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HONGYING CHEN

DISSERTATION ADVISOR: DR. STEFANÍA ÆGISDÓTTIR

BALL STATE UNIVERSITY

MUNCIE, INDIANA

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ABSTRACT

The purpose of the present study was to examine the influence of cultural factors, such as self-construal, and social beliefs, on coping for U.S. and Chinese college students. Data from 325 U.S. and 321 Chinese college students were used for the analyses. It was found that independent self-construal, beliefs in reward for application and social complexity predicted task-oriented coping and self-regulation for both the U.S. and Chinese students. It was also found that beliefs in both fate control and social cynicism were associated with avoidance and emotion-focused coping in both groups. These two patterns of relationships were also observed across gender in each sample. Differences were also noted between the two countries. For the U.S. students, independent self-construal and interdependent self-construal contributed equally to task-oriented coping and self regulation, whereas for the Chinese students, only independent self-construal predicted these coping strategies. Moreover, religiosity was associated with emotion-focused coping and self regulation for the Chinese participants, while this pattern was not found in the U.S. student sample.

The results of this study support the transactional model of coping. Consistent with previous findings, significant associations were found between three of the cultural variables (independent self-construal, beliefs in social complexity, and reward in application) and task-oriented coping. In contrast to prior research, the current study indicates that both independent and interdependent self-construal predicted task-oriented coping for the U.S. students. This contradicts Lam and Zane's (2004) findings which suggested that these two dimensions of self-construal affect coping differently. Moreover, the current study found associations in the U.S. sample between self-construal, social

beliefs, and coping dimensions which were originally identified in Chinese populations (i.e., self-regulation and help seeking). Similarly, the current research illuminated relationships in the Chinese sample between self-construal, social beliefs, and coping dimensions which were originally identified in the West (i.e., task-oriented and emotion-oriented coping). These findings suggest that current conceptualizations of coping in the West and China may not fully capture important aspects of coping in these two cultures. These results were discussed in relation to past findings in the literature, as well as the cultural contexts of the U.S. and China.

CHAPTER I

Introduction

Coping has been defined as the cognitive and behavioral approaches used to manage stressful life events (Lazarus & Folkman, 1984). In the U.S., coping has been a focus of research in social and behavioral science, medicine, public health, and nursing for more than thirty years (Folkman & Moskowitz, 2004). Coping was first conceptualized as a relatively stable style or trait for different individuals (Parker & Endler, 1992). This dispositional model of coping allowed for the development of reliable coping measures and the comparison of individual coping behaviors. Later, Lazarus and his colleagues (Lazarus & Folkman, 1984) proposed the transactional model of coping which holds that coping changes according to individual characteristics, environmental factors, and the interaction between the person and the environment. This model recognizes the importance of context in understanding coping behaviors and implies that coping responses are influenced by social and cultural factors.

Much attention has been given to the influence of situational phenomena on coping since the introduction of the transactional model, whereas the effect of sociocultural context has been examined far less (Cross & Vick, 2001). Heppner (2008) pointed out that cultural context affects all aspects of coping and that it has been overlooked in the vast majority of research in the U.S. Culture affects coping behavior in several ways (Aldwin, 1994; Heppner, 2008). Cultural beliefs and values inherently

affect the ways in which situational stressors are perceived and the coping strategies an individual uses to address these stressors. Furthermore, depending on the cultural setting, certain coping strategies may be more or less appropriate than others (Chun, Moos, & Cronkite, 2006; Heppner, 2008). For example, coping by removing the barrier to one's desired outcome is considered appropriate in individualistic societies because autonomy and independence are valued. In contrast, compromise and accommodation are deemed more appropriate in collectivistic societies in which interpersonal harmony is stressed. To understand the complexity of coping, it is important to include culture-specific constructs in the conceptual model of coping (Heppner, 2008).

One purpose of the current study was to understand the role of specific cultural factors on coping. Coping strategies used by U.S. and Chinese college students were compared in relation to how cultural factors influence coping strategies used by persons in these two countries. The purpose of the study was two-fold: a) to investigate the relationship between self-construal, social beliefs and coping in both countries, and b) to compare the interrelationship between self-construal, social beliefs, and coping in the two countries.

The literature contains many cross-cultural studies on coping behaviors (Hoedaya & Anshel, 2003; Lam & Zane, 2004; O'Connor & Shimizu 2002; Sheu & Sedlacek, 2002; Tweed, White, & Lehman, 2004). In these studies, the coping strategies utilized within individualistic societies (i.e., Britain, U.S., Canada, and Australia) were compared with those found in collectivistic societies (i.e., Indonesia, Japan, and East Asia). These studies found that individuals from both societies used similar coping strategies when faced with difficult situations. These strategies included taking action, seeking emotional

social support, avoidance and denial. Despite the similarities, these studies also revealed that individuals from collectivistic societies were more likely than those from individualistic societies to use internally targeted coping strategies, such as acceptance of and taking responsibility for the problem, self-control, and adjusting one's feelings and thoughts to accommodate the external environment.

The studies mentioned above have provided great insight regarding the cultural differences in coping. Still, the body of literature is not free of significant limitations. One such limitation lies in the assumption that a coping construct conceptualized in the West is universal and applicable to all cultures. Coping theories presented in the U.S. literature have been developed within the U.S. cultural context (Dunahoo, Hobfoll, Monnier, Hulsizer, & Johnson, 1998; Lazarus and Folkman, 1984; Parker & Endler, 1992). These theories include the dispositional model, which emphasizes the role of individual traits on coping (Parker & Endler, 1992), the transactional model which stresses the importance of cognitive appraisal and context on coping (Lazarus and Folkman, 1984), and the multiaxial model which incorporates the social dimensions of coping (Dunahoo et al., 1998). While these theories may describe coping constructs in the United States, they may not capture indigenous coping strategies used in other cultures. As Heppner (2008) pointed out, constructs based solely on the U.S. culture do not tell the whole story about coping for different cultures in the world.

It is highly likely that theories developed within a Western cultural context only identify values that influence coping behaviors that are salient to that particular world view. Thus, important values that are prominent in non-Western cultures are likely overlooked and undocumented. For example, individualism is a predominant social

framework in Western culture while collectivism is a predominant perspective in many non-Western cultures (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988). Individualism assumes that individuals are independent of one another and that one's identity is based on self-fulfillment (Oyserman, Coon, & Kemmelmeier, 2002). In an individualistic society, well-being is associated with the attainment of personal goals and the ability to take control of a situation. Thus, active problem-focused coping is encouraged and is usually associated with positive outcomes (Norman, Collins, Conner, & Martin, 1995; Ptacek, Smith, & Zana, 1992; Zakowski, Hall, Klein, & Baum, 2001). In contrast, problem-focused efforts may be considered antisocial in collectivistic societies because such efforts ignore the effect one's behavior has on others (Dunahoo et al., 1998). Instead, people in collectivistic societies may prefer doing nothing or adjusting their own thoughts and feelings to the external environment.

Coping theories developed in the West may not capture strategies which are non-action oriented or which require adaptation of internal thoughts/feelings to the environment. These theories are limited in the conceptualization of coping in other cultures, which leads to questions about the applicability of Western based measures in cross-cultural studies of coping. In their studies of cultural differences in coping, Hoedaya and Anshel (2003), Lam and Zane (2004), O'Connor and Shimizu (2002), Sheu and Sedlacek (2002), and Tweed at al. (2004), employed Western based measures of the coping construct without first assessing the equivalence of the construct within the cultures that were examined. The validity of these studies can be questioned, as the coping construct may not have identical meaning and function across the cultures that were being compared (Van de Vijver, 2003; Ægisdóttir, Gerstein, & Çinarbaş, 2008). It is,

for instance, possible that using coping instruments specifically developed to measure common coping strategies in the United States may not fully capture common coping strategies employed in countries outside the United States. This raises questions of a significant construct bias which may create serious limitations in cross-cultural comparisons (Ægisdóttir et al., 2008).

Indigenous studies conducted on the Chinese population have provided evidence that the coping construct in China and the United States are very different (Heppner, Heppner, Lee, Wang, & Park, 2005; Kwang, 1977, 1978, cited in Shek & Cheung, 1990, Yue, 2001). These studies identified some unique coping strategies employed in China that were seldom mentioned in the U. S. literature. These coping strategies included self-control, self-reflection, reframing, endurance, mobilizing personal resources, striving, seeking help from social resources, seeking family support, acceptance, appealing to a supernatural power, and adopting a philosophy of doing nothing. From these unique coping strategeis, Shek and Cheung (1990) derived two major coping dimensions, which were referred to as "self regulation" and "seeking practical social support." These unique coping strategies reflect behavioral characteristics of persons in a collectivistic society where perpetuation of group harmony and interdepedence are valued more than individual fulfillment (Tweed & Conway, 2006). Therefore, these coping dimensions, better reflect the behavior of persons in collectivistic societies who are more likely to choose compromise or to adjust their own thoughts/feelings than to confront another or disrupt social relationships when dealing with difficult situations. These strategies stand in stark contrast to the coping mechanisms emphasized in U.S. culture, such as problem-focused and emotion-focused coping which are proposed in the transactional model of

coping (Lazarus & Folkman, 1984) and are commonly cited in the coping literature (Norman et at., 1995; Ptacek, Smith, & Zanas, 1992; Zakowski, Hall, Klein, & Baum, 2001). Problem-focused and emotion-focused coping reflect a preference for confrontation and modification of the external environment (Tweed & Conway, 2006), and the importance of emotional expression (Markus & Kitayama, 1991) when coping with stressful events.

The identification of different coping behaviors in non-Western cultures points to the importance of addressing construct bias in cross-cultural research. In their discussion of methodological issues in cross-cultural studies, Ægisdóttir and colleagues (2008) suggested that researchers pay attention to construct bias and construct equivalence when making decisions about how to measure and study psychological phenomena. Similarly, Van de Vijver and Leung (1997) argued that investigating the applicability of a construct, and the instrument used to measure it, should involve the collection of additional data about local cultures, and that the study's design should represent both cultures equally. Based on these recommendations (Van de Vijver & Leung, 1997; Ægisdóttir et al., 2008), in the current study a convergence approach was employed to enhance the measurement of the coping construct in both the Chinese and the U.S. student samples. The convergence approach involved an administration of a Chinese (Chinese Coping Scale, CCS; Shek & Cheung, 1990) and a U.S. based (Coping Inventory for Stressful Situation, CISS; Endler & Parker, 1994) coping measure to both the U.S. and Chinese samples. It was assumed that this approach would provide a more comprehensive understanding of coping behaviors in China and the United States and would therefore provide a more valid comparison of factors affecting coping in these two cultures.

Lot of consideration was taken in the selection of a Chinese based coping measure. There have been a limited numbers of coping measures developed to capture indigenous coping strategies by the Chinese population. Two measures were identified by the time of data collection. One was the Collectivistic Coping Styles Inventory (CCSI; Heppner et al., 2005) and the other one was the CCS (Shek & Cheung, 1990). The CCSI was developed to measure present-day Taiwanese college students' coping with traumatic or stressful events. This scale has sound reliability and validity (Heppner et al., 2005; Wei, Heppner, Ku & Liao, 2008). The CCS measures middle-age Chinese adults' coping with interpersonal and work related stress. In comparison of these two scales, the CCSI stood out as strong candidate in comparison to the CCS since it targets current issues with college students and has been validated in other studies (Wei et al., 2008). However, it was not used in the current study due to several reasons. First, some of the coping dimensions in CCSI overlap with the dimensions of CISS (Endler & Parker, 1994), the U.S. based coping measure. For example, the Avoidance and Emotional Outlet subscales are similar to the Avoidance and Emotion-oriented coping in the CISS. There is, however, no overlap in coping dimension between CISS and CCS (Shek & Cheung, 1990). Second, the CCSI items were written to assess how helpful the coping strategy was in actually resolving the specific stressful event. For example, participants rated the helpfulness of the item on a Likert-type scale (0=never used this strategy; 1=used not of no help at all; 5=a tremendous amount of help). Because the current study aimed to measure the frequency of using certain coping strategies and both CISS and CCS met this criteria, the CCS was used instead of the CCSI.

In addition to expanding the conceptualization of the coping construct to limit construct bias, the current study addressed another methodological limitation in the current literature (Hoedaya & Anshel; 2003; O'Connor & Shimizu, 2002; Sheu & Sedlacek, 2002; Tweed et al., 2004). Previous studies have relied on level-oriented analyses such as *t*-tests and analyses of (co)variance to compare mean scores and to determine cultural differences in coping. Yet, level-oriented analyses are only applicable when scalar equivalence has been established (Ægisdóttir et al., 2008) and when there is no construct and/or measurement bias. Because there is some evidence that the coping construct may not be similar in China and the United States (Heppner et al., 2005; Kwang, 1977, 1978, cited in Shek & Cheung, 1990, Yue, 2001), a nomological network approach was used in this study. A nomological network approach involved an examination of a relationship among coping behaviors and cultural variables in each country as opposed to an examination of mean score differences in coping between countries (e.g., Van de Vijver, 2003). In this study, the coping construct's nomological network was examined by looking at the interrelationship between coping behaviors and cultural factors for the Chinese and U.S. student samples, separately. Similarities and differences in these relationship patterns would suggest cross-cultural variations in coping.

In addition to addressing the methodological limitations of previous studies, the current research examined a less explored subject in the literature – the influence of specific cultural variables on coping. One such variable is self-construal. Self-construal refers to the way people perceive themselves and is influenced by the shared subjective feature of one's culture (i.e., Western or Eastern philosophy) (Markus & Kitayama,

1991). Research has shown that people in individualistic cultures tend to construct an independent self-construal, whereas persons in collectivistic cultures are more likely to develop an interdependent self-construal (Markus & Kitayama, 1991; Triandis, 1995). A study (Hofstede, 1980) on cultural dimensions across 50 countries showed that the distribution of individualism-collectivism separates most Asian, Latin American, and African cultures from most North American and northern and western European cultures. Among these, Chinese culture is more collectivistic than mainstream U.S. culture (Bond, 1986; Hofstede, 1980; Smith, Dugan, & Trompenaars, 1996). Moreover, Chinese individuals have been found to be interdependent, while U.S. persons are more independent (Triandis et al., 1993). This link between individualism/collectivism and self-construal provides a theoretical framework to explain behavior through an examination of cultural influence.

The current research also suggests a relationship between self-construal and coping. Lam and Zane (2004) investigated Asian and White American student coping when faced with interpersonal stressors. It was found that Asian American students tended to use internally targeted coping (i.e., adjusting one's thoughts and feelings to accommodate the environment), whereas White American students were more likely to use externally targeted coping (i.e., take action to change the external environment). In addition, in comparison to the White Americans, Asian Americans were more oriented toward an interdependent self-construal and less oriented toward an independent self-construal. Moreover, Lam and Zane (2004) showed that self-construal had a mediating affect on ethnic differences in coping. Orientation toward an interdependent self-construal partially explained the greater use of internally targeted coping by Asian

American students. On the other hand, orientation toward an independent self-construal fully accounted for the greater use of externally targeted coping by White American students (Lam & Zane, 2004).

The relationship between self-construal and coping may explain why emotion-focused coping is more prevalent in the United States than in China. In an individualistic culture, expression of emotion is an important way of asserting one's internal attributes (i.e., traits, abilities, values) and enhancing one's self confirmation (Markus & Kitayama, 1991). In contrast, in a collectivistic culture like China where the maintenance of interpersonal harmony takes precedence over individual autonomy, the expression of emotion in public can be troublesome as it may disturb social interaction and may lead to interpersonal conflicts. Studies by Matsumoto and colleagues (Matsumoto, 1989; Matsumoto, Kudoh, Scherer & Wallbott, 1988) provide support for this view by showing that U.S. college students tended to experience emotions longer and more intensely than did their Japanese counterparts. These studies indicated that self-construal was an important construct in understanding differences in coping across culture.

Another important variable related to coping is social beliefs. The influence of social beliefs has long been addressed in the transactional model of coping (Park & Folkman, 1997). The transactional model pays attention to the interaction between the appraisal process and one’s belief system, which involves both global meaning and situational meaning in the context of coping. Global meaning refers to beliefs about the world, the self, and the relationship between the two constructs. Situational meaning refers to the appraisal of the circumstances of person-environment transactions. Social beliefs, or global meanings, shape appraisals of events, which in turn affect coping

strategies (Parker & Folkman, 1997). Based on a review of the literature on social beliefs from North America and on input from Chinese people and Venenzuelans, Leung et al. (2002) identified five dimensions of social beliefs, which include social cynicism, social complexity, reward for application, spirituality, and fate control. Social cynicism represents a negative perception of human nature such as a biased view about certain groups of people, a mistrust of social institutions, and a disregard for ethical means of achieving an end. Social complexity refers to the view that there are multiple solutions to social issues and that the outcome of events is uncertain. Reward for application represents the belief that investment of human resources results in positive outcomes. Spirituality refers to the view that spiritual forces influence the world and that religious institutions have a positive influence on social outcomes. Fate control refers to the beliefs that social events are determined by external forces (Leung et al., 2002).

Studies investigating the relations between social beliefs and coping in China, Iran and Canada showed that individuals who believe in destiny, as well as those who have a negative view of life and others, tend to attempt to cope with stressors by avoidance (Bond, Leung, Au, Tong, Cemonges-Nielson, 2004; Safdar, Lewis, Daneshpour, 2006). In addition, individuals who believe in social complexity and multiple solutions to problem solving are more likely to engage in problem-focused coping, as are people who believe that their efforts can produce positive outcomes. These studies indicate that beliefs about human nature and society have an impact on the coping strategies utilized.

In summary, the current study was based on the theoretical frameworks of the dispositional and transactional models of coping. While coping is relatively stable and

consistent across situation and time, the current study draws attention to the impact of cultural factors on coping by examining coping behaviors in relation to cultural factors such as self-construal and social beliefs.

This study also elaborated on previous cross-cultural studies of coping in several ways. First, it addressed some methodological limitations in the current body of research, A convergence approach was adopted to maximize coverage of the coping construct in the U.S. and Chinese cultures and a nomological network approach was used to further address the issue of cross-cultural validity. Furthermore, instead of measuring culture simply by nationality, this study utilized specific cultural variables, such as self-construal and social beliefs, to better understand the influence of culture on coping.

The findings of the current study have implications for both research and practice. One criticism of current coping research is a Eurocentric bias. Western-based theories and research methodologies are repeatedly utilized when studying cultures that are grounded in different worldviews and philosophies. Over the last 20 years, many coping studies have focused on problem-focused and emotion-focused coping behaviors that are specific to individualistic cultures, rather than examining culturally-bound coping strategies (e.g., internally targeted coping and seeking help from social resources; Billings & Moos, 1981; Endler & Parker, 1994; Lazarus & Folkman, 1984; Norman, et al., 1995; Ptacek et al., 1992; Zakowski et al., 2001). Furthermore, many studies have relied upon conceptualizations of coping and measurement scales that were developed in the United States and later adapted to other cultures without questioning the equivalence of the concept or the measurements (Hoedaya & Anshel, 2003; Lam & Zane, 2004; O'Connor & Shimizu, 2002; Sheu & Sedlacek, 2002). Relying solely on Western-based

measures and conceptualizations prevents one from truly understanding coping behaviors in other cultures. The current study attempted to break away from the Eurocentric bias by exploring more diverse coping dimensions and by utilizing a convergence approach. Moreover, the examination of the impact of self construal and social beliefs on coping in both China and the U.S. is a step forward in constructing a socio-cultural theoretical framework for understanding coping.

Expanding the concept of coping, as was done in the current study, has clinical implications as well. Research has indicated that flexibility in using different coping strategies in different situations is related to better personal adjustment and outcome (Cheng, 2003). For instance, in a study comparing the coping strategies of Malaysian, U.S., and German persons, Essau and Trommsdorff (1996) found that persons who learned and adopted coping strategies from cultures other than their own reported less distress than those who did not. More specifically, they found that the U.S. nationals and Germans who used similar coping strategies as Malayasian persons, reported fewer physical symptoms than those who did not. Furthermore, the Malaysian persons who coped in ways similar to the U.S. and German respondents, reported fewer physical symptoms than those who did not. These findings suggest the advantages of possessing a large collection of coping tools from different cultures and having the competencies to know what coping strategies are effective in different situations and cultural contexts. This study is the only study identified so far that focused on the benefits of coping flexibility in a cross-cultural context. Although other studies (Catanzaro, 1997; Kardum & Krapic, 2001) have examined coping and mental health by looking at dispositional differences and situational influences, these studies did not address the process of coping

flexibility across cultures. More studies are needed to address the outcome of learning coping strategies from different cultures. Because the current study focused on coping among the U.S. and Chinese college populations and investigated the influence of culture on coping across cultures, the results of this study can provide suggestions for clinicians on how to help clients of various cultural backgrounds adopt new, more flexible coping strategies.

Description of Variables

Predictor variables:

Self-Construal: perceptions about one's thoughts, feelings and actions in relation to others.

Independent Self-Construal: a "bounded, unitary, stable" self that is separate from social context; emphasizes internal attributes such as individual thoughts, feelings, abilities, and personal goals, individual uniqueness, and self expression (Markus & Kitayama, 1991).

Interdependent Self-Construal: a "flexible, variable" self that emphasizes external features such as roles and relationships, belonging and fitting in, one's proper place and behaviors in groups, and indirectness in communication (Markus & Kitayama, 1991).

Social Beliefs: general beliefs about people, social groups, social institutions, the physical environment and the spiritual environment, and events and phenomena in the social world.

Social Cynicism: a negative perception of human nature such as a biased view about certain groups of people, a mistrust of social institutions, and a disregard of ethical means for achieving an end (Leung et al., 2002)

Reward for Application: the belief that investment of human resources results in a positive outcome (Leung et al., 2002)

Social Complexity: the belief that there are multiple solutions to social issues and that the outcome of events is uncertain (Leung et al., 2002)

Fate Control: the belief that social events are determined by external factors and there are no ways to influence outcomes (Leung et al., 2002).

Religiosity: the view that spiritual forces influence the world and that religious institutions have a positive influence on social outcomes (Leung et al., 2002).

Criterion Variables:

Task-oriented Coping: action taken to remove the stressor or to solve the problem (Endler & Parker, 1990)

Emotion-Oriented Coping: regulation of effect and emotional support seeking (Endler & Parker, 1990)

Avoidance: distance or withdraw self from the stressor (Endler & Parker, 1990)

Self-Regulation: reliance on self, which include mobilization of personal resources, self-reflection, and self-control (Shek & Cheung, 1990).

Help Seeking: behaviors that involve seeking out assistance and/or advice from others (Shek & Cheung, 1990).

CHAPTER II

Literature Review

In this chapter, theories of coping are discussed with a focus on two theories: the dispositional model and the transactional model of coping. The Chinese coping literature and cross-cultural studies of coping are also reviewed, as are methodological issues in cross-cultural research. This discussion is followed by a review of the influence of cultural factors on coping, such as self-construal and social beliefs.

Literature showed that the coping construct may not be identical across societies (Heppner et al., 2005; Shek & Cheung, 1990; Phillips & Pearson, 1996). Distinctive coping strategies used by people from collectivistic societies are self-regulation and accommodation to the environment (Heppner et al., 2005, Shek & Cheung, 1990), whereas the most common coping strategies in individualistic societies are confrontation/active problem solving and emotional expression (Endler & Parker, 1994; Lazarus & Folkman, 1984). Therefore, it can be problematic to compare coping between individuals in China, a collectivistic society (Smith, Dugan, & Trompenaars, 1996) and individuals in the Unites States, an individualistic society (Smith et al., 1996) based on theories and measures that are developed and validated in the United States with an emphasis on individualism. To address this methodological issue, the current study employed a more balanced approach to studying coping in China and the United States

by combining dimensions of coping discovered in both cultures as a way to incorporate both individualistic and collectivistic cultural values. In addition, it has also been argued that coping behavior is influenced and shaped by social and cultural factors (Aldwin, 1994; Heppner, 2008). Therefore, it is important to examine coping in relation to cultural variables that may contribute to coping differences across societies. This is addressed in the current study by examining how cultural variables, such as social axioms and self-construal, affect the coping behaviors of U.S. and Chinese college students.

