals.

Hypothesis 14b was partially supported for the women. There was a significant coefficient between General Self-efficacy and self-efficacy appraisals ($b=.41$, $p<.001$), and a significant coefficient between self-efficacy appraisal and changes in job satisfaction ($b=.18$, $p<.05$). The coefficient for the direct effect between General Self-efficacy and changes in job satisfaction was reduced ($b=.20$ to $b=.16$) when the effect of self-efficacy appraisal was included. This result

fulfills Baron and Kenny's (1986) criteria for partial mediation and indicates that the relationship between General Self-efficacy and job satisfaction is partially mediated by perceived self-efficacy appraisal for Chinese professional women. This hypothesis, however, was not supported for the men due to a nonsignificant coefficient between General Self-efficacy and self-efficacy appraisals.

No significant direct coefficients were revealed between general self-efficacy and coping strategies, and outcome variables for the men. For the women, although significant negative coefficients were found between General Self-efficacy and Disengagement coping ($b = -.19$, $p < .05$), and between General Self-efficacy and the outcome variable of changes in job satisfaction ($b = .20$, $p < .05$), the coefficient for Disengagement coping and changes in job satisfaction was nonsignificant ($b = -.09$, $p > .05$). As such, the hypothesis 14c was not supported.

Hypothesis 15: The relationship between social support and changes in job satisfaction, depression, and somatic symptoms would be mediated by (a) control and (b) self-efficacy appraisals, and (c) coping strategies.

Hypothesis 15 was not supported for the men because the coefficients between control and self-efficacy appraisals, and the coping variables were all nonsignificant.

Similarly, hypothesis 15a was also not supported for the women. A significant coefficient was revealed between social support and self-efficacy appraisal ($b = .28$, $p < .05$), and between self-efficacy appraisal and changes in depressive symptoms ($b = -.23$, $p < .05$). However, the coefficient between social support and depressive symptoms did not change significantly before ($b = -.31$, $p < .05$) and ($b = -.28$, $p < .05$) after the mediation effect was accounted for. The same pattern was also revealed for the relationship between social support and perceived self-efficacy ($b = .28$, $p < .01$), and self-efficacy and changes in job satisfaction ($b = .19$, $p < .05$) for the women. There was no significant change in the direct relationship between social support and job satisfaction before and after ($b = .20$ and $b = .21$) accounting for mediation. Therefore, hypothesis 15b was also not

supported.

When examining the mediating effect of coping for the women, once again, significant coefficients were found between social support and Disengagement coping ($b = -.21$, $p < .05$), and between Disengagement coping and depressive symptoms ($b = .22$, $p < .05$). However, no significant change was revealed when the direct relationship between social support and depressive symptoms was included ($b = -.31$ and $b = -.30$). Therefore, hypothesis 15c was also not supported for the women.

Hypothesis 16: The relationship between work support and changes in job satisfaction, depression, and somatic symptoms would be mediated by (a) control and (b) self-efficacy appraisals, and (c) coping strategies.

Hypotheses 16 a, b, and c were not supported for either men or women because the direct coefficients between work support and outcome variables were all nonsignificant.

Post-hoc Analysis

Modified models. Path analysis with LISREL provides modification indices (MI) and standardized residuals (SR) that indicate the possible omission of direct paths. Thus, to better understand workplace stress and coping for overseas Chinese professional men and women, modified path models were tested. Also, because different MI were revealed in the men's and women's results, the models were modified independently for men and women.

I examined these MI in an exploratory fashion when supported by a plausible alternative theory or empirical research. MI, 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 MI (>5) indicate that the model would fit the data better if the corresponding parameters were introduced to the model. SR reflect the difference between the hypothesized and observed variable correlations; large SR (>2) indicate that adjustments to

specified paths would result in a better fitting model (Byrne, 1989). Thus, the path model was modified when large MI or SR were revealed and if there was theoretical or empirical support to do so. The paths were freed one at a time for a more meaningful model.

Large MI (MI=14.8) and SR (SR=3.79) indicated that by freeing a path from changes in somatic symptoms to changes in depressive symptoms for the men, the model would fit the data better. The rationale for freeing the path was based on findings from cross-cultural studies that have indicated that somatizing psychological distress is more prominent than affective mood expressions among Chinese adults (e.g., Chang, 1985; Zhang, 1995). Moreover, according to traditional Confucian values, men are expected to be less emotionally expressive, and are less likely to express emotions that could be viewed as weak (e.g., cry, sad, lonely), and are more likely to internalize emotions as physical symptoms, compared with Chinese women (Ho, 1987; Shek, 1992; Tang & Lau, 1995). That is, somatic symptoms are more likely to reflect men's emotional distress, and as such, contribute to depression. Therefore, a path was freed between changes in somatic symptoms and changes in depressive symptoms for the men, and resulted in a significant path coefficient ($b=.33$, $p<.001$). The coefficient indicated that an increase in somatic symptoms contributes to increases in depressive symptoms for Chinese professional men.

Large MI and SR were then revealed between social support and changes in depressive symptoms for both men (MI=6.23 and SR=-2.42) and women (MI=8.93 and SR=-3.19). Previous research findings have demonstrated a direct relationship between social support and personal well-being (e.g., Cohen & Wills, 1985; Lu, 1995; Newton & Keenan, 1985). Specifically, high satisfaction with social support has been negatively related to depression for Chinese students, Chinese workers, and overseas Chinese samples (e.g., Amatea & Fong, 1991; Liang & Bogat, 1994; Jou & Fukada, 1995). Therefore, a path from social support to changes in depressive symptoms was added for both men and women, and significant path coefficients were revealed

($b = -.21$, $p < .05$, $b = -.31$, $p < .001$, for men and women, respectively).

Large MI and SR were revealed for social support and changes in job satisfaction for the women (MI=6.73 and SR=2.55), but not for the men. Bord (1998) has argued that having good interpersonal relationships contributes to one's job satisfaction in today's workplace. Researchers have found that in the traditional Chinese culture, women are expected to have more responsibility than men for caring relationships and for others; and in turn, are expected to receive support from others (Ho, 1987; Tong & Lau, 1995; Yan, 1991). Thus, it is likely that perceived satisfaction with social support from friends and family leads to increases in women's job satisfaction when confronted with workplace stress. In contrast, it is less likely that men's job satisfaction is tied to social support from family and friends. As such, a direct path was added from social support to changes in job satisfaction for the women, and revealed a significant path coefficient ($b = .27$, $p < .05$).

Large MI and SR were revealed between General Self-efficacy and changes in job satisfaction for the women (MI=5.10 and SR=2.35), but not for the men. Theoretically, general self-efficacy refers to the broad, stable sense of personal competence developed through one's past experiences to deal efficiently with a variety of stressful situations (Jerusalem & Schwarzer, 1986, 1992). Considering women's role in Chinese culture, it is likely that women develop self-efficacy based on their past experiences of caring for others and success in interpersonal relationships (Ho, 1987; Tong & Lau, 1995; Yan, 1991). As such, high levels of General Self-efficacy for women may lead to more work satisfaction in response to work stress because in today's workplace professional workers need effective interpersonal skills to be successful (Bord, 1998). In contrast, according to traditional Confucian values, men are valued more for their productivity in the workplace and less for their interpersonal competency (Broaded, Cao, & Inkeles, 1994; Shek, 1992; Tang & Lau, 1995). As such, high General Self-efficacy may not

contribute to an increase in job satisfaction for men. Moreover, other researchers studying female managers have found that General Self-efficacy contributes to job satisfaction (Long et al., 1992). Therefore, a path was freed between General Self-efficacy and changes in job satisfaction for the women. The path coefficient was significant ($b=.21$, $p<.05$).

Large MI and SR were revealed between Chinese collective values and Engagement coping for men (MI=5.53 and SR=2.56), but not for women. Chinese collectivism has been viewed as a source of coping. Specifically, Chinese people who hold collectivist values tend to employ group effort or teamwork to aid in problem solving (Bond et al., 1984; Stipek et al., 1989; Yue, 1993). Recently, Lazarus (1997) suggested that cultural values may influence an individual's coping process. Therefore, it is posited that Chinese collective values directly influence engagement forms of coping. Furthermore, men's social role in both Chinese and Western cultures is related to pride in work productivity (Broaded et al., 1994; Ho, 1987; Tang & Lau, 1995; Yan, 1991) and is likely to lead to more active engagement in coping with workplace stress. Thus, the path between Collective values and Engagement coping was freed, and a significant path coefficient was revealed ($b=.20$, $p<.05$).

In contrast, large MI and SR were revealed for Chinese collective values and Collective coping for women (MI=6.98 and SR=2.64), but not for men. Chinese collective values (e.g., harmony with others, solidarity with others) may have a strong impact on Chinese women's use of Collective coping strategies (e.g., Shared my feelings and experiences in order to help others in my group who have similar problems; Tried to confirm that my feelings were similar to those of other people in my group) compared with men, given the Confucian values that women are caring and nurture relationships (Ho, 1987; Tong & Lau, 1995; Yan, 1991). Researchers have argues that cultural values influence not only the individual's response in the situation, but also the reaction of others in the social environment (Aldwin, 1994; Leung, AuFernandez-Dols, &

Iwawaki, 1992). As such, the path between Collective values and Collective coping was freed for the women, and a significant path coefficient was revealed ($b=.27$, $p<.01$).

Large MI and SR were revealed for Work Support and Collective coping for men (MI=5.51 and SR=2.31), but not for women. Although helping people from one's cultural ingroup is commonly expected in collective cultures for both men and women, it may be more important for Chinese men than for women to have their co-workers' support, and that help from co-workers and supervisors may directly lead to men working on their tasks collectively and efficiently. Thus, the path between Work Support and Collective coping was freed for the men's group, and a significant path coefficient was revealed ($b=.23$, $p<.05$).

No large MI or SR were revealed after adding these paths (all <5 or <2 , respectively), and no further model modifications were made (see Figure 5, and 6 for the modified models for men and women respectively). The fit indices for the modified models indicated a good fit for the men, $\chi^2(29, N=128) = 32.72$, $p=.29$, $Q=1.13$, $GFI=.96$, $RMSR=.05$, and $CFI=.98$, and a better fitting model for the women, $\chi^2(29, N=100) = 44.10$, $p=.04$, $Q=1.52$, $GFI=.93$, $RMSR=.07$, and $CFI=.92$. The total coefficient of determination was 22% and 50% of the total variance in the models (for the men and women, respectively). The difference in chi-square between the results of the hypothesized model and modified model was 34.26 ($df=4$, $p<.001$) for the men; and 30.91 ($df=4$, $p<.001$), for the women, and indicates a significant improvement in the model fit through addition of these paths.

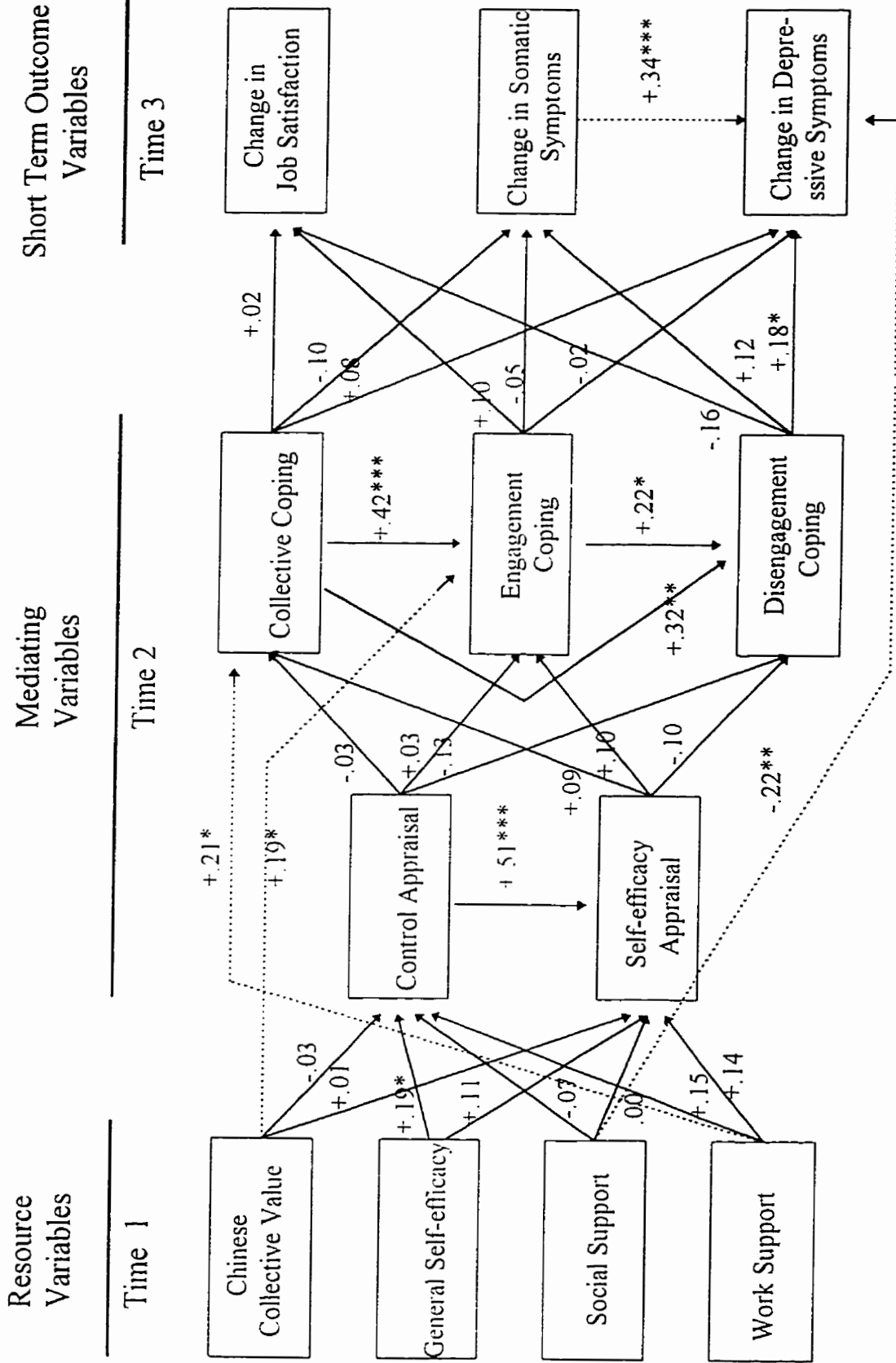


Figure 5. Modified Path Model Representing the Relationships among Resources, Mediating, and Outcome Variables at Time 1, Time 2, and Time 3 for Overseas Chinese professional Men (N=128). (Arrows indicate the direction of the relationships. Standardized LISREL estimates are indicated) *p<.05, **p<.01, ***p<.001.