Theories of Coping

Dispositional Model

Rooted in the psychoanalytic conceptualization of defense mechanisms, the dispositional model of coping emphasizes the influence of individual traits on coping. In this model, coping is considered a relatively stable style or trait across different individuals (Parker & Endler, 1992). The dispositional view of coping is valuable in its ability to predict a person's coping response and its outcomes because personality traits are relatively stable and affect the extent to which a person is affected by a stressful situation.

In support of this conceptualization, a significant amount of empirical studies have demonstrated that there is some consistency in coping responses across situations and time (Costa, Somerefiled, & McCrae, 1996; Endler & Parker, 1994; Parker & Endler, 1992). There seems to be some evidence indicating that coping can be conceptualized as a personality trait. Evidence of this was demonstrated in longitudinal studies of coping behaviors of U.S. adults over a seven-year period beginning in 1980 and ending in 1987 (MaCrae, 1989; McCrae, 1992). Two parallel longitudinal studies were conducted in

1980 with community volunteers from the Baltimore area. In one of them, the participants (group A) were asked to think about three different stressful situations they had experienced in the past six months: a loss, a threat, and a challenge. Following this, they completed the Ways of Coping Questionnaires (WCQ; Folkman & Lazarus, 1988) for each of the three situations. In the other study, a different group of participants (group B) completed the WCQ concerning the ways they had dealt with a single stressful event they had previously reported on a check-list of life events. Seven years later, in 1987, group A and group B were tested again. For the participants in group A in which three stressful situations were elicited, both a situational influence and cross-situational consistency of coping behaviors were observed. For example, it was found that fatalism, social comparison, and wishful thinking were often used when individuals were facing a loss or threat. In contrast, intellectual denial, thriving from adversity, and humor were frequently used when they were facing a challenge. The effects of these influences were, however, not large (i.e., ranging from .02 to .06). This indicated a weak situational influence on the consistency of coping behaviors. Cross-situational consistency was also seen in the way these participants coped, as indicated by medium-size correlations (i.e., ranging from -.01 to .59) between their coping responses to the three stressors. Eighty-three percent of the correlations that were calculated were significant. In addition, it was found that the most cross-situational consistent coping responses were escaping fantasy, resorting to faith, and hostile reactions. The least consistent coping mechanisms were seeking help and avoidance. These results indicate that there is some consistency in how individuals cope across different situations and that some coping responses are more consistent than others. Moreover, test-retest results of the coping responses reported by

groups A and B over the seven-year period showed medium-size (i.e., ranging from -.10 to .60) test-retest correlations. Also, sixty-five percent of the test-retest correlations of the coping responses were significant. This indicates an enduring dispositional basis for coping.

Other studies (Grace & Schill, 1986; Rim, 1987; Smith, Rope, Rhodewalt, & Poulton, 1989) have also supported the dispositional model of coping. For instance, Grace and Schill (1986), Rim (1987), and Smith et al. (1989) showed that people with a "neurotic" personality tended to use wishful thinking and avoidance coping when encountering a stressful situation, whereas people characterized as extroverted used problem-focused coping and positive thinking, and people grouped as having an agreeable personality tended to seek social support.

The dispositional model of coping enabled the development of standardized measures of the construct with good psychometric properties. For example, the Coping Inventory for Stressful Situations (CISS; Endler & Parker, 1990), which is a dispositional oriented measure, has been shown to produce more stable factors and higher internal reliabilities than the WCQ (Folkman & Lazarus, 1988), which is a situationally oriented measure (Schwarzer & Schwarzer, 1996). The dispositional view of coping and the psychometric rigor of dispositional oriented measures are applicable when comparing individuals' coping across cultures in empirical studies.

Despite the good psychometric properties of the coping construct as measured by dispositional oriented measures and the evidence of dispositional influences on coping, the dispositional theory of coping on which they are based is often criticized for its ignorance of the influence of environmental conditions and the overgeneralization of

personal styles (Donnelly, 2002). Some researchers (Aldwin, 1995; Lazarus & Folkman, 1984) pointed out that individuals' coping depends largely on the context in which the stressors occur. Coping, therefore, varies based on an individual's capacity, the external environmental factors, and the relationship between the individual and environment. Moreover, according to Aldwin (1995) and Heppner (2008), coping should be examined in the context of social and cultural factors, which indirectly influence individuals' appraisal of the stress and shapes their responses to the stress.

Transactional Model

The transactional model of coping was proposed by Lazarus and Folkman (1984). One important aspect of this model is its emphasis on the role of cognitive appraisal in shaping individuals' coping responses. Cognitive appraisal refers to persons' evaluation of the degree to which stressors are threats, challenges, or harmful in relation to their wellbeing, and the consideration of ways to best respond to these stressors (Carver & Scheier, 1994). Moreover, the transactional model emphasizes individual differences in the appraisal of the situation. That is, what is considered stressful to one person may not be considered as stressful to another person. Furthermore, the transactional model stresses that persons' appraisal of a stressful situation is influenced and shaped by social and cultural factors (Aldwin, 1994; Donnelly, 2002).

In elaboration of the transactional framework, Park and Folkman (1997) pointed out that the interaction between the appraisal process and one's belief system can be viewed as a joint involvement of global meaning and situational meaning in the context of coping. Global meaning refers to persons' fundamental beliefs and goals and is shaped by culture. Fundamental beliefs include people's beliefs about the world (i.e., estimates

of how benevolent the world is and how benevolent other people are), the self (i.e., evaluations of one's essential goodness and morality, perception of control), and the relation between the self and the world (i.e., the trustworthiness and value of intimate relationships with others, optimism, and expectations that situations will work out favorably) (Park & Folkman, 1997). Goals give people a sense of purpose, which include pleasure, power, independence, connectedness, and generativity. Although some stressors are universal, such as natural disasters and bereavement, the definitions of stressors and persons' appraisal regarding the degree of stressfulness of a given event vary with different cultural contexts (Aldwin, 1994). For example, in a study that compared Euro-Canadian and Japanese college students' appraisal of a stressful event, Heine and Lehman (1995) found that Euro-Canadian students were oriented more toward independent self-construal and rated an individual-oriented event (i.e., sometimes in the future you will become an alcoholic) as more severe than an interpersonal-oriented event (i.e., sometimes in the future you will do something that will bring shame to your family). The opposite was true for the Japanese students who were more oriented toward an interdependent self-construal and rated an event focused on their family more stressful than an event geared toward themselves. Similarly, Heppner et al. (2005) found that the most traumatic events among Taiwanese college students were related to stresses in interpersonal relationship and societal expectations, whereas the most distressing events reported by U.S. college students were events perceived to threaten their individual autonomy and uniqueness. These studies indicate the importance culture plays in the appraisal of and coping with stressful events.

Another important feature of the transactional model is that it differentiates two coping dimensions: problem-focused and emotion-focused coping (Lazarus & Folkman, 1984). With problem-focused coping, persons attempt to change the situation to minimize the effect of a stressor. They do this by confronting the problem and making an action plan. For example, a college student who fails a test may try to schedule his or her time better for the next test, think about and apply successful testing strategies that were used in the past, prepare a study guide, or talk to the instructor for advice. With emotion-focused coping, individuals regulate their affect or turn to other activities as a way to alleviate the stress. Using the same example as before, upon failing a test, the student may blame him/herself for the failure, feel very anxious about the next test, deny what has happened, become angry with the instructor, or talk to friends about his/her frustration. By expressing emotions regarding the problem and seeking emotional support from others, he/she may alleviate the stress the event has on him/her. Although in recent years, the classification of coping strategies proposed by the transactional model has been challenged and new dimensions have been proposed, such as avoidance coping (i.e., withdrawing oneself from the stressor), direct/indirect coping (i.e., confronting the stressor vs. seeking help from others), and active/passive coping (i.e., taking active steps to remove the stressor vs. accepting the reality) (Billings & Moos, 1981; Ender & Parker, 1994), these new dimensions share content similar with those of problem-focused and emotion-focused coping.

In studies of the White population in the U.S., the use of problem-focused coping strategies is often viewed as a more effective strategy than emotion-focused coping, which is often associated with a negative outcome (Norman et al., 1995; Ptacek et al.,

1992; Zakowski et al., 2001). In these studies (Norman, 1995; Ptacek et al., 1992; Zakowski et al., 2001), it was found that problem-focused coping was associated with greater perceived control of the situation than emotion-focused coping, and that emotion-focused coping predicted higher levels of reported distress. It has also been found that in the United States, women were more likely than men to use emotion-focused coping, while men tended to employ problem-focused coping more often (Carver, Scheier, Weintraub, 1989; Dyson & Renk, 2006; Lawrence, Ashford, & Dent, 2006). These gender differences in coping, however, have not been found in some Eastern countries such as Singapore, India, Pakistan, and also countries such as Guyana, Trinidad, Barbados, and Jamaica (Nevo & Yin, 2001; Rokach, 1999).

One criticism of the classification of coping in the transactional model is that it represents an individualistic perspective without taking into account the collectivistic aspects of coping (Buchwald, 2003; Dunahoo et al., 1998). The individualistic perspective assumes that successful coping involves persons taking control of the situation, which is reflected in the emphasis on cognitive coping and the link between effective coping and problem-focused coping. Because of an emphasis on independence and autonomy in individualistic cultures (e.g., the United State and some other Western cultures), people in such societies may desire to master and directly control their environment to meet their own personal needs (Markus & Kitayama, 1991). In contrast, persons in collectivistic cultures (e.g., China, and other Eastern countries) tend to emphasize interdependence and group cohesion (Yue, Arora, & Wu, 2006). Individuals in such societies may prefer seeking help from family and social groups in times of distress and focus on changing themselves to adjust to social situations. Thus, it can be

argued that the emphasis on cognitive coping and the link between effective coping and problem-focused coping supported in the coping literature in the Unites States has grossly ignored coping constructs that are more frequently adopted by non-Western cultural societies.

In summary, the dispositional and the transactional models of coping both have merits and limitations. The dispositional model of coping points out that coping is relatively stable and consistent across time and situations. This has allowed for the development of reliable coping measures and the comparison of individuals' coping behaviors. The downside of this model is that it overemphasizes the influence of personality and underestimates environmental factors. The transactional model of coping emphasizes the role of appraisal in coping and also the environmental factors that influence the appraisal. The limitations of this model are that it categorizes coping and defines the success of coping from an individualistic perspective without considering collectivistic dimensions of coping. Because both the dispositional and transactional models were based on Western cultural values emphasizing individualism, these models may not fully capture effective coping strategies used in non-individualistic cultures.

Culture and Coping

Brief Introduction of China

China has one of the world's longest continuous civilization. Distinctively, Chinese culture dates back to 3,000 BC. For 4,000 years, feudalism was the dominant economic and cultural model. Then in 1911, the revolution led by Sun Yat-sen brought the monarchy to an end and resulted in the establishment of the Republic of China, which signifies the beginning of the modern era in the Chinese history (www.sacu.org). The

Chinese civil war, which ended in 1949, led to the split of the country into two parts, Mainland China ruled by the Communist Party and Taiwan governed by the Chinese Nationalist Party. In the current study, the term *China* refers to Mainland China.

China is a country with 56 ethnic groups. The majority (92%) are Han Chinese. Most ethnic groups have their own languages and most regions have their own dialects. The language Chinese, spoken by most people in China, has been the language that bridges communication between Chinese people of different ethnic backgrounds and societies.

The education level is relatively low in China. According to the State Statistical Bureau (2005), by 2005, only 17% of women and 21% of men completed Junior high school. Five percent of women completed senior high school, as compared to seven percent of men. Only two percent of women and three percent of men had a college degree in 2005. Similarly, income level is low in China. The average annual income per capita in urban areas was about $3,000 in 2008 (State Statistical Bureau, 2008).

Traditional Chinese culture is more collectivistic than individualistic (Hofstede, 1980; Oyserman et al., 2002), and is characterized by an emphasis on in-group cohesion and social deference. A strong emphasis is also placed on the maintenance of harmony. Chinese traditional values were derived from Confucianism, Buddhism, and Taoism (see discussion later). Also influential is a hierarchical form of social control which is reflected in wide-spread government monitoring of media, economics, education, and family planning (Dimitrov, 2008). As a result, subjugation of self-interest to group expectations and conformities, the endorsement of cooperation, and reciprocal

involvement in relationships are often observed in Chinese people's social interaction (Lau, 1996).

China has witnessed tremendous economic growth since the endorsement of the Open-Door Policy at the end of the 70's. Since then, China has accelerated the process of urban growth. During the last 30 years, the proportion of China's urban dwellers increased from 18% to 52% of its total population, which was 1.3 billion by the year 2005 (State Statistical Bureau, 2005). The Open-Door Policy and industrialization process brought not only a huge amount of foreign investment, but also the influence of Western culture. Reform in technology and the importation of Western movies, books and other commercial products definitely has impacted people's thinking. Studies (Jin, 2003; Yu, 1997) have showed increased prevalence of an awakened individualism in college students, which is manifested as an emphasis on individual happiness, increased self-awareness, and a stronger sense of independence.

Despite profound influence from the West, current Chinese social ethics still reflect the legacy of a powerful Chinese cultural tradition (Lau, 1996). Traditional literature, the arts, history, traditional morality and ethics have remained an important part of the school curriculum. Traditional values are taught through childhood socialization in family, school, and community. Some Chinese scholars concerned about the Chinese youth's possible break-away from Chinese tradition in the process of modernization have proposed that the strength of cultural tradition should carry on, side by side with Western influences (Chen & Lan, 1998; Wang, 2006).

Traditional Philosophies of China

The traditional philosophies of China, namely, Confucianism, Buddhism, and Taoism, share an approach to the understanding of coping which is different from how coping may be influenced by Western philosophies. Confucianism was once considered the "state philosophy" (Dreyer, 1999) in China. It has been one of the most influential schools of philosophy in China for the past 2,500 years. The central tenet of Confucianism is that people are essentially benevolent and that all individuals have the potential to be developed (Lau, 1996). This view has had a major impact on the social behaviors of Chinese people. For example, Chinese persons believe that hard work will result in positive outcome, regardless of one's social and economic background. People can achieve a higher social status through education and learning. In addition to the concept of human benevolence, Confucian tradition emphasizes the individual's responsibilities in maintaining harmonious relations with others. In Confucian teaching, a person is defined by his or her relationships with others. For example, a Chinese person is often introduced as the father, the mother, the child, the boss or colleagues of another person who is known to the other person. It is also quite common to refer to a person's position or title instead of his or her name. Social order and harmony are maintained by each member's fulfilling the requirements and responsibilities of interpersonal relationships (Chao, 1994). In a family, parents are expected to provide support to and educate their children to be responsible citizens. Similarly, children are expected to respect and take care of their parents when they are old and have difficulty with self-care. This reciprocal give-and-take pattern is also observed in friendships. Because interpersonal harmony and modesty are highly valued in Chinese culture, individuals tend to subordinate their personal goals to the goals of the group (Lau, 1996). The concern is

with the proper conduct expected by a situation rather than with the direct expression of opinions or emotions. Negotiation and compromise are preferred over confrontation in problem resolution (Lau, 1996).

If Confucianism focuses on the maintenance of social order and harmony and thus is more social-oriented, then Taoism is more nature-oriented as it emphasizes the relationship between humans and nature. Originated in 500 BC, Taoism has been recognized as the most influential cultural root for the Chinese mind (Cheng, 1995). Its influence is still profound in modern days. One important teaching of Taoism is that individuals should follow the way of nature, which is often referred to as *Tao* (the Way) (Han, 1998). The belief that it is most effective to deal with things as they are allows individuals to accept the misfortunes and limitations in their lives. People will be blessed when they follow the way of nature and unhappy if they do not. As a result, people tend to take a non-action position and choose to accept the situation when they perceive the situation as uncontrollable. For example, a college student following the Taoist principles may acknowledge his or her lack of interest in math and numbers. When he/she makes decision about a career path, he/she chooses majors and occupations that do not require advanced knowledge in math and much work dealing with numbers. Because they are realistic about their capacity, they may be happier in terms of career choice compared to individuals who do not enjoy math and numbers but still choose an occupation requiring these skills. Following the law of nature also helps lessen unnecessary competition, struggle, and confusion (Cheng, 1995). In addition, Taoism sees “ego” as one of the major barriers that prevents individuals from following the way of nature (Han, 1998). It maintains that only when persons let go of the “ego”, they are able to perceive and accept

situations as they are, and respond to them in the most effective way. Instead of emphasizing the importance of self assertion and self attainment, Taoism encourages the state of transcendence. It holds that true happiness comes from within rather than from outward conditions such as appearance, wealth, and honor, as these conditions are perishable. Not only can one be transcended from materialistic possession, but also from one's own emotion and others' influence (Cheng, 1995). A person with a high level of transcendence is able to adapt to every kind of social environment. Therefore, adaptation and endurance are favored over change or confrontation in times of difficulty.

Together with Confucianism and Taoism, Buddhism also plays an important role in forming the root of the Chinese traditional culture. Buddhism was introduced to China from India during the 1st century (Engler, 1997). The core of Buddhist teaching can be summarized in the "Four Noble Truths", which recognizes that life is suffering and that suffering is inevitable. More importantly, it points out ways to liberate one self from suffering by removing attachments and gaining insights into the cause of suffering and living a mindful life, which is often referred to as the "Middle Way" (Engler, 1997). Buddhism emphasizes the cultivation of mindfulness and a compassionate attitude. The ability to be mindful, that is, to have an on-going awareness of one's emotions, cognitions and bodily sensations has a beneficial effect on recovery from trauma and distress (Silva, 2006). Similarly, a compassionate attitude toward oneself and others enhances one's psychological well-being. Buddhism also stresses the concept of "Karma" or "cause and effect" (Engler, 1997), which tells that each event is connected to one another, each affecting and being affected by the other. Therefore, always doing well to others and being a good person is of great importance.

As demonstrated above, the major philosophical influences on traditional Chinese culture are marked with an emphasis on the cultivation of the inner self and interpersonal harmony. Much focus is placed on self awareness as in Buddhism, transcendence as in Taoism, and individual effort in Confucianism. These philosophies all hold that meaningful transformation comes from within, not from the outside. Meanwhile, the emphasis on interpersonal harmony over individual attainment leads Chinese people to choose compromise over confrontation in conflict resolution, and to subordinate their personal goals to those of others.

Moreover, all these philosophies value self reflection over self expression. In Western cultural traditions, expression of thoughts and feelings is considered a way to express and assert one's selfhood, and is thus a sign of individual freedom (Kim & Sherman, 2007). In contrast, self expression is not encouraged in the traditional Chinese culture because individual attributes give way to group identity and social harmony, as indicated in Confucianism. Similarly, in Taoism and Buddhism, individuals are encouraged to self reflect, develop mindfulness, and eventually transcend from their emotions and others' influence to a higher level of consciousness. The de-emphasis on self expression can be understood from the perception of the self in Chinese culture. In Chinese tradition, the self is understood primarily as a relational entity rather than an independent entity (Kim & Sherman, 2007). Because meaningful aspects of the self are social and external, such as roles and relationships, expressing internal attributes such as beliefs and values is less significant. In fact, the self as a separate entity is considered a barrier to psychological well-being. In Confucianism, it stands in the way of interpersonal harmony. In Taoism, it is an obstacle to the following of *Tao*. In Buddhism, it is

perceived as a false belief or an illusion constructed through the avoidance of unpleasant feelings and sensations (Silva, 2006). This false belief or illusion leads to a false sense of continuity that resists the inevitable impermanence that comes with life.

Because of the profound influences of Chinese philosophies on Chinese culture and behaviors of the people, it is reasonable to believe that these philosophies also have an impact on people's responses to stressful events. To gain insights about how these philosophies are reflected in people's coping responses, it is necessary to look at what research studies have found about Chinese ways of coping.

Chinese Ways of Coping

Studies on coping strategies of people in the Chinese community can be divided into two categories. In the first category, Western based measures were translated and adapted. In these studies, a Western based conceptual framework was used to understand Chinese peoples' means of coping. For example, Zhang (2001) examined the dimensionality of the Chinese version of the COPE (Carver et al., 1989) using a confirmatory factor analysis. Participants were 736 college students in Beijing. The study supported the eight dimensions of the COPE that have been hypothesized to represent the measure in the United States. These eight dimensions include seeking social support, active control and planning, accumulation of mental resources, positive appraisal, focusing on and venting of emotions, denial and mental disengagement, superstition coping, and helplessness reaction. In another study validating the COPE instrument for Chinese persons, Shi et al. (2002) used an exploratory factor analysis to determine the dimensionality of the COPE. Relying on responses from 1,144 individuals, Shi et al. (2002) discovered four major coping styles: a) active coping focused on the problems, b)

denying the problems and mental disengagement, c) seeking emotional support and venting of emotions, and d) avoiding the problems and shifting attention. Another study by Liu and Tao (2005) investigated the relationship between stress, negative emotions, and coping in 239 female college students using Structural Equation Modeling. The COPE was adapted in the study to measure coping. Second order factor analysis of the 14 subscales identified in the original study in the United States (Carver et al., 1989) of coping responses yielded three major dimensions: positive coping, passive coping, and seeking support. This study also showed that stress, passive coping, and seeking support predicted negative emotions. Stress was found to predict negative emotions through the mediating effect of passive coping and seeking support.

Overall, these studies suggest that Chinese college students used a variety of coping strategies when facing stress. Also, it appears from these studies that coping dimensions discovered in the West were applicable to college students in China. One major limitation of these studies, however, is that by using a Western conceptualization of coping some potentially unique aspects of Chinese coping were ignored. In none of these studies (Liu & Tao, 2005; Shi et al., 2002; Zhang, 2001) did the researchers openly question whether the adapted Western based measure they used (i.e., the COPE) captured the Chinese ways of coping. This may be a serious concern, given that scholars (e.g., Van de Vijver & Leung, 1997; Ægisdóttir et al., 2008) emphasized that researchers performing cross-cultural and international research need to pay a special attention to construct bias and construct equivalence when making decision about a measurement. *Construct bias* occurs, for instance, when the constructs measured are not identical across groups, such that the construct may not be fully captured in both groups (Van de Vijver

& Leung, 1997; Ægisdóttir et al., 2008). *Construct equivalence* refers to the extent to which how accurately and well the construct is measured in both groups (Van de Vijver & Leung, 1997; Ægisdóttir et al., 2008). A meaningful cross-cultural comparison of a construct is impossible without established construct equivalence. When existing measures do not capture indigenous constructs satisfactorily, emic approaches have been recommended (Ægisdóttir et al., 2008). An emic approach explores a particular construct from within the cultural system. With this approach, instruments and theories meaningful to the target culture are developed to generate a set of indigenous attributes (Benet-Martinez, 2007). To accurately understand Chinese ways of coping, it may be necessary to utilize instruments that reflect the unique aspects of Chinese coping.

Another limitation to Liu and Tao (2005), Shi et al. (2002) and Zhang's (2001) studies on coping, is that in none of the articles did the authors discuss the translation procedures used when translating and adapting the COPE into the Chinese language. A thorough translation-back-translation process is an important step toward enhancing equivalence between multilingual versions of an instrument (Ægisdóttir et al., 2008). Without a thorough translation and back translation process and some evidence the measure's language versions equivalence, the validity of studies using U.S. based measures to understand Chinese ways of coping is questionable. Thus, it can be argued that the information gained from these studies (Liu & Tao, 2005; Shi et al., 2002; Zhang, 2001) about coping of Chinese individuals may not be sufficient. It is highly conceivable that some coping strategies commonly used by Chinese persons were not captured by the COPE. Therefore, these studies may not have painted a complete picture of coping behaviors in China.

The other category of studies investigated coping within the Chinese context by using scales or interviews specifically designed to reflect the Chinese reality. In these studies, some unique coping strategies were discovered that are rarely mentioned in the U.S. literature. For example, Yue (2001) used a qualitative approach to investigate Chinese college students' coping strategies in relation to academic underachievement, emotional frustrations, and interpersonal conflicts. Responses of 40 students in a college in Beijing revealed a variety of coping strategies, including self-reflection (i.e. see what I could have done differently), endurance (i.e., do not give up), self-control (i.e., forbear and remain calm), Ah-Qism -- the tendency to rationalize defeat as a spiritual victory (i.e,. be a better person even though I lost the game), and acceptance (i.e., resign to what is inevitable). The results demonstrated that self-regulation and self-preservation constituted the cultural protocol for coping with stress in Chinese society. Instead of trying to change the external environment, these persons looked within for the cause of their problems, regulated their emotions, or adjusted the way they viewed the situation. An emphasis on self regulation of thoughts and feelings, as reflected in these coping dimensions, is congruent with the Taoist philosophy of self-transcendence, and the Confucian teaching of self-discipline and self-cultivation (Phillips & Pearson, 1996).

Additionally, studies of a community sample in Taiwan (Hwang, 1977) using qualitative methods revealed similar coping patterns. A face to face interview was conducted with 180 Chinese in Taiwan. The participants were asked about methods that help them the most to deal with stress in life. Content analyses of their responses revealed five categories of coping. They included: (1) mobilization of personal resources (e.g., face the problem and devise a solution; to be clam; constant persistence, to adapt myself

quickly to the changing circumstances); (2) seeking help from social resources (e.g., seeking help from friends; seeking help from a relative); (3) appealing to supernatural power (e.g., pray for Buddha's protection; pray for God's blessing); (4) adopting a philosophy of doing nothing (e.g., wait as the difficulty will be gone as the time and situation change; it will take care of itself when the time comes); and (5) avoidance (wish that one's children may have a bright future; compare one self with persons who are inferior).

Furthermore, in a study that investigated Taiwanese college students' coping processes when dealing with traumatic events, Heppner et al. (2005) found that the most frequently used coping strategies were accepting or adjusting to reality, reframing the meaning of trauma, thriving from negative experiences, and seeking support from families and respected elders. In this study, 344 college students were asked to identify a stressful or traumatic event in the past year and then to fill out the Collectivist Coping Styles (CCS; Heppner et al., 2005) which was developed based on previous research on Asian Values and the coping literature in the United States. Eighty-eight percent of the respondents utilized self-regulation coping strategies such as "believed that I would grow from surviving the traumatic event," "believed in my potential to resolve the trauma however difficult it might be," "realized that often good comes after overcoming bad situations," "told myself that I could think of effective ideas," and "as a starting point, tried to accept the trauma for what it offered me," etc (Heppner et al., 2005, p. 113). Seeking social support was another frequently reported strategy. For example, respondents reported coping by sharing feelings with their family, following the guidance of family elders, and asking assistance from family.

Besides indigenous studies in native Chinese societies, researchers have conducted studies investigating the experiences of Chinese immigrant students in the United States. For example, Yeh and Inose (2002) used a semi-structured interview with 114 Chinese immigrant high school students in the United States asking about their struggles and corresponding coping strategies. The study revealed that communication problems, unfamiliar customs and values, interpersonal relationships, and academic/career issues were frequently reported adjustment difficulties. The top coping strategies used by these students included seeking help, keeping to oneself, endurance, and creative activities. When encountering stressors, these students were willing to seek help from people in their social support network. This coping strategy reflects the cultural value of interdependence. On the other hand, some of them tended to keep things within themselves or endure rather than confronting their problems. This may be related to the cultural emphasis on maintenance of interpersonal harmony. These students may have hesitated in confronting others to avoid creating interpersonal conflicts. Furthermore, using creative activities as a way to express oneself could be an effective coping strategy in a culture where direct emotional expression is not encouraged. A strong tendency to endure was also observed, which may be associated with the cultural emphasis on self-transcendence and self-cultivation.

The coping strategies described above highlight Chinese people's preference for self-regulation (i.e., self control, self-reflection, reframing, endurance, mobilizing personal resources, self-help, striving) as a way of handling stressors. Seeking help is another important coping strategy (i.e., seeking help from social resources, seeking family support). Another tendency is a fatalistic acceptance of circumstances (i.e.,

acceptance, appealing to supernatural power, adopting a philosophy of doing nothing). These coping dimensions reflect behaviors characteristic of people in a collectivistic society where preservation of group harmony and interdependence are valued more than individual autonomy (Tweed & Conway, 2006). In contrast, prominent coping dimensions in the U.S. culture, such as problem-focused and emotion-focused coping, reflect people's preference for confrontation and modification of the external environment (Tweed & Conway, 2006), and the value of self assertion and expression (Markus & Kitayama, 1991). Emotional discharge does not appear to be a dominant coping strategy in collectivistic societies such as China, where expression of emotions, especially that of negative emotions, is discouraged (Russell & Yik, 1996).

Results from the above indigenous studies (Heppner et al., 2005; Kwang, 1977; Yue, 2001; Yue & Inose, 2002) indicate that the construct of coping in China and the United States are not identical. As these studies revealed, coping dimensions frequently cited in the United States include problem-focused coping, emotion-focused coping, and avoidance (Carver et al., 1989; Endler & Parker, 1994; Lazarus & Folkman, 1984), while those typically identified in China include self-regulation and seeking help (Hepper et al., 2006; Shek & Chueng, 1990; Yue, 2001; Yue & Inose,2002). For example, the self-regulation dimension in Chinese coping has several meanings: looking inward, self-reflection, and growth from adverse circumstances which is in contrast to the United States problem focused coping dimension which emphasizes efforts to alter the external environment to meet one's goals. Self-regulation coping is also different from avoidance coping because it is associated with a sense of self-cultivation, self-transcendence, and personal growth with a positive connotation. It emphasizes resolving the negative effect

of adversity from within rather than trying to avoid it. Along the same lines, the U.S. emotion-focused dimension emphasizes the regulation of feelings so that one feels better. People using these coping strategies may seek emotional support from others. This is, however, different from the Chinese coping dimension of seeking help as the former focuses on emotional relief while the latter focuses on practical advice and guidance on problem solution (Tweed et al., 2004).

Therefore, a comparison of typical coping dimensions identified in the United States and Chinese literature suggests that there is a lack of overlap in the definition of coping behaviors in these two countries. Because of this, using any one measure rooted in just one of these countries to understand coping behavior in China and the United States is problematic due to the lack of construct equivalence and the existence of construct bias. As demonstrated above, one source of construct bias is an incomplete overlap in the definition of a construct across cultural groups. Another source of a construct bias is the different meanings of behaviors related to a construct across cultures (Ægisdóttir et al., 2008). For example, studies of coping among U.S. and Chinese persons (Carver et al., 1989; Shek & Cheung, 1990) showed that resorting to a supernatural power/God is one major coping method for both populations. However, the specific behaviors under this dimension are different between the two groups when items of the measures of the COPE (COPE; Carver et al., 1989) and the Chinese Coping Scale (CCS; Shek & Cheung, 1990) are examined. When seeking help from a supernatural power, a U.S. person would “seek God’s help,” or “pray more than usual” (from the COPE), while a Chinese would typically “seek help from fortune-tellers” and “seek help from a supernatural power” (from the CCS). The concept of a supernatural power is different from that of God. In the

Chinese culture, the supernatural power is a broad entity which may include ghosts, spirits of ancestors, and spirits or demons inhabited in natural wonders (Millay & Streeter, 2004). Chinese people may go to a fortune-teller to get advice how to avoid misfortune or to realize their wishes. They may pray to their ancestors at home or simply wear objects believed to carry some protective power. These activities are different from going to church, reading the bible or praying, as observed in the United States. Because of the different meanings of supernatural power across cultures, using a Western based measure, such as the COPE, to measure Chinese coping may miss the concept of "fortune-telling" in the Chinese context. Due to the different meanings and different behavioral domains targeted in coping between China and the U.S., there is a great risk of construct bias and a lack of construct equivalence when comparing coping between persons from each country using instruments developed in either the U.S. or China.

Cross-cultural studies of coping

There have been cross-cultural studies on coping reported in the counseling literature comparing the similarities and differences of coping strategies used between people from individualistic and collectivistic societies. For example, O'Connor and Shimizu (2002) examined coping styles and perceived personal control of Japanese and British persons in dealing with life hassles. Their study was based on responses from 84 college students from Japan and 82 college students from England. Coping was assessed using the WCQ (Folkman & lazarus, 1988). Folkman and colleagues discovered that Japanese students reported a significantly lower sense of personal control compared to the British students. There were no significant differences found in the use of problem-focused coping between the Japanese and the British students and between the male and

female students. For emotion-focused coping, however, the Japanese students were found to employ significantly more escape-avoidance (i.e., refused to believe it had happened) and positive reframing (i.e., changed or grew as a person in a good way) than did the British students. This difference may reflect the variations in control beliefs held by the two samples. No gender difference was found for emotion-focused coping. In addition, this study showed that a sense of personal control was positively associated with problem-focused coping for the British students, but not for the Japanese students. This difference suggests that it may be a Western bias to assume that a sense of personal control determines coping behaviors (Anderson, 1977). In other words, the notion that control beliefs play an important role in determining coping behaviors may only apply to coping strategies of persons in Western cultures.

Along the same lines, Tweed and colleagues (Tweed et al., 2004) compared coping between Canadian college students, Chinese Canadian college students, and Japanese college exchange students. The Way of Coping Questionnaire (WCQ; Folkman & Lazarus, 1988) was combined with additional items developed by the Japanese researchers. This study revealed that Japanese and Chinese Canadian students were more likely than their Canadian counterparts to report coping strategies such as accepting responsibility, accepting the problem, self-control, and waiting. In contrast, Canadian students were more likely than Japanese students to confront others. Moreover, Canadians and Chinese Canadians were more likely than the Japanese to employ avoidance coping strategies. Canadians also were more likely than both Chinese Canadian and Japanese to engage in positive reframing. These findings suggest that compared to European Canadians, people with an East Asian background tend to use

internally targeted coping strategies such as accepting problems and responsibility, and using self control. This tendency can be explained by the Eastern cultural beliefs that the best solution to a problem is to adjust the self to accommodate the world rather than to change it.

In a related research, Lam and Zane (2004) investigated differences in coping between Asian and European American college students. The Primary and Secondary Control Questionnaire (PSCQ; Seginer, 1998) was used to assess control orientation in coping and was administered to 79 European American and 79 Asian American students. The majority of Asian American students in this study were individuals of East Asian descent (i.e., Chinese, Japanese, and Korean, 80%). The remaining sample included individual from Southeast Asian backgrounds (20%). Among the Asian American sample, 51% were foreign born and the average percentage of time lived in the United States was 62% of their lives (Lam & Zane, 2004). Participants were presented with 15 college-life situations involving interpersonal stressors with peers, family members, teachers, and authorities. Results showed that the Asian Americans were significantly less oriented toward primary control and more oriented toward secondary control compared to European Americans. In handling interpersonal stressors, Asian Americans tended to accommodate or adapt to existing circumstances, whereas European American tended to master the environment and gain control of the situation to fit their personal goals. This difference reflects cultural variations in self-construal (Lam & Zane, 2004). European Americans' cultural emphasis on individual autonomy may foster their preference for primary control coping. In contrast, Asian Americans' cultural values for interdependence and connectedness may foster their use of secondary control coping. It

should be noted that there may be within-group difference in the Asian American sample depending on their country of origin and acculturation level. To address this concern, Lam and Zane (2004) compared the mean of responses on the independent and interdependent self-construal on the three largest Asian ethnic groups and found no significant group differences. Meanwhile, Asian Americans in this study were less oriented toward independent self-construal and more oriented toward interdependent self-construal than European Americans. These results indicated that Asian Americans can be differentiated from European Americans in terms of their self-construal orientation. Nevertheless, caution should be taken in making conclusion about Asian Americans coping as there may be within-group difference and the sample in this study may not be representative of the general population of Asian Americans.

In another investigation of coping across cultures, Hoedaya and Anshel (2003) used the COPE (Carver et al., 1989) to measure how Australian and Indonesian athletes coped with sport related issues. In terms of coping frequency, Indonesian athletes used more social support, denial, restraint, and active coping than did the Australian athletes. These differences may be explained by cultural influences such as the discouragement of negative emotional expression and cultural emphasis on self-reflection and cooperation in the Indonesian society. These findings echo those from previous studies which suggest that individuals from East Asian societies tend to adopt coping strategies such as seeking social support and escape-avoidance. Moreover, this study suggested that the frequency of using a coping strategy is not an indicator of coping effectiveness. For example, regarding coping effectiveness, Australian athletes perceived active coping as being more effective in various situations, while the Indonesian athletes did not.

According to the results of these studies, the most commonly reported coping strategies by people from collectivistic cultures (i.e., Japanese, Indonesian, Asian American, and East Asian Canadian, etc.) included *internally targeted coping* such as acceptance of a problem and responsibility, waiting, distancing, self-control, and changing one's feelings and thoughts to suit the environment (Lam & Zane, 2004; Tweed et al., 2004), *emotion-focused coping* such as seeking emotional social support (O'Connor & Shimizu 2002), avoidance and denial (Hoedaya & Anshel, 2003; O'Connor & Shimizu 2002; Sheu & Sedlacek, 2002), and *externally targeted coping* such as taking action (Hoedaya & Anshel, 2003). In contrast, people from individualistic societies (British people, European Canadian, and European American, etc.) tended to use *externally targeted coping* such as planful problem solving and confrontation (Lam & Zane, 2004; Hoedaya & Anshel, 2003; Tweed et al., 2004) and *avoidance* (Sheu & Sedlacek, 2002). These studies taken together suggest that there are similarities and differences in coping between people from individualistic and collectivistic societies. People from both societies tend to use strategies such as taking action and persons from individualistic societies are more likely to use direct coping such as confrontation when compared to persons from collectivistic societies. Some inconsistency, however, seems to be regarding the use of escape-avoidance and positive-reframing across cultures. For example, some studies (Hoedaya & Anshel, 2003; O'Connor & Shimizu, 2002) showed that persons from collectivistic cultures used more avoidance and positive thinking, whereas Tweed et al. (2004) indicated people from individualistic cultures employed these strategies more often. The coping strategies that were used by people from collectivistic societies but not shared by people from individualistic societies tend to be

internally targeted. The major feature of internally targeted coping is the adaptation of the self to external circumstances, which may have some overlap with the concept of self-regulation observed in the Chinese literature on coping. Both concepts describe strategies of accepting problems, taking responsibility, and changing one's thoughts according to the environment. The difference between these two is that internally targeted coping connotes a sense of passivity, while self-regulation emphasizes a sense of striving with personal resources. For example, items grouped under the dimension of internally targeted coping include "went on as if nothing had happened" "wished the situation would go away or somehow be over with" (WCQ; Folkman & Lazarus, 1988), "I accept the reality of the fact that it happened," "I hold off doing anything about it until the situation permits" (COPE; Carver et al., 1989). Unique self-regulation items not shared by internally targeted coping include "believed that I would grow from surviving the traumatic event," "believed in my potential to resolve the trauma however difficult it might be" (CCSI; Heppner et al., 2005), "maintained optimism and self-confidence," "forbear and remain calm" (CCS; Shek & Cheung, 1990). An examination of items of these measures suggests that coping instruments developed in the West do not capture some unique coping features depicted in Chinese instruments. This again provides support for the lack of the equivalence of the coping construct as understood and measured in the United States and China.

One limitation of the cross-cultural studies just reported (Hoedaya & Anshel, 2003; Lam & Zane, 2004; O'Connor & Shimizu, 2002; Sheu & Sedlacek, 2002) is that they all employed measures based on Western theories and populations without first assessing the equivalence of the construct of coping across the cultures being

investigated. The validity of the results is hindered in two ways. First, the measures only reflected dimensions of coping in individualistic societies. Second, coping comparison was not made on a common ground. The findings, therefore, may not explain the true differences between groups, which may explain some of the contradicting results discussed earlier.

Another limitation of these studies (Hoedaya & Anshel, 2003; Lam & Zane, 2004; O'Connor & Shimizu, 2002; Sheu & Sedlacek, 2002) lies in the use of level-oriented analysis such as *t*-tests and analyses of (co)variance to make cultural comparison. Level-oriented analysis is only applicable when measurement equivalence and scalar equivalence are evident (Ægisdóttir, et al., 2008). *Measurement equivalence* is ensured when the measurement units of the instruments are identical, whereas *scalar equivalence* refers to if the instrument is on the same ratio/interval scale in each group. These two are higher-level equivalences which allow for fine grained cross-cultural comparison such as comparing mean scores using *t*-test or analysis of (co)variance (Van de Vijver, 2003; Ægisdóttir et al., 2008). Construct equivalence is a precondition for measurement equivalence, which in turn is a precondition for scalar equivalence. Even with evidence of construct equivalence, researchers need to establish scalar equivalences before comparing mean scores on multilingual versions of a measure. None of the studies listed above provided information about scalar equivalence, which limits the validity of their findings.

Another limitation of these studies (Hoedaya & Anshel, 2003; O'Connor & Shimizu, 2002; Sheu & Sedlacek, 2002) is their level of analysis. In these studies, nationality was used as an independent variable representing a culture, which assumes

homogeneity of coping styles within each country. The lack of attention to individual differences within a group may also contribute to the inconsistent findings across these studies. A better approach would be to use specific cultural variables (e.g., self-construal, social beliefs, etc.) measured on the individual level to get a better understanding of the role of culture in coping. Cultural differences in coping may be better explained by individual differences in self-construal and social beliefs within each country.

In summary, distinctive coping strategies used by people in collectivistic cultures are self-regulation and accommodation to the environment when dealing with stressful events. These responses may be explained by the emphasis in collective cultures on maintaining societal order and peace, harmony in interpersonal relationships, self-discipline, and self-transcendence. In contrast, in individualistic societies such as the United States, the most common coping strategies are confrontation/active problem solving and emotional expression (Lam & Zane, 2004; O'Connor & Shimizu, 2002; Sheu & Sedlacek, 2002). These latter coping strategies reflect a society where individual autonomy and achievement as well as personal assertion are highly valued. Furthermore, studies with Chinese samples (Heppner et al., 2006; Shek & Cheung, 1990; Yue, 1994) showed that there are some unique coping dimensions in the Chinese society which are not recognized in the literature on U.S. persons' coping. These coping strategies reflect a preference for self reflection and endurance, which do not fit into either the problem-focused or emotion-focused categories. Conversely, emotion-focused coping, a major coping dimension reported in the U.S. literature, does not appear to be a dominant coping strategy in the Chinese society. Thus, due to the complexity of the coping construct and

its variability across cultures, special attention should be paid to construct equivalence in cross-cultural studies of coping.

In the current study, coping responses of U.S. and Chinese college students were examined by addressing some of the main limitations of previous studies. As mentioned earlier, the major limitation of extant studies is the assumption of the universality of the coping construct as conceptualized in the West. To enhance construct equivalence and limit construct bias, therefore, in the current study, a convergence approach (e.g., Ægisdóttir et al., 2008) was used, in which both Chinese based (Chinese Coping Scale, CCS; Shek & Chueng, 1990) and U.S. based (Coping Inventory for Stressful Situation, CISS; Endler & Parker, 1994) measures of coping were administered to both the U.S. and Chinese student samples. This method ensures a more complete coverage of coping behaviors in the cultures under study. These two measures together include five coping dimensions: task oriented/problem focused coping, emotion oriented coping, avoidance coping, self-regulation coping, and seeking support. An examination of the items of these five dimensions showed that their content does not overlap. Furthermore, all of the items within these two measures make sense in each cultural context. Because of the difficulty in establishing measurement unit and scalar equivalences, the coping construct's nomological network was examined instead of comparing mean scores on each coping dimension to investigate cultural similarities and differences in coping behaviors of U.S. and Chinese college students. That is, the interrelationship between coping and cultural variables (to be introduced below) was studied within each country, followed by a non-statistical comparison of the relationship patterns found in each country.

Cultural Context

Heppner (2008) pointed out that the assumption of the universality of U.S. based findings results from the ignorance of cultural context in coping. The cultural context affects all aspects of coping including appraisal of a situation and selection of coping strategies (Aldwin, 1994; Heppner, 2008). Thus, coping constructs based on the dominant U.S. culture without examining cultural context do not tell the whole story. To expand conceptualization of coping beyond the existing theoretical models, it is essential to include cultural context in coping research. Including culture-specific constructs will provide a more accurate picture of coping and bring about greater theoretical complexity.

To address this concern, the current study examined relationships between specific cultural variables and coping based on the transactional model of coping. According to the transactional model, coping involves the interaction between the appraisal process and one's belief system. People's fundamental beliefs include their beliefs about the world, the self, and about the relation between the self and the world (Park & Folkman, 1997). These fundamental beliefs shape persons appraisals of events, which in turn affect the coping strategies they use. Self-construal, a constellation of thoughts, feelings, and actions concerning the self and the relation of the self to others, is strongly linked to cultural norms and values. As a construct that measures cultural variability on the individual level, self construal links cultural variability and individual behaviors. Social beliefs, another cultural concept, refer to one's general beliefs about the self, the physical and social environment, and the spiritual world (Park & Folkman, 1997). People from diverse cultural backgrounds endorse and use these beliefs to guide their actions and choices. An examination of the influence of self construal and social

beliefs on coping will enhance our understanding of coping similarities and differences between Chinese and U.S. persons.

Self-construal

The way people conceive themselves is influenced by the culture into which they are socialized (Gudykunst, Matsumoto, Ting-Toomey, Hishida, Kim, & Heyman, 1996). To begin the discussion of self-construal, it is necessary to first look at related cultural variables. Individualism and collectivism are the most frequently researched dimensions of culture. An individualistic culture emphasizes the superiority of personal goals over those of the in-group, while a collectivistic culture emphasizes the subordination of personal goals to in-group goals (Triandis et al., 1988). Hofstede's (1980) cross cultural study of cultural dimensions across 50 countries and 117,000 individuals indicated that individualism and collectivism are opposite ends on a continuum, and that the distribution of individualism-collectivism contrasts most Asian, Latin American, and African cultures with most North-American and northern and western European cultures. In Hofstede's (1980) study, individualism-collectivism referred to the extent to which the identity of persons of a given culture was shaped primarily by personal choices and achievements or by the groups to which they belonged. Hofstede computed country mean scores on an Individualism Index (IDV; Hofstede, 1980), which described the extent to which a country tends to be individualistic. The Individualism Index ranges from zero to 100, the higher the score, the more individualistic. The highest IDV scores were found in the United States (92), Australia (90), U.K. (89), Canada (80), the Netherlands (80), and New Zealand (79). The lowest were found in Venzuela (12), Columbia (13), Pakistan (14), Peru (16), Taiwan (17), and Singapore (20). The individualism-collectivism

dimension was further supported in another study by Smith, Dugan, and Trompenaars (1996) with data collected from 8,841 respondents from 43 nations. The authors devised 25 questions to measure facets of individualism-collectivism based on the definition proposed in Hofstede's study. Similar to Hofstede's findings, Smith et al. (1996) showed that China scored highly on collectivist values, while the U.S. scored high on individualistic values. Recently, a meta-analysis of 170 studies on the dimensions of individualism and collectivism (Oyserman et al., 2002) demonstrated that European Americans in the United States were more individualistic compared to people from Japan, Korea, China, India, Poland, and Singapore. European Americans were also less collectivistic than were people from Isreael, Nigeria, China, Mexico, and India. In contrast, the Chinese were robustly lower in individualism and higher in collectivism than European Americans in the United States. These studies, all conducted on a nation level (i.e., computation of country mean scores), have shown that Chinese culture is more collectivistic than the United States mainstream culture.

The individualism-collectivism continuum has been measured through culture/nation level analyses based on the aggregate of individual scores on variables including personal and in-group goals, self concept, perception of norms and duties, and interpersonal relationships. It represents the shared subjective feature of a culture and does not dictate individual differences within cultures. The corresponding cultural variable measured at the individual level is self-construal (Singelis, Bond, Sharkey, & Lai, 1999). Self-construal is influenced by the individualistic or collectivistic culture in which individuals are socialized. Markus and Kitayama (1991) identified two basic and relatively stable types of self-construal: independent self-construal and interdependent

self-construal. Independent self-construal is defined as a "bounded, unitary, and stable" self that is separate from social context (Markus & Kitayama, 1991, p. 230). It emphasizes internal attributes such as individual thoughts, feelings, abilities, and personal goals, individual uniqueness, and self expression. Persons with an independent self-construal regard the self as separate from groups, they use internal attributes to guide their behavior (i.e., make decision based on their desires or likes and dislikes), and evaluate relationships in terms of their costs and benefits. Persons in the United States and other individualistic societies are likely to construct an independent self-construal (Markus & Kitayama, 1991) because the United States society encourages directness and forthrightness in communication, expression of different opinions, and assertiveness of individual needs.