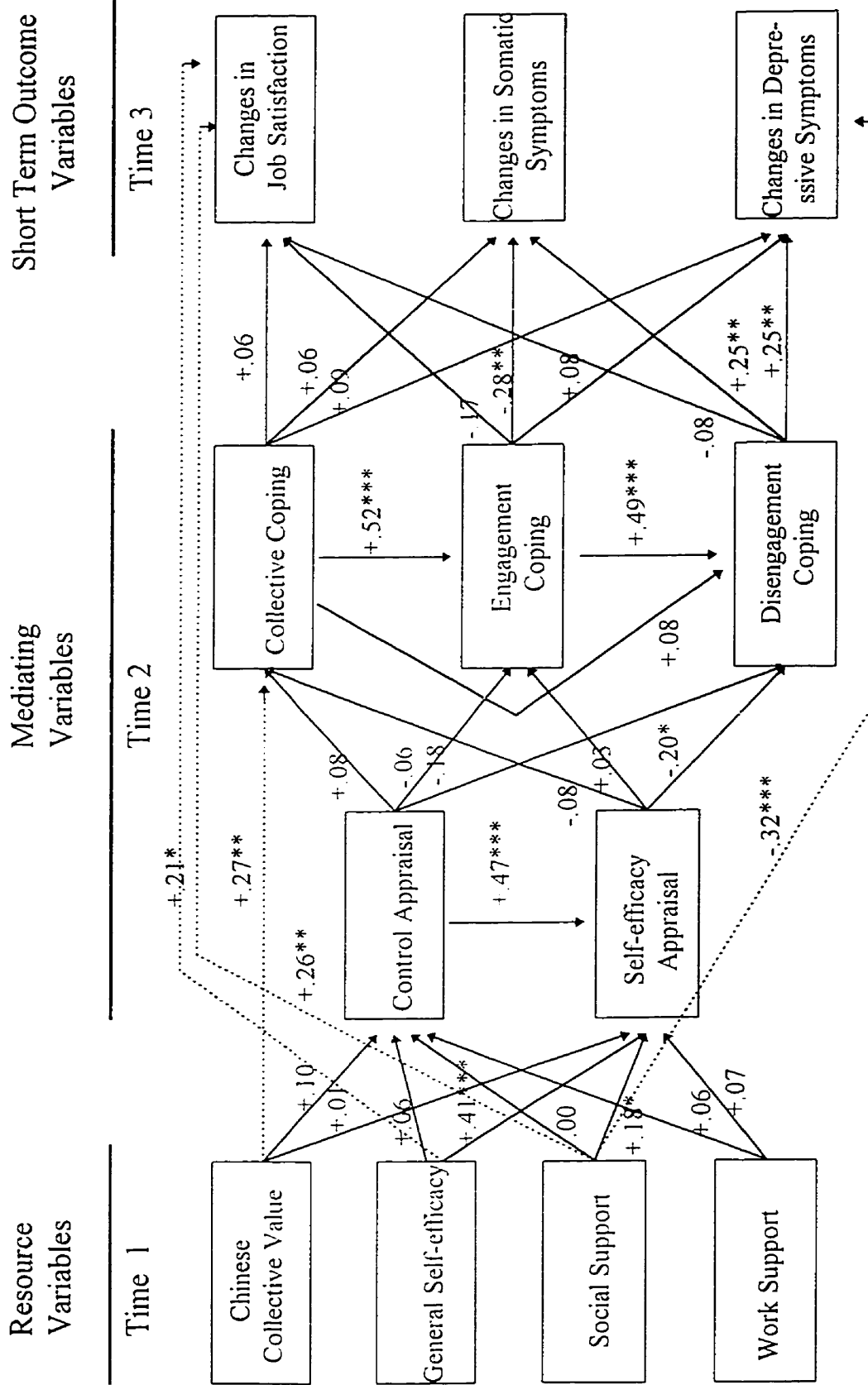


Figure 6. Modified Path Model Representing the Relationships among Resources, Mediating, and Outcome Variables at Time 1, Time 2, and Time 3 for Overseas Chinese professional Women (N=100). (Arrows indicate the direction of the relationships. Standardized LISREL estimates are indicated) *p<.05, **p<.01, ***p<.001.

CHAPTER VI: DISCUSSION

The purpose of this study was to test a model of stress and coping for overseas Chinese professionals who were experiencing workplace stress. The findings revealed a pattern of relationships that provide partial support for Lazarus and Folkman's (1984) stress and coping framework and the workplace stress and coping models of Terry (1991) and Long et al. (1992). Although gender differences were not hypothesized, series of exploratory steps determined that the model should be tested separately for the men and women groups in this sample. The results for the initial hypothesized path models, which included coping resources (e.g., personal, social, and cultural resources), mediators (appraisal and coping strategies), and short-term outcomes (changes in job satisfaction, somatic symptoms, and depressive symptoms), accounted for 9.3% and 33.2% of the variance in the outcomes for male and female overseas Chinese professionals, respectively. However, based on theory and empirical research, and statistical indications, the models were modified and the results revealed adequate fit indices accounting for 22% and 50% of the total variance for men and women, respectively. The following detailed discussion is based on the results of the modified models.

One of the main purposes of this study was to determine the influence of coping resources (i.e., Chinese collective values, General self-efficacy, Social and Work support) on appraisals and coping strategies. Chinese collective values were positively related to Collective or Engagement coping for women and men, respectively; but contrary to expectations, collective values were not significantly related to the appraisal variables. General self-efficacy was positively related to control or self-efficacy appraisals for men and women respectively, and also directly related to an increase in job satisfaction for women. Social support was positively related to self-efficacy appraisal and an increase in job satisfaction for women, and a decrease in depressive symptoms for both women and men. Finally, work support was positively related to collective coping for

men. The results suggest that (a) the influence of cultural values on stress and coping is complex; and (b) although collective values appears to play a role in influencing workplace stress, the inclusion of other variables related to collective values in future models (e.g., collective appraisal and collective job satisfaction) may be helpful in furthering our understanding.

This study also was a first step in the development of a collective coping measure. The results of this study provide some evidence to support collective coping as a distinctive coping dimension, however, more research is needed to further understand the function of collective coping and to provide evidence of the validity of the scale.

Coping Resources

Chinese collective values. The results of the models tested for both the male and female overseas Chinese professionals support the notion that Chinese collective values play a significant role in influencing how Chinese men and women respond to workplace stress. Although some researchers have found that Chinese collective values have a negative relationship with self-efficacy appraisal (high collective values are associated with low self-efficacy, e.g., Dong, 1995; Oettingen et al., 1994), such findings were not replicated in this study. For both men and women, Chinese collective values failed to significantly predict appraisals. One explanation for these results is that the previous findings were mainly based on research on children and adolescents with collective cultural backgrounds, and collective values were not directly tested in these studies (e.g., Dong, 1995; Oettingen et al., 1994), as such, Chinese collective values may not be the factor that directly influences self-efficacy appraisals. In addition, one could also speculate that other types of appraisals that are related to collective values may be not have been included in the model. For example, whether the stressors are appraised as ingroup (interpersonal) or outgroup (intergroup) may be influenced by collective cultural values (Gire, 1997; Rhee, Uleman, & Lee, 1996; Triandis, 1989). Moreover, it is possible that secondary appraisals of control and self-

efficacy may have a collective component that was not assessed in the present study and may account for the relationship between collective values and coping strategies. Such speculation deserves attention in further research.

The results of the analysis provide some support for the role Chinese collective values plays in coping strategy use. For the male group, higher levels of Chinese collective values directly predicted greater use of Engagement coping. These results are inconsistent with previous studies that found that the Chinese culture discourages direct interactions and favors avoidance forms of coping when dealing with conflict situations (e.g., Leung & Lind, 1986; Trubisky et al., 1991). However, these findings support the notion that Chinese collectivism--Confucian value of dedication, responsible, task completion, and hard work--is associated with the use of active problem-solving strategies to cope with workplace stressful events (Chan, 1989; Yang, 1986; Yue, 1993). This is also consistent with other research findings that Engagement forms of coping such as increasing concentration, analyzing problems, resetting goals, and working harder are used by Chinese individuals when problems become more challenging and in competitive situations (Cheung et al., 1984; Hau & Salili, 1996; Weiner, 1994). According to Confucian values, for example, in addition to the commitment to one's family members and relationships, men are expected to be hard workers, physically strong, knowledgeable, and skillful in the workplace (Broaded et al., 1994; Ho, 1987; Tang & Lau, 1995; Yang, 1991). Consequently, Chinese professional men who hold high levels of Chinese collective values are more likely to use Engagement coping in dealing with workplace difficulties. For the women, the analysis revealed that Chinese collective values were positively related to Collective coping. That is, for overseas Chinese women, the greater the belief in collective values, the more collective forms of coping they employed. In addition to the Confucian value of self-reflection and hard work, the expectations for women are often focused on their ability to care for others and to maintain

relationships (Broaded et al., 1994; Ho, 1987; Tang & Lau, 1995; Yang, 1991). As such, the more that women hold high levels of Chinese collective values, the more likely they are to emphasize ingroup togetherness in coping with workplace stress. Results from the pilot study focus group discussion also revealed that women were more likely to talk to co-workers and attend more workplace social gatherings when coping with work-related stress than men; whereas men were less likely to join social activities at work, particularly if it involved exchanging feelings. Thus, one can speculate that both Chinese professional men and women may be influenced by traditional social and cultural gender role values while working overseas.

General self-efficacy. Previous findings indicate that a strong sense of personal competence or agency directly influences one's appraisal in stressful situations (e.g., Jerusalem & Schwarzer, 1992; Long et al., 1992; Yue, 1996). In the present study, General Self-efficacy, a personal coping resource, was positively associated with appraisals of self-efficacy for the women, and appraised control for the men. Men who had a high level of General Self-efficacy appraised the stressor as controllable; whereas women who had a high level of General Self-efficacy appraised their capability to cope with stressful events as high. These findings suggest that men in general feel more control over their work (Hall, 1991), and that personal competence is a key element that directs men's evaluation of their stressor as controllable. Whereas for women, evaluating one's ability to perform a course of action is important in coping with workplace stress (Smith, 1993), and personal competence directly contributes to their performances in a stressful episode.

These results further support the notion that although perceived control and self-efficacy are two highly correlated appraisal variables with zero-order correlations of $r = .54$, and $r = .51$, for men and women respectively, they are in fact two distinctive concepts (Litt, 1988; Terry, 1991, 1994; Terry et al., 1995). Given that perceived control refers to an individual's evaluation of the

extent to which the situation can be controlled or changed (Lazarus & Folkman, 1984; Lazarus, 1990), and self-efficacy appraisal refers to a belief that one can successfully execute specific behaviors that would lead to successful coping (Bandura, 1986), a person may perceive a stressful event as highly controllable but may have low confidence in his or her ability to deal with the event.

Social support. Satisfaction with social support was found to have no association with control appraisal for either men or women. Although both men and women reported similar mean levels of social support, greater satisfaction with support was associated with greater self-efficacy appraisal for the women but not for the men. These results are consistent with studies that have found that satisfaction derived from social support influences one's feelings of confidence in stressful situations (Chataway & Berry, 1989; Liang & Bogat, 1994; Schwarzer & Leppin, 1991). Several explanations are given for the men's results: (a) the social support variables chosen for this study may be limited in representing the full range of support resources of male overseas Chinese professionals; or (b) social support may relate to appraisal variables that were not included in this model.

High levels of satisfaction with social support were found to have an indirect influence (through self-efficacy appraisal) on Disengagement forms of coping for women, which in turn influenced changes in somatic and depressive symptoms. That is, the more women derive satisfaction from support, the more self-efficacious they are in the stress situation, and in turn, the less they engage in behavioral activities that orient their attention away from the stressful event. Satisfaction with social support is a coping resource for women, and it is possible that having support and understanding from their social environment reduces the need for overseas Chinese professional women to avoid or escape stressful situations at work. Moreover, these results suggest that social support is an important precursor to somatic and depressive related symptoms.

The results of the path model indicate that social support has a direct influence on change in depressive symptoms. That is, consistent with previous studies, a higher level of satisfaction with social support significantly reduces stress-related depressive symptoms for both men and women (e.g., Amates & Fong, 1991; Liang & Bogat, 1994; Jou & Fukada, 1995; Lu, 1995). Furthermore, in keeping with previous studies (e.g., Long et al., 1992; Terry et al., 1995; Turnage & Spielberger, 1991), social support was also found to have positive effects on changes in job satisfaction for the women. These results imply that satisfaction with support and understanding contributes to the job satisfaction of overseas Chinese professional women. Chinese women reported facing more difficulties with interpersonal conflicts than men. It is possible, as Long (1990) suggested, that women may be more sensitive to interpersonal concerns in general, and thus both interpersonal conflicts and support are more salient to women than to men, and therefore social support is directly related to women's job satisfaction. Given that changes in job satisfaction were measured in the present study, the results are a strong test of the influence of the stress and coping process on short-term outcomes.

Work support. Unexpectedly, the findings indicated that work support did not statistically significantly predict stressor appraisals for either the men or the women. These results, together with the failure to find significant relationships between Chinese collective values and appraisals, suggest that the appraisal variables (control and self-efficacy) may not fully reflect the appraisals of overseas Chinese professionals in relation to workplace stress. High levels of work support did, however, positively relate to Collective coping strategies for the men. That is, the more work support the men experience, the more they use collective coping when encountering stressful situation at work. It is possible that Chinese cultural expectations for men to focus on work productivity (Broaded et al., 1994; Ho, 1987; Tang & Lau, 1995; Yang, 1991) is reflected in the importance of work support has on their use of Collective coping. Thus, work support plays a

significant role in determining men's ways of coping, and men's utilization of group effort (i.e., Collective coping) is dependent on the quality and availability of co-worker, colleague, and supervisor support.

The different sources of support for the men and women may be due to both socialization and structural explanations. Researchers have consistently reported findings that women seek social support much more than men, and have larger and more interdependent social networks (e.g., Billing & Moos, 1984; Ptacek et al., 1994). A broad range of support sources, including family members and friends, are associated with women's perception of self-efficacy when confronted with workplace stress. One can also argue that, from a structural view point, the differences in support resources may be influenced by their work role differences. It is important to note that significant differences between men and women were found in their present occupation for men and women in this study--more men worked as engineers and researchers, for instance; whereas more women were employed in the field of social services, including such occupations as teachers, social workers, librarians, and counsellors. Given the fact that significant differences in the types of stressor were found between men and women in that men reported working longer hours and having greater work overload than women, and women reported more conflicts on unfair treatment and values differences between co-workers than men, it is likely that men and women may have drawn on different support resources because support needs were related to the nature of their occupation and the types of stressors they encountered. For example, in this study, more men were in the natural science encountering work overload compared with women, and they needed more support from co-workers but less from family and friends to complete work tasks; whereas for women who were in social science occupations, care and understanding from family members and friends may be more important when coping with personal value conflicts and interpersonal difficulties.

Appraisals and Coping Processes

Appraisals. The results of this study are partially consistent with previous research linking control and self-efficacy appraisals to coping. Regarding the women, as expected and consistent with previous findings (e.g., Aldwin, 1994; Haney & Long, 1995; Terry et al., 1995), women who appraised themselves as self-efficacious in the face of workplace stress, were less likely to use Disengagement coping strategies. These results suggest that overseas Chinese women who have confidence in handling specific workplace stressors rely less on withdrawal or escape forms of coping.

Unexpectedly for the men, and inconsistent with previous studies on Chinese children and students (e.g., Hess et al., 1987; Hau & Salili, 1996), neither appraisal variable predicted ways of coping. Although similar levels of control and self-efficacy appraisals were used by both men and women, men may experience different or additional appraisals (e.g., assessing the type of stressor, ingroup or outgroup issues, or collective control and collective efficacy as speculated earlier) that were not included in the present study. Given the lack of studies that have included appraisals (especially workplace stress appraisals) when examining Chinese professionals' workplace stress, further research in this area would help us better understand the types of appraisals used in response to work-related stress, particularly among men. In addition, the self-efficacy appraisal scale showed low reliability (internal consistency) for the men, and may account for the weak relationships.

Coping. As expected, Engagement coping strategies were found to be associated with a reduction in women's somatic symptoms, which indicates that more active ways of coping (e.g., taking steps to overcome the problem, asserting oneself, and increasing one's effort) are associated with less distress (Long et al., 1992; Portello, 1996; Terry, 1992; Terry et al., 1995). As expected, Disengagement coping was found to increase depressive symptoms among both

overseas Chinese professional men women. Consistent with previous findings (e.g., Chataway & Berry, 1989; Chan, 1994; Haney & Long, 1995; Lin, 1993), an increased use of avoidance, denial, and self-blaming forms of coping was significantly associated with an increase in psychosomatic and depressive symptoms.

The non-significant relationship between coping and changes in job satisfaction for the men's and women's groups is interesting. For women, there was a negative relationship between Engagement forms of coping and changes in job satisfaction, although it was not statistically significant ($b = -.17$, $p > .05$). Similar to Long et al.'s (1992) findings, the negative relationship suggests that persistent hard work and effort may not necessarily bring success at work but could cause increasing in exhaustion for women that results in feeling dissatisfied with their job. For the men, it is possible that the lack of relationship between coping and job satisfaction is a reflection of one's feeling of job satisfaction in relation to today's job characteristics in general (Bord, 1989). That is, interpersonal skills are required in addition to productivity (emphasized in traditional jobs) in today's work world, thus, the lack of interpersonal skills may directly impact men's feeling of job satisfaction, in particular for professional occupations.