In contrast, interdependent self-construal is defined as a "flexible, variable" self (Markus & Kitayama, 1991, p. 230) that emphasizes external features such as roles and relationships, belonging and fitting in, one's proper place and behaviors in groups, and indirectness in communication. People with interdependent self-construal see the self as part of an in-group. They pay attention to norms and social obligations, and the importance of relationships regardless of immediate costs. People in a collectivistic culture are likely to construct an interdependent self-construal because they tend to define the self in terms of relationships with others (Markus & Kitayama, 1991; Triandis, 1988). For example, a person in China is usually referred to by his or her position at work or roles in the family, rather than by his or her name. Chinese students in Taiwan tended to act primarily in accordance with the expectations of others and social norms rather than with internal desires (Yang, 1981).

Empirical studies have supported the association between the individualism-collectivism continuum and independent and interdependent self construal (Singelis et al., 1999). Specifically, these studies showed that collectivism is associated with stronger interdependent self construal and weaker independent self-construal. Another study conducted in nine countries/areas (Chile, France, Hong Kong, Illinois, India, Indonesia, Japan, China, Poland and Venezuela) (Triandis, et al., 1993) showed that independence versus interdependence discriminated these cultural groups. On independence, China had the lowest scores, while Illinois in the U.S. had the highest score (i.e., -59 vs. 47). On interdependence, China had a higher score than Illinois (i.e., 33 vs. 15). The study indicates that U.S. persons have a much stronger independent self-construal compared to Chinese persons. Chinese persons are more interdependent than U.S. persons. In addition, it shows that interdependence and independence co-exist in a culture, which is observed in the scores of U.S. persons.

This link between individualism-collectivism and self-construal provides a theoretical framework that explains individual behavior through an examination of cultural differences. Individual coping behaviors, therefore, could be explained by cultural variability through the analyses of self-construal. As such, the current study used self-construal as one of the independent variables to investigate cultural influences on coping.

In addition to the discussion of self-construal as a feature of cultural variability at the individual level, there have been studies (Cross & Madson, 1997; Gabriel & Gardner, 1999; Kemmelmeier & Oyserman, 2001; Maddux & Brewer, 2005) on the relation between self-construal and gender. These studies showed that in Western societies,

women were more likely than men to develop an interdependent self-construal and that men were more likely than women to develop an independent self-construal. Children tended to define themselves very early as a function of their gender, with girls having a greater social sense of self than boys (McGuire & McGuire, 1988). Men's sense of worth is closely associated with autonomy and the sense of personal achievement, while women emphasized connectedness and sensitivity to others. However, such gender differences in self-construal were not found in a range of collectivistic societies including China, Nepal, India, Nigeria, and Zimbabwe, etc. (Watkins, Adair, Akande, Cheng, Flemming, Lefner, & Gerong, 2003). A recent study that compared responses from France, Belgium, the Netherlands, the United States, and Malaysia (Guimond et al.,, 2007) showed that gender differences in self-construal are in fact larger in American and European cultures where greater progress has been made toward gender equality. Variation of gender differences in self-construal can be explained by the role of social comparison processes in a particular culture. In individualistic cultures where more egalitarian gender role is emphasized, people are more likely to engage in between-group (gender) social comparison (Guimond, Chatard, Martinot, Crisp, & Redersdorff , 2006). When they compare themselves with out-group members, they define themselves in terms of characteristics that define the in-group as apposed to the out-group. As a result, they exhibit stronger gender differences in self-construal. In contrast, in collectivistic culture where power imbalance between men and women is larger, people tend to engage in intra-group (within-gender) social comparison, which results in weaker gender differences in self-construal.

Self-construal and Coping. The relation between self-construal and coping was investigated in a study by Lam and Zane (2004). In this study, differences between Asian and White American students' coping with interpersonal stressors were examined. It was found that Asian American students were less likely to use externally targeted coping such as doing something to change the external environment than the White American students. The Asian American students tended to use internally targeted coping such as changing their thoughts and feelings to adjust to the environment. Furthermore, it was found that the Asian American students were more oriented toward an interdependent self-construal and less towards independent self-construal than the White American students were. More importantly, the study showed that self-construal had a significant mediating effect on ethnic differences in coping. The relation between ethnicity and coping was significantly reduced after the effect of self-construal was controlled. Greater orientation toward an interdependent self-construal partially accounted for the greater use of internally targeted coping, and greater orientation toward an independent self-construal fully accounted for the greater use of externally targeted coping. These results make sense because people with an independent self-construal are oriented toward mastering and controlling the environment to fit their personal goals and needs. As a result, they take action to change the situation and use problem solving coping strategies when facing adversities. In contrast, for people with an interdependent self-construal, the self is defined in relation to others. Persons so oriented attempt to accommodate or adapt to the environment. As a result, they examine and change their thoughts and feelings to cope with stressful situations.

Similarly, Cross (1995) investigated the differences in self-construal of American and East Asian students in the United States and the influence of self-construal on coping. Seventy-one East Asian students and 79 U.S. students participated in the study. The results showed that East Asian students in the first year of study in the U.S. were higher on the interdependent self-construal than were the American students. There was, however, no difference in both groups emphasis on the independent self-construal. It is possible that East Asian students who chose to travel to and study in the United States were more individualistic compared to their counter-parts in their home country. Moreover, the study demonstrated that East Asian students who were more independent oriented tended to take direct action in addressing school related problems. In contrast, the relation between self-construal and coping was not observed in the U.S. students. According to the author, this may due to the lower internal reliability of the self-construal measures for the U.S. students in this study. This limitation may result in the underestimation of the strength of the relationships between self-construal and coping for the U.S. sample. Although interpretation of the results was somehow impeded due to this limitation, the study provided evidence for the relationship between self-construal and coping in the East Asian sample.

In related research, Zaff, Blount, Phillips, and Cohen (2002) investigated the association between self-construal and coping among African and Caucasian American middle school students. Their study found that for both African Americans and Caucasian Americans, independent self-construal was associated with less use of self criticism and other-blaming, and more positive reframing of the stressor. The similarity between the two groups may be attributed to the acculturation of African Americans youth into the

majority culture. On the other hand, interdependent self-construal was found to contribute to more use of social support for African Americans, while independent self-construal was related to more use of social support for Caucasian Americans. For Caucasian Americans, interdependent self-construal was not associated with any coping strategies. This difference suggests a more independent ideology in Caucasian Americans.

The above studies indicate that self-construal influences coping. The relation between ethnicity and/or nationality and coping is somewhat mediated by people's self-construal. It is important to note that ethnicity and nationality are different concepts. Ethnicity refers to a cultural identity with which members share a common heritage including religious, or linguistic characteristics, whereas nationality refers to one's citizenship (Fischer & Moradi, 2001). Some studies discussed above concern ethnic minority groups in the U.S. (Lam & Zane, 2004; Zaff et al., 2002) and some concern East Asian international students (Cross (1995). As shown from these studies, coping differences across cultures may have more to do with how people perceive themselves and how they relate to others than it has to do with the cultural society they are from. Thus, to gather meaningful information on cross-cultural differences in social behaviors, specific cultural variables should be included. As mentioned earlier, self-construal reflects cultural variability at an individual level. The use of self-construal as an independent variable unpacks the specific aspect of culture that is associated with coping. Moreover, incorporating individual level analyses like this recognizes differences within cultures and that not all members of a culture are represented by the prototype that characterize a culture (e.g., some U.S. nationals may have a stronger interdependent self-construal than independent self-construal, and vice versa to some Chinese people).

Among previous cross cultural studies of coping (Hoedaya & Anshel, 2003; Lam & Zane, 2004; O'Connor & Shimizu, 2002; Sheu & Sedlacek, 2002; Tweed et al., 2004), only one study (Lam & Zane, 2004) incorporated self-construal as a specific cultural variable to understand the mechanism underlying cultural differences in coping. Studying cultural differences in coping without an investigation of influences of specific cultural variables gives the impression that people's nationality or ethnicity determines their behaviors, which is misleading. In each culture, individuals may develop a different understanding of the self and the world due to a different personality and living environment, which in turn brings about different responses to stressors. Thus, the current study addressed this limitation by looking into the relations between coping and specific cultural variables, namely, self-construal and social beliefs.

Cultural differences in self-construal also explain why the emotion-focused coping dimension is prevalent in the United States but not China. Expression of emotions is important to people with an independent self because it highlights their internal attributes and enhances self confirmation in public and in private (Markus & Kitayama, 1991). In contrast, in collectivistic cultures such as China where an interdependent self is more prevalent, emotions are less frequently expressed. Public display of one's personal emotions may disturb the maintenance of interdependent and harmonious social interaction, and if unconstrained can lead to interpersonal conflict (Markus & Kitayama, 1991). The interpersonal context assumes priority over private feelings, and as a result, private feelings are de-emphasized to fit the interpersonal context. This position is supported by a study by Matsumoto and colleagues (Matsumoto et al., 1988). The researchers provided a semi-structured interview with 81 U.S. undergraduate students and

193 undergraduate students from Japan. These students were asked about their experiences of emotions including joy, fear, anger, sadness, disgust, shame and guilt, the regulation of emotion, the subjective evaluation of emotion-eliciting events, and verbal, nonverbal, and physiological reactions. The study showed that the U.S. undergraduate students reported experiencing their emotions longer and more intensely than did the Japanese students. Moreover, the U.S. students reported more physiological and verbal reactions to the emotion-eliciting events than did the Japanese. Based on data collected from 15 countries, Matsumoto (1989) further investigated the relation between self-construal and emotion expression. Participants were asked to identify and rate emotions displayed by an individual in photographs. The results suggested that people from individualistic cultures perceived and experienced emotions more intensively to the same stimuli compared to people in collectivistic cultures. These studies (Matsumoto, 1989; Matsumoto et al., 1988) indicate that there is a positive relation between individualism and negative emotion expression. Cultures low in individualism stress group cohesion. In these cultures, expression of negative emotions is minimized as it threatens interpersonal harmony. On the other hand, cultures high in individualism may sanction the communication of negative emotions as they relate to individual freedom to express and perceive those emotions.

Social Beliefs

Another cultural construct to be examined in the current study is social beliefs. The current study applies Leung and colleagues'(2002) definition of social beliefs which refers to general beliefs about people, social groups, social institutions, the physical environment and the spiritual environment, and events and phenomena in the social

world. Social beliefs are expressed in the form of an assertion about the relationship between two entities or concepts. Examples of social beliefs include statements such as, "good health leads to life satisfaction," or "Wars will lead to the destruction of civilization" (Leung et al., 2002, p. 289). Social beliefs are developed through people's socialization experiences. Thus, they reflect the social environment in which one grows up and influence the way one behaves and relates to others. Social beliefs is a broader concept than worldview as the former includes beliefs about the world, the self, and the relations between the self and the world, while the latter focuses on beliefs about the world only (Park & Folkman, 1997). In addition, social beliefs are different from values, as the former concerns the relationship between two concepts, while the latter makes assumption about only one concept (e.g., Wars are bad; Eating healthy is important) (Leung et al., 2002).

Despite the importance of social beliefs in understanding people's social behaviors, it was not until the early 2000s that researchers began to develop an instrument to identify and measure this construct at the individual level (Leung et al.; 2002). Based on a review of Western literature on beliefs and on cultural input from Hong Kong Chinese people and Venezuelans, the instrument *Social Axioms Survey* was developed. Specifically, the authors gathered survey instruments on beliefs in the psychological literature in English, which contained more than 300 scales. Items that were consistent with the said definition of social beliefs were selected. Meanwhile, 265 people in Hong Kong and 42 people in Venezuela were approached for an interview. The participants were asked to respond to three sets of questions: 1) beliefs and principles that "guide their interactions with others" as well as beliefs about "everyday matters," 2)

beliefs about the "self, others, social relations, social groups, the environment, and the supernatural," and 3) beliefs about "issues on love, health, marriage, society, politics, religion, entertainment, work, family, sports, and life in general" (Leung et al., 2002, p. 290). In addition, content analyses were conducted of samples from Chinese and Venezuelans newspaper, magazines, popular songs, proverbs, primary and secondary textbook, poetry, and folklore to extract items of social beliefs. Based on a series of statistical analyses (see details in Chapter III) on populations in various cultures including Hong Kong, Venezuela, U.S., Japan, and Germany, five culture-general dimensions of social beliefs were identified which include *social cynicism, social complexity, reward for application, religiosity,* and *fate control*. Specifically, *Social cynicism* represents a negative perception of human nature such as a biased view about certain groups of people, a mistrust of social institutions, and a disregard of ethical means for achieving an end. People with social cynicism may expect negative outcomes from their involvement with life, especially with more powerful others. *Social complexity* refers to the view that there are multiple solutions to social issues and that the outcome of events is uncertain. People with social complexity recognize the variability of individual behaviors and multiple influences on social outcomes. *Reward for application* represents the belief that the investment of human resources results in a positive outcome. People believe in a just world where hard work and effort will pay off. *Religiosity* refers to the view that spiritual forces influence the world and that religious institutions have a positive influence on social outcomes. People with spirituality believe in the existence of supernatural powers. *Fate control* refers to the belief that social events are determined by external forces. People with fate control believe that outcomes are predetermined. Meanwhile, they also

believe that there are ways to influence outcomes (Leung et al., 2002). As such, people engage in certain practices (e.g., doing good, chanting, going to a fortuneteller) to avoid bad luck.

The relation between social beliefs and the cultural dimension of individualism and collectivism is yet to be explored as few studies have investigated this topic. In their study of examining the nomological network of social axioms on Chinese undergraduate students, Chen, Fok, Bond, and Matsumoto (2006) found that two dimensions of social axioms were associated with the social characteristics of individualism and collectivism. Specifically, *social cynicism* was associated with *vertical individualism. Vertical individualism* (emphasizing hierarchy) as compared to *horizontal individualism* (emphasizing equality), is characterized by a sense of competition and emphasis on hierarchical status. People in a vertical individualistic culture tend to be competitive and strive to be the best. Research showed that some individualistic cultures, such as Australia and Sweden, emphasize equality whereas other individualistic cultures, such as the United States, emphasize hierarchy (Triandis, 1995; 2001). The relation between *social cynicism* and *vertical individualism* makes sense as individuals with cynical worldviews tend to see social institutions as repressive and hierarchical structured, and thus are self-protecting due to their mistrust of others. In addition, *social complexity* was found to be associated with both vertical individualism and vertical collectivism. This may indicate that people in a hierarchical culture, either individualistic or collectivistic, believe in the inter-related nature of the world and thus apply multiple solutions to problems.

Social Beliefs and Coping. Studies have been conducted to evaluate the relation between dimensions of social beliefs and coping (Bond et al., 2004; Safdar et al., 2006) in various populations. In a study of the social beliefs construct with Chinese college students, Bond et al. (2004) found that social beliefs predicted coping styles. Specifically, the dimensions of *fate control* and *social cynicism* were associated with avoidance coping. Individuals, who believe that events are destined and beyond the control of human beings, may choose to stay away from a difficult situation and wish for the reverse of fortune to occur. Similarly, people who perceive human nature and social events in a negative way may be skeptical about the outcome of active engagement with problems, and resort to distancing and wishful thinking. The study also demonstrated that *social complexity* was related to problem-focused coping. Resorting to problem solving when facing difficulties is consistent with the rationale of social complexity, that is, there are multiple solutions to a problem. The relation between problem-focused coping and social complexity suggests that a complex view of human behaviors encourages rational approaches to human difficulties (Bond et al., 2004).

In another study with U.S college students, Singelis, Hubbard, Her, and An (2003) found that *fate control* was associated with the belief of external control and the existence of a supernatural power. As a result, people who believed in fate control tended to read their horoscope to avoid unfavorable situations which can be categorized as avoidance coping. Meanwhile, *reward for application* was found to be related to trying hard following an unfortunate event and working hard to maintain good relationships with others which may be associated with problem-focused coping. In addition, *religiosity* was positively related to seeking help from a religious advisor, praying,

reading scriptures, and attending church, which implies that people with religious beliefs tend to use social support. Last but not the least, *social complexity* was found to be associated with direct confrontation in interaction with others, which indicates a relation between social complexity and problem-focused coping. Again this study (Sengelis et al., 2003) provided evidence that people's choice of coping strategies was influenced by their beliefs about the world and the relation of the self to the world.

In related research, Safdar et al. (2006) examined the relations between social beliefs and coping strategies on Iranian college students. The study revealed that problem focused coping was positively associated with *reward for application*. This indicates that individuals who believe that efforts lead to positive outcome are more likely to engage in problem solving.

Research on the relation between social beliefs and coping is still in its early stages as the social beliefs construct has been studied only in recent years. Despite the limited number of studies on this subject, related research has showed that there are relations between some dimensions of social axioms and some dimensions of coping. In studies of Chinese, U.S., and Iranian populations, it was found that *reward for application, social complexity* were associated with problem-focused coping, that *fate control* and *social cynicism* were related to avoidance coping, and that *religiosity* was related to help seeking. Yet these studies (Bond et al., 2004; Safdar et al., 2006; Singelis et al., 2003) investigated only the relationships between social beliefs and Western-based coping dimensions. The relationships between social beliefs and coping dimensions that include the Chinese dimensions remain unknown. The current study explored the relationships between social beliefs and coping (both U.S. and Chinese coping

dimensions) in U.S. and Chinese college populations separately. In addition, the relationship between social beliefs and coping in each culture were compared in a non-statistical way to provide insights about similarities and differences of these relationships for these two cultures.

Summary

Coping has been the focus of social studies on human behavior and health for more than 30 years. Numerous theories and research projects have been developed to understand the coping process as well as its influential factors and outcomes. The current study intended to understand the impact of culture on coping based on two theoretical models: the dispositional model and the transactional model. First, the dispositional model emphasizes the stability of coping across situations and time and the predictability of coping and outcomes (Parker & Endler, 1996). Hence, this model allowed for the development of standardized measures of coping with good psychometric properties. This model provides premise for the current study, that is, comparison of individual coping is possible since there is evidence of consistency in the way an individual responds to different stressors and at different times. Moreover, a coping measure, the *Coping Inventory for Stressful Situations* (CISS; Endler & Parker, 1994) based on this model is adopted in the current study. The CISS had demonstrated stability of subscales, and sound reliability and validity in the U.S. populations, which is a foundation for a good empirical study. Second, the transactional model looks at coping in the environmental context and pays attention to the interaction between one's belief system and coping appraisal (Lazurus & Folkman, 1984). It insists that to understand coping, social and cultural factors need to be considered. The current study recognized that

people in different cultures cope differently due to their unique socialization and personal experiences. Thus, this study investigated relations between coping and specific cultural variables across U.S. and Chinese college populations to gain insights about influence of culture on coping.

A good way to demonstrate the impact of culture on coping is to conduct a cross-cultural study in two societies that are distinct from each other in terms of cultural characteristics. In various nation-level studies, the United States has stood out as an individualistic society and China as a more collectivistic society (Hofstede, 1980; Oyserman et al., 2002; Smith et al., 1996). The current study aimed to examine coping among U.S. people and Chinese people and provide an explanation of coping similarities and differences by looking into cultural variables such as self-construal and social beliefs. Previous cross-cultural studies of coping (Hoedaya & Anshel, 2003; Lam & Zane, 2004; O'Connor & Shimizu, 2003; Sheu & Sedlacek, 2002) have used coping as the dependent variable and nationality or ethnicity as the independent variables based on the assumption that nationality or ethnicity differentiates people. This assumption does not take into account within-group differences (Zaff et al., 2002) because not all members of a culture are represented by the prototype that characterizes a culture. For example, not all U.S. persons have a strong independent self-construal (Tiandis et al., 1993). Moreover, this assumption does little to explain the mechanisms underlying the relationship between ethnicity/nationality and coping behavior. Ethnicity or nationality is a general cultural category that includes various shared aspects of the group and its environment. Using such a broad category as the independent variable does not inform which aspect of culture is associated with coping. Thus, the current study extended previous research on

cross-cultural coping by looking at the relationships between specific cultural variables such as self construal and social beliefs and their influence on coping. Studies (Cross, 1995; Lam & Zane, 2004; Zaff et al., 2002) have demonstrated that self-construal, as a cultural variable linked to the individual-collectivism dimension, influences one's coping behaviors. Moreover, social belief, a construct catching researchers' attention in cross-cultural studies in recent years, is associated with coping (Bond et al., 2004; Safdar et al., 2006; Sengelis et al., 2003). These studies, however, investigated only the relationships between these two cultural variables and Western-based coping dimensions. Very little is known about specific relationships between cultural variables and the Chinese-based coping dimensions of self-regulation and seeking practical social help. Thus the current study aimed to further examine the relationships between cultural factors such as self-construal and social belief and a broader range of coping dimensions including task-oriented coping, emotion-oriented coping, avoidance coping, self-regulation coping, and seeking practical help.

Besides exploring the influence of specific cultural variables on coping across cultures, another task of the current study was to address methodological limitations in previous research. These limitations lie in a lack of attention to construct equivalence and construct bias, which hinder the validity of the results. Cross-cultural comparison is impossible when the construct discussed is not equivalent across cultures. Indigenous studies in China have revealed that the construct of coping in China and the United States are not identical. Major coping dimensions in the Chinese population are self-regulation and seeking practical social support (Heppner et al., 2005; Hwang, 1977, 1978, cited in Shek & Cheung, 1990; Yeh & Inose, 2002; Yue, 2001), whereas frequently cited coping

dimensions in the United States are problem-focused and emotion-focused coping. Moreover, there is a lack of overlap in behaviors even connected to the same dimension of coping. Previous cross-cultural studies of coping (Hoedaya & Anshel, 2003; Lam & Zane, 2004; O'Connor & Shimizu, 2002; Sheu & Sedlacek, 2002) have not addressed this issue as they all employed measures based on Western theories and populations without first assessing the equivalence of the construct. In addition, these studies used level-oriented analysis such as comparing mean scores without addressing measurement equivalence and scalar equivalence, which again limits the validity of the results. To address these methodological limitations, the current study adopted a convergence approach, which involved the use of both Chinese and U.S. based scales to measure coping. This research design provides a more comprehensive and balanced coverage of coping behaviors in the cultures under study. Also, to address the issue of measurement and scalar equivalence noted in past cross-cultural studies on coping, the current study used structure-level analysis by looking at the construct's nomological network in each country, followed by a comparison of the relationship patterns discovered in each of the two countries.

As a great deal of attention was paid to enhancing cross-cultural validity in this study, results of the study may provide a more accurate picture of differences in coping due to socio-cultural factors than prior studies have. The findings of the current study have important implications for both research and practice. In terms of research, this study challenges the Eurocentric bias, which assumes that theories and research methodologies in the West are the standard and thus applicable to all cultures. Instead of "exporting" Western ideas and instruments to another culture, the current study adopted a

more balanced approach, which involved borrowing dimensions of coping equally from both cultures (e.g., Ægisdóttir et al., 2008). As this approach is not commonly applied in cross-cultural counseling psychology research, this study may encourage cross-cultural counseling researchers in utilizing this methodology. In terms of practice, studies have shown that flexibility in using diverse coping strategies is associated with better adjustment (Essau & Trommsdorff, 1996). In a multicultural society, it is important that mental health practitioners as well as clients seeking mental health services are exposed to a large collection of coping tools with the knowledge of what works best in what type of situation. A multicultural competent practitioner respects clients' worldviews and seeks to understand their behaviors and thoughts in their cultural context. Cross-cultural studies of coping like the current one can certainly open the door for this mutual understanding and collaboration between practitioners and clients.

Hypotheses

Based on the review of the current literature, the following hypotheses were tested:

1. Self-construal and social beliefs are associated with different coping dimensions in the U.S. and Chinese student samples.

   For the U.S. sample,

   a. The greater their independent self-construal and the greater their beliefs in the complexity of society and the importance of efforts in attaining goals, the greater their likelihood of using task-oriented coping;
   b. The greater their interdependent self-construal, the greater their likelihood of using emotion-focused coping;

c. The greater their belief in destiny and the more negative view of society they hold, the greater their likelihood of using avoidance coping.

For the Chinese sample,

d. The greater their independent self-construal and the greater their beliefs in the complexity of society and the importance of efforts in attaining goals, the greater their likelihood of using task-oriented coping;

e. The greater their interdependent self-construal, the greater their likelihood of using self regulation coping and seeking help from others;

f. The greater their belief in destiny and the more negative view of society they hold, the greater their likelihood of using avoidance coping.

Because no prior studies have been performed on cultural variables and the Chinese coping dimensions, a general *non-directional* hypothesis is stated predicting the relationships between the Chinese coping dimensions, self-construal, and social beliefs for both the U.S. and the Chinese students:

g. Self-construal and social beliefs will influence self regulation coping and seeking help for the U.S. and the Chinese students.

2. The relationship pattern between emotion-focused coping, self-construal, and social beliefs will be different between the Chinese and U.S. student samples.
3. The relationship pattern between religious beliefs and coping will be different between the Chinese and U.S. student samples.

CHAPTER III

Method

The purpose of the current study was threefold. The first goal was to understand the impact of socio-cultural factors on coping. This was accomplished by examining the relationships between self construal, social beliefs, and coping among Chinese and U.S. college students. A Canonical Correlation was used to analyze the data for the Chinese and U.S. student samples separately. The second goal of this study was to examine if the inter-relationships between these variables would yield the same pattern for both groups of students. The relationships between these variables for both groups were compared in a non-statistical way to determine cross-cultural differences and similarities. The final goal of this study was to address some methodological limitations of previous cross-cultural studies of the coping construct (Hoedaya & Anshel, 2003; Lam & Zane, 2004; O'Connor & Shimizu, 2002; Sheu & Sedlacek, 2002), by attending to and minimizing construct equivalence and construct bias. Special attention was also paid to the translation procedures to maximize equivalence between the instruments.

Participants

A sample of 759 students participated in this study. Among them, 392 were undergraduate students at a university in China, and 367 were undergraduate students at a Midwestern university in the United States. Both universities started as teaching colleges and expanded to be comprehensive public universities. They are comparable in size and

students from both universities are familiar with paper-pencil self-report surveys. Responses from 42 U.S. students and 71 Chinese students were excluded from the study due to a large percentage (more than 10%) of missing data and because of outlier responses (see discussion below). This left 321 Chinese participants (114 men and 207 women) and 325 (147 men and 178 women) U.S. participants. The Chinese students were enrolled in any one of the courses offered by the Education, Economic, Business Management, Computer Science, Biology, Chemistry, and Psychology Departments at the Chinese university. To recruit the Chinese students, the researcher obtained permission from the instructor of each class to present the research project. The Chinese students participated in the study at the end of their respective class periods. They did not receive any incentives for their participation. The U.S. students were enrolled in various courses offered by the Business, Biology, Physiology, Chemistry, Nursing, Telecommunication, Counseling Psychology, History, and Computer Science Departments at the U.S. University. The students who were enrolled in counseling psychology and business management classes received one credit hour toward completion of a course requirement in exchange for participation. One out of every 25 U.S. students who were enrolled in other classes was randomly selected to receive a $25 gift certificate. The U.S. students completed the survey at the end of class period, as well as outside of class.

As mentioned earlier, responses from 42 U.S. students and 71 Chinese students were removed either because their responses were outliers or they missed answering more than 10% of the questions. Several layers of criteria were used to refine the data set. To identify outliers, box plots were displayed for each variable within each of the two

samples. Responses were considered outlier responses when they fell more than 1.5 box lengths from the lower or upper edge of the box (Green & Salkind, 2004). An examination of the demographics of the outlier cases indicated that these respondents tended to be non-traditional students (e.g., older age and/or having children). Because these characteristics did not represent the majority of undergraduate students in either country, data from these participants were excluded from the study.

With regards to considerations for missing data, Tabachnick and Fidell's (2001) suggestions were consulted. These authors recommended removal of respondent data if the number of cases with missing data is relatively small and the percentage of missing data is relatively large. Based on this recommendation, cases with 10% or more of their data missing were excluded from the study. Therefore, all responses from the 40 U.S. and the 68 Chinese participants were deleted to avoid the confounding effects of large percentages of missing data. A different approach was adopted in handling missing data from the Chinese Coping Scale (CCS; Shek & Cheung, 1990) because two items on this scale were responded to intermittently. These two items asked about whether participants sought help from their (a) spouses and (b) in-laws. Since most of the participants were single, it is reasonable to assume that they may not have answered these questions because the questions were not relevant to their experience. Therefore, if the participants were single their responses were kept for the analyses whether or not they responded to these items. Individual mean substitution was used to score the scale. That is, the missing value was replaced by the mean of the items that had values (Shrive, Stuart, Quan, & Ghali, 2006).

After these exclusion measures were carried out, data from 325 U.S. participants (89%) and 321 Chinese participants (82%) remained. The mean age was 20.71 (*SD* = 1.1) years for the Chinese students and 21.54 (*SD* = 3.4) years for the U.S. students. Two-hundred-and-sixty-four U.S students (81%) identified as European American, 24 (7%) as African American, seven (2%) as Hispanic, six (2%) as Asian or Pacific Islander, three (1%) as American Indian and Alaskan Native, and 17 (5%) identified with another ethnic group. Four (1%) students did not indicate their racial or ethnic background. In the Chinese sample, 311 (97%) participants identified as Han, and nine (3%) as belonging to an ethnic minority group. Table 1 shows the frequency distribution of the participants' demographics and counseling experiences. As the table shows, the percentage of men and women were comparable across samples. For both samples, the majority of participants were single, with a higher percentage of single persons in the Chinese sample. Table 1 also shows that the U.S. students' parents tended to have higher levels of education compared to the Chinese students. Table 1 also shows that the frequency distributions of previous career counseling experience were comparable across samples, while that of previous personal counseling experience was higher for the U.S. student sample. Table 2 shows the quality of family and social relationships and family income. In general, close familial and social relationships were reported in both samples. The U.S. students reported higher familial income than did the Chinese students.

Instruments

Demographic Information. The demographic sheet was developed by the researcher and asked students to provide their age, gender, major, year in school, marital status, socio-economic status (i.e., their total family income, parents' education and

occupation, and living arrangement prior to college), race/ethnicity, religion, and social relationships (familial relationships and friendships). Social relationships were measured by asking participants to rate the quality of their relationships with their family and friends on a scale from 1 (*very distant*) to 5 (*very close*). The students were also asked whether they had sought counseling or psychological services for career or personal problems, and the number of times they had sought such services (see Appendix A).

Coping. Coping was measured with two instruments, the *Chinese Coping Scale* (CCS; Shek & Cheung, 1990) developed on Hwang's (1977) conceptualization of Chinese ways of coping and *the Coping Inventory for Stressful Situations* (CISS; Endler & Parker, 1994) based on Lazarus' (Lazarus & Folkman, 1984) model of transactional coping and validated with U.S. populations. The CCS (Shek & Cheung, 1990) was selected over the CCSI (Heppner et al., 2005) as it measures coping behaviors that are commonly used in China and do not overlap with the coping dimensions measured by the CISS (Endler & Parker, 1994). Because the coping dimensions covered by either scale alone may not cover culture specific coping dimensions in the other culture, the two scales were used together to maximize the coverage of coping dimensions applicable in both cultures. Both the CCS and the CISS ask about the frequency of use of specific coping strategies when encountering a stressful situation.

The Chinese Coping Scale. Both the Chinese and English language versions of the CCS developed by Shek and Cheung (1990) were used in the current study. The CCS was developed utilizing Hwang's (1977) conceptualization of coping styles among Chinese people. Development of this scale incorporated responses from 180 Chinese persons in Taiwan. Respondents were asked to provide information about how they cope in high

stress situations. Five themes were extracted: (a) mobilization of personal resources (e.g., analyze the causes of problem and think about its solutions, forbearance, and being confident), (b) seeking help from social resources (e.g., seeking help from friends and relatives), (c) appealing to a supernatural power (e.g., pray for Buddha's protection, (d) adoption of the philosophy of doing nothing (e.g., let nature take it's course), and (e) avoidance (e.g., make self feel good by comparing self to persons who are less fortunate (Hwang, 1977). These five themes were then re-categorized by Shek and Cheung (1990) around the principle of involvement of self or others in the coping process, leading to two main dimensions: (1) coping by relying on self, which includes mobilization of personal resources, doing nothing, and avoidance. This dimension was referred to as internal coping; and (2) coping by relying on others, which includes seeking help from social networks and appealing to a supernatural power. This dimension was referred to as External Coping. Shek and Cheung (1990) developed sixteen items corresponding to Hwang's (1977) five categories of coping and the internal and external dimensions. Three items correspond to mobilization of personal resources, eight items measure attempts to seek social support, one item refers to appealing to a supernatural power, three items reflect "doing nothing," and one item measures avoidance.

Shek and Chueng (1990) administered the CCS to 1000 Chinese adults instructed to think about marital, family, interpersonal, and work-related stressors. The participants were asked to indicate how often they used the 16 coping strategies on a Likert-type scale, ranging from 1 (*never*) to 4 (*always*). Based on a factor analysis of the responses, two subscales were extracted using Principal Component analysis. These two factors accounted for 40.8% to 43.4% of variance for each set of items pertaining to different life

domains (CCS-marital = 41.85%; CCS-family = 43.3%; CCS-interpersonal = 43.4%; CCS-work = 40.8%). The two subscales are: Internal Coping (e.g., face the problem and devise a solution, forbear, and remain calm) and External Coping (e.g., seek help from spouse or friends). Individuals who score high on Internal Coping use internal resources for stress release, while those scoring high on External Coping look to external resources for problem solving. Scoring consisted of calculating the mean item response for each of the two subscales, with higher scores indicating higher frequency of a particular coping behavior (Shek & Cheung, 1990). The Cronbach's alpha coefficient for the CCS total score was .77 for work-related stressors, .78 for interpersonal stressors, .79 for family related stressors, and .75 for marital stressors. The Cronbach's alpha coefficient for the Internal Coping subscale was .86 for work-related stressors, .86 for interpersonal stressors, .86 for family related stressors, and .82 for marital stressors. The Cronbach's alpha coefficient for the External Coping subscale was .67 for work-related stressors, .72 for interpersonal stressors, .72 for family related stressors, and .72 for marital stressors (Shek & Chueng, 1990). The authors attributed the moderate reliability coefficients to the minimal number of items. When the items were aggregated across the four life domains, reliability increased, with a Cronbach's alpha coefficient of .93 for the CCS total score, .95 for Internal Coping, and .91 for External Coping (Shek & Cheung, 1990). Shek and Chueng (1990) also reported Cronbach's alpha reliabilities above .90 for the total score and the subscale scores when splitting the sample into two. Similarly, the authors examined the stability of the CCS's factor structure. In the same study, they randomly split the sample into two groups and conducted principal component analyses for each sample. The coefficients of congruence were high (> .95) showing that the factor

structures of the two groups resembled that of the total sample.

Shek and Cheung (1990) found a weak relationship between Internal Coping and External Coping which provided support for the divergent validity of the CCS. The correlation coefficients between the two subscales (Internal and External Coping) for the martial, family, interpersonal relations, and work related stress domains were .07, .13, .07, and .05, respectively. In support of convergent validity, Shek and Cheung (1990) reported that the factor loadings converged with the conceptualization of separate coping dimensions: Internal (referred to as the dimension of self-regulation in the proposed model) and External Coping (referred to as the dimension of seeking support in the proposed model). Furthermore, using the two subsamples, a multi-group confirmatory factor analysis demonstrated invariance in the factor pattern, which suggests convergent validity. Prior to this study, there was no literature on the reliability and validity of the CCS with U.S. samples. Additionally, no formal studies had been conducted to evaluate the CCS's cross-cultural validity. The author, a Chinese-English bilingual person, and a faculty member, who is knowledgeable about test development, reviewed the item content of the scale. It was agreed between the two persons that the content was appropriate for both cultures and that the CCS would be applicable for both U.S. and Chinese participants. Thus, in the current study, both the Internal Coping (referred to as Self Regulation) and External Coping (referred to as Help Seek Help) subscales were used.

In this study, Cronbach's alpha reliability for the Self Regulation and the Seek Help subscales were .53, and .71 respectively for the English version, and .64, and .66 respectively for the Chinese version. The Cronbach's alpha reliability of both versions

were lower than those reported in the original study of the CCS (Shek & Cheung, 1990). This could be related to sample differences inherent in the current study. Shek and Cheung (1990) tested the scale on middle-aged Chinese adults whose use of coping strategies might be heavily influenced by traditional Chinese values. In the current study, however, the scale was used on younger Chinese and U.S. college students, who are likely less influenced by traditional Chinese values. Furthermore, the reliability coefficients were also impacted by the number of items in each of the subscales. The Self Regulation subscale consists of five items, and the Seek Help subscale is composed of seven items, which may affect the magnitude of the Cronbach's alpha coefficients as scales with fewer items may have a lower alpha score (Ponterotto & Ruckdeschel, 2007). Considering the nature of the current study, which is to examine the relationship between cultural factors and coping across cultures, rather than making individual high-stake decisions such as those involving clinical assessments (Ponterotto & Ruckdeschel, 2007), these two subscales were utilized in the analyses despite their lower than ideal Cronbach's alpha reliability. Limitations of the CCS subscales' reliability coefficients are discussed further in Chapter V.

The Coping Inventory for Stressful Situations (Endler & Parker, 1990, 1994) was developed in response to a criticism of the psychometric properties (e.g., relatively low reliabilities, and unstable factor structure of existing coping instruments, such as the WCQ (Folkman & Lazarus, 1988) and the COPE (Carver et al., 1989). The CISS was based on the transactional model of coping (Lazarus & Folkman, 1984) which suggests two dimensions of coping functions: problem-focused and emotion-focused. The CISS assesses coping styles that are used by individuals across different types of stressful

situations (Endler & Parker, 1990; Endler & Parker, 1994; Parker & Endler, 1992). To develop the scale, seven psychologists and graduate students in psychology were asked to list their own coping strategies. Meanwhile, items from existing coping inventories and the literature on strategies of coping were identified and evaluated. Finally, redundancies were eliminated and items were removed that seemed biased towards certain groups of individuals.

As a result of the process mentioned above, a 70-item questionnaire was generated. This preliminary 70-item scale was administered to 559 undergraduate students in the United States. A Principal Component factor analysis with a Varimax rotation yielded three factors: Task Oriented Coping, Emotion Oriented Coping, and Avoidance Coping. An identical factor structure was observed for male and female students. Items that loaded below .35 were eliminated. To obtain subscales with equal number of items, new items were added to subscales that had a lower than average number of items. This left 66 items on the scale. This revised 66-item scale was then administered to 394 college students and 284 adults. Principal Component factor analysis with a Varimax rotation again yielded three factors. After deleting low loading items, 48 items were retained, with 16 items on each of the three subscales. Identical factor structures were found for both the college students, adult samples, and psychiatric inpatients in Endler and Parker's (1990, 1994) studies. Individuals who score high on Task Oriented Coping focus on problem solving (e.g., "Focus on the problem and see how I can solve it"). Those scoring high on Emotion Oriented Coping respond to stressful situations with self-blame, emotional outbursts, or wishful thinking (e.g., "I blame myself for procrastinating"). Persons scoring high on Avoidance Coping distract themselves with

other activities (e.g., “Window shopping” or “I think about the good times I have had”) (Endler & Parker, 1990). The CISS has a 5-point Likert type rating scale on which respondents evaluate how often they use the coping strategies listed. The rating scale ranges from 1 (*not at all*) to 5 (*very much*). The CISS is scored by summing items on each factor and dividing the total score by the number of items.

In a study of 832 U.S. college students, Endler and Parker (1994) found Cronbach’s alpha reliability coefficients for the Task, Emotional, and Avoidance subscales to be .90, .87, and .84, respectively for men, and .89, .87, and .83, for women. Over a 6-week interval, test-retest reliability was found to range from .51 to .73, for men, and from .59 to .72, for women.

Numerous studies have been conducted to evaluate the construct validity of the CISS using adolescent, undergraduate student, adult, and clinical populations in the United States (Endler & Parker, 1990). For instance, Endler and Parker (1990) investigated the relationship between responses of the CISS and the WCQ (Folkam & Lazarus, 1985) in a study of 130 undergraduate students (33 men and 97 women). The pattern of correlations between responses of the CISS and the WCQ converged and diverged in a theoretically meaningful way. As predicted, responses of the CISS Task-Oriented subscale correlated highly with responses of the WCQ Problem-Focused subscale and the CISS Emotion-Oriented subscale correlated highly with the WCQ Wishful Thinking and Self-Blaming subscales. Responses of the CISS Avoidance subscale had a moderate correlation with responses of the WCQ Seeking Social Support and Tension-Reduction subscales, which may be due to the fact that the Avoidance subscale did not have a clearly defined counterpart on the WCQ (Endler & Parker, 1990).

Construct validity of the CISS was also demonstrated in another study by Endler and Parker (1994). In this study, the correlations between responses of the CISS and the Coping Strategy Indicator (CSI; Amirkhan, 1990) were examined utilizing the responses of 95 adult participants. Construct validity was supported by a high correlation between responses of the CISS Task-Oriented scale and the CSI Problem Solving scale, moderate correlations between responses of the CISS Social Diversion scale and the CSI Seeking Social Support scale, and moderate to high correlations between responses of the CISS Emotion and Avoidance scales and the CSI Avoidance scale.

In another study using 328 undergraduate students (132 men and 196 women), Endler and Parker (1994) examined the relationship between responses of the Basic Personality Inventory (BPI; Jackson, 1989) and the CISS subscales. The BPI measures psychopathology across three higher-order factors: Psychiatric Symptoms, Depression, and Social Impairment. Consistent with predictions, responses of Task-Oriented Coping was negatively related to psychopathology and psychological distress, while responses of Emotion-Oriented Coping were positively related to psychopathology and psychological distress. For both men and women, there were low negative correlations between responses of Task-Oriented Coping and Depression, moderated to high positive correlations between responses of Emotion-Oriented Coping and Depression, Social Impairment, and Psychiatric Symptoms. Furthermore, low to moderate positive correlations were found between responses of the Avoidance subscale and Psychiatric Symptoms, and between responses of the Avoidance subscale and Social Impairment for both genders. The results suggest that Task-Oriented coping is related to positive outcome, while Emotion-Oriented and Avoidance coping are associated with negative

outcomes. These links indicate that psychopathology differentiates the three coping styles, which provides evidence for the construct validity of the CISS (Endler & Parker, 1994) on a U.S. population.

The criterion validity of the CISS was evaluated through the examination of the relationship between this scale and measures of depression, state anxiety, trait anxiety, and Type A behavior. The analysis included responses on 275 undergraduate students in the United States (75 men and 200 women) (Endler & Parker, 1994). It was predicted that depression and anxiety would moderate the type of coping behaviors in which individuals engage and that Type-A individuals would be more likely to engage in Emotion-Oriented coping than Type-B individuals. The study revealed that depressed individuals reported relying heavily on Emotion-Oriented coping. Also, there were moderate positive correlations between Emotion-Focused coping and State Anxiety, Type A Behavior, and Neuroticism. State Anxiety and Depression were negatively related to Task-Oriented coping. These findings were consistent with the authors' predictions and indicate that coping styles vary by personality styles and type of psychopathology. These findings provide support for the criterion validity of the CISS for U.S. persons.

In contrast to the CCS, the CISS has only been used for U.S. participants (Endler & Parker, 1990, 1994). Furthermore, no studies have been conducted to evaluate its cross-cultural validity. In the current study, the CISS was utilized to explore the application of coping strategies identified in the U.S. for both the Chinese and the U.S. college students. Based on item content, the author determined that the items were appropriate for measuring coping behaviors of Chinese college students.

For use on the Chinese college students, the CISS was translated into Chinese through a translation-back-translation process (see procedures) to ensure language equivalency with the English and U.S. language versions used in the current study. All of the CISS subscales were used: Task-Oriented Coping, Emotion-Oriented Coping, and Avoidance Coping. In this study, Cronbach's alpha reliabilities for the Task, Emotional, and Avoidance subscales were .89, .88, and .83, respectively for the English version, and .89, .85, and .83, for the Chinese version. These values were comparable to those reported in the literature.

Cultural Factors. The Cultural factors assessed in this study were self-construal measured by the *Self-Construal Scale* (SCS; Gudykunst et al., 1996) and social beliefs assessed by the *Social Axiom Survey* (SAS; Leung et al., 2002). Both the SCS and the SAS have been used and validated on U.S. and Chinese samples (Gudykunst et al., 1996; Leung et al., 2002; Moneta & Wang, 2001; Singelis, Hubbard, Her & An, 2003).

The Self-Construal Scale (SCS; Gudykunst et al., 1996) is a 29-item scale measuring two theoretically derived dimensions of self-construal: Independent and Interdependent. The Independent Self-Construal subscale consists of 15 items (e.g., "I should be judged on my own merits," "I prefer to be self-reliant rather than depend on others"). The Interdependent Self-Construal subscale consists of 14 items (e.g., "I consult with others before making important decisions," "I will sacrifice my self-interest for the benefits of my group").

Items are rated on a 7-point Likert-type scale, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Persons who score high on the Independent Self-Construal subscale are more oriented towards autonomy, while those high on the Interdependent Self-

Construal subscale tend to value the interconnected with others. Internal reliability was investigated in a study of 753 college students from four universities in four countries (283 from the U.S., 192 from Japan, 168 from Korea, and 110 from Australia) (Gudykunst et al., 1996). The following Cronbach's alpha reliability coefficients were obtained for Interdependent Self-Construal: United States .80, Japan .84, Korea .85, and Australia .85. For the Independent Self-Construal, the following Cronbach's alphas were found: United States .82, Japan .77, Korea .73, and Australia .83.

Convergent validity of the SCS was assessed by the associations between responses of the scale and measures of other theoretically related constructs such as communication styles, conflict styles, and leadership styles (Gudykunst & Lee, 2003). More specifically, responses of Independent Self-Construal was related to low-context communication (clarity and preciseness), whereas responses of Interdependent Self-Construal was associated with high-context communication (sensitivity) (Gudykunst et al., 1996). It has been reported that Independent Self-Construal is associated with dominating conflict styles, while Interdependent Self-Construal predicts avoiding, obliging, and compromising conflict styles (Oetzel, 1998). Difference in self-construal also differentiates leadership style. That is, Independent Self-Construal has been found to predict the initiation of structure in leadership (leader's focus on task function of the group), while Interdependent Self-Construal is related to consideration (leader's exhibition of concern for members' welfare) (Hackman, Ellis, Johnson, & Staley, 1999).

The Chinese version of the SCS was used in a study with 173 Hong Kong college students (Moneta & Wang, 2001). In this study, it was demonstrated that the Chinese version had adequate internal reliability as had been found on other samples. The

Cronbach's alpha was .82 for Interdependent Self-Construal and .72 for Independent Self-Construal. In the same study, support was provided for the construct validity of the SCC with the Chinese sample. Specifically, for Independent Self-Construal, positive relationships were found with the dominant/control dimension of personality. Also for Interdependent Self-Construal, positive relationships were found with the affiliation and the nurturance dimensions of personality. These findings were consistent with the authors' conceptualization about the relationships between personality traits and self-construal. These relationships make sense as both dominant/control personality and Independent Self-Construal signal a tendency to separate oneself from the environment in order to act upon it, whereas both affiliation and nurturance personality and Interdependent Self-Construal indicate a tendency to merge with the environment. In the current study, both subscales of the SCS were used: the Independent Self-Construal subscale and the Interdependent Self-Construal subscale.