The lack of relationships between the coping strategies and outcome variables for the men may be explained by speculating on missing coping strategies from the model. For example, exercise or alcohol use and smoking, may be used by men as a way of coping (Brooks, 1998; Weissman & Klerman, 1977; Williams & Spitzer, 1983). Furthermore, outcomes that reflect men's affective distress such as anger and frustration (Brooks, 1998; Greenglass & Noguchi, 1996; Faludi, 1991) were not included in the study. The significant association between changes in somatic symptoms and depressive symptoms for men but not for women is also interesting. These results may reflect previous findings that Chinese men tend to be less emotionally expressive than women when distressed. Although it is common for Chinese people to report

somatic symptoms in general, consistent with findings from other cultures, it is likely that the expectation that “big boys never cry” may increase the chances for Chinese professional men to internalize their emotional distress in response to physical symptoms. Confucian values of self-control and restriction of emotional expression may have more impact on Chinese men than women. Given the increasing attention to stress and coping in the workplace, further studies examining both men and women with the intent of attending to their similarities and differences would be of great interest, particularly in cross-cultural settings.

Mediating effects. The present study provides very weak support for the hypothesized mediating effects in the model. When mediating effects were examined using Baron and Kenny's criteria (1986), only the relationship between changes in job satisfaction and general self-efficacy was mediated by self-efficacy appraisal for women. Relatively low internal consistency obtained for the self-efficacy appraisal measure for the men in this study may have contributed to an inability to detect mediating effects. In addition, the lack of support for a mediating effects may also reflect the type of personal and social resource variables and mediating variables used in the study. One fruitful avenue for further research would be to investigate other cultural resources that may be related to both appraisals and outcomes in the context of workplace stress and coping.

Collective Coping

The present study provides an initial step in the development of a collective coping subscale. In this study, Collective coping was defined as cognitive and behavioral activities that orient attention to relationships with ingroup members. Collective forms of coping include asking for help from others, maintaining harmony, and conforming to one's ingroup--strategies that are used by individuals from both collective and individualistic cultures (Ho & Chiu, 1994; Kashima & Triandis, 1986; Kirkbride et al., 1991; Yamaguchi, 1990). Although the intercorrelations

among the three coping dimensions (Collective, Engagement, and Disengagement coping) were relatively moderate (r s ranged from .22 to .52), high loadings obtained from the factor analysis reflect good internal consistency among the items developed in the Collective coping subscales. Collective coping strategies were predicted by Chinese collective values and work support for overseas Chinese professional women and men, respectively.

Collective coping was positively related to both Engagement and Disengagement coping in the present study. Thus, Collective coping strategies are associated with solving problems and providing emotional assistance (e.g., Tried to make others in my group get involved in order to solve the problem; Talked to someone from my group of people about how I was feeling), as well as orienting attention away from one's problem (e.g., Tried to confirm one's feelings with people in the group). These findings are not surprising when one considers the fact that most coping subscales are interrelated because individuals tend to engage in a number of coping strategies, rather than in one particular form of coping (Folkman & Lazarus, 1980; Folkman, Lazarus, Gruen, et al., 1986).

The lack of direct relationships between appraisals and Collective coping, and Collective coping and outcome variables was unexpected. These results are speculated to be due to the lack of collective appraisal and collective outcome variables in the model. Moreover, it is also possible that there are other collective coping strategies that could have been included. Thus, further research is needed to explore the Collective coping scale's content and construct validity.

Gender Differences

Although gender differences were not initially the focus of this study, several gender differences were found in the path model and deserve further discussion. The findings on gender differences provide some support for cultural influences on stress and coping. Although cultural values regarding gender were not directly tested, the pattern of gender differences for overseas

Chinese professionals that were found in this study are consistent with general findings in other cultures that support socialization explanations of gender differences (Archer, 1996; Eagly, 1983; Kessler et al., 1981). Similar to many other cultures, traditional Chinese culture prefers male characteristics that reflect a sense of personal agency and control, less emotional expressivity, and for men to be instrumentally focused on their performance in the workplace. Women, on the other hand, are expected to be dependent, feminine, more emotionally expressive, to have major responsibilities for caring for others, and to be more dependent on support from various resources in coping with stressful events (e.g., Broaded et al., 1994; Shek, 1992; Tang & Lau, 1995). One fruitful avenue for further research would be to investigate specific cultural values related to gender socialization that may influence the stress and coping process in the workplace.

Noticeably, demographic information revealed that Chinese professional men and women were employed in similar occupations before going overseas, however, they showed significant differences in their present overseas occupation. Men are more likely to be employed in the natural science field, whereas women more likely to be employed in the social science field. These results suggest that Chinese professional men and women may have been treated differently when they applied for work overseas. In the present study, men reported working longer hours and experienced greater work overload than women; whereas women reported encountering more unfair treatment by co-workers and colleagues than men. Although a preliminary analysis in the present study did not find that gender differences in appraisals, coping strategies, or outcomes were associated with the types of stressor reported, stressor type was collapsed into three broad categories for analysis, precluding a rigorous test of this possibility. Thus, future research would benefit from an exploration of structural differences men and women Chinese professionals experience, including, for example, types of stressors, level of influence or power in the workplace, and specific work tasks.

Along with the Chinese cultural revolution, significant changes have been reported regarding gender equality in China (Woo, 1993). Researchers also reported that when comparing American working men and women ($N=2482$), women tend to be in occupations marked by lower pay, and lower prestige, and receive lower pay even within a prestigious occupational category when compared with men; however, the similar pattern was not found in Chinese working women and men ($N=2000$) (Pan et al., 1994). Thus, one can speculate that the gender differences found in the stress and coping process in this study were a reflection, at least in part, of the social structure for men and women from their host cultures.

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), and Terry et al.'s (1995) models in the context of specific coping resources--the cultural values of Chinese collectivism. A primary limitation of this study, however, relates to the Chinese Values Scale (The Chinese Connections, 1987) used in the study. The Chinese Values Scale was selected because it was developed specifically on the Chinese culture and Confucian values. Although such a scale is representative of some Chinese cultural beliefs, it may lack predictive validity because it does not fully assess the multiple dimensions of collective values (Bond et al., 1985; Cross, 1995; Kashima & Triandis, 1986). Thus, Chinese collective values, as representative of cultural values, were operationalized in a limited way and applied to a particular Chinese group within a workplace stress context. Therefore, generalization of these findings are limited.

The selection of volunteer overseas Chinese professionals restricts the researcher's ability to generalize results to other populations of overseas Chinese workers. In addition, the sample consisted of volunteers who may have had a special interest in stress and coping. Thus, the magnitude of the relationships in the models may differ for other samples. Therefore, there is a

need to replicate this study with other groups of overseas Chinese professionals before these findings can be generalized.

In addition, the use of recursive path analysis in this study limited the examination of reciprocal relationships among variables. Moreover, the stress and coping model for overseas Chinese does not attempt to present an exhaustive analysis of all the variables that may relate to overseas Chinese professionals' well-being. For example, certain background variables that may function as coping resources were not included, such as the self-monitoring personality traits (e.g., Yue, 1996). Causal inferences about the results may be prone to alternate causal explanations and to the effects of unmeasured variables. Thus, other models may fit the data equally well and alternative models need to be tested.

Because the modified model may have capitalized on chance findings, replication studies need to be conducted. There are also limitations in this study due to the nature of path modeling. Although path models are sometimes defined as "causal" models, they are, in fact, correlational. By itself, path analysis cannot indicate causation, although it can reveal whether results are consistent with a hypothesized causal direction. Causal priority in this study was assigned from a temporal perspective for some of the variables. Coping resource variables were assessed 2 weeks prior to appraisals and coping, which in turn were assessed 2 weeks prior to the outcome variables by asking overseas Chinese professionals to retrospectively recall, over the last 2 weeks, a stressful experience related to their work. Such recall procedures may be subject to recall difficulty or to response bias. In addition, when interpreting the study findings, it is important to consider experimental-wise error, given that multiple tests were employed in the models.

Outcome variables were assessed for change over time so that it would be possible to understand whether or not participants have maintained, increased, or decreased their well-being as a consequence of coping with a workplace stressor (Hart et al., 1995; Wearing & Hart, 1996).

This approach provides a conservative test of the model by controlling for the influence of initial psychological adjustment on later adjustment (Major et al., 1998; Valentiner et al., 1994).

Assessing change in the outcomes may provide stronger evidence to support the transactional model developed by Lazarus and Folkman (1984). However, use of residuals for change score may have limited the interpretation of the results when comparing other studies in which change over time was not considered.

Although the use of electronic communication is effective in terms of saving time, money, and space, as well as facilitating the involvement of participants who reside some distance away, participants were mainly limited to individuals who have e-mail access, which may further limit generalization of the results. A further limitation may be related to the validity of the measures used in this study, as the psychometric properties were established on paper and pencil responses, rather than through e-mail.

Research Implications

The results of this study have implications for further research in several ways. Although Lazarus and Folkman's (1984) theoretical framework has been the most frequently used model in cross-cultural research of stress and coping, as far as I am aware, this is the first study to examine the relationship between personal and cultural resources, appraisals, and the coping strategies used in the workplace with overseas Chinese professionals. The results of this study have several research implications. First, Lazarus (1997) suggests that cultural values may influence an individual's coping process, however, he posits that the transactional process will hold regardless of cultural differences. The results of this study provide partial support for Lazarus and Folkman's (1984) conceptual framework. Clearly, there was weak support for the hypothesized mediating effect of appraisal on coping resources and outcomes. The appraisal and outcome variables used in this study were developed by people from an individualistic culture, and measures of appraisal

and outcomes with collectivistic features have not yet been investigated in the current stress and coping research paradigm. Findings from this study indicate that our knowledge on how cultural values influence stress and coping is still limited. We need to enrich our understanding of the impact of culture on human psychological processes (Bond, 1994; Enns, 1994; Lazarus, 1991; Triandis, 1994). Thus, further research is needed to explore and develop multicultural approaches to the study of stress and coping.

There is also a need to explore the similarities and differences among the variables in the model involved in the stress and coping process for men and women. The analysis of gender in response to workplace stress is complex. Several researchers have argued that gender differences are due to the types of events experienced, rather than gender per se, and may account for previously reported differences in coping (Billings & Moos, 1984; Folkman & Lazarus, 1980). Researchers should conduct studies involving not only an analysis of male and female similarities and differences as applied to the present study variables, but also include consideration of factors such as the type of stressor, situational factors that may influence responses (e.g., power imbalances), and different work demands and responsibilities. The extent to which cultural values influence men's and women's ways of coping may be also an interest for further research.

In addition, relationships between coping appraisals, coping strategies, and changes in outcomes were weak in this study and further investigation into the factors that may have contributed to the present model would be helpful. Certainly, appraisals regarding types of stressors (i.e., interpersonal, ingroup, or outgroup) are of concern for people from collective cultural backgrounds. Thus, it is likely that individuals use coping strategies based on the types of stressors encountered. A number of participants commented on completion of their questionnaires that specific emotional outcomes such as anger, frustration, and confusion were not included in the outcome measures of this study. Moreover, although the measures used in this study were

carefully selected to be cross-culturally appropriate (e.g., materials were translated and back translated from English to Chinese and Chinese to English), and reasonable reliabilities were obtained (except for self-efficacy appraisal for the male group), it is possible that these translations did not succeed in conveying the proper message or replacing significant elements that may have been missed due to the fact that the development of these measures was based on a Western and individualistic cultural background.

Finally, as far as I am aware, this is the first study to focus on the development of a measure of collective coping. The development of a collective coping instrument was aimed at extending the model's predictive ability. Only a few of the relationships that emerged provided support for the validity of the measure for overseas Chinese professionals in a workplace context. However, this measure is still at an early stage of development and is far from complete. The ability to enhance an individual's well-being through close connections with a group may be a critical determinant of coping efficacy for all populations, regardless of cultural orientation. As such, items in the collective coping measure need to be applied to different populations within different cultural settings. Second, the weak links between collective coping and changes in outcome in this study raises concern. The relationships among collective coping, appraisal, and outcome may be more complex than that presented in the current model. The development of an instrument that could adequately reflect the full range and function of collective coping efforts requires further study.

It is also interesting and worthwhile to mention the employment of e-mail in this study for recruiting participants, completing questionnaires, and obtaining interactive feedback from participants because this procedure can be applied to other types of research (Myers, 1992; Myrick & Sabella, 1995; Stricker, 1996; Travers, 1997). Using such a procedure provided a learning experience for both myself and the study participants. Although utilizing the latest

technology for research purposes is by no means unusual, the frequent communication between researcher and participants through the use of e-mail resulted in bringing both closer together over the course of the study. A number of participants expressed their appreciation for having the opportunity to take part in this study without being limited by time, place, and distance. Getting frequent feedback from participants certainly helped clarify questions and obtain suggestions and even criticism throughout the research process, and provided the opportunity to understand the participants on a much more personal and deeper level.

Counselling Implications

The findings of this study suggest a number of counselling intervention programs for overseas Chinese professionals dealing with work-related stress. Attention should be paid to how one might recognize and change appraisals that may interfere with overseas Chinese professionals' application of coping strategies. Twenty-five percent of participants reported feeling stressed over their uncertainty as to whether the quality of their work was acceptable. This common stressor indicates that lack of confidence in one's ability may impact Chinese professionals ways of coping and well-being. Therefore, helping clients to strengthen their confidence and sense of self-efficacy, is important in increasing their level of perceived control and self-efficacy, and to help them decrease the use of Disengagement coping strategies (i.e., wishful thinking, avoidance, and self-blame), and consequently to reduce their feelings of distress.

Second, the direct and indirect effects of social support on adjustment for both men and women also suggests the importance of support resources for the well-being of overseas Chinese professionals. A number of participants admitted to feelings of isolation due to a lack of connection and communication with local people because of language barriers and cultural bias, and that this significantly decreased their ability to cope with stressful issues encountered at work. Given the fact that similar difficulties may well happen in non-work situations, it is critical to

assist our clients in recognizing, exploring, and utilizing existing and potential support resources, particularly in a cross-cultural environment.

Finally, attention needs to be focused not only on the general ways of coping used by each individual, but also on the specific coping strategies applied to particular issues. Increasing awareness of their ways of coping and the consequences of particular ways of coping may help clients to alter or combine strategies. This might involve substituting strategies of working harder for strategies of seeking information and assistance from others, or by trying to see things from another perspective in order to solve difficult tasks at work. Teaching a wide variety of coping strategies would also provide clients with numerous coping options for handling difficulties occurring outside the workplace.

In summary, the strength of this study lies in its strong theoretical basis, its prospective research design, the development of a collective coping measure, and use of the e-mail procedure for studying workplace stress and coping mechanisms for overseas Chinese professional men and women. Interesting results include the finding that gender differences contribute to our understanding of personal and cultural resources in relation to appraisals and coping for Chinese professionals working overseas. Further research is needed to establish whether these findings can be replicated in other groups in order to determine whether the relationships identified in this study can be generalized to different populations. An examination of the influences of values associated with different cultures on appraisals and coping strategies is necessary in order to provide an understanding of how individuals cope with workplace stress in a cross-cultural setting. In addition, the development of a collective coping measure may extend predictive validity in the study of stress and coping in addition to enriching our understanding of Chinese employees' coping strategies. Moreover, the results of this study will be useful in the development of effective research-based counselling interventions for stress management, and for promoting a harmonious

environment in the workplace and in multicultural societies at large.

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Appendix A

Invitation to Participate in the Study

INVITATION

Overseas Chinese Needed to Practice in a Study on Workplace Stress and Coping

Stressful or upsetting experiences at work have been found to negatively impact employees' health. Working overseas can certainly be challenging and difficult. For my doctoral research, I am conducting a study to identify the effects of workplace stress on the well-being of overseas Chinese who are currently employed in professional occupations.

Your participation in this study is extremely valuable. I am sure that the information we gather from this project will help us--people like you and me, to understand ourselves better, to learn and cope with our stress more efficiently, and most importantly to promote the well-being of our overseas life. You were asked to complete three questionnaires over a six-week period (via e-mail); the first questionnaire is the longest one, which takes about 20 to 25 minutes to complete, the second one takes about 10 minutes, and the last one only takes about 5 minutes to complete.

Your individual questionnaire responses were confidential and anonymous--no e-mail group list were formed; you are asked to send your reply directly to my e-mail address only, and your e-mail responses were then down loaded with your name and e-mail address deleted; no one will have access to your personal responses nor will results ever be reported in ways that allow individuals to be identified.

At the study completion, you are entitled to receive a summary report of the study's findings. If you are currently working in a professional occupation (full time or part time) such as professor, doctor, lawyer, engineer, psychologist, researcher, accountant, manager, counsellor, social worker, teacher, and nurse, for example, and have experienced stressful situations at work, and are also interested in participating in the study, **please reply to me by simply returning this invitation to my e-mail address.**

Thank you for taking the time to consider this project. I hope to hear from you.

Yours sincerely,

Dan Zhang
(E-Mail: dan@unixg.ubc.ca)

Note:

Dr. Bonita Long, Professor, Department of Counselling Psychology at UBC, Vancouver, Canada, is my research supervisor
Telephone: (604) 822-5259; E-Mail: blong@unixg.ubc.ca

APPENDIX B
Informed Consent Form



Department of Counselling Psychology
Faculty of Education
5780 Toronto Road
Vancouver, B.C. Canada V6T 1L2
Tel: (604) 822-5259
Fax: (604) 822-2328

Informed Consent Form

Culture, Workplace Stress, and Coping-- A Study of Overseas Chinese

Faculty Advisor: Dr. Bonita Long, UBC Department of Counselling Psychology,
Tel: (604) 822-5259, E-mail: blong@unixg.ubc.ca

Student: Dan Zhang, This research project is for my Doctoral dissertation (Ph.D.), UBC Department of Counselling Psychology.

Tel: (604) 822-5259, E-mail: dan@unixg.ubc.ca

Purpose:

The aim of this project is to examine the factors that influence the well-being of overseas Chinese when situations at work are stressful or upsetting. The information you provide will help us gain a better understanding of the strategies that overseas Chinese use to reduce the negative effects of workplace stress and enhance well-being of overseas life in general.

Study Procedure:

All participants are volunteers responded to an invitation posted through e-mail networks.

As a participant, you were asked to complete a three-part questionnaire over a six-week period, at a time that is convenient to you (via e-mail). Each part takes approximately 15 to 20 minutes to complete. Part One of the questionnaire is enclosed at the end of this form, and you can send me your answers to the questionnaire by simply using the reply function through the e-mail directly to me. Part Two were e-mailed to you two weeks after I received your reply to Part One. Part Three were e-mailed to you with the same sequence and procedure.

It is important to the design of this study that you complete each part of the questionnaire separately and that you remain at work during the six-week period. If you have planed a holiday or other event that would take you more than four days away from work, please inform me so that your starting time can be delayed or rearranged.

Confidentiality:

Any information resulting from this research study were kept strictly confidential.

Given the nature of the e-mail technique used in the study, no personal e-mail address or any other personal information of the respondents were presented in the public sites. That is, each participant will send his or her e-mail response directly to Dan Zhang's e-mail address. No e-mail group list were formed specific to this study. Therefore, each participant will not be known to any other participant, they will only be known to the researcher. Only Dan Zhang will send or receive information regarding this study to or from the e-mail nets. In addition, a message were posted at the top and the end of each part of the questionnaires to remind you to send your responses only to Dan.

Each set of questionnaires that is received by e-mail were downloaded and edited with a individualized code. That is, no names, personal e-mail addresses, or other identifying information will remain on the questionnaires once they are edited for analysis. The same code were used on each individual's returned questionnaires at each wave of data collection. The code can be broken **only** when an emergency situation is identified (e.g., suicidal) and further assistant is need to the individual participant. All documents including disks with the downloaded information were kept in a locked filing cabinet. No one will have access to the information but the investigators.

Contact:

If you have any questions or desire further information with respect to this study, you may contact Dr. Long or Dan Zhang at 822-5259, or e-mail at dan@unixg.ubc.ca.

If you have any concerns about your right as a participant you may contact the Director of Research Services at the University of British Columbia, Dr. Richard Spratley at 822-8598.

Consent:

This is to certify that I understand that my participation in this study is entirely voluntary and that I may refuse to participate or withdraw from the study at any time without jeopardy to my employment or opportunity to participate in any other programs sponsored by the University of British Columbia.

I have received a copy of this consent form for my own records.

I consent to participate in this study by reply this form to Dan Zhang's e-mail address at: dan@unixg.ubc.ca.

APPENDIX C**Questionnaires: Part One**

The Overseas Chinese Project

Questionnaire: PART ONE INTRODUCTIONS

Dear overseas Chinese fellows, thank you for your interest in participating in this project. This study consists of three parts. It is important to the design of the study that you complete each section of the questionnaire separately 2 weeks apart. This is part one, which includes questions about your background, your view of Chinese beliefs, how you feel about yourself, how you feel about others, your work, and your general well-being.

Your responses were remain **anonymous and confidential**. To ensure anonymity, we ask that you **be sure to send your reply directly to my e-mail address only** by using the reply function on your e-mail system. I will download your responses and code it with a number, so that no individual identification will remain on it. The same code were used on Part Two and Part Three responses.

Questionnaires for Part One take about 20 to 25 minutes to complete. I hope you will find them interesting. If, while completing Part One, you are uncertain about an item or question please feel free to ask. The results of this research project were beneficial to overseas Chinese who are just like you and me. Thank you again for your participation in this project. **Your contribution to this study is very valuable.**

The Overseas Chinese Project

Questionnaire: PART ONE

The following questions are about you. **Please indicate the number of the most appropriate response at the end of each question, unless otherwise instructed.** This information were used for group statistics only in order to better understand us as a whole (these questions take about 5 minutes to complete).

1. Sex: _____
 1 (Male)
 2 (Female)
2. Age: _____ years old on last birthday
3. Country of Birth (please indicate): _____
4. Are you (choose one only): _____
 1 (Married/common law)
 2 (Single)
 3 (Divorced/Separated)
 4 (Widowed)
5. Highest level of education (indicate one only): _____
 1 (High school)
 2 (Technical School)
 3 (Diploma)
 4 (Bachelor's Degree)
 5 (Master's Degree)
 6 (Doctorate Degree)
 7 (Post doctorate)
6. Living accommodations: _____
 1 (Live alone)
 2 (with your family)
 3 (with friends/roommates)
 4 (other)
7. Number of Children (include all ages) in your household: _____
 0 (none)
 1 (one)
 2 (two)
 3 (three or more)
8. Did you work before going overseas? _____
 1 (yes)
 2(no)

9. If you answered "yes" to question 8, How long had you been working at your previous job? Please indicate (years)_____
10. What was your occupations before going overseas?_____
- | | | |
|----------------|------------------|---------------------------------|
| 1 (professor) | 6 (doctor) | 11 (lecturer) |
| 2 (engineer) | 7 (psychologist) | 12 (social worker) |
| 3 (researcher) | 8 (accountant) | 13 (teacher) |
| 4 (manager) | 9 (counsellor) | 14 (other, please specify)_____ |
| 5 (nurse) | 10 (lawyer) | |
11. How long have you been overseas? Years: _____ and Months _____
12. In which overseas countries (areas) have you worked? (please list all starting from the most recent one).
- _____
13. In which overseas country(s) or area(s) are you working now? (please indicate)_____
14. What is your current occupation?: _____
(please list the one you spend most of your time at).
- | | | |
|----------------|------------------|---------------------------------|
| 1 (professor) | 6 (doctor) | 11 (lecturer) |
| 2 (engineer) | 7 (psychologist) | 12 (social worker) |
| 3 (researcher) | 8 (accountant) | 13 (teacher) |
| 4 (manager) | 9 (counsellor) | 14 (other, please specify)_____ |
| 5 (nurse) | 10 (lawyer) | |
15. What is your current job title?_____
16. How many hours are you working on average each week? Hours/per week?_____
17. How long have you been working at your current job?
Please indicate years_____, and months_____.
18. What language (s) do you speak other than Chinese?
- 1 (English)
2 (French)
3 (other, please specify):_____
19. What is your fluency level in English:_____
- 1 (not at all)
2 (a little)
3 (functional)
4 (fluent)
5 (very fluent)
20. Do you consider yourself:_____
- 1 (Chinese)
2 (Chinese Canadian, Chinese American, or Chinese Australian, or so forth)
3 (Canadian, American, Australian, or so forth)
4 (other, please specify)_____

21. Which one of the above is the most important identity for you at work? _____
22. Are you a member of overseas Chinese organization(s)? _____ 1 (yes) 2 (no).
Which are they? (please list no more than three) _____
23. How frequently do you attend social events with the organization (s) that you belong to? _____
- 1 (not at all)
 - 2 (once a year)
 - 3 (2-5 times/year)
 - 4 (6-12 times/year)
 - 5 (more than 12 times/year)
24. What is your gross family income (in Canadian dollars)? _____
- 1 (less than \$5,000)
 - 2 (\$5,000 to \$14,999)
 - 3 (\$15,000 to \$29,999)
 - 4 (\$30,000 to \$59,999)
 - 5 (\$60,000 to \$99,999)
 - 6 (\$100,000 to 149,999)
 - 7 (\$150,000 to \$200,000)
 - 8 (over \$200,000)
25. What is your religion: _____
- 1 (Catholicism)
 - 2 (Protestantism)
 - 3 (Buddhism)
 - 4 (None)
 - 5 (other, please specify) _____

THANK YOU

The Overseas Chinese Project

The Chinese Value Survey

I'd like you to think about the values listed below and to indicate how important your belief is for each item. Using a 9 point scale, you can choose any number that applies to you. For example, please indicate 1 when you believe the statement is not important to you at all, and please indicate 9 when you consider the listed value is extremely important to you. **Please provide a number that represents most closely your belief at the end of each phrase.** There are no right or wrong answers, only personal preferences (This survey takes an average of 5 minutes to complete):

1	2	3	4	5	6	7	8	9
(not important at all)							(extremely important)	

1. Filial piety____.
(obedience to parents, respect for parents, honoring of ancestors, financial support of parents).
2. Industry (working hard)_____.
3. Tolerance of others_____.
4. Harmony with others_____.
5. Humbleness_____.
6. Loyalty to superiors_____.
7. Observation of rites and social rituals_____.
8. Reciprocation of greetings, favors, and gifts_____.
9. Kindness (forgiveness, compassion)_____.
10. Knowledge (education)_____.
11. Solidarity with others_____.
12. Moderation, following the middle way_____.
13. Self-cultivation_____.
14. Ranking relationships by status and observing this social order_____.
15. Sense of righteousness_____.
16. Benevolent authority_____.
17. Non-competitiveness_____.

18. Personal steadiness and stability_____.
19. Resistance to corruption_____.
20. Patriotism_____.
21. Sincerity_____.
22. Keeping oneself disinterested and pure_____.
23. Thrift_____.
24. Persistence (perseverance)_____.
25. Patience_____.
26. Repayment of both the good or the evil that another person has caused you_____.
27. A sense of cultural superiority_____.
28. Adaptability_____.
29. Prudence (carefulness)_____.
30. Trustworthiness_____.
31. Having a sense of shame_____.
32. Courtesy_____.
33. Contentedness with one's position in life_____.
34. Being conservative_____.
35. Protecting your "face"_____.
36. A close, intimate friend_____.
37. Chastity in women_____.
38. Having few desires_____.
39. Respect for traditions_____.
40. Wealth_____.

THANK YOU

The Overseas Chinese Project

View of Your Self

The following questions are about your general view of your self, your confidence, and sense of agency in life. Please read each statement, using a 4 point scale where 1 is not at all, and 4 absolutely applies to you. You can choose any number between 1 and 4. **Please provide the number that agrees with your opinion the most** (this section takes about 2 minutes to do).

1 (not at all)

2 (sometimes)

3 (most of time)

4 (absolutely)

1. I can always manage to solve difficult problems if I try hard enough. ____
2. If someone opposes me, I can find means and ways to get what I want. ____
3. It is easy for me to stick to my aims and accomplish my goals. ____
4. I am confident that I could deal efficiently with unforeseen situations. ____
5. Thanks to my resourcefulness, I know how to handle unforeseen situations. ____
6. I can solve most problems if I invest the necessary effort. ____
7. I can remain calm when facing difficulties because I can rely on my coping abilities. ____
8. When I am confronted with a problem, I can usually find several solutions. ____
9. If I am in a bind, I can usually think of something to do. ____
10. No matter what comes my way, I am usually able to handle it. ____

THANK YOU

The Overseas Chinese Project

Social Support Questionnaire

The following questions ask about people in your environment who provide you with help or support. Each question has two parts. **For the first part**, list all the people you can count on. **For the second part**, indicate how satisfied you are with the overall support you have. Using 6 point dissatisfied-satisfied scale (where 1 is very much dissatisfied, and 6 is very satisfied, and you can choose any number between 1 and 6). You may need about 2 minutes to complete this questionnaire.

1. Whom can you really count on to be dependable when you need help?

(e.g., mother, father, sister, brother, friends, husband, wife, son, daughter, self or no one).

list: _____

How satisfied are you with the support received (choose one)? _____

1	2	3	4	5	6
(very dissatisfied)	(fairly dissatisfied)	(a little dissatisfied)	(a little satisfied)	(fairly satisfied)	(very satisfied)

2. Whom can you really count on to help you feel relaxed when you are under pressure or tense?

(e.g., mother, father, sister, brother, friends, husband, wife, son, daughter, self or no one).

list: _____

How satisfied are you with the support received (choose one)? _____

1	2	3	4	5	6
(very dissatisfied)	(fairly dissatisfied)	(a little dissatisfied)	(a little satisfied)	(fairly satisfied)	(very satisfied)

3. Who accepts you totally, including both your worst and your best points?

(e.g., mother, father, sister, brother, friends, husband, wife, son, daughter, self or no one).

list: _____

How satisfied are you with the support received (choose one)? _____

1	2	3	4	5	6
(very dissatisfied)	(fairly dissatisfied)	(a little dissatisfied)	(a little satisfied)	(fairly satisfied)	(very satisfied)

4. Whom can you really count on to care about you, regardless of what is happening to you?

(e.g., mother, father, sister, brother, friends, husband, wife, son, daughter, self or no one).

list: _____

How satisfied are you with the support received (choose one)? _____

1	2	3	4	5	6
(very dissatisfied)	(fairly dissatisfied)	(a little dissatisfied)	(a little satisfied)	(fairly satisfied)	(very satisfied)

5. Whom can you really count on to help you feel better when you are feeling generally down-in-the-dumps?

(e.g., mother, father, sister, brother, friends, husband, wife, son, daughter, self or no one).

list: _____

How satisfied are you with the support received (choose one)? _____

1	2	3	4	5	6
(very dissatisfied)	(fairly dissatisfied)	(a little dissatisfied)	(a little satisfied)	(fairly satisfied)	(very satisfied)

6. Whom can you count on to console you when you are very upset?

(e.g., mother, father, sister, brother, friends, husband, wife, son, daughter, self or no one).

list: _____

How satisfied are you with the support received (choose one)? _____

1	2	3	4	5	6
(very dissatisfied)	(fairly dissatisfied)	(a little dissatisfied)	(a little satisfied)	(fairly satisfied)	(very satisfied)

The Overseas Chinese Project

Work Support

Sometimes people can be helpful to you when you have difficulties at work. Please read and indicate to each question. Thank you.