In this study, Cronbach's alpha reliabilities of the independent self-construal subscale were .80 and .79 for the English and Chinese versions, respectively. The Cronbach's alpha reliability for the Interdependent Self-Construal subscale were .80 and .83 for the English and Chinese versions, respectively. These values are comparable to those reported in the literature (Gudykunst et al., 1996; Moneta & Wang, 2001)

The Social Axioms Survey. The Social Axioms Survey (SAS, Leung et al., 2002) is a 60-item developed based on Euro-American literature. The SAS assesses not only general beliefs about the world and the self, but also the relationship *between* the world and the self. It also incorporates common beliefs from two non-Western cultural groups: Chinese persons from Hong Kong (East Asia) and individuals from Venezuela (South

American) (Leung et al., 2002). To elicit input from these two groups, 265 Chinese and 42 Venezuelan participants were asked to respond to three sets of questions: (a) their beliefs about everyday matters and the principles that guide their interaction with others, (b) beliefs regarding the self, others, social relations, social groups, the environment, and the supernatural, and (c) beliefs regarding issues of health, love, marriage, society, politics, religion, recreation, work, family, sports, and life in general. Meanwhile, Leung et al. (2002) reviewed samples from newspapers, magazines, popular songs, proverbs, and folklore from both cultures for the extraction of social axioms or beliefs. In the extraction of social axioms, almost 2,000 statements were identified with responses from the Chinese sample, more than 1,100 from Venezuelan participants, and more than 1,000 from the Euro-American psychological literature. The collection of these statements was condensed by eliminating statements of similar content. Many statements were rewritten to be less idiomatic and to be free of context limitations. Statements were grouped into four broad categories: Psychological Attributes (axioms concerning characteristics of individuals), Orientation toward the Social World (axioms concerning the social characteristics of groups, organizations, and societies), Social Interaction (axioms concerning the way people interact with each other), and Environment (axioms concerning aspects of the environment that have implications for social behavior). The final version of the SAS consisted of 182 items, rated on a 5-point Likert-type scale ranging from 1 (*strongly disbelieve*) to 5 (*strongly believe*). Three language versions were developed: Chinese, English, and Spanish, with the English version used as the standard. Translation and back- translation procedures were used in the development of the

Chinese and Spanish versions (Leung et al., 2002). The English and Chinese language versions were considered equivalent based on the author's evaluation.

In the original study of its psychometric properties and factor structure, the SAS was administered to students and adults in Hong Kong (128 college students and 230 community citizens) and in several Venezuelan metropolitan areas (100 college students and 122 non-student adults). A cluster analysis was first conducted in each culture to identify major clusters. A subsequent factor analysis was then conducted to identify factors underlying the items. As a result, a five-factor solution appeared as a best fit for the data in both cultures. To address response bias, Leung et al. (2002) applied a procedure recommended by Becker (1996) for the meta-analysis of factor structures. The correlation matrix of each cultural group was transformed by the Fisher transformation and averaged to generate a combined matrix. This combined matrix was then transformed back into a correlation matrix for factor analysis. Principal Component factor analyses with Varimax rotation were used to extract factors. Items with loading higher than .25 and consistent with the rest of the items on a particular factor were retained. Sixty items were selected to define the five factors. A subsequent factor analysis of these 60 items based on the combined sample was conducted. The five factors obtained were termed: Cynicism (e.g., "kind-hearted people usually suffer from losses"), Social Complexity (e.g., "human behavior changes with the social context"), Reward for Application (e.g., "one will succeed if s/he really tries"), Spirituality (e.g., "there is a supreme being controlling the universe"), and Fate Control (e.g., "fate determines one's successes and failures"). Altogether, these five factors accounted for 29.4% of the total variance. A Procrustes rotation was run to check how closely the factor structure of each cultural

group resembled the common factor structure. For each country, the five-factor model was obtained by rotating the factor structure toward the common structure. Congruence coefficients were calculated to evaluate the similarity between the resulting factor structure and the common structure. For the Chinese participants, the congruence coefficients ranged from .88 to .98. For the Venezuelan sample, the coefficients ranged from .90 to .97 (Leung et al., 2002). Although these numbers do not meet the standard for detailed comparison of similarities of the factor compositions suggested by (Vijver & Leung, 1997; > .95), they nevertheless indicate factorial similarity at a global level and suggest that the common factor structure provides an adequate model for both groups (Leung et al., 2002).

The five-factor model was tested with a confirmatory factor analysis (CFA) based on data from university students in the United States (25 men and 89 women), Germany (45 men and 54 women), and Japan (93 men and 118 women) (Leung et al., 2002). The 60-item version of the SAS was administered to U.S. and Japanese participants, while due to resource constraint, a 33-item shorter version of the survey was administered to German participants. The 33-item version consisted of items randomly selected from the original 60-item version (12 items from Cynicism, 4 items from Reward for Application, 7 items from Social Complexity, 4 items from Fate Control, and 6 items from Spirituality). For the U.S. sample, the CFA results confirmed the five-factor model (GFI = .919, CFI = .969). For the Japanese sample, the fit was not as good, but was considered adequate (GFI = .879, CFI = .901). Finally, for the German data, the fit between the data and the model was good (GFI = .950, CFI = .1.00) (Leung et al., 2002). This study suggested that the five-factor model was replicable across these three different cultural

groups. As had been done previously (Leung et al., 2002), a Procrustes rotation was run to check the equivalence of factor composition between the U.S. and Japanese groups. The five-factor structure in each group was rotated toward the common structure identified in the previous study. The congruence coefficients for each factor in the U.S. sample were .446 for Social Complexity, .538 for Fate Control, .582 for Reward for Application, .637 for Cynicism, and .792 for Religiosity. The congruence coefficients in the Japanese sample ranged from .562 for Religiosity, .568 for Fate Control, .593 for Social Complexity, .708 for Reward for Application, and .789 for Cynicism. Because of the low congruence coefficients for Fate Control for both the U.S. and Japanese groups, it was suggested that at least four of the five factors had the potential to be pan-cultural. These four factors were Cynicism, Social Complexity, Reward for Application, and Religiosity. Despite varying degrees of factor similarity, the authors argued that the results met their goal of identifying broad factors of social axioms across diverse cultures (Leung et al., 2002).

The Cronbach's alpha reliability of the Chinese version of the SAS administered to Chinese college students were reported as .79 for Social Cynicism, .72 for Reward for Application, .67 for Social Complexity, .59 for Fate Control, and .78 for Religiosity (Leung et al., 2002). The criterion validity of the Chinese version was supported by the ability of social axioms to predict social behaviors such as vocational choice, conflict resolution, and coping styles (Bond et al., 2004). That is, consistent with the theory of Leung and his colleagues (2002), Reward for Application predicted a preference for conventional jobs and a tendency to be accommodating in order to resolve conflict. Further, Religiosity predicted accommodation and competition in conflict resolution, and

Social Complexity predicted collaboration and compromise in conflict resolution and the use of problem focused coping. Finally, the Fate Control and the Social Cynicism dimensions predicted reliance on avoidance coping (Bond et al., 2004).

The internal consistency reliability of the English version of the SAS was gathered from a sample of 224 U.S. college students (Singelis et al., 2003). Lower than desired Cronbach's alphas were reported: Social Cynicism.76, Reward for Application .53, Social Complexity .51, Fate Control .54, and Religiosity .69. These lower than optimal internal consistency reliability coefficients were hypothesized to be due to the breadth of the items that were developed to cover aspects of the social belief construct in a variety of cultures (Singelis et al., 2001).

Despite low internal consistency reliabilities, the factor structure of the English version of the SAS was confirmed in Singelis et al's (2001) study. The convergent validity of the measure was supported through the demonstration of relations between the five dimensions of social axiom and theoretically related constructs, such as social desirability, locus of control, and various dimensions of personality. As predicted, social cynicism was positively related to external locus of control and negatively related to interpersonal trust, cognitive flexibility, and social desirability. Reward for Application was positively correlated with Social Desirability and Social Complexity was positively related to Cognitive Flexibility. In addition, Fate Control was positively related to both External Locus of Control and Beliefs in Precognition. Finally, Religiosity was positively related to Traditional Beliefs and Seeking Advice (Singelis et al., 2001).

Because the development of the dimensions of social axioms is still in its early stages, the current dimensions may not cover all aspects of beliefs around the world.

However, research on the SAS shows that it captures some universal dimensions that may provide a common base for cross-cultural comparisons. Its weakness, the low to moderate levels of internal consistency demonstrated for both the Chinese and U.S. samples, may be due to item development that focused on the coverage of various aspects of the construct in different cultures. Yet, it should be noted that this weakness may lead to the underestimation of correlations of its dimensions to other variables (Nordhamn, et al., 2000). Despite this weakness, the SAS was chosen for the current study because it is the first and only one measure available assessing social beliefs, and it has been validated cross-culturally. For the current study, the 60-item English and Chinese versions of the SAS were used, which are composed of five subscales: Social Cynicism, Reward for Application, Social Complexity, Fate Control, and Religiosity. The SAS is scored by summing items on each factor and dividing the total score by the number of items, with higher scores indicating stronger beliefs.

In the current study, the Cronbach's alphas of the SAS for U.S. college students were .73 for Social Cynicism, .63 for Reward for Application, .60 for Social Complexity, .59 for Fate Control, and .79 for Religiosity. The Cronbach's alphas for the Chinese students were .80 for Social Cynicism, .78 for Reward for Application, .74 for Social Complexity, .66 for Fate Control, and .67 for Religiosity. These values are comparable to those reported in the literature.

Procedure

Translation and back-translation of instruments. All of the instruments used in the current study, except the CISS (Endler & Parker, 1994) have both English and Chinese versions. The CCS (Shek & Cheung, 1990) was originally developed in Chinese

and then translated into English by the authors (Shek & Chueng, 1990). It is important to note that this translation procedure has not been described by the authors in any publication. The SCS (Gudykunst et al., 1996) was developed in English and Moneta and Wang (2001) translated it to Chinese and administered it to a Chinese sample. Again no information was located on the translation procedures utilized. The SAS (Leung et al., 2002) was developed in both Chinese and English, and the English version was used for standardization. Leung et al. (2002) described the translation procedure in one sentence, "the method of back-translation was used to check the quality of the translation, and changes made where inaccuracies had been revealed through the process" (Leung et al., 2002; p.291). In this study, the author examined the accuracy of the translation of the instruments and considered them linguistically equivalent.

As the CISS had not been translated and used in studies in the United States prior to the current study, a Chinese version of the CISS was prepared based on recommendations by Ægisdóttir et al. (2008). Two Chinese-English bilingual translators worked independently to convert the English version into Chinese. One of the translators was born in China and had lived in the United States for more than 10 years at the time of the study. She had a graduate degree in Business. The other translator was the current author who is a Chinese international student in Counseling Psychology and has lived in the United States for seven years. Following the two independent translations from English to Chinese, the two translated versions were compared until agreement was reached between the two translators about the best Chinese translation. This version was then translated back to English by a third Chinese-English bilingual person who was a Chinese native studying linguistics in the Unites States toward a doctoral degree. Two

persons then compared the back-translated English to the original English version. Those doing the comparison were the current author and a faculty member who is experienced in instrument translation and knowledgeable about test-development. Inconsistencies between the two versions were identified and discussed between these two individuals. When inconsistencies were discovered between an original item and a back-translated item, the Chinese items were re-examined and a determination was made whether the inconsistency was due to inaccuracy of the Chinese translation or to inaccuracy in the back translation. For example, an original item in CISS reads “I worry about what I am going to do.” The back-translated English version became “I feel anxious about what I am about to do.” A review of the Chinese item revealed that the Chinese translation did not capture the meaning of “worry.” The current author then revised the Chinese item and replaced it with another word that better reflects the meaning of “worry.” The revised Chinese version was then presented to a fourth Chinese-English bilingual person who was a doctoral student in Linguistics to translate it back to English. Again, the author and the faculty expert reviewed the second back-translated English version by comparing it to the original English version and the first Chinese version. Again differences were addressed and further modifications were made until both the author and the faculty expert agreed on the content equivalence between the Chinese and the original English version of the scale.

To further assess the content equivalence of the two versions of the CISS, both were administered to two additional Chinese-English bilingual persons that were not involved in the translation back-translation process. They were asked to read each item carefully and rate the equivalence of meaning of each item on a scale from 1 (*not*

equivalent meaning at all) to 5 (*completely equivalent meaning*). The author met with the two evaluators after they finished the evaluation. Items with a score lower than four were examined and replaced by a more accurate Chinese term based on determination of the three bilingual persons. For instance, both outside evaluators evaluated the equivalence of the item "Spend time with a special person" and its Chinese translation in the moderate range (3). They pointed out that the Chinese version did not reflect the meaning of "special." As a result, the Chinese word (yao hao-- close) was replaced by another word (te bie -- special), which more accurately captures the meaning of "special" in the English language. Moreover, both outside evaluators determined that the Chinese version of the item "Focus on my general inadequacies" carried a heavier weight on the word "focus" in the Chinese language compared to the English language due to the addition of an adverb. As a result, the adverb was removed to balance the weight given to the word "focus." With the exception of these two items, the outside evaluators rated all items on both versions with high equivalency (a score of 4 or 5). The preparation of the Chinese version of the CISS was thus finalized and later administered to college students in China.

Administration of the instruments. A *Demographic Sheet*, the *Chinese Coping Scale* (Shek & Cheung, 1990), the *Coping Inventory for Stressful Situation* (Endler & Parker, 1994), the *Self-Construal Scale* (Gudykunst et al., 1996), and the *Social Axiom Survey* (Leung et al., 2002), were administered to Chinese and U.S. students in their respective languages. These scales were administered in a counterbalanced order. Chinese participants were recruited by contacting the instructors for each course and requesting permission to collect data from his or her class(es). The questionnaire package

was administered by the researcher to the Chinese participants in a group of 30-80 students either at the end of their class period or outside of class.

U.S. participants were recruited in two distinct fashions. U.S. participants enrolled in courses offered by the Department of Counseling Psychology and Guidance Services (CPSY) were provided an opportunity to "sign-up" for research via a posted bulletin on the department research pool board. Students who participated in the study earned one credit hour toward research participation required by one of their CPSY classes. For U.S. students outside the CPSY department, instructors of various departments were contacted and introduced to the project. With the permission of these instructors, a U.S. research assistant announced the project in class and distributed the survey to the students in groups of 10-50 who either responded to the questionnaires at the end of the class or outside of a class period. To control for potential bias in the administration procedures, an English speaking European American person administered the survey to U.S. students and a Chinese-speaking East-Asian individual (the author) administered the survey to Chinese students. All students were informed of the purpose of the study which was to gain an understanding of the way they cope with stressful events. They were also told about the approximate length of time to complete the survey. It took the students in both countries approximately 20-25 minutes to respond to the questionnaires. Students from both countries were informed that their participation was voluntary and that they were free to withdraw at any time for any reason without prejudice or penalty from the investigator. They were also assured of the confidential nature of the project and that their responses would be reported only as group data. The Ball State University Institutional Review Board (IRB) approved this project.

Research Design and Statistical Procedure

The current study was designed specifically to address some methodological problems in cross-cultural research. As mentioned previously, cross-cultural comparison is impossible when the construct under investigation is not identical across the cultures under investigation. Studies have demonstrated that the coping methods employed by Chinese and U.S persons differ (Heppner et al., 2005; Hwang, 1977; Shek & Cheung, 1990; Yue, 2001). Some unique coping dimensions observed in Chinese populations such as *Self-Regulation* and *Seeking Help* have not been captured in coping instruments developed in the United States. In the current study, a convergence approach was used to address this issue of construct bias and to enhance construct equivalence. This approach involved administrating both a Chinese (CCS; Shek & Cheung, 1990) and a U.S. based (CISS, Endler & Parker, 1994) measure of coping to both the Chinese and the U.S. samples. This method ensured a more comprehensive and balanced coverage of coping behaviors used in both countries. These two measures together include five coping dimensions which do not overlap in content.

A second purpose of this study was to study the coping construct's nomological network in each country. That is, this study attempted to understand the relationship between students' coping and their responses to variables considered to be determined by one's culture. The relationship found among coping strategies (Task-Oriented coping, Emotion-Oriented coping, Avoidance, Self Regulation, and Seek Help) and the cultural variables (Independent Self-Construal, Interdependent Self-Construal, Social Complexity, Reward for Application, Social Cynicism, Fate Control, and Religiosity) in each sample were compared to each other qualitatively to provide insights about

similarities and differences in the coping constructs' nomological network across cultures. A Canonical Correlation analysis (a set of cultural variables and a set of coping strategies) was employed for this purpose.

In addition to minimizing construct bias, steps were taken to minimize item bias and method bias. Item bias was limited by performing a thorough translation and back-translation of the CISS, and by using previously translated and validated instruments. To minimize method bias due to differences in administration, the instruments were administered in similar classroom settings across countries. The author, a Chinese person, announced and administered the Chinese versions of each instrument to the Chinese students, while a research assistant, a European American, administered the English versions of the measures to the U.S. students. This prevented potential communication problems due to the use of language during administration and therefore eliminated potential bias within the administration process. To further eliminate bias related to administration and familiarity with the instrumentation, the use of college student participants ensured similar levels of familiarity with paper-pencil standardized self-report measures. The familiarity with paper-pencil self-report survey was true for both the U.S. and Chinese students. Moreover, by sampling college student participants, extraneous factors such as age, educational level and marital status were held relatively constant and can therefore be excluded as confounds when examining cultural difference. In both countries, the instruments were administered in a counterbalanced order to control for order effects. Finally, the participants were ensured of the confidentiality of the project, which minimized response biases and a desire to respond in a socially desirable fashion.

CHAPTER IV

Results

Preliminary Analyses

Preliminary analyses were performed to examine if the same relationships between gender and self-construal and between country and self-construal found in previous studies (Cross & Madson, 1997; Gabriel & Gardner, 1999; Guimond et al., 2007; Maddux & Brewer, 2005; Triandis et al., 1993) also existed in the current study. Studies have shown that women in the West are more interdependent than men and men are more independent than women (Cross & Madson, 1997; Gabriel & Gardner, 1999, Maddux & Brewer, 2005) and that gender difference in self-construal is larger in individualistic cultures than in collectivistic cultures (Guimond et la., 2007). Moreover, studies have demonstrated that Chinese persons are more interdependent than U.S. persons, whereas U.S. persons are more independent compared to Chinese persons (Triandis et al., 1993). Yet the interaction between gender and culture remains unexplored. The interaction between gender and culture on self-construal may provide insights about cross-cultural difference in the relationships between self-construal and coping. Thus, to examine the effect of gender and country on independent and interdependent self-construal, a 2 (gender: male & female) x 2 (country: the United States & China), Multivariate Analysis of Variance (MANOVA) was calculated with the scores

on the two dimensions of self-construal: independent and interdependent self-construal as the dependent variables. The results are reported in Table 3. The MANOVA indicated significant interaction between gender and country, Wilks's $\Delta = .99$, $F(2, 640) = 4.58$, $p < .05$. Follow-up univariate Analyses of Variance (ANOVA) were conducted to explore these multivariate effects. The analyses revealed a significant interaction between gender and country on the interdependent self-construal ($F(1, 641) = 7.05$, $p = .008$), but not on independent self-construal ($F(1, 641) = 133.84$, $p = .001$). For independent self-construal, the U.S. college students were more independent ($M = 5.71$, $SD = .04$) than the Chinese students were ($M = 5.10$, $SD = .04$) regardless of gender. No significant difference was found between men and women regardless of country on independent self-construal. For the interdependent self-construal, only the interaction effect will be interpreted (Stevens, 1996). The interaction indicated that cultural difference in interdependent self-construal varies between men and women. Specifically, the U.S. men ($M = 5.24$, $SD = .06$) reported greater interdependent self-construal than the Chinese men did ($M = 4.92$, $SD = .06$), whereas no significant difference was found between the U.S. women ($M = 5.30$, $SD = .05$) and the Chinese women ($M = 5.40$, $SD = .05$) in their level of interdependent self-construal.

Correlation analyses were also conducted to examine the strength and direction of relationships between each self-construal, social beliefs and coping variables and to assess for multicollinearity. To assess the relationship between coping, self-construal, and social beliefs, correlations between responses of the subscales of the Chinese Coping Scale, the Coping Inventory for Stressful Situations, the Self-Construal Scale, and the Social Axioms Survey were computed for the U.S. and Chinese college students.

Pearson's correlation coefficients are reported in Tables 4 and 5. For both populations, there were low to moderate correlations (.08 to .45) between the self-construal subscales and social beliefs subscales, which indicate that multicollinearity was not a problem. Moreover, low to moderate correlations were found between the cultural and the coping variables (.01 to .49). The highest correlation for both the Chinese and U.S. students was between independent self construal and task-oriented coping (i.e., .45 for Chinese students and .40 for U.S. students). The correlations were similar for the U.S. and the Chinese samples with a couple of exceptions. For example, a moderate correlation was found between fate control and religiosity in the Chinese sample but not in the U.S. sample. A correlation was found between help seeking and religiosity in the U.S. sample but not in the Chinese sample.

Main Analysis

To analyze the hypothesized relationship between self-construal, social beliefs and coping in each country (hypothesis 1), canonical correlation analyses were conducted for the U.S and the Chinese students separately with the cultural variables (independent self-construal, interdependent self-construal, social cynicism, reward for application, social complexity, fate control and religiosity) as the predictors and the coping variables (task-oriented coping, emotion-oriented-coping, avoidance, self regulation, and help seeking) as the criterion. The results of each country were then visually compared to determine similarities and differences in the relationship pattern between the predictor and the criterion variables. The use of canonical analysis allows for the exploration of the maximum possible relationship between two sets of variables. Both canonical function coefficients (also called *weights*) and structure correlation coefficients (also called

loadings) were used to interpret the findings. The function coefficients (weights) provide information about the unique contribution of each variable to a given canonical correlation (root), while the structure coefficients (loadings) indicate the correlation between an observed variable and a synthetic variable, that is, the contribution of the observed variable (i.e., independent self-construal) to the explanatory power of the synthetic variable (i.e., the predictor variate) (Sherry & Henson, 2005). In the current study, structure coefficients above .45 were underlined in the tables (i.e., Tables 6, 7, 14, 15, 16) and interpreted as significant, as recommended by Sherry and Henson (2005).

For the U.S. students, three significant canonical roots were extracted. Results are reported in Table 6. These three functions accounted for 58% of the total variance between the two composites. Only the first two functions were considered noteworthy in the context of this study (accounting for 28% and 19% of shared variance, respectively). The third root was not interpreted as it only explained 11% of the remaining variance in the variable set after the extraction of the prior functions (Sherry & Henson, 2005).

As mentioned earlier, the first canonical root accounted for 28% of the variance between the two composites of the predictor (Rc = .53, $F(35) = 6.57$, $\rho < .001$). The greatest contribution to this canonical root was made by the independent self-construal (.44) and task-oriented coping (.81). A further examination of the structure coefficients (loadings) of variables in the predictor synthetic variate indicates that independent self-construal (.72) and interdependent self-construal (.73) shared a great potion of the variance. It also shows that reward for application (.74) was another primary contributor, with social complexity (.46) making secondary contribution to the synthetic variate. Similarly, a further examination of the structure coefficients of variables in the criterion

synthetic variate suggests that task-oriented coping (.93) was the primary contributor with self-regulation (.54) making the secondary contribution. Thus, the first function indicates that the greater independent and interdependent self-construal the U.S. students reported, the greater their beliefs in the investment of human resources in achieving positive outcome (reward for application) and multiple solutions to problems (social complexity), the greater their tendency to use task-oriented coping and utilize personal resources to cope with a stressor. These results were generally supportive of the theoretically expected positive relationships between independent self-construal, reward for application, social complexity and task-oriented coping. The co-contribution of independent self-construal and interdependent self-construal in the predictor variate corresponds to the results in the preliminary analysis, which showed a moderate relationship between these two variables for the U.S. students. Moreover, current findings demonstrate that for the U.S. students, there was a relationship between independent self-construal, interdependent self-construal, reward for application, social complexity and self-regulation (adjusting one's thoughts and feelings to the external circumstance). This relationship has not been previously reported in the literature. Because the first function was characterized by a sense of personal mastery (reward for application, task-oriented coping) and internal control (independent and interdependent self-construal, self regulation), it was labeled "U.S. internal locus of coping."

The second canonical root explained 19% of the relationship between the two composites of predictor and criterion variables ($Rc = .44$, $F(24) = 4.76$, $p < .001$). The canonical function coefficients shows that the greatest contributions to this canonical root were made by social complexity (-.63) and avoidance coping (.68). Social complexity

was inversely related to avoidance coping. A further examination of the structure coefficients of variables in the predictor synthetic variate indicates that social complexity (-.65) and fate control (.64) were primary contributors, with social cynicism making (.55) secondary contribution to the predictor synthetic variate. Regarding the criterion synthetic variate, avoidance coping (.82) was the primary contributor, with a secondary contribution of emotion-focused coping (.58) and help-seeking (.55). These criterion variables were positively related to fate control, social cynicism and negatively related to social complexity. This function suggests that the less the U.S. students believed in multiple solutions in problem solving, the greater their belief in fate control, and the more negative their view about the world, the more likely they avoided problems, engaged in venting of emotions, and resorted to others for help. That is, the more the U.S. students believed in destiny and external locus of control, the more negative view they had about the world, the greater their tendency to avoid facing their problems, the more likely they were to use emotion-focused coping and turn to others for help. Given the nature of these variables, this function was named "U.S. external locus of coping."