1. To what extent do any co-workers, or secretaries give you work support (e.g., giving good advice when needed)? _____

1	2	3	4	5
never	rarely	sometimes	quite a bit	regularly

2. To what extent how helpful is the support offered by co-workers, or secretaries at work? _____

1	2	3	4	5
not at all	rarely	sometimes	usually	extremely
helpful	helpful	helpful	helpful	helpful

3. To what extent do any of your colleagues give you work support (e.g., giving good advice when needed)? _____

1	2	3	4	5
never	rarely	sometimes	quite a bit	regularly

4. To what extent how helpful is the support offered by your colleagues? _____

1	2	3	4	5
not at all	rarely	sometimes	usually	extremely
helpful	helpful	helpful	helpful	helpful

5. To what extent do any of your supervisors give you work support (e.g., giving good advice when needed)? _____

1	2	3	4	5
never	rarely	sometimes	quite a bit	regularly

6. To what extent how helpful is the support offered by your supervisors? _____

1	2	3	4	5
not at all	rarely	sometimes	usually	extremely
helpful	helpful	helpful	helpful	helpful

The Overseas Chinese Project

Job Satisfaction

The following questions will give you a chance to tell how satisfied or dissatisfied you feel about your job at present. Please choose the numbered response that most accurately describes your satisfaction with your current job over the past 2 weeks.

1. Which one of the following shows how much of the time you feel satisfied with your job. _____
 - 1 (Never)
 - 2 (Seldom)
 - 3 (Occasionally)
 - 4 (About half of the time)
 - 5 (A good deal of the time)
 - 6 (Most of the time)
 - 7 (All the time).

2. Choose one of the following statements which best tells how you like your job. _____
 - 1 (I hate it)
 - 2 (I dislike it)
 - 3 (I don't like it)
 - 4 (I am indifferent to it)
 - 5 (I like it)
 - 6 (I am enthusiastic about it)
 - 7 (I love it).

3. Which one of the following best tells how you feel about changing your job ____?
 1. (I would quit this job at once if I could).
 2. (I would take almost any other job in which I could earn as much as I am earning now).
 3. (I would like to change both my job and my occupation).
 4. (I would like to change my job, but I would do so if I could get a better job).
 5. (I am not eager to change my job, but I would do so if I could get a better job).
 6. (I cannot think of any jobs for which I would change).
 7. (I would not exchange my job for any other).

4. Which one of the following shows how you think you compare with other people ____?
 1. (No one dislikes his or her job more than I dislike mine).
 2. (I dislike my job much more than most people dislike theirs).
 3. (I dislike my job more than most people dislike theirs).
 4. (I like my job about as well as most people like theirs).
 5. (I like my job better than most people like theirs).
 6. (I like my job much better than most people like theirs).
 7. (No one likes his or her job better than I like mine).

The Overseas Chinese Project

Symptoms

Below is a list of problems and complaints that people sometimes have. Please read each symptom carefully. Choose any number on the 5 point scale provided below (where 1 is not at all and 5 is extremely), to indicate how much the problem has bothered you during the past 2 weeks.

1 2 3 4 5

(Not at all) (A Little Bit) (Moderately) (Quite a Bit) (Extremely)

1. Headaches. _____
2. Faintness or dizziness. _____
3. Pains in the heart or chest. _____
4. Pains in the lower back. _____
5. Nausea or upset stomach. _____
6. Soreness of your muscles. _____
7. Trouble getting your breath. _____
8. Hot or cold spells. _____
9. Numbness or tingling in parts of your body. _____
10. A lump in your throat. _____
11. Felt weak in parts of your body. _____
12. Heavy feelings in your arms and legs. _____

Using the scale below, indicate the number which best describes how often you felt or behaved this way—during the past 1 week.

0	1	2	3
Rarely or None of the Time (less than 1 Day)	Some or a Little of the Time (1-2 Days)	Occasionally or a Moderate Amount of the Time (3-4 Days)	Most or ALL of the Time (5-7 Days)

1. Bothered by things that don't usually bother you. _____
2. Appetite was poor. _____
3. Felt unhappy even after talking with family and friends. _____
4. Felt that you were just as good as other people. _____
5. Had trouble keeping your mind on what you were going. _____
6. Felt depressed. _____
7. Felt that everything you did was an effort. _____
8. Felt hopeful about the future. _____
9. Thought your life had been a failure. _____
10. Felt fearful. _____
11. Had restless sleep. _____
12. Felt happy. _____
13. Talked less than usual. _____
14. Felt lonely. _____
15. People were unfriendly. _____
16. Enjoyed life. _____
17. Had crying spells. _____
18. Felt sad. _____
19. Felt that people disliked me. _____
20. Not feel motivated, and could not 'get going.' _____

THANK YOU VERY MUCH FOR YOUR PARTICIPATION

<p style="text-align: center;">The Overseas Chinese Project</p>
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You have completed Part One, please send your response now. Your individual responses to each of the questionnaires will remain **anonymous and confidential**. To ensure anonymity, we ask that you **be sure to send your reply directly to my e-mail address only** by using the reply function on your e-mail system. You were receiving Part Two of the project by e-mail in two weeks time, and the same procedure were used for your participation.

Please contact me if you stop working for more than a week (e.g., for holidays, sick, etc) before you complete the Part Two questionnaires. If that is the case, for research purposes, I will send you Part Two after you have a continued to work for two weeks.

**If you have any questions, comments or suggestions,
please feel free to contact me.**

Thank you again, and have a nice day.

APPENDIX D

Questionnaires: Part Two

The Overseas Chinese Project

Questionnaire: PART TWO INTRODUCTIONS

Dear overseas Chinese fellows, you are starting to work on Part Two of the project. In this section, you were asked to think about aspects of working overseas that are difficult or troubling to you, and ways that you've dealt with these difficulties. I am sure that each of you have a lot of experiences to share.

Part two takes approximately 10 minutes to complete. Throughout the questionnaire please feel free to ask me any questions if you are uncertain about an item. Again, there are no right or wrong answers, only your personal preferences.

Your individual responses to the questionnaires will remain **anonymous and confidential**. To ensure anonymity, I ask that you **be sure to send your reply directly to my e-mail address only** by using the reply function on your e-mail system. Thank you again for your contribution in this project. Your participation is very important.

The Overseas Chinese Project

Questionnaire: PART TWO

Please think over the past 2 weeks and recall a situation, event, or incident at work that has been stressful for you and is currently of concern to you. By "stressful" we mean the most stressful situation that was difficult or troubling for you, either because it upset you or because it took effort to deal with it.

1. Would you please briefly **describe** what happened and what was stressful about it. Thanks.

2. Please specify the **type** of the event that you have just described

(indicate one number regarding the type of the event that has been the most upsetting one to you) : _____

1 (unfair treatment received from others at work)

2 (communication difficulties because of language barriers)

3 (conflicts between you and other people because of value or belief differences at work)

4 (uncertainty about the quality of your work)

5 (misunderstanding between you and other people at work)

6. other (please specify) _____

The Overseas Chinese Project

Control

Please answer the following questions with regard to the stressful or difficult situation you just described. Although some of the questions are similar, there are differences between them. Please treat each of them as a separate question. Using a 5 point scale (where 1 is not at all and 5 is very much), please indicate one number that applies to your situation the most. Again, **answer each one in relation to the situation you just described.** Thank you.

1	2	3	4	5
Not at all		somewhat		Very much

- a. How much do you feel that the outcome of this situation is beyond your control? _____
- b. How much do you feel that the situation is something you can change or do something about? _____
- c. How much do you feel you have to accept the situation as there is nothing you can do to change it? _____
- d. How much do you feel you can take steps to resolve the situation? _____
- e. How much do you feel that the outcome of the situation were influenced by factors external (e.g., chance) to yourself? _____
- f. How much do you feel that your abilities will influence the outcome of the situation? _____
- g. I have confidence in my ability to deal with the problem. _____
- h. I have reason to believe I may not be able to handle the problem well in the situation. _____
- i. Although I may need some assistance, I have little doubt I can deal with the problem well. _____

The Overseas Chinese Project

COPING

It is very useful to find out what you did to cope with the particular stressful experience you just described. As you respond to each of the statements, please keep this stressful situation in mind. Please use the 4 point scale, where 0 is not used or does not apply, and 3 is used a great deal. Read each statement carefully, and indicate to what extent you used it in the situation.

Please respond to each item. Thank you.

- | 0 | 1 | 2 | 3 |
|---|--------------------|-----------------------|------------------------|
| (Not Used or
Does Not Apply) | (Used
Somewhat) | (Used
Quite A Bit) | (Used
A Great Deal) |
| 1. Stood my ground and fought for what I wanted. _____ | | | |
| 2. Refused to get too serious about the situation; tried to laugh about it. _____ | | | |
| 3. Didn't let it get to me; refused to think about it too much. _____ | | | |
| 4. Tried to get the person responsible to change his or her mind. _____ | | | |
| 5. Realized I brought the problem on myself. _____ | | | |
| 6. Expressed anger to the person who caused the problem. _____ | | | |
| 7. Hoped a miracle would happen. _____ | | | |
| 8. Concentrated on what I had to do next—the next step. _____ | | | |
| 9. Changed or grew as a person in a good way. _____ | | | |
| 10. Kept others from knowing how bad things were. _____ | | | |
| 11. Tried not to act too hastily or follow my first hunch. _____ | | | |
| 12. Tried to keep my feelings to myself. _____ | | | |
| 13. Criticized or lectured myself. _____ | | | |
| 14. Increased my efforts to make things work. _____ | | | |
| 15. Rediscovered what is important in life. _____ | | | |
| 16. Went on as if nothing had happened. _____ | | | |
| 17. Made a promise to myself that things would be different next time. _____ | | | |
| 18. Wished the situation would go away or somehow be over with. _____ | | | |
| 19. Had fantasies about how things might turn out. _____ | | | |
| 20. Made a plan of action and followed it. _____ | | | |

21. Prayed or found faith in God or my religion. _____
22. Went over in my mind what to say or do. _____
23. Prepared for the worst. _____
24. Waited to see what would happen before acting. _____
25. Tried to see things from another perspective. _____
26. Talked to someone from my group of people about the situation. _____
27. Tried to avoid arguing with people in my group in order to maintain group harmony. _____
28. Talked to someone from my group of people about how I was feeling. _____
29. Tried to understand the problem by determining whether it is a common issue at my workplace. _____
30. Tried to find out how important the problem is for my group. _____
31. Spoke out for the benefit of my group. _____
32. Tried to confirm that my feelings were similar to those of other people in my group. _____
33. Tried to find out if my reactions to the problem were acceptable to others in my group. _____
34. Followed the ways that other people in my group dealt with similar problems. _____
35. Shared my feelings and experiences in order to help others in my group who have similar problems. _____
36. Tried to get other people in the group get involved in order to solve the problem. _____
37. Tried to find a solution by using Chinese e-mail networks. _____
38. Talked to someone from my group who could do something concrete about the problem. _____
39. Asked a respected relative/friend for advice. _____
40. Tried to understand the other person's concerns. _____
41. Tried to understand how the other people in my group felt. _____
42. Tried to figure out what would make the other people feel better. _____
43. Others (please specify) _____

You have completed Part Two of the questionnaires, please send your reply now. Once again, your individual response to each of the questionnaires will remain **anonymous and confidential**. To ensure anonymity, we ask that you **be sure to send your reply directly to my e-mail address only** by using the reply function on your e-mail system. You were receiving the Part Three of the project by e-mail in two weeks time, and the same procedure were used for your participation. Your completed reply for Part Two were coded in the same manner as your Part One return.

APPENDIX E

Questionnaires: Part three

The Overseas Chinese Project

Questionnaire: PART THREE INTRODUCTIONS

Dear overseas Chinese fellows, this is the last section--Part Three of the project. This section asks you about your satisfaction with your current job and your well-being in general. Again, there are no right or wrong answers.

As a reminder, in order to ensure anonymity and confidentiality of your responses, please **be sure to send your reply directly to my e-mail address only** by using the reply function on your e-mail system.

Attached to Part Three is a **summary request form**. If you would like to receive a summary report of the study findings or some self-help references, please indicate your interest on this form, the results were e-mailed to you. In addition, you can indicate whether you are interested in participating in future research projects regarding stress and coping and the well-being of overseas Chinese.

Part Three will take approximately 5 minutes to complete. Throughout the questionnaire please feel free to ask me any questions if you are uncertain about an item. You are welcome to make any comments or suggestion about this project. Thank you again, and your participation is very much appreciated.

Sincerely,

Dan Zhang

<h2 style="margin: 0;">The Overseas Chinese Project</h2>
--

Job Satisfaction

The following questions will give you a chance to tell how satisfied or dissatisfied you feel about your job at present. **Please choose the numbered response that most accurately describes your satisfaction with your current job over the past two weeks.**

1. Which one of the following shows how much of the time you feel satisfied with your job. _____

- 1 (Never)
- 2 (Seldom)
- 3 (Occasionally)
- 4 (About half of the time)
- 5 (A good deal of the time)
- 6 (Most of the time)
- 7 (All the time).

2. Choose one of the following statements which best tells how you like your job. _____

- 1 (I hate it)
- 2 (I dislike it)
- 3 (I don't like it)
- 4 (I am indifferent to it)
- 5 (I like it)
- 6 (I am enthusiastic about it)
- 7 (I love it).

3. Which one of the following best tells how you feel about changing your job ____?

- 1. (I would quit this job at once if I could).
- 2. (I would take almost any other job in which I could earn as much as I am earning now).
- 3. (I would like to change both my job and my occupation).
- 4. (I would like to change my job, but I would do so if I could get a better job).
- 5. (I am not eager to change my job, but I would do so if I could get a better job).
- 6. (I cannot think of any jobs for which I would change).

7. (I would not exchange my job for any other).
4. Which one of the following shows how you think you compare with other people_____?
1. (No one dislikes his or her job more than I dislike mine).
 2. (I dislike my job much more than most people dislike theirs).
 3. (I dislike my job more than most people dislike theirs).
 4. (I like my job about as well as most people like theirs).
 5. (I like my job better than most people like theirs).
 6. (I like my job much better than most people like theirs).
 7. (No one likes his or her job better than I like mine).

The Overseas Chinese Project

Symptoms

Below is a list of problems and complaints that people sometimes have. Please read each symptom carefully. Choose any number on the 5 point scale provided below (where 1 is not at all and 5 is extremely), to indicate how much the problem has bothered you during the past 2 weeks.

1	2	3	4	5
(Not at all)	(A Little Bit)	(Moderately)	(Quite a Bit)	(Extremely)

1. Headaches. _____
2. Faintness or dizziness. _____
3. Pains in the heart or chest. _____
4. Pains in the lower back. _____
5. Nausea or upset stomach. _____
6. Soreness of your muscles. _____
7. Trouble getting your breath. _____
8. Hot or cold spells. _____
9. Numbness or tingling in parts of your body. _____
10. A lump in your throat. _____
11. Felt weak in parts of your body. _____
12. Heavy feelings in your arms and legs. _____

The Overseas Chinese Project

Using the scale below, indicate the number which best describes how often you felt or behaved this way--during the past 1 week.

0	1	2	3
Rarely or None of the Time (less than 1 Day)	Some or a Little of the Time (1-2 Days)	Occasionally or a Moderate Amount of the Time (3-4 Days)	Most or ALL of the Time (5-7 Days)

1. Bothered by things that don't usually bother you. _____
2. Appetite was poor. _____
3. Felt unhappy even after talking with family and friends. _____
4. Felt that you were just as good as other people. _____
5. Had trouble keeping your mind on what you were going. _____
6. Felt depressed. _____
7. Felt that everything you did was an effort. _____
8. Felt hopeful about the future. _____
9. Thought your life had been a failure. _____
10. Felt fearful. _____
11. Had restless sleep. _____
12. Felt happy. _____
13. Talked less than usual. _____
14. Felt lonely. _____
15. People were unfriendly. _____
16. Enjoyed life. _____
17. Had crying spells. _____
18. Felt sad. _____
19. Felt that people disliked me. _____
20. Not feel motivated, and could not 'get going.' _____

<p style="text-align: center;">The Overseas Chinese Project</p>
--

You have completed Part Three, please send your response now. Your individual responses to each of the questionnaires will remain **anonymous and confidential**. To ensure anonymity, we ask that you **be sure to send your reply directly to my e-mail address only** by using the reply function on your e-mail system. You were receiving Part Two of the project by e-mail in two weeks time, and the same procedure were used for your participation.