For the Chinese sample, two canonical roots were significant. The results are reported in Table 7. These two roots accounted for 43% of total variance. The first canonical root accounted for 28% of the variance between the two composites of predictor and criterion variables ($Rc = .53$, $F(35) = 5.28$, $p < .001$). Looking at the canonical function coefficient, Table 7 reveals that independent self-construal (.68) and task-oriented coping made the greatest contribution to this canonical root. An examination of the structure coefficients revealed that independent self-construal (.90) was the primary contributor to the predictor synthetic variate, with social complexity

(.72) and reward for application (.63) making secondary contributions. In terms of the criterion synthetic variate, task-oriented coping (.92) was the primary contributor, with a secondary contribution by self regulation (.62). This root indicates that the greater the Chinese students' independent self-construal, the greater their belief in multiple solutions to problems and importance of effort in achieving positive outcomes, the more likely they were to use task-oriented coping and utilize internal resources in dealing with stress. Because this relationship indicates self mastery (independence, efforts, self regulation, task oriented coping), this function was labeled "Chinese internal locus of coping."

The second canonical root explained 15% of the relationship between the two composites ($Rc = .38$, $F(24) = 3.11$, $p < .001$). As can be seen in Table 7, the canonical function coefficients suggested that the relevant predictor variable was fate control (.66) and the most relevant criterion variable was emotion-oriented coping (.80). This conclusion was supported by the structure coefficients. The canonical structure coefficients show that the primary contributors to the predictor synthetic variate were fate control (.84), with a secondary contribution by social cynicism (.48) and religiosity (.47). Regarding the criterion variable set in this function, emotion-oriented coping (.79) was the primary contributor, with avoidance (.49) and self-regulation (.45) making secondary contributions. These results indicate that the more the Chinese students believed in destiny and external control, the more negative their view of the world, and the more religious they were, the more likely they were to use emotion-focused coping, and avoid facing the stressor. As this root indicates a surrender to external power, it was named "Chinese external locus of coping."

The current findings lend partial support to the first hypothesis, in which it was predicted that self-construal and social beliefs were associated with different coping dimensions for both the U.S. and Chinese samples. More specifically, the findings support hypothesis 1a, stating that for the U.S. sample, independent self-construal, social complexity, and reward for application were associated with task-oriented coping; and hypothesis 1c, which stated that the more U.S. persons believe in destiny, the more negative view of society they have, and the more they use avoidance coping. Hypothesis 1b, which stated that interdependent self-construal was related to emotion-focused coping for the U.S. sample, was not supported. On the contrary, the current findings indicate that interdependent self-construal contributed as much as independent self-construal to persons' use of task-oriented coping and self-regulation. The mutual contribution of independent and interdependent self-construal to these coping strategies may be due to the co-existence of both dimensions of self-construal for U.S. nationals (Triandis et al., 1993). In addition, the findings also revealed a relationship between fate control, social cynicism, and emotion-oriented coping and help seeking. This association has not been discussed in previous literature.

For the Chinese sample, the current findings support hypothesis 1d, stating that independent self-construal, reward for application, and social complexity would contribute to task-oriented coping; and hypothesis 1f, stating that fate control and social cynicism were associated with avoidance coping. Hypothesis 1e, however, in which interdependent self-construal was expected to be related to self-regulation and help seeking was not supported. The results for the Chinese students showed an association between independent self-construal, social complexity, reward for application and self-

regulation, which had not been previously reported. Moreover, and unexpectedly, the results demonstrated that for the Chinese students, fate control, social cynicism, and religiosity predicted emotion-oriented coping and self-regulation.

For both the Chinese and U.S. students, the greater their independent self construal, the greater their belief in reward for application and social complexity, the more they were to use self-regulation coping. Moreover, for the U.S. students, the greater their belief in fate control and social cynicism, the greater their tendency to seek help from others. These findings support hypothesis 1g in which it was predicted that self-construal and social beliefs influence self-regulation coping and seeking help for the U.S. and the Chinese students. In addition, for both groups, the greater their belief in fate control and social cynicism, the more likely they were to employ avoidance and emotion-oriented coping. These similar results, therefore, do not support hypothesis 2, stating that the relationships between social beliefs and emotion-focused coping are different between the Chinese and U.S. students, based on the notion that emotion-focused coping is not a major coping dimension in the Chinese society.

Regardless of the similarity discovered in the relationships between Chinese and U.S. students' coping strategies and cultural variables influencing their coping, the results indicate some difference in how these factors are inter-related. For the U.S. students, for instance, both the independent and interdependent self-construal predicted task-oriented and self-regulation coping, whereas for the Chinese students, only the independent self-construal predicted task-oriented and self-regulation coping. Another distinction between the two samples is that religiosity as a social belief variable contributed to emotion-focused coping, avoidance, and self regulation as coping strategies for the Chinese

students, which was not observed in the U.S. students. This finding lends support to hypothesis 3.

Supplementary Analyses

Supplementary analyses were performed to inspect if the relationship between self-construal, social beliefs and coping showed the same pattern for men and women. These analyses were performed for exploratory purposes only to gain a better understanding of the results of the main analyses. More specifically it is important to explore if the similarities or differences discovered in the relationship between cultural factors and coping among Chinese and U.S. students were affected by gender given that the preliminary MANOVA analyses indicated an interaction effect of gender and nationality on self-construal. It is important to note that as these supplementary analyses were not a part of the hypothesis testing, they may be subject to Type I error, and need to be confirmed in subsequent studies.

First, to explore the contribution of gender in the relationship between cultural variables and coping, a canonical analysis was run for men and women, with both U.S. and Chinese student samples combined. Following this procedure, additional canonical analyses were conducted for men and women of each country separately.

Correlation matrices for men and women regardless of nationality are reported in Tables 8 and 9 respectively. Inspection of Tables 8 and 9 indicates a somewhat similar relationship among the predictor and the criterion variables for men and women. There were also some differences. For example, a significant positive correlation between self-regulation and independent self-construal was found for men, but not for women. In addition, there was a significant positive correlation between self–regulation and

cynicism in the female sample, but not the male sample. Significant positive correlations between help-seeking and independent self-construal, interdependent self-construal, and reward for application were found for women, but not for men. Furthermore, emotion-focused coping was significantly correlated to interdependent self-construal for women, but not for men.

Correlation matrices for the U.S. men and women are reported in Tables 10 and 11 respectively. A somewhat similar relationship among the predictor and the criterion variables for men and women was observed with a couple of exceptions. For example, a significant correlation between independent and interdependent self-construal existed in the male sample, but not in the female sample. Moreover, for the female sample, both independent self-construal and interdependent self-construal were significantly associated with task-oriented coping, whereas for the male sample only the independent self-construal was related to task-oriented coping.

Correlation matrices for Chinese men and women are reported in Tables 12 and 13. An inspection of Tables 12 and 13 suggests the relationship between the predictor variables and the criterion variables was similar between the genders.

Results of the canonical analyses of countries combined are reported in Table 14. Three significant canonical roots were extracted for both the male and the female samples. For men the first canonical root accounted for 38% of the variance between the two composites ($Rc = .61$, $F(35) = 6.27$, $p < .001$). The second canonical root explained 18% of the relationship between the two sets of variables ($Rc = .42$, $F(24) = 3.59$, $p < .001$). The third root accounted for 9% of the variance ($Rc = .30$, $F(15) = 2.32$, $p < .001$). Because the first and second canonical roots appear to be superior to the third one in

terms of variance explained (38% and 18% vs. 9%) and to reduce Type I error, only the first two roots will be interpreted. As Table 14 reveals, for men, the first two roots accounted for 56% of the total variance. The greatest contributions to the canonical composite were the independent self-construal (.82), a belief in social complexity (.82), the interdependent self-construal (.72), a belief in reward for application (.73) and task-oriented coping (.97). This root indicates that the greater the men's independent and interdependent self-construal, the greater their belief in multiple solutions to problems solving and in the investment of human resources in achieving positive outcome, the more likely they used task-oriented coping. These results are similar to those found in the main analyses for the U.S. and Chinese students, which featured an internal locus of coping. When looking at men only, however, self-regulation did not contribute to the relationship between cultural factors and coping as it did in the main analyses when the data was analyzed based on nationality (U.S. and Chinese students). For the second root, the primary contributions to the canonical composite were fate control (.63), religiosity (.52), avoidance coping (.78), help-seeking (.78), and emotion-oriented coping (.56). This extraction suggests that the more men believed in destiny and external control and the more religious they were, the more likely they avoided the problem, turned to others for help, and engaged in emotion-focused coping. This function, which is similar to what was found in the U.S. and Chinese college samples, reflects an external locus of coping.

For the female sample, the first canonical root accounted for 34% of the variance between the two composites (Rc = .59, $F(35) = 8.76$, $\rho < .001$). The second canonical root explained 19% of the relationship between the two sets of variables (Rc = .44, $F(24) = 5.45$, $\rho < .001$). The third canonical root accounted for 9% of the variance (Rc = .31,

$F(15) = 3.13$, $\rho < .001$). Only the first two roots will be interpreted (explained variance: 34% and 19%) to reduce Type I error. As Table 14 reveals, for the female sample, the first two roots accounted for 53% of the total variance. The greatest contributions were made by independent self-construal (.79), religiosity (.57), reward for application (.50), social cynicism (-.47), task-oriented coping (.79), and help-seeking (.72). This root indicates that the greater the women's independent self-construal, the more religious they were, the greater their belief in the investment of human resources in achieving positive outcome, and the less negative their view about the world, the more likely they used task-oriented coping and sought help from others. Again, this root is similar to what was found in the main analyses on the U.S. and Chinese students, suggesting an internal locus of coping. For the second function, the greatest contributors were fate control (.72), interdependent self-construal (.62), social cynicism (.53) and self-regulation (.75). This extraction suggests that the more the women believed in destiny and external control, the greater their interdependent self-construal, and the more negative their view about the world, the more likely they were to adjust their thoughts and feelings to the external circumstance (i.e., self-reflection, reframing, etc.). This function reflects a surrender to external power, indicating an external locus of coping. This relationship was also observed in the main analyses of both the U.S. and the Chinese samples.

Overall, these results indicate that there are some gender differences in the relationship between self-construal, social beliefs, and coping. For men, being independent was related to the use of task-oriented coping, whereas for women, being independent was associated with both task-oriented coping and seeking help from others. This association between independence and help seeking in women was not observed in

the U.S. and the Chinese students when both genders were combined. This difference corresponds to the interaction effect of gender and nationality discovered in the preliminary analyses. Another difference found between men and women is that a belief in fate control was related to seeking help for men, but self-regulation for women. The association between fate control and help seeking in men was found in the main analysis with the U.S. students, but not the Chinese students. Furthermore, the association between fate control and self regulation in women was found in the main analysis for the Chinese students, but not the U.S. students. In addition, for men, both types of self-construal (independent and interdependent) was associated with task-oriented coping, whereas for women an independent self-construal was related to task (externally)-oriented coping, while interdependent self-construal was related to self-regulation (internally targeted) coping. A third difference found between men and women in this study is that religiosity predicted task-oriented coping and help seeking for women, but not for men. Again these findings indicate the importance of looking at the effects of gender in addition to nationality when examining the effects of culture on coping behaviors.

As mentioned earlier, a canonical analysis was also run for men and women of each country separately. These results are reported in Tables 15 for the U.S. students and 16 for the Chinese students. Because of the small size of each sample group (U.S. men: N = 147; U.S. women: N = 178; Chinese men: N = 114; Chinese women: N = 207), only the first root of the canonical correlations was interpreted. Looking at Table 15, for U.S. men, the first canonical correlation accounted for 43% of the variance between the two composites (Rc = .65, F(35) = 4.40, $p < .001$). It can be seen that the more independent

and interdependent the U.S. men were, the more they believed in investment of efforts and multiple solutions in problem solving, the more likely they used task-oriented coping and self-regulation. These results correspond to the findings for the U.S. students as a whole. For the U.S. women, the first canonical correlation accounted for 27% of the variance between the two composites (Rc = .52, F(35) = 3.61, p < .001). This indicates that the more interdependent they were, they more they believed in efforts in achieving outcome, multiple solutions to problems and destiny, the more likely they were to use avoidance, task-oriented, help seeking and self regulation coping. These results were also comparable to those found in the main analyses of the U.S. student samples. The difference found between U.S. men and women echoes the difference found between men and women with both countries combined, that is, for men, being independent was related to the use of task-oriented coping, whereas for women, being independent was associated not only with task-oriented coping but also seeking help from others.

Results of the canonical analyses of the Chinese men and women are reported in Table 16. For Chinese men, the first canonical correlation accounted for 46% of the variance between the two composites (Rc = .68, F(35) = 2.97, p < .001). It indicates that the more independent they were, and the more they believed in multiple solutions in problem solving and in the investment of efforts, the more likely they used task-oriented and self regulation coping, the less likely they were to express emotions and seek help from others. For women, the first canonical correlation accounted for 28% of the variance between the two composites (Rc = .53, F(35) = 3.88, p < .001). The result suggests that the more independent they were, the more they believed in the investment of efforts and in multiple solutions, the more likely they used task-oriented and self-regulation coping.

These results were comparable to findings in the main analyses about the Chinese students as a whole. The difference between Chinese male and female samples indicates that Chinese men were less likely to seek help and use emotion-oriented coping than Chinese women. This difference corresponds to the difference found between men and women with both countries combined. This finding again supported the influence of gender on the relationship between cultural factors and coping.

CHAPTER V

Discussion

In this study, the relationship between coping behaviors and specific cultural factors, such as self-construal and social beliefs, was examined in both U.S. and Chinese college student samples utilizing canonical correlation analyses. The U.S. and Chinese samples were similar in terms of age, education, gender distribution, and quality of social relationships. English and Chinese versions of the CISS (Endler & Park, 1990, 1994), the CCS (Shek & Cheung, 1990), the SCS (Gudykunst et al., 1996), and the SAS (Leung et al., 2002) were used. The Cronbach's alphas for the listed instruments with both the Chinese and U.S. samples were comparable to those reported in the literature, supporting the integrity of the data. However, Cronbach's alpha reliabilities for both the English and Chinese versions of the subscales on the CCS were lower than those reported in the original study of the scale. These lower internal reliability coefficients raise some concerns about the internal reliability of the CCS with different populations and in different times. Limitations of using this scale will be discussed later in this chapter.

Because previous studies suggested gender difference (Cross & Madson, 1997; Maddux & Brewer, 2005) and country difference (Singelis et al., 1999; Triandis et al., 1993) in self-construal, a preliminary analysis was performed to examine the effect of gender and country on independent and interdependent self-construal. In line with past research (Triandis et al., 1993), the results showed that the U.S. college students were

more independent than were the Chinese college students. Moreover, an interaction effect was found between gender and country on interdependent self-construal. Specifically, U.S. men were more interdependent than Chinese men, whereas U.S. and Chinese women did not differ in their level of interdependent self-construal. This result corresponds to Triandis and colleagues' (1993) study which found that U.S. persons had stronger independent self-construal than Chinese persons, and that independent and interdependent self-construal co-existed in U.S. persons.

Associations between Self-Construal, Social Beliefs and Coping for U.S. Students

In the first hypothesis, it was predicted that the greater the U.S. college students' independent self-construal, the more they believed in the complexity of society and putting effort in attaining goals, the more they would use task-oriented coping. This hypothesis was supported. This finding corresponds to Lam and Zane's (2004) findings regarding the relationship between self-construal and coping. In this study, the authors found that greater orientation toward an independent self-construal accounted for the greater use of externally targeted coping, such as taking action to change a situation when facing stress. The findings in the current study are commensurate with prior studies on the relations between social beliefs and coping which suggest that a complex view of human behavior and a belief in working hard to achieve positive outcomes would lead to direct confrontation with others and a problem-focused coping style (Bond et al., 2004; Safdar et al., 2006; Sengelis, et al., 2003).

The second hypothesis anticipated that an interdependent self-construal would lead to the use of emotion-focused coping. This hypothesis was not supported. Instead it was found that U.S. students' social beliefs predicted emotion-focused coping. That is,

the more they believed in fate control and held a negative view about others and the world, the more likely they were to use emotion-focused coping. This finding indicates that when persons believe that events are predestined and beyond their control, they resign from taking actions to change the situation. Ultimately, when hopelessness is combined with a negative attitude toward others and the world, individuals may utilize emotional venting to release their stress. This finding provides new information about the association between social beliefs and coping, which has not been described in the previous literature.

A possible reason for this new finding may lie in the statistics used in the current study. The current study used canonical analysis to examine the relationship between a set of cultural variables and a set of coping variables, whereas the previous studies (Bond et al., 2004; Safdar et al., 2006; Sengelis et al., 2003) applied univariate methods, such as Pearson's correlations, to examine the relationship between social beliefs and various coping dimensions. Canonical analysis is a multivariate method which maximizes shared variance between sets of predictor variables and criterion variables (Sherry & Hensen, 2005). Thus, it is highly probable that canonical analysis would detect a complex multivariate relationship that may be otherwise missed when using univariate methods. In the case of the current study, the association between fate control, social cynicism, and emotion-focused coping was identified when the correlation between the two variable sets was maximized in the canonical analysis. It should be noted though, because this association has not been reported in the empirical literature, it needs to be replicated in future studies.

The third hypothesis stated that a belief in destiny and a more negative view of society would contribute to greater use of avoidance coping. This hypothesis was supported and is in line with Singelis and colleagues' (2003) finding that individuals who believe in external control tend to avoid facing unfavorable situations instead of trying to create change. The findings of the current study also cross-validate Bond and colleagues' (2004) findings of the relationship between fate control, social cynicism, and avoidance coping among Chinese college students. Bond et al. (2004) discovered that Chinese individuals who believed that events were beyond their control and perceived human nature in a negative light tended to resort to distancing themselves from the stressor and to engaging in wishful thinking. The current study indicates that the same holds for the U.S. students.

In addition to supporting and extending the findings of Singelis and colleauges' (2003) study, the current study delineates additional findings which were not predicted given the past research. For example, both independent and interdependent self-construal contributed to task-oriented coping. In previous literature, interdependent self-construal has been associated with greater use of internally targeted coping, such as trying to change one's perception and adjusting it to the external environment (Lam & Zane, 2004). Meanwhile, task-oriented coping refers to problem-solving and taking initiatives to change the external environment (Endler & Parker, 1990, 1994). Thus an association between interdependent self-construal and task-oriented coping was not expected.

There may be several reasons for the difference between the current findings and those reported in the literature (Lam & Zane, 2004). One possibility is the coexistence of independent and interdependent orientations among U.S. college students. With increased

opportunities for global interaction and the diversity of cultures represented within the U.S. college environment, it is possible that U.S. college students have incorporated collectivistic values from other cultures, and as a result, the distinction between an independent and interdependent self has become less salient (Galdwell, 2005). In fact, Triandis et al. (1993) and Singelis (1994), in discussing self-construal, postulated that a person may have elements of both an interdependent and independent self. Furthermore, Triandis and colleagues' (1993) study provided evidence for the co-existence of independent and interdependent self-construal in U.S. persons. Therefore, an orientation toward both independent and interdependent self-construal predicted the use of task-oriented coping for the U.S. student.

Another possible reason for the equal contribution of independent and interdependent self-construal to task-oriented coping could be the contextual nature of self-construal. Although many studies have linked self-construal to cultural identity (Markus & Kitayama, 1991), less attention has been paid to the context within which one perceives the self. Brubaker and Cooper (2000) argued that self-construal is fundamentally situational and may vary from context to context. For example, in a study investigating manipulations of self construal, Hannover, Birkner and Pohlmann (2005) found that when individuals reflected upon differences between themselves and their friends, they were more inclined to manifest an independent self construal. In contrast, after individuals reflected upon similarities between themselves and their friends, they were more inclined to manifest an interdependent self construal. The current study was conducted in the context of coping with stress, which may foster an orientation toward interdependence in the individual. For example, a college student who is facing financial

stress may realize the limitations of attempting to solve problems alone (i.e., independent self-construal) and therefore seek out a social network for added support (i.e., interdependent self-construal). This finding points out the necessity of reevaluating the link between self-construal and cultural identities. People may acquire both independent and interdependent self-construal regardless of their culture of origin. Moreover, self-construal can be influenced by the context of an event and both types of self-construal may be activated in the context of coping with difficult situations.

The current study also found that the less U.S. students believed in multiple solutions, the more they believed in destiny, the more negative their views of society, the more likely they were to seek help from others. These findings suggest that with a sense of powerlessness and the inability to see other solutions, U.S. college students in the current sample may give up trying to deal with the stressor alone and turn to others for help. This association between fate control, social cynicism, and help seeking has not been previously explored in empirical study or theoretical literature. A possible reason that this association had not been identified may be that the help-seeking dimension had not been a part of the coping construct in previous research. Thus, the current research suggests the necessity of reexamining the current conceptualization of coping.

In addition to the above discoveries, the current study found that both independent and interdependent self-construal, beliefs in effort, and an understanding of social complexity predicted self-regulation. Self-regulation was a coping dimension originally identified in the Chinese population (Shek & Cheung, 1990). The association between self-construal, social beliefs, and self-regulation found in the U.S. sample in this study indicates that self-regulation also applies to U.S. college students. In fact, this finding

partially concurs with Lam and Zane's (2004) notion regarding the association between self-construal and self-regulation. In their study, Lam and Zane (2004) on U.S. college students found that greater orientation toward interdependent self-construal predicted increased use of internally targeted coping. The association between independent self-construal and self-regulation may be explained by the shared emphasis on self reliance in independent self-construal and self regulation. The associations between self-construal, various aspects of social beliefs, and self-regulation correspond to associations between these cultural variables and problem-focused coping found in previous studies (Bond et al., 2004; Safdar et al., 2006; Singelis, et al., 2003). This similarity between findings in the current study and those in previous studies suggests that self-regulation may have some problem-focused components. Further examination reveals that self-regulation emphasizes resolving negative effects of situations from within the self such as reframing and adjusting one's thoughts and feelings to the external environment (Heppner et al., 2006; Shek & Cheung, 1990; Yue, 2001). Similar to task-oriented coping, self-regulation aims to resolve the problem. The difference between the two is that the former is externally oriented while the latter is internally oriented.

In general, the findings for the U.S. college students in this study reveal two major themes in the relationship between self-construal, social beliefs, and coping. One theme concerns an orientation for handling stress centered upon internal control. This theme is reflected in the association between independent and interdependent self-construal, beliefs in social complexity and efforts in making positive outcome, and task-oriented coping and self-regulation. The theme emphasizes problem solving (i.e., task-oriented coping, self-regulation) and internal locus of control (i.e., independent self-

construal, beliefs in efforts). The other theme is that of an orientation for handling stress which centers on external control. This is demonstrated in the association between social cynicism, fate control, and emotion-oriented coping, avoidance, and help seeking. This theme emphasizes the impact of external circumstances (i.e., fate control), skepticism about outcome (i.e., social cynicism, avoidance), and coping utilizing external resources (i.e., help seeking). In general, these two themes correspond to the literature regarding the association between locus of control and coping, which stated that a high sense of mastery or internal locus of control leads to problem-focused coping, whereas an external locus of control leads to emotion-focused coping (Lam & Zane, 2004; O'Connor & Shimizu, 2002).

Associations between Self-Construal, Social Beliefs and Coping among Chinese College Students

As predicted for the Chinese college students, the greater their independent self-construal, the more they believed in the complexity of society and effort in attaining goals, the greater their likelihood of using task-oriented coping. This finding echoes the finding from the U.S. college student sample. These results also correspond to previous studies that demonstrated associations of independent self-construal, beliefs in social complexity, and reward for application with task-oriented coping in Chinese college students (Bond et al., 2004), Asian and Caucasian American students (Lam & Zane, 2004), East-Asian college students (Cross, 1995), Iranian college students (Safdar et al., 2006) and U.S. college students (Sengelis et al., 2003). Thus, it appears that the associations of independent self-construal, beliefs in social complexity, and reward for application to task-oriented coping are cross-culturally robust.

The second hypothesis predicted that the more interdependent Chinese college students were, the more they would use self regulation and seek help from others. Unexpectedly, the analyses revealed that an interdependent self-construal did not contribute to these coping dimensions. Thus, the second hypothesis was rejected. This finding contradicts Lam and Zane's (2004) findings that an orientation toward interdependent self-construal was positively related to the use of internally targeted coping. One possible reason for the lack of association between interdependent self-construal and any coping dimension may be explained by the awakened individualism in the Chinese college student population over the last 20 years (Jin, 2003; Yu, 1997), which has resulted from increased contact with Western culture. Compared to traditional Chinese persons, present-day college students may be more independent. As a result, independent self-construal may have a greater than expected influence on Chinese college student coping strategies. In fact, an association between independent self-construal and self-regulation was also found in the current study which supports this notion. That is, it was discovered that the greater Chinese students' independent self-construal, and the greater their beliefs in both social complexity and reward for application, the greater their likelihood of using self-regulation coping. This relationship is similar to what was found for the U.S. college student sample.

The third hypothesis, which indicated that the more Chinese students believed in destiny, the more negative their view of society and the more likely they would be to utilize avoidance coping, was supported. These findings correspond to findings in Singelis et al. (2003) and Bond et al. (2004) and were also found in the U.S. college student sample.

In addition to findings related to the hypotheses, additional information was discovered for the Chinese students. For example, fate control, social cynicism and religiosity were found to predict emotion-focused coping. According to the literature (Markus & Kitayama, 1991; Matsumoto, 1989), emotional expression is not considered typical in collectivistic societies where interpersonal context assumes priority over private feelings. The cultural emphasis on group cohesion prevents the individual from expressing emotions for the sake of interpersonal harmony. Therefore, in the current study, an association of self-construal and social beliefs with emotion-focused coping was not expected among the Chinese students. However, the current findings indicate that emotion-focused coping may now be an active coping strategy in Chinese culture.

Chinese society has changed significantly in the past 20 years. During this period of time, China has increased its contact with the West and welcomed the influence of Western culture. An awakened individualism has been observed in the younger generations who are more assertive regarding their internal attributes than their parents' generation (Jin, 2003; Yu, 1997). Because Chinese youth feel free to experience and express their emotions more freely, Chinese college students may resort to emotional venting when they become distressed.

Similar to findings in the U.S. sample, the findings for the Chinese students can be summarized into two major themes. These themes reflect an orientation of internal control and an orientation of external control. The internal control orientation is demonstrated in the associations of independent self-construal, beliefs in social complexity, and reward for application to task-oriented coping and self-regulation. The external control orientation is evidenced in the association between fate control and social

cynicism, and emotion-oriented coping, avoidance, self-regulation. These two themes imply that Chinese students in this study were likely to utilize a problem solving approach (i.e., task-oriented coping, self regulation) when they had a sense of mastery and internal control, and were likely to take a passive approach (i.e., avoidance, emotion-oriented coping) when they believed that control is in the hands of others.

Another hypothesis anticipated that self-construal and social beliefs influence self-regulation coping and help seeking for the U.S. and the Chinese students. This hypothesis was supported by the associations found between self-construal, social beliefs and self-regulation in both the U.S. and Chinese students, and between fate control, social cynicism and help seeking in the U.S. students.

Comparison of Associations between Self-Construal, Social Beliefs, and Coping across Cultures

It was predicted that the relationship pattern between self-construal, social beliefs, and emotion-focused coping will be different between the Chinese and the U.S. students. This hypothesis was partially supported. On the one hand, for both the U.S. and the Chinese students, fate control and social cynicism predicted emotion-oriented coping. Yet, it was also discovered that religiosity contributed to emotion-focused coping for the Chinese college students, but not for the U.S. college students. It appears, therefore, that religiosity has different implications for the Chinese than the U.S. students.

Chinese religiosity fundamentally consists in living in harmony with "The Way" of nature or the external environment (Cheng, 1995). It is commonly believed that people are blessed when they follow the way of nature and accept situations which are perceived as uncontrollable. Thus, religiosity carries a passive and non-active connotation. In fact,

the current study found that religiosity contributed to self-regulation for the Chinese students. People with religious beliefs may resort to emotional venting and focus on self transcendence rather than taking action to change the situation. In contrast, Western religiosity emphasizes the relationship between the individual and "God," and fosters a sense of hope and connectedness with others (Wilcox, 2003). Thus, people with religious faith in the U.S. are less likely to resort to emotional venting in dealing with stress. Therefore, religiosity is associated with emotion-focused coping and self regulation for the Chinese students, but not for the U.S. students. This finding supports another hypothesis in which it was expected that the relationship between religiosity and coping dimensions are different between the Chinese and the U.S. samples.

Another notable difference between the U.S. and Chinese students relates to the variations in the influence of self-construal on coping. For the U.S. students, both independent and interdependent self-construal contributed equally to task-oriented coping and self-regulation coping, whereas for the Chinese students, only independent self-construal predicted these coping strategies. Thus, it appears that for the U.S. students, interdependent self-construal is equally as strong as independent self-construal, whereas for the Chinese students, one orientation of the self is more salient than the other. This co-existence of an independent and an interdependent self was identified in Triandis and colleagues' study (1993) on U.S. persons.

It is possible that U.S. students have more opportunities than Chinese students to interact with diverse cultures due to a long history of immigration (Daniel, 2002) and, therefore, develop a more complex self-construal that is less dichotomized and compartmentalized. Yet, it is also possible that the nature of the U.S. sample in the

current study may explain these findings as well. The U.S. sample was drawn from a university in the mid-west where religious beliefs with an emphasis on family values are very influential. In fact, seventy-five percent of the U.S. students in the study identified themselves as Christian. It has been reported that students with Christian religious beliefs are more interpersonally oriented compared to non-religious persons because of the emphasis on family values in Christian teachings (Gallagher & Smith, 1999). These factors may have also contributed to the strong interdependent self-orientation in the U.S. students.

Besides the differences observed between the two samples, similarities were also found in the relationship between self-construal, social beliefs, and coping in the two samples. For both the U.S. and the Chinese students, two major themes emerged, which were labeled as "internal locus of coping" and "external locus of coping." An internal locus of coping is reflected in the association of independent self-construal, beliefs in social complexity and importance of effort, to both task-oriented coping and self regulation coping. An external locus of coping is reflected in the association between negative worldviews and a belief in destiny, and emotion-focused and avoidance coping. This similarity indicates that, despite difference in culture of origin, the students in this study may employ similar coping strategies depending on whether they believe situations are under or beyond their control. When they believe that things are under their control, they are more likely to focus on problem-solving in dealing with stress. These problem-solving coping strategies can be internally targeted (i.e., self regulation) or externally targeted (i.e., task-oriented coping). In contrast, when they believe that things are beyond their control, they tend to use a passive approach, such as emotion-venting or avoidance.

Gender Differences in the Relationships between Self-Construal, Social Beliefs and Coping

To further understand the differences in the relationships between cultural factors and coping for U.S. and Chinese college students, the relationships were also examined in the context of gender. For all male college students regardless of country of residence, two canonical roots were extracted. These two roots also reflected an internal and an external orientation of control for coping. Specifically, the first function demonstrated associations between independent self-construal, interdependent self-construal, belief in social complexity, and reward for application and task-oriented coping. That is, the first root indicates that a belief in personal control (i.e., independent self-construal, beliefs in social complexity and reward for application) was related to problem-solving coping. The second root revealed an association between a belief in external control (i.e., beliefs in destiny and religiosity) and external oriented coping (i.e., emotional-focused, seeking help from others).

In comparison to findings for the male students, results for the female students revealed similar themes with different corresponding coping strategies. Two canonical roots were extracted. The first root featured associations between independent self-construal and beliefs in religiosity and reward for application, and task-oriented coping and help seeking. This root emphasized beliefs in personal control (i.e., independent self-construal, beliefs in religiosity and reward for application) and problem-solving coping with both personal (i.e., task-oriented coping) and external resources (i.e., help seeking). The second root was characterized by an association between beliefs in fate control, interdependent self-construal, social cynicism, and self-regulatory coping. This root

reflected a belief in external control (i.e., fate control, interdependent self-construal, social cynicism) and internally targeted coping (i.e., self-regulation).

The above findings also indicate gender differences in the relationships between cultural factors and coping. For men a belief in internal control predicted the use of individual resources in problem solving, whereas for women, belief in internal control contributed to the use of both individual and social resources. When they believed a situation was under their control, men tended to rely on themselves, whereas women were likely to rely both on themselves and to seek help from others. For women, therefore, seeking help from others is a way of active problem-solving. This finding aligns with the literature which suggests that women are generally more relational and socially oriented than men (Jordon, 1996). Women are likely to reach out for available social resources while a man's need for external assistance tends to be activated only when he believes that circumstances are beyond his control. Moreover, when men believe things are predetermined and out of their control, they tend to use avoidance strategies. Under similar circumstance, when women perceive problems to be outside of their control, they tend to look within and reflect on the meaning of the event. Women appear to try to endure the adverse effects of the event and resign to what is inevitable. This is reflected in their use of self-regulatory coping (Yue, 2001). It appears, therefore, that women may be more willing than men to adapt themselves to the external circumstances by modifying their thoughts and feelings.

Another indicator of gender difference in the relationships between self-construal, social beliefs, and coping is the different contributions independent and interdependent self-construal make to coping. For men, both independent and interdependent orientations

predicted task-oriented coping. Yet for women, independent self-construal predicted task-oriented coping, whereas an interdependent self-construal predicted self regulation.

These associations between self-construal and coping in women echo findings from previous studies (Lam & Zane, 2004; Yeh & Inose, 2002). These studies suggested that people with interdependent orientation avoid confronting others due to the cultural emphasis on interpersonal harmony, whereas people with independent orientation tend to confront others and attempt to change the external environment to meet their needs. The current study indicates that this notion may apply more to women than to men. In another words, the coexistence of independence and interdependence may be more likely observed in men than in women. However, this finding needs to be further explored in future studies in order to solidify its reliability.

The study also found differences in the contribution of religiosity to problem-solving coping between men and women. For women, religiosity predicted task-oriented coping and help seeking, which was not observed in men. This finding suggests a bigger influence of religiosity on women's coping behavior than men's. This difference can be supported by findings which showed that women were more religious than men (Walter & Davie, 1998) and that religious involvement have a positive impact on women's well-being (Mirola, 1999). Women who are religious may develop a sense of internal control due to the faith in God or a supernatural power. They may also develop a social network built on the religious community. As a result, these women tend to use a problem-solving approach in dealing with stress either through mobilization of personal resources or seeking assistance from others.

Canonical analyses were also run separately for male and female students in each country to explore a possible interaction effect between gender and country. The results showed that for both Chinese and U.S. men and women, the greater their independent and interdependent self-construal, the more likely they were to utilize task-oriented and self-regulation coping. However, compared to the U.S. men, Chinese men were less likely to use emotion-oriented coping and help seeking. This finding corresponds to what was found between the Chinese men and the U.S. men in the preliminary analyses—that the U.S. men were more interdependent than the Chinese men. Moreover, for the U.S. men, independent and interdependent self-construal contributed equally to the above-mentioned coping dimension, whereas for the Chinese men, independent self-construal shared a larger contribution than interdependent self-construal. These results echo what was found in the main analyses, namely, that independent and interdependent self-construal contributed equally to problem-focused coping amongst the U.S. students, whereas only independent self-construal made a significant contribution for the Chinese students.

Overall, the examination of the influence of gender and nationality on the relationships between self-construal, social beliefs, and coping provided support for the two major themes found for the U.S. and Chinese student samples. The themes of internal orientation of control and external orientation of control existed in both countries and within both gender groups. Specifically, an internal locus of control (e.g., independent self-construal, and a belief in the effectiveness of individual effort) predicted active problem-solving coping, whereas an external locus of control predicted emotion-focused and avoidance coping. Under this overarching framework, there are several differences

between the U.S. and Chinese students and between men and women. These differences may be explained in the context of culture and gender.

Limitations

Significant efforts were made to minimize the construct bias and to strengthen the research design in this project. For this reason, a convergence approach was adopted and structure-level analyses were utilized. Still, despite these efforts, the current study has several limitations. First, a convenience sample of college students, rather than a random sample, was utilized. Thus, the samples may not accurately represent university students in these countries. Moreover, college students represent a small fraction of the population at large. Therefore, the results of the current study may have significant limitations if generalized to the U.S. and Chinese populations. Also, because the current study is correlational in nature, a cause-effect relationship between cultural factors and coping behaviors cannot be established.

Although a careful process of translation and back-translation was adopted to develop a Chinese language version of the CISS, possible inequalities between the two versions of the instrument may still exist. Any inequalities in the measures could create item bias and confound the results of the study. Still, the strong reliability of these two versions provides some evidence to suggest significant equivalence. Moreover, the current study adopted the established English and Chinese versions of other instruments (i.e., the CCS, the SAS, the SCS) from the original studies in which they were developed (Gudykunst et al., 1996; Leung et al., 2002; Shek & Cheung, 1990). The author, a native Chinese speaker, verified the linguistic equivalence of these instruments by visually examining the content of both versions. Because of limited information about the

translation procedure employed on the CCS, the SCS, and the SAS, the translation procedures used in developing different versions of the instruments cannot be evaluated. However, the author's item-by-item perusal of the two language versions of the instruments indicated that they are linguistically equivalent. This level of equivalence needs to be evaluated in future studies. Furthermore, scarce information about the cross-cultural validity of the instruments posed a threat to the validity of the current study. Yet, information from the current study suggests initial evidence of cross-cultural validity of these instruments. The evidence includes the low to low moderate correlations between the subscales of the CCS and those of the CISS in both the U.S. sample and Chinese samples. In addition, the reliability coefficients of both versions of these instruments in the current study were comparable between the two language versions and to those reported in the original studies. This lends some support to the measurement equivalence (i.e., reliability coefficients) of these coping measures for Chinese and U.S. college students.

In the current study, low Cronbach alpha's for the subscales of the CCS (Shek & Cheung, 1990) raise questions regarding the utility of this scale for college student populations. The Self-Regulation and Help Seeking subscales of the CCS showed moderate to high internal reliabilities for middle-aged Chinese adults in previous research (Shek & Cheung, 1990). However, in the current study the internal reliabilities were lower for both the Chinese and the U.S. student samples. Though the CCS had not been used previously on college student samples, it was used in the current study as this was the only scale available which specifically targeted coping strategies commonly found among Chinese persons. It should be noted that the low reliabilities of the Self-

Regulation and the Help Seeking subscales may lead to an underestimation of their correlations with other variables.

Implications of Findings

The results of the current study are consistent with the transactional model of coping, which emphasizes the effect of culture on coping. According to this theory, fundamental beliefs, including beliefs about the self, the world, and the relation between the self and the world, shape an individual's appraisal of stressful situations, which in turn influences coping behaviors (Park & Folkman, 1997). The current study supports the association between independent self-construal, beliefs in social complexity and reward for application, and task-oriented coping. It also supports the associations between beliefs in fate control and social cynicism, and emotion-oriented coping and avoidance. These associations were demonstrated in both the U.S. and Chinese college student samples. These findings correspond to those discovered in previous studies conducted in the U.S. (Lam & Zane, 2004), on Asian Americans (Lam & Zane, 2004), and on Chinese (Bond et al., 2004) and Iranian populations (Safdar et al., 2006). Therefore, the current study provides further evidence for the cross-cultural validity of the association between cultural and coping behaviors.

In addition, the current study suggested associations between self-construal, social beliefs and certain coping strategies that have not been explored before. For both U.S. and Chinese college students, independent self-construal, a belief in social complexity, and a belief in hard work predicted the use of self-regulation as a coping strategy. Self-regulation is an internally targeted coping dimension that has not been previously examined in this context on Western populations. It is considered one of the most

frequently used coping strategy among individuals from collectivistic cultures (Heppner et al., 2005; Lam & Zane, 2004). Furthermore, self-regulation has frequently been found to be related to an interdependent construal of the self (Lam & Zane, 2004). However, in the current study, a different relationship emerged. Self-regulation, similar to task oriented coping, was found to be associated with independent self-construal, belief in social complexity, and reward for application. This finding suggests that there is a problem-solving component in self-regulation since previous studies demonstrated association between independent self-construal, beliefs in social complexity and reward for application, and problem-focused coping (Bond et al., 2004; Safdar et al., 2006; Sengelis, et al., 2003). An examination of the components of self-regulation (e.g., looking inward, self reflection, growth from adversity) reveals that this strategy often incorporates adaptation of the self to the external environment. It also emphasizes resolving negative effects of adversity from within, such that a personal transformation takes place. Therefore, self regulation may be a form of problem-focused coping similar to task-oriented coping, with the former being internally oriented (i.e., changing oneself), whereas the latter being externally oriented (i.e., changing the external environment). The association between self-construal, social beliefs, and self-regulation found among the U.S. college students also suggests that self-regulation is not only a coping strategy used solely in collectivistic cultures, but also exists in more individualistic cultures. Therefore, based on these results, given the increased interconnectedness among countries and cultures, current conceptualizations of coping in the United States and Western society may need to be expanded to include coping strategies focused on personal transformations and changes from within that are more commonly associated with Asian

cultural values. Similarly, the relationships between self-construal, social beliefs, and task-oriented and emotion-focused coping discovered among the Chinese students indicates that coping strategies identified in individualistic cultures may be applicable to Chinese individuals as well. Future studies on coping that combine qualitative and quantitative methods are needed to enhance the development of a more comprehensive theorization of the coping construct.

Apart from offering support to the transactional model of coping, the current study presents findings that do not correspond with reported findings in the literature. For instance, in the current study it was found that independent and interdependent self-construal predicted problem-focused coping (task-oriented and self-regulation coping) for the U.S. students. This finding suggests the co-existence of independent and interdependent self-construal in U.S. college students. The notion that individuals from an individualistic culture are oriented toward independent self-construal and those from a collectivistic culture are oriented toward interdependent self-construal was not supported in this study. The current study points to the importance of examining the effect of specific cultural factors on coping rather than looking at coping differences based on cultural group membership. In addition to replicating the current study in different samples, future studies are needed to explore other specific cultural factors, such as personal values and multiculturalism, to better understand the complexity underlying coping behavior.

With respect to research methodology, the current study demonstrated the advantages of using canonical analysis over univariate statistical methods when examining the relationships between cultural factors and coping behaviors. As mentioned

earlier, canonical analysis maximizes the shared variance between two sets of variables. With this analysis, the current study discovered relationships not found in previous studies which employed bivariate correlations (Singelis et al., 2003) or regression analyses (Bond et al., 2004; Safdar et al., 2006). For example, the current study found that belief in fate control and a negative worldview were associated with emotion-focused coping in both U.S. and Chinese college students (Bond et al., 2004; Safdar et al., 2006; Singelis et al., 2003). As utilization of the canonical analysis has revealed this yet undocumented finding, future research is needed to confirm this relationship between social beliefs and coping.

Moreover, the current study combined coping constructs identified in Chinese culture and the West to minimize construct bias across cultures and to maximize the coverage of the coping behaviors that were measured. The association between self-construal, social beliefs, and self-regulation coping and help-seeking (the Chinese coping dimensions) in U.S. college students indicates that coping measures developed in the West may overlook some important coping behaviors that were utilized by Chinese people but also applicable to the U.S. persons. Similarly, the associations between self-construal, social beliefs, and Western coping behaviors, such as task-oriented and emotion-oriented coping, discovered in the Chinese students suggest that conceptualizations of coping in the Chinese culture need to be expanded. More studies, both qualitative and quantitative are needed to expand current conceptualizations and the measurement of coping behaviors in the United States and in China.

In addition to the use of a convergence approach to address construct bias, the current study applied a rigorous translation-back-translation procedure to enhance the

cross-cultural validity of the CISS (Endler & Parker, 1990, 1992). Applying a proper translation methodology is very important to increase equivalence between various versions of an instrument (Ægisdóttir et al., 2008), as is reporting the details about methods of translation in the manuscript. Inappropriate translation of an instrument may threaten a study's internal validity and hinder the level of equivalence which is the base for cross-cultural comparison (Ægisdóttir et al., 2008). Future studies should place importance on the discussion of translation methods to enhance construct equivalence, which will in turn strengthen the cross-cultural validity of the study.

The current study also provides some important implications for counseling practice in the United States and China. The findings indicate that regardless of culture of origin, U.S. and Chinese students tended to focus on problem-solving when they have a sense of mastery and internal control. They also tended to resort to emotion venting and distancing themselves from the stressor when they held a negative view about the world and believed that things were predetermined. When working with college student in both countries, it is important to assess clients' social beliefs and self-construal as a way to understand their coping styles. Intervention may involve discussions regarding the self in relation to others and general beliefs, and help clients see the link between beliefs and behaviors.

Moreover, the current study demonstrates that coping strategies unique in the Chinese culture may also be applicable in the U.S., and vice versa. Counselors may help clients of each country expand their coping toolbox and learn to utilize tools which compliment a given problematic situation. Because self-regulation has a problem-solving component and is applicable to the U.S. students, counselors may encourage U.S.

students to look both externally and internally for problem solutions. In addition to taking action to change the external circumstance, clients may learn to explore personal resources and use self-reflection to develop different perspectives of the same situation. Because task-oriented coping and emotion-oriented coping are applicable to the Chinese students, counselors working with Chinese students can encourage them to take initiative in removing the stressor when the situation is perceived as under their control, and encourage the expression of emotion to help them release the stress when things are perceived as beyond their control. Caution should be made in working with Chinese men in regard to the usefulness of emotion-focused therapy because Chinese men in this study used less emotion-oriented coping and help seeking compared to the Chinese women. Talking about emotion may put them into a vulnerable state, which in turn challenges their sense of mastery.

Gender difference in the relationship between self-construal, social beliefs and coping also provide implications for practice. When they have a sense of mastery and internal control, men in this study tended to rely on themselves in problem-solving, whereas women would rely both on themselves and external resources for solution. This finding coincides with findings which showed that women were more likely to seek counseling then men (Fischer & Farina, 1995). When working with women in the U.S. and China, counselors can provide information about available resources and encourage them to seek assistance or advice from their social network.

With the expansion of coping conceptualization in the U.S. and China, counselors in both countries can bring ideas into practice by working to promote the expansion of coping reservoir of clients. Because studies have shown that the ability to learn and adopt

coping strategies from other cultures decreases one's subjective experiences of distress (Essua & Trommsdorff, 1996), it is especially important to help client explore various coping options and develop the confidence and competence to utilize coping strategies flexibly in different context. With increased cross-cultural interaction and traveling, U.S. and Chinese students will benefit greatly from this expansion of their coping toolbox, which will improve the quality of their lives within their own country or abroad.

Conclusion

The current study investigated the relationships between self-construal, social beliefs, and coping in U.S. and Chinese college students. Similarities and differences in the relationships between these two populations were explored, as well as similarities and differences between men and women. Results indicated that cross-culturally, persons who have an independent self-construal, who believe that individual effort can result in positive outcomes and that they can conceptualize multiple solutions in problem-solving, tend to take action to make change, and often adjust their own thoughts and feelings to the external environment. In addition, persons who have a negative world view and believe in destiny, are more likely to use avoidance coping and emotion-focused coping.

Despite the above mentioned similarities, some differences across cultures were also identified. Specifically, Chinese college students with religious faith tended to use emotion-focused coping. This pattern was not found for the U.S. students. This difference suggests that religiosity may have a different meaning across cultures and may therefore affect coping differently. It was also found that, for the U.S. students, independent and interdependent self-construal contributed equally to problem-solving coping, whereas for the Chinese students, only independent self-construal predicted this style of coping. This

suggests the co-existence of independent and interdependent self-construal among U.S. persons. This may be related to the cultural diversity present in the United States and the influence of religious beliefs.

Overall, an orientation toward internal control and an orientation toward external control existed across cultures and gender. Specifically, internal locus of control, such as an independent self-construal and beliefs in social complexity and individual efforts, predicted active, problem-focused coping, whereas an external locus of control predicted emotion-focused and avoidance coping.

In general, results of the current study support the transactional model of coping which emphasizes the effect of culture on coping. More specifically, the current study demonstrated that cultural factors such as self-construal and social beliefs contributed to various coping behaviors. Whereas some of the results were consistent with previous findings in terms of the association between independent self-construal, beliefs in effort, and social complexity and the use of task-oriented coping, as well as the association between beliefs