Please contact me if you stop working for more than a week (e.g., for holidays, sick, etc) before you complete the Part Two questionnaires. If that is the case, for research purposes, I will send you Part Two after you have a continued to work for two weeks.

**If you have any questions, comments or suggestions,
please feel free to contact me.**

Thank you again, and have a nice day.

APPENDIX F

Summary of Results Request Form

Monetary Award Entry Form

The Overseas Chinese Project

**Request for Summary Report of Findings or
Participation in stress and coping research in the future**

a) Please indicate if you wish to receive a summary of the study's findings by e-mail: _____

1 (yes) 2 (no)

b) Please indicate if you are interested in participating in future stress and coping research: _____

1 (yes) 2 (no)

****** Enter to Win******

A

\$25 Award

Name _____

Address _____

I am grateful for your time and effort in completing each of the three questionnaires. As a way of showing my appreciation, I am offering six \$25 cash awards to six participants through a random draw. If you wish to enter this draw, please complete your name and address and e-mail back to me.

Please Note: Only those participants who completed and returned all three questionnaires are eligible to enter.



*******Thank you for your participation*******

It is very important for me to hear your comments or suggestions.

Please feel free to contact me.

Dan Zhang

University of British Columbia

Department of Counselling Psychology

2125 Main Mall

Vancouver, B.C. Canada V6T 1Z4

E-mail: dan@unixg.ubc.ca

APPENDIX G**Demographic Information on Dropout Sample
of Overseas Chinese Professionals**

Table G1

Demographic Information on Dropout Sample of Overseas Chinese Professionals (Total N=14, men=8, women=6)

Variable	Mean	SD	f	Range	%
Age (years)	34.07	7.48		20-49	
Years of Overseas	6.61	3.02		1-11	
Country of Birth					
People's Republic China			12		85.7
Taiwan			2		14.3
Marital status					
Married			9		63.3
Single			4		28.6
Divorced			1		7.1
Living Accommodations					
Live alone			3		21.4
with own family			9		64.3
with friends			1		7.1
with roommates			1		7.1
Children					
None			7		50.0
one			4		28.6
two			2		14.3
three or more			1		7.1
Family Income					
\$5,000 to \$14,999			1		7.1
\$15,000 to \$29,999			1		7.1
\$30,000 to \$59,999			5		35.7
\$60,000 to \$99,999			5		35.7
\$100,000 to \$149,000			1		7.1
Over \$200,000			1		7.1
Member of Overseas Organizations					
Yes			9		64.3
No			5		35.7
Attending Social Group Event					
Not at all			5		35.7
Once a year			2		14.3
Twice a year			6		42.9
Weekly			1		7.1
Religion					
None			14		100.1

(table continues)

Variable	Mean	SD	f	Range	%
Education					
Bachelor			2		14.3
Master			6		42.9
Doctorate			3		21.4
Post Doctorate			3		21.4
Level of English					
Functional			6		42.9
Fluent			5		35.7
Very fluent			3		21.4
Country Working at Present					
Canada			2		14.3
USA			12		78.6
Sweden			1		7.1
Current Occupation					
Professor			1		7.1
Doctor			3		21.4
Engineer			2		14.3
Researcher			6		42.9
Librarian			1		7.1
Other			1		7.1
Years Worked in current position					
	1.63	1.21		0.3-3.33	
Hours worked/week					
	39.71	12.26		6-56	
Previous Occupation					
Student			2		14.3
Profession			2		14.3
Researcher			2		14.3
Nurse			1		7.1
Doctor			2		14.3
Lecturer			2		14.3
Counsellor			1		7.1
Others			1		7.1
Years worked before overseas					
	4.79	3.33		0-13	

Note. "Other" = non-classified.

APPENDIX H

Pilot Study Phase I Report: E-mail Focus Group

Pilot Study Report: E-mail Focus Group

E-mail focus group discussions were conducted with 20 overseas Chinese volunteers who are currently working in professional occupations (e.g., teachers, researchers, managers). A total 36 messages were collected during discussions that lasted about a month starting in the mid of November, and ending at mid December 1995. Chinese overseas were recruited through posted e-mails through e-mail networks, such as WWW and China.

Most of the participants' age were unknown at this time. Education background include 93% graduate degree and 7% Bachelor degree, occupations include professor (36%), researcher (36%), research Assistant, (7%), and technician (21%). Length of stay overseas ranges from 1 to 12 years with average 7.07 years.

Procedure

Each participant has access to the e-mail network, and they sent in their consent forms for their involvement of the discussion, and permission to use their discussion for this study. The researcher was the leader of the group. Two basic questions were asked in the discussion: (a) What are some of things that you have identified as difficulties when you work in an overseas environment; and (b) What are some of ways that you have used to deal with your difficulties.

In order to maintain total confidentiality for the participants, no group list was formed, personal e-mail addressees were not presented within the group, every e-mail message was sent directly to the researcher first, and after excluded the e-mail address of the senders, only the messages were distributed to the group participants for continue discussion. Participants send me their responses to the inputs distributed to them, and the same procedure were used in the focus group discussion till the end. E-mail messages were downloaded, edited by omitting the name and e-mail address of each individual, and printed. Messages were content analysed to locate a set of themes that summarised the kinds of stressors at work and coping efforts experienced by Chinese overseas.

Results

From a total of 36 e-mail responses, data were content analyzed to identify 7 stressor themes (e.g., language difficulties in daily conversations, lack of sense of belonging) and nine coping efforts (e.g., working harder, blaming self for not doing a good job). The results indicated a need to consider stressors relevant to cultural differences and individual perceptions. Please see Table 2 for the summary of the results.

Table H1

Stressors Themes (from Focus Group)Theme 1

Language difficulties in daily with co-workers:

This theme consists of language barriers at work. Comments were mainly focused on Chinese overseas' social interactions with co-workers at work.

Samples

“Except working, I still cannot understand a lot what my peers are talking. So I cannot join the discussions separates me from my peers.”

Theme 2

Loss of self identity and social status:

This theme includes Chinese overseas' feeling devalued and lacking recognition at the workplace.

“We are frustrated. We worked so hard but could not get well recognized or appraised.”

“I cannot see myself as the same in Canada as I was in China, my high level of academic degree does not help me at all.”

“Because my area of study area is not recognized in the job market here in Canada, it forced me to change my direction, which means I had to give up almost ten years' experiences and start all over at an age more than 30.”

Theme 3

Feeling of uncertainty about the relationship with managers and co-workers and lack of the sense of belonging:

This theme contains comments on Chinese overseas' uncertainty on how his or her bosses and co-workers' view about them.

“I work for my company and my direct manager, they give me a job offer and pay me salary, but I don't know how they feel about me. Not many co-workers tell me about how they see me and I do not feel close to them, which can be very stressful.”

“When I started to work, I did not feel the welcome from people there, it is not like what I had experienced in China. I just don't get the similar sense of care and belonging at work.”

Theme 4

Conflicting on value of loyalty to the work company

This theme is composed of Chinese overseas' belief of loyalty to the

“The work is the same as I did in China, but actually I feel here is not the same as Chinese or Japanese loyalty to their company, here everyone has their own plan and way of doing things. Everyone is working for self, that is

work company and the conflict with the individual independence in decision making.

all about. I don't know what to say, maybe I am just not used to this way yet."

Theme 5

Loss of close support network:

"I think social circle is often built with childhood and teens as young people would fit in to each other much easier than elders. Thus, it becomes very difficult to make close friends and to have social relationships and support here in Canada."

This theme includes Chinese overseas' perceived lack of support when facing challenges, and feeling of isolation because the loss of close network from homeland.

Theme 6

Feel pressured related to open expression:

"I don't feel comfortable to open my opinions in front of others, I believe it is something that people do as they like to show off. I like to do the work but not make noise about it. As such, however, I can be seen as I know nothing."

Includes Chinese overseas' feeling of difficulty when requested to express self in front of others includes making both positive and negative comments about themselves largely due to the Chinese cultural influence.

Theme 7

Uncomfortable to ask for help from co-workers:

"I am a Chinese and new to the company, but I don't feel I should ask too much from other."

This theme contains Chinese overseas' difficulties related to help seeking

"If they like, they would ask me whether I need help, I don't want be looked down by others by asking something that may be too simple" and stupid.

Table H2

Coping Themes (from Focus Group)Theme 1

Working harder:

This theme centers on Chinese overseas' major coping mechanism.

Samples

"I know I need to readjust myself, so simply to work harder and to learn more. We have overcome many hardships in the past even if in China. We know how to do better jobs, and we believe that hard work always pay back."

Theme 2

Active efforts:

Theme 2 includes coping with stressful aspects of working by taking an active role in learning social skills, movies, adopting, and familiarizing oneself with the local culture.

"I found the willingness to readjust myself is very important and necessary."

"I found familiarity with the pop-culture (TV show, literature, or just everyday life) helped a lot, I tried to join conversation with my co-workers. I found that good ideas are not often easy to be understood but tidy neat presentation would certainly give a better impression."

"I learned how to communicate with my supervisor and my colleagues. Once I talk more and join their water-cooler conversations, hallway gatherings, and lunch table triages, in other words, once I started to "fit in," the workplace became a much likable environment."

Theme 3.

Find commonality:

This theme represents Chinese overseas' cognitive action of looking for similarities rather than differences in terms of work environment, working values, and relationship.

"I do not like to exaggerate the differences because problems are everywhere the same. I see other people (such as Italian, Irish, Jewish, Arab, Eastern Indian) may have the same feelings as we do."

"Good value judgments are equally important and useful in the Western society. I found there are so many things in common, such as people's attitude to work, relationship, love, family, and friends, maybe not all but in general."

"There are people's common behaviors in the new world and the old one. Once you know them, they are not really much different with those in China or any other places."

Theme 4

Be proud of being a Chinese and making oneself home in Canada:

Includes Chinese overseas' positive self image and their active involvement in the society.

"We should feel proud about our background that include our special experiences in China and Chinese culture. It is nothing wrong to be a new comer in Canada. I view Canada as my home. The home feeling provides me the most strong confidence on myself in my working place and in the society."

"Canada promotes multiculturalism, even if I am a Chinese in origin, I know I am a real Canadian, not because I can speak the language, but I pay my tax, most importantly, involve in and contribute to the society."

Theme 5

Confident about one's intelligent and prepare to take risks:

This theme reflects Chinese overseas' positive view about their education background and skills.

"I believe we are group of intelligent people who could struggle and made so far from where we come from."

"I believe the education background, skills and work experiences have make and will make us confident to deal with stressful situations."

"I am a hard worker, I come here prepared to take risks, I know things are difficult, but I will make the best I can anyway."

Theme 6

Seeking support:

This theme includes Chinese overseas making new friends with other Chinese overseas and local people.

"Very often at workplace, we Chinese stick together because we know how we feel and we usually have better advice to each other."

"Discussions can ease our stress. I also got many supports from local people. Our colleagues, bosses, and people we deal with are generous. I feel that they know how to respect something that is totally new in their experiences. You can make friends with them without losing your dignity."

Theme 7

Negative view and avoidance:

This theme involves Chinese overseas' passive ways of coping with their difficulties

"In general, I do not think that out of China town Canadian society really has a large interest in us other than to attract money and educated people for this country."

"Maybe I am wrong, I still feel the origins of English and French as well as Germans get

the most cultural respect here. “

“I don’t want talk about it because it makes me feel down. I may have to leave here.”

Theme 8

Blame and doubt about oneself:

This theme is comprised of personal beliefs that they are not doing good jobs.

“Certainly there are problems with my knowledge and language, I need to do more or learn more so that I can stand at the same level as other Canadians.”

“I still regret that I could not make enough local friends here in Canada. I don’t know if I could ever do the work the same as native Canadians.”

Theme 9

Thinking positively about future:

This theme reflects Chinese overseas’ positive views about their future.

“Compared to where I come from(the time I arrived Canada), I see the differences, I think we were able to do things better in the long run.”

APPENDIX I

Pilot Study Phase II Report: Pilot Questionnaires

Pilot Study Phase II Report: Pilot Questionnaires

This phase of the pilot study was conducted to refine the scales selected, particularly the collective coping items developed for this study. Eligibility criteria for the participants included first generation overseas Chinese who were working in professional occupations. Twenty three volunteer overseas Chinese professionals, both men ($n=15$) and women ($n=8$) from Canada (91.3%) and the United States (8.7%) participated. Respondents ranged in age from 27 to 50 years ($M=34.78$, $SD=5.09$). The average length of time that participants lived overseas was 5.72 years ($SD=2.82$) ranging from 1 to 11 years. The average length that respondents were employed full- or part-time in their current position was 2.54 years (range from 2 month to 12 years) with an average 41.03 hours worked per week ranging from 10 to 76 hours per week. The sample consisted of professors (4.3%), lawyers (4.3%), researchers (43.5%), engineers (4.3%), accountants (8.6%), managers (4.3%), counselors (4.3%), and teachers (13%). With respect of language, English was identified as the second language for all the participants with most at level of fluent (52.2%), and some at functional (30.4%) and very fluent levels (17.4%). Three reported Japanese as their third language. The majority of respondents had Bachelor (26.1%) to Master degree (39.1%), 17.4% had Doctorates, and 17.4% Post Doctorate degree. About 34% of the participants stated that they are members of overseas Chinese organizations, and 65% responded no to this question. Ninety five percent of the respondents were married, 47.8 % reported having no children, 47.8 % reported having one child, and 4.3% reported having two children. About 74% participants were living with their own family, 8.7% were living alone, and 17.4% were living with roommates. Approximately 17% reported their family income as \$ 14,999 USD or less; 34.8% reported between \$15,000 and \$29,999; 30.4% reported between \$30,000 to \$59,999, with the balance of 13% reporting above \$60,000. (Please see Table 3 for complete demographic information).

Procedure

The pilot study was conducted through an e-mail network. All participants voluntarily consented by e-mail to be involved in the study. Questionnaires (please see Appendix D to F for the details of the

questionnaires) were sent to each participant three times two weeks apart. Participants were also encouraged to make comments and suggestions as well as completing the questionnaires. Most of the respondents sent their replies through e-mail. The questionnaires were downloaded, and edited by using an individualized code to replace the name and e-mail address of the each participant. The downloaded files were saved on a disk with security passwords placed to insure the confidentiality of the information. Four respondents printed the questionnaires from their e-mail and sent back their responses directly to the researcher, and those questionnaires were locked in a filing cabinet. Of the 23 returned questionnaires, 20 were used to refine the collective coping items, and 3 were unusable due to failure to identify a stressful event during the 2 weeks between completing part 1 and part 2 of the questionnaires.

Results

About 35% of the participants made comments and suggestions such as changing the order of the questions in part one (for example to put past work experiences before the years of overseas), and correcting typos. Some participants also recorded the time it took them to complete the questionnaires and raised some concerns regarding the length of part 1 (times used range from 30 to 45 min. to fill out part 1). Comments were also made regarding the distribution of the questionnaires. They suggested that I encourage individuals to mail back their respondents directly to the researchers if such procedure is applicable to interested people who have no access to e-mail. Of the 23 respondents, 13 indicated that they were interested in participating in future stress and coping related studies.

No comments were made regarding the collective coping items. Every item in the collective coping measure was responded to and the means of each item ranged from 1.10 to 1.85 with one exception of .50 (item 38: tried to find a solution by using Chinese e-mail networks), and standard deviations ranged from .60 to 1.08. Such results indicate that these items are identified as ways of coping by overseas Chinese in this pilot sample. Internal correlation coefficients computed with ranged from .25 to .76 among the items except one with .93 (correlation between item 35 and 36). The high correlation coefficient obtained between item 35: shared my feelings in order to help others in my group who have similar problems, and item 36:

shared my experiences in order to help others in my group deal with similar problems, indicates that these two items may be viewed as identical items. It is possible that feelings are considered as part of the experiences by Chinese respondents. Therefore, these two items were combined into one—shared my feelings and experiences in order to help others in my group deal with similar problems. No further changes were made to refine the questionnaires.

APPENDIX J

Pilot Study Phase II: Demographic Information of Overseas Chinese Professionals

Table J1

Pilot Study Phase II: Demographic Information of Overseas Chinese Professionals (N=23)

Variable	Mean	<u>SD</u>	f	Range	%
Age (years)	34.78	5.09		27-50	
Years of Overseas	5.72	2.82		1-11	
Years worked before overseas	4.63	2.86		1-10	
Years Worked in current position	2.54	2.87		0.1-12	
Working hours/week	41.03	15.16		10-76	
Gender					
Male			15		65.2
Female			8		34.8
Country of Birth					
People's Republic China			23		100.0
Marital status					
Married			22		95.7
Single			1		4.3
Living Accommodations					
Live alone			02		8.7
with own family			17		73.9
with roommates			4		17.4
Children					
None			11		47.8
one			11		47.8
two			1		4.3

(table continues)

Variable	Mean	<u>SD</u>	<u>f</u>	Range	%
Education					
Bachelor			6		26.1
Master			9		39.1
Doctorate			4		17.4
Post Doctorate			4		17.4
Member of Overseas Organizations					
Yes			8		34.8
No			15		65.2
Attending Social Group Event					
Not at all			9		39.1
Twice a year			5		21.7
Monthly			6		26.1
Missing			3		13.0
Religion					
Protestantism			1		4.3
Buddhism			1		4.3
None			20		87.0
Other			1		4.3
Level of English					
Functional			7		30.4
Fluent			12		52.2
Very fluent			4		17.4
Country Working at Present					
Canada			21		91.3
USA			2		8.7
Current Occupation					
Profession			1		4.3
Lawyer			1		4.3

(table continues)

Variable	Mean	<u>SD</u>	<u>f</u>	Range	%
Engineer			1		4.3
Researcher			10		43.5
Accountant			2		8.7
Manager			1		4.3
Counsellor			1		4.3
Teacher			3		13.0
Other			1		4.3
Missing			2		8.7
Previous Occupation					
Profession			2		8.7
Doctor			3		13.0
Lawyer			1		4.3
Engineer			1		4.3
Lecture			3		13.0
Researcher			3		13.0
Accountant			1		4.3
Manager			3		13.0
Teacher			1		4.3
Other			4		17.4
Missing			1		4.3
Family Income					
\$500 to \$14,999			4		17.4
\$15,000 to \$29,999			8		34.8
\$30,000 to \$59,999			7		30.4
\$60,000 to \$99,999			2		8.7
\$150,000 to \$200.000			1		4.3
Missing			1		4.3
Request for Summary					
Yes			13		56.5
no			5		21.7
Missing			5		21.7
Future Participation					
Yes			13		56.5
no			5		21.7
Missing			5		21.7

APPENDIX K
Demographic Information on
for Total Sample of Overseas Chinese Professionals

Table K1

Demographic Information on Total Sample of Overseas Chinese Professionals (N=228)

Variable	Mean	SD	f	Range	%
Age (years)	32.61	6.66		19-61	
Years of Overseas	5.92	5.32		1-40.5	
Country of Birth					
People's Republic China			213		93.4
Hong Kong			7		3.1
Taiwan			4		1.8
Singapore			1		.4
Indonesia			3		1.3
Marital status					
Married			156		68.4
Single			58		25.4
Divorced			12		5.3
Widowed			1		.4
Non-specified			1		.4
Living Accommodations					
Live alone			42		18.4
with own family			142		62.3
with friends			38		16.7
with roommates			4		1.8
Non specified			2		0.9
Children					
None			119		52.2
one			72		31.6
two			33		14.5
three or more			4		1.8
Family Income					
<\$5,000			14		6.1
\$5,000 to \$14,999			42		18.4
\$15,000 to \$29,999			51		22.4
\$30,000 to \$59,999			61		26.8
\$60,000 to \$99,999			29		12.7
\$100,000 to \$149,000			22		9.6
\$15,000 to \$200,000			6		2.6
Over \$200,000			3		1.3

(table continues)

Variable	Mean	<u>SD</u>	f	Range	%
Education					
High School			2		.9
Technical School			1		.4
Diploma			6		2.6
Bachelor			39		17.1
Master			108		47.4
Doctorate			42		18.4
Post Doctorate			30		13.2
Member of					
Overseas Organizations					
Yes			122		53.5
No			104		45.6
No indication			2		.9
Attending Social					
Group Event					
Not at all			71		31.1
Once a year			34		14.9
Twice a year			77		33.8
Monthly			22		9.6
Weekly			24		10.5
Religion					
Catholicism			4		1.8
Protestantism			12		5.3
Buddhism			6		2.6
Christian			17		7.5
None			189		82.9
Level of English					
A little			1		.4
Functional			51		22.4
Fluent			125		54.8
Very fluent			51		22.4
Stressor Type					
Uncertainty about work quality			56		24.6
Work overload			49		21.5
Unfair treatment			37		16.2
Language barriers			31		13.6
Cultural and work value differences			32		14.0
Interpersonal conflict			8		3.5
Misunderstanding			11		4.8
Under employment			1		.4
Lack of work support			1		.4
Other			1		.4

(table continues)

Variable	Mean	SD	f	Range	%
Country Working					
at Present					
Canada			78		34.20
USA			109		47.80
Australia			12		5.30
Sweden			13		5.70
Finland			6		2.60
UK			7		3.10
Germany			1		.40
Other			2		.90
Current Occupation					
Profession			12		5.30
Engineer			29		12.70
Researcher			106		46.50
Manager			15		6.60
Nurse			1		.40
Psychologist			2		.90
Accountant			4		1.80
Counsellor			1		.40
Lawyer			2		.90
Lecturer			13		5.70
Social Worker			3		1.30
Teacher			16		7.00
Technician			6		2.60
Librarian			6		2.60
Analyst			8		3.50
Other			4		1.80
Years Worked in current position	2.17	2.78		1-27.5	
House worked/week	38.00	14.68		5-80	
Previous Occupation					
Student			58		25.40
Profession			12		5.30
Engineer			26		11.40
Researcher			32		14.00
Manager			5		2.20
Nurse			2		.90
Doctor			8		3.50
Psychologist			1		.40
Accountant			4		1.80
Lawyer			2		.90
Lecturer			42		18.40
Teacher			16		7.00
Technician			10		4.40
Librarian			6		2.60
Others			4		1.70
Years worked before overseas	3.28	3.89		0-18.1	

Note. "Other" = non-classified.

Appendix L

Collective Coping Items

Table L1
Collective Coping Items

-
1. Talked to someone from my group of people about the situation.
 2. Tried to avoid arguing with people in my group in order to maintain group harmony.
 3. Talked to someone from my group of people about how I was feeling.
 4. Tried to understand the problem by determining whether it is a common issue at my workplace.
 5. Tried to find out how important the problem is for my group.
 6. Spoke out for the benefit of my group.
 7. Tried to confirm that my feelings were similar to those of other people in my group.
 8. Tried to find out if my reactions to the problem were acceptable to others in my group.
 9. Followed the ways that other people in my group dealt with similar problems.
 10. Shared my feelings in order to help others in my group who have similar problems.
 11. Shared my experiences in order to help others in my group deal with similar problems.
 12. Tried to get other people in my group involved in order to solve the problem.
 13. Tried to find a solution by using Chinese e-mail networks.
 14. Talked to someone from my group who could do something concrete about the problem.
 15. Asked a respected relative/friend for advice.
 16. Tried to understand the other person's concerns.
 17. Tried to understand how the other people in my group felt.
 18. Tried to figure out what would make the other people in my group feel better.

Note: Items 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 are newly developed collective coping items. 1, 3, 14 are modified items from the Ways of Coping Checklist (WCC; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Item 15 is from the Chinese Ways of Coping (Chan, 1994). Items 16, 17, 28 are modified items from O'Brien & DeLongis' (1996) Relationship-Focused Coping Scale.

APPENDIX M**Means, Standard Deviations, and Reliabilities of Path Model Variables****for Total Sample of Overseas Chinese Professionals**

Table M1

Means, Standard Deviations, and Reliabilities Of Path Model Variables for Male and Female (N=228)

Variable	<u>M</u>	<u>SD</u>	Score Range	Reliability (Cronbach's Alpha)	Skewness	Kurtosis
Collective values	250.54	30.20	160-325	.88	-.08	.04
General self-efficacy	29.18	4.87	12-39	.85	-.47	.21
Social Support	29.16	5.39	12-36	.87	-1.20	1.18
Work Support	20.75	3.68	12-30	.74	.16	-.08
Control Appraisal	19.67	4.54	6-30	.74	-.29	-.38
Self-efficacy Appraisal	11.07	2.55	4-15	.60	-.27	-.49
Collective Coping	17.22	8.72	0-39	.90	.08	-.45
Engagement Coping	18.83	6.19	0-32	.78	-.29	-.20
Disengagement Coping	9.22	4.67	0-23	.70	.31	-.29
Job Satisfaction						
(time 1) ^a	18.68	3.22	10-27	.77	-.27	.16
(time 2)	18.71	3.18	9-27	.80	-.18	.38
Somatic Symptoms						
(time 1)	6.24	5.59	0-31	.83	1.45	2.52
(time 2)	7.10	5.31	1-33	.83	1.50	3.02
Depressive Symptoms						
(time 1)	15.40	8.96	0-46	.86	.82	.43
(time 2)	15.14	8.93	0-46	.87	.75	-.42

^a Time 2 score obtained one month later of time 1.

Appendix N
Coping Item Factor Loadings
&
Deleted Coping Items

Table N1

Coping Item Factor Loadings

Factor	Loading	Item
Collective Coping (total 13 items)	.75	Shared my feelings and experiences in order to help others in my group who have similiar problems. (35)
	.73	Tried to confirm that my feelings were similar to those of other people in my group. (32)
	.70	Tried to get other people in the group get involved in order to solve the problem. (36)
	.69	Talked to someone from my group who could do something concrete about the problem. (38)
	.68	Talked to someone from my group of people about how I was feeling. (28)
	.67	Tried to find out if my reactions to the problem were acceptable to others in my group. (33)
	.64	Tried to find out how important the problem is for my group. (30)
	.64	Talked to someone from my group of people about he situation. (26)
	.63	Spoke out for the benefit of my group. (31)
	.62	Followed the ways that other people in my group dealt with similar problems. (34)
	.53	Asked a respected relative/friend for advice. (39)
	.53	Tried to understand how the other people in my group felt. (41)
	.50	Tried to understand the problem by determining whether it is a common issue at my workplace. (29)

(table continues)

Factor	Loading	Item
Engagement Coping (total 11 items)	.63	Made a promise to myself that things would be different next time. (17)
	.58	Tried to see things from another perspective. (25)
	.58	Criticized or lectured myself. (13)
	.54	Realized I brought the problem on myself. (5)
	.53	Increased my efforts to make things work. (14)
	.48	Rediscovered what is important in life. (15)
	.47	Changed or grew as a person in a good way. (9)
	.47	Made a plan of action and followed it. (20)
	.46	Prepared for the worst. (23)
	.45	Tried to keep my feelings to myself. (12)
	.45	Went over in my mind what to say or do. (22)
<hr/>		
Disengagement Coping (total 9 items)	.59	Didn't let it get to me; refused to think about it too much. (3)
	.58	Refused to get too serious about the situation; tried to laugh about it. (2)
	.53	Went on as if nothing had happened. (16)
	.49	Kept others from knowing how bad things were. (10)
	.48	Expressed anger to the person who caused the problem. (6)
	.46	Hoped a miracle would happen. (7)
	.43	Had fantasies about how things might turn out. (19)
	.41	Waited to see what would happen before acting. (24)
	.40	Wished the situation would go away or somehow be over with. (18)

Note. The number in the parentheses () after each coping item corresponds to the question on the coping questionnaire in the study.

Deleted Coping Items (total 9 items)

(Loading <.40)

The number for each coping item corresponds to the question on the coping questionnaire in the study.

1. Stood my ground and fought for what I wanted.
4. Tried to get the person responsible to change his or her mind.
8. Concentrated on what I had to do next---the next step.
11. Tried not to act too hastily or follow my first hunch.
21. Prayed or found faith in God or my religion.
27. Tried to avoid arguing with people in my group in order to maintain group harmony.
37. Tried to find a solution by using Chinese e-mail networks.
40. Tried to understand the other person's concerns.
42. Tried to figure out what would make the other people feel better.

APPENDIX O

Sources of Engagement and Disengagement Coping Items

Table O1

Sources of Engagement and Disengagement Coping Item

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

<u>Coping Item</u>	<u>Source</u>
1. Stood my ground and fought for what I wanted.	Folkman et al.'s (1986) WOC a Item loaded on the Engagement Coping factor in Long et al.'s (1992) model.
2. Refused to get too serious about the situation; tried to laugh about it.	Folkman et al.'s (1986) WOC. Item loaded on the Disengagement Coping factor in Long et al.'s (1992) model.
3. Didn't let it get to me; refused to think about it too much.	Folkman et al.'s (1986) WOC. Item loaded on the Disengagement Coping factor in Long et al.'s (1992) model. Item loaded on Resigned Distancing Coping Factor in Chan's (1994) model.
4. Tried to get the person responsible to change his or her mind.	Folkman et al.'s (1986) WOC. Item loaded on the Engagement Coping factor in Long et al.'s (1992) model.
5. Realized I brought the problem on myself.	Folkman et al.'s (1986) WOC.
6. Expressed anger to the person who caused the problem.	Folkman et al.'s (1986) WOC. Item loaded on the Disengagement Coping factor in Long et al.'s (1992) model. Chan (1994)'s item "Took it out on others" loaded on Seeking Support and Ventilation factor.
7. Hoped a miracle would happen.	Folkman et al.'s (1986) WOC. Item loaded on the Disengagement Coping factor in Long et al.'s (1992) model.
8. Concentrated on what I had to do next--the next step.	Folkman et al.'s (1986) WOC.

- Item loaded on the Engagement Coping factor in Long et al.'s (1992) model.
- Item loaded on Rational Problem Solving Factor in Chan's (1994) model.
- Carver et al.'s (1989) item "I think hard about what steps to take" loaded on "planing" coping.
9. Changed or grew as a person in a good way. Folkman et al.'s (1986) WOC.
- Item loaded on Rational Problem Solving Factor in Chan's (1994) model.
- Carver et al.'s (1989) item "I try to grow as a person as a result of the experiences" loaded on factor Positive reinterpretation & Growth
10. Kept others from knowing how bad things were. Folkman et al.'s (1986) WOC.
11. Tried not to act too hastily or follow my first hunch. Folkman et al.'s (1986) WOC.
12. Tried to keep my feelings to myself. Folkman et al.'s (1986) WOC.
13. Criticized or lectured myself. Folkman et al.'s (1986) WOC.
- Item loaded on the Disengagement Coping factor in Long et al.'s (1992) model.
14. Increased my efforts to make things work. Folkman et al.'s (1986) WOC
- Item loaded on Rational Problem Solving Factor in Chan's (1994) model.
15. Rediscovered what is important in life. Folkman et al.'s (1986)

16. Went on as if nothing had happened. Folkman et al.'s (1986) WOC
Item loaded on the Disengagement Coping factor in Long et al.'s (1992) model.
17. Made a promise to myself that things would be different next time. Folkman et al.'s (1986) WOC
18. Wished the situation would go away or somehow be over with. Folkman et al.'s (1986) WOC
Item loaded on the Disengagement Coping factor in Long et al.'s (1992) model.
Item loaded on Passive Wishful Thinking Factor in Chan's (1994) model.
19. Had fantasies about how things might turn out. Folkman et al.'s (1986) WOC
Item loaded on the Disengagement Coping factor in Long et al.'s (1992) model.
Item loaded on Passive Wishful Thinking Factor in Chan's (1994) model.
20. Made a plan of action and followed it. Folkman et al.'s (1986) WOC.
Item loaded on Rational Problem Solving Factor in Chan's (1994) model.
21. Prayed or found faith in God or my religion. Folkman et al.'s (1986) WOC.
Carver et al.'s (1989) items (e.g., "I put my trust in God", "I pray more than usual") loaded on factor Turning to Religion.
22. Went over my in mind what to say or do. Lazarus and Folkman (1984) WCC.
Folkman et al.'s (1986) WOC.
Item loaded on the Disengagement Coping factor in Long et al.'s (1992) model.
23. Prepared for the worst. Lazarus and Folkman (1984) WCC.
Item loaded on Rational Problem Solving Factor in Chan's (1994) model.
24. Waited to see what would happen before acting. Lazarus and Folkman (1984) WCC.

Item loaded on Rational Problem Solving Factor in Chan's (1994) model.

25. Tried to see things from another perspective.

Lazarus and Folkman (1984) WCC.

Item loaded on Rational Problem Solving Factor in Chan's (1994) model.

APPENDIX P

Sources of Collective Ways of Coping Items

Table P1

Sources of Collective Ways of Coping Items

<u>Coping Item</u>	<u>Source</u>
1. Talked to someone from my group of people about the situation.	<p>Changed "someone" to "someone from my group of people" of Folkman et al.'s (1986) WOC</p> <p>Item loaded on Seeking Support and Ventilation factor in Chan's (1994) Chinese Ways of Coping model.</p> <p>Triandis' (1991) item "When faced with a difficult personal problem, one should consult widely with one's relatives" loaded on Attitudes Kin Collectivism" factor.</p> <p>Carver et al.'s (1989) item "I talk to someone to find out more about the situation" loaded on Seeking Social Support for Instrumental Reason factor.</p>
2. Tried to avoid arguing with people in my group to maintain group harmony.	<p>Folkman et al.'s (1986) item "Tried not to burn my bridges, but leave things open somewhat" loaded on Self-controlling factor.</p> <p>Yamaguchi's (1990) items "Avoiding argument with one's group even though one strongly disagrees with other group members" and "Maintaining harmony in one's group" on Collectivism Scale.</p> <p>Singelis and Brown's (1994) items "It is important for me to maintain harmony within my group" and "Even when I strongly disagree with group members, I avoid an argument" on Interdependence Self-Construal Scales</p>
3. Talked to someone from my group of people about how I was feeling.	<p>Changed "someone" to "someone from my group of people" of Folkman et al.'s (1986) WOC</p> <p>Item loaded on the Disengagement Coping factor in Long et al.'s (1992) model. Item loaded on Seeking Support and relation factor in Chan's (1994) model.</p>

- | | |
|---|---|
| 4. Tired to understand the problem by determining whether it is a common issue at my workplace. | Ho and Chiu's (1994) research on collectivism responsibility that "One's business is also the business of the group." |
| 5. Tried to find out how important the problem is for my group. | Developed based on Kirkbride, Tang, and Westwood (1991)'s research on Chinese conflict preferences and negotiating behavior (e.g., "Collectivist position.... in problem situation,...there may be a tendency to locate the issue in terms of its importance for the group, organizational unit, or even society at large" p. 367). |
| 6. Spoke out for the benefit of my group. | Ho and Chiu's (1994) research on collectivism responsibility that "One's business is also the business of the group." |
| 7. Tried to confirm that my feelings were similar to those of other people in my group. | Item developed based on Ho and Chiu's (1994) collectivism theory on "conformity to societal or group norms, compliance, and harmony." |
| 8. Tried to find out if my reactions to the problem were acceptable to others in my group. | Singelis and Brown's (1994) items "It is important for me to maintain harmony within my group" |
| 9. Followed the ways that other people in my group dealt with similar problems. | Same as above. |
| 10. Shared my feelings to help others in my group who have similar problems. | Same as above. |
| 11. Shared my experiences in order to help others in my group deal with similar problems. | Same as above. |
| | Item developed from my Focus group study. |
| | Pernnebaker and Harber's (1993) research on Collective Coping. |
| | Hui's (1988) item "one needs to return a favor if a colleague lends a help hand "on measurement of "Co-Worker" collectivism. |
| | Hui's (1988) item "I would help if a colleague at work told me that he or her needed money to pay utility bills" on measurement of "Co-Worker" collectivism. |

- Ho and Chiu's (1994) notion on collectivism that "friends should be concerned with each other's personal matters."
12. Tried to make others in my group get involved in order to solve the problem.
- Ho and Chiu's (1994) research on collectivism responsibility that "One's business is also the business of the group;" "Do things together;"
- "Collective efforts are superior;" and "Unity is strength."
- Pernnebaker and Harber's (1993) research on Collective Coping.
13. Tried to find a solution by using Chinese e-mail networks.
- Item developed from my Focus group study.
- Findings from Milgram (1993)'s research on societal coping and adaptive responses "hot lines" services on both problem and emotional focused coping.
- Carver et al.'s item "I ask people who have had similar experiences what they did" loaded on factor "Seeking Social Support for Instrumental Reason.
14. Talked to someone from my group who could do something
- Changed "someone" to "someone from my group of people" of concrete about the problem. Folkman et al.'s (1986) WOC
- Long et al. (1992) used a item of Dewe (1985) "Talked the problem over with my colleagues", and this item loaded on Engagement Coping in Long et al.'s (1992) model.
- Item loaded on Seeking Support and Ventilation factor in Chan's (1994) model.
15. Asked a respected relative/ friend for advice.
- Lazarus and Folkman (1984) WCC.
- Folkman et al.'s (1986) WOC.
- Item loaded on Seeking Support and Ventilation factor in Chan's (1994) model.
- Hui (1989)'s item "I can count on my relatives for help if I find myself in any kind of trouble" loaded on "Kin" Collectivism.

- | | |
|---|---|
| 16. Tried to understand the other person's concerns. | Item from O'Brien (1992) Relationship-Focused Coping. |
| 17. Tried to understand how other people in my group felt. | Item from O'Brien (1992) Relationship-Focused Coping (changed "the other person" to "the other person in my group"). |
| 18. Tried to figure out what would make the other people in my group feel better. | Item from O'Brien (1992) Relationship-Focused Coping. (changed "the other person" to "the other person in my group"). |
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a

WOC=Ways of Coping, Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986).

b

WCC=Ways of Coping Checklist, Lazarus, R. S., & Folkman, S. (1984).

Appendix Q
Intercorrelations among
the Collective, Engagement, and Disengagement Coping Subscales
&
Examples of ways of coping listed by participants

Table Q1

Intercorrelations among the Collective, Engagement, and Disengagement Coping Subscales (N=228)

Coping Subscale	Collective Coping	Engagement Coping	Disengagement Coping
Collective Coping	1.00		
Engagement Coping	.45	1.00	
Disengagement Coping	.31	.35	1.00

Table Q2

Examples of ways of coping listed by participants:

1. Find common ground for understanding.
2. Realize that you are responsible and you can change the situation.
3. Exercises and relax.
4. Thinking about future
5. Stick to my goal and plan.
6. Change people to work together.
7. Ask for professional help
8. Watch out, be careful.
9. Find what is the most important thing, and to solve it first.

Appendix R
A Random Sample of
Stressful Events at Work

The following are a random selection of stressful events that overseas Chinese professionals in the current study reported having experienced at work. Respondents described these events on Part Two of the questionnaire.

1. Unfair treatment received from others at work

“There was a professor in the department where I used to be constantly made bad remarks about Chinese. It was unfair but the person was very powerful and you can not do much about it.”

“We are in the fiscal year end. A manager from the auditing firm came last week. The controller introduced him to my supervisor without even mentioning my name while I was just standing there. I felt been ignored.”

“Did not receive the deserved mention in a publication for my contributions to a major project. It was later explained to me that the overlook was as an honest mistake.”

“I submitted a form to the administrator requesting access to a computer lab last Friday. But today the administrator told me she could not find the form, and I was asked to re-submit the form. And I have to go through the process once again. And I have to re-schedule the plan.”

“When the supervisor didn't appreciate my achievements and took it for granted that I worked hard and spent some spare time in the office, I felt very frustrated.”

“Disrespect from subordinate.”

“I feel that I was not getting enough respect and was neglected somehow.”

2. Communication difficulties because of language barriers

“Difficulties on communication with boss. Somehow because of language.”

“I have been always feeling a bit left out in my office because I can hardly engage myself into our coffee time conversation. The main reason is lack of knowledge and language difficulty.”

“Because of the language and culture difference. These two reasons really make a distance between XXXXX people and me. In general, XXXXX people are not sociable and talkble. Most people are shy and reserved. Sometimes I stay in my room working a whole day without saying a word to others. Can you imagine what kind stress I feel at this time?”

“The language barrier keeps this discussion really difficult.”

3. Conflicts between you and other people because of value or belief differences at work

“I had a meeting with a co-worker who is supposed to be the project leader but has very little background in the field. It is very difficult to discuss with him as he had hard time to understand. He does not trust me, and did not read my notes which he asked me to write for him. He thought he has smart ideas, which were not even suit for the project.”

“My computer was not functioning after changeover of the motherboard. It was agreed on site with computer support staff that he will fix it. But it will never happen even I pushed a couple of time. I believe that even you promise to do something orally, you have to do it. The western people are too easy not to keep their words.”

4. Uncertainty about the quality of your work

“After I try my best I can't finish well something. and begin to suspect of myself, and fearful about everything ahead.”

“I just won a competition for presentation couple days ago. I don't feel comfortable that my advisor keeps telling people how good I am. I am afraid that others might feel unease about it.”

“I am currently teaching Mandarin at XXXXXX. Considering the huge amount of money, time and energy my students have invested, they are indeed very critical about my teaching. Although I have experience of teaching other languages, having not gone through the process of learning the language (Mandarin), I find it very difficult to teach the right things students really need. Besides, I can not satisfy each student's learning preferences. I have been losing students during the last few sessions. This made me very nervous, frustrated and of course, guilty.”

5. Misunderstanding between you and other people at work

“We were changing office rooms. A colleague of mine (XXXXXX) moved his stuff into our rooms (previously shared by two people) before we moved out. Recently X phoned me and told me that he lost a box of material. He had already asked the other person whom had used the room before and she said she did not have his box. I told him that I did not have his box either and told him that he could go to my new room and see for himself. He said he had already done that. That's the stressful part. He checked my room before he asked. On one hand I feel sorry for him because he is really desperate. On the other hand I feel that he was suspicious of me (which is quite legitimate). But of course, he did not find his box in my room. But the problem remains, his box is still missing. The only thing I could do at that moment was to explain to him the stuff that I had moved hoping that he would believe me.”

“I am currently on a sabbatical leave in a foreign university. I have started and so far been smoothly working with a Chinese colleague who works under the supervision of my host professor. The scientific issue over which our understandings depart, in my opinion, is one of the basics and is well understood both in the literature and my own experienced. However, in trying to convince my colleague I might have been too formative and persistent of my own understanding, which, I guess, has hurt the personal pride of the colleague. In the past a couple of weeks I find ourselves talking more often in an argument than in a discussion.”

6. Work overload and time pressure

“Meeting schedule was changed due to the unexpected work schedule of other attendees. Lost some for preparation. Had to work overtime.”

"I have to work overtime (on the weekends and evenings) constantly. Not have enough time to look after or to spend with my family."

"My boss (advisor) asked me about the progress of a project. No particular progress for it because I was working on another one. Difficult to manage several things at the same time."

"I tried to meet the deadline."

"I had much work to do and was extremely busy two weeks ago I was asked to work in a different section where new skills and different responsibilities required. It took me a lot of effort to deal with it."

"When I was stressful by the intensive work in short period, my health will go too weak to have infected by flu or other uncomfortable feeling."

7. Lack support from work.

"I need chemical equipment for sample analyses. We don't have it in our lab. I urgently need the analytical data. Therefore, I talked to my supervisor and technician. My supervisor asked technician to solve this problem. The technician contacted with chemical center and tried to use their equipment, but up to now it is still not solved."

8. Under employment.

"I felt very embarrassed and frustrated when people knowing I had been a physician before overseas and now working as a lab technician. I hate to be questioned about how I feel about this just like someone asked me about this again this week at work. I would not say it is totally changed my field of interesting to a extend, but certainly is not what I was trained for. I am under the pressure of working for financial support, and also struggling to the fact that if I should continue work like this."

9. Interpersonal conflict.

"I am responsible for a project that involves/requires the co-operation for several other Development Managers. I've been struggling for the last couple of months because out of 6 groups, one Development Manager seems to be hell bent on NOT co-operating. Two weeks ago, she's finally made some attempt at complying ... but I'm finding that she really only was making a minimal effort. She's paid lip service to committing to participate in the project, but in reality has allotted no real resource or means in which to comply."

"The stress is that she is making me micromanage this project a tedious and unnecessary task if she would only co-operate. I've had no trouble with the other five groups and it are stressful to have to spend all my attention on her. A minor source of stress is that I am not fully confident that upper management is giving proper weight to this flagrant lack of co-operation from her. She has yet to incur appropriate level of "penalty" for being so contrary ... at least not according to their otherwise claim that this project, for which I've been given the responsibility to see through for my Division, is supposed to be the top priority to everyone."

10. Other

“My director is a lying person. He always intends to manipulate the number in the project financial analysis to get a make or a project looked better than it is. He likes to please boss with those rosy pictures he painted. However, sometimes I am the one to be asked to do those financial analyses. My boss's boss-an Executive Director wants to know the truth from me. What should I do?”

“The client had not paid me the fee for my service promptly.”

“Trying to deal with an unduly negative review on one of my manuscripts “

“A regular situation was that when I returned the result of a test to a class that some students were not happy about their grades. We had to talk about the reasons why they didn't do well and made some adjustment about the class structure. The stressful part is that it was difficult to get through to students that their grades were the result of their effort in preparing for the exam. I do not like dealing with complaining students.”

Appendix S

**Multivariate Analysis of Gender, Types of stressor,
Appraisal, Coping, and Outcome Variables**

Table S1

Multivariate Analysis of Gender, Types of stressor, Appraisal, Coping, and Outcome Variables

Source	df	F
Between Groups		
Sex (A)		
Control Appraisal	1	.35
Self-efficacy Appraisal	1	.02
Collective Coping	1	.00
Engagement Coping	1	.15
Disengagement Coping	1	5.64**
Changes in Job Satisfaction	1	.00
Changes in Somatic Symptoms	1	.30
Changes in Depressive Symptoms	1	2.97
Types (B)		
Control Appraisal	2	2.78
Self-efficacy Appraisal	2	3.58
Collective Coping	2	.01
Engagement Coping	2	.10
Disengagement Coping	2	.46
Changes in Job Satisfaction	2	2.99
Changes in Somatic Symptoms	2	.76
Changes in Depressive Symptoms	2	.78
A x B		
Control Appraisal	2	.33
Self-efficacy Appraisal	2	.43
Collective Coping	2	.06
Engagement Coping	2	.29
Disengagement Coping	2	.23
Changes in Job Satisfaction	2	1.42
Changes in Somatic Symptoms	2	.14
Changes in Depressive Symptoms	2	.31
Between Subjects Error		
Control Appraisal	222	(20.39)
Self-efficacy Appraisal	222	(6.42)
Collective Coping	222	(77.72)
Engagement Coping	222	(38.94)
Disengagement Coping	222	(21.65)
Changes in Job Satisfaction	222	(.86)
Changes in Somatic Symptoms	222	(1.00)
Changes in Depressive Symptoms	222	(1.00)

Note. Value enclosed in parentheses represent mean square errors. Gender refers to men and women. Types of stressor include uncertainty about work quality, work overload, and interpersonal value conflicts and others. ** $p < .01$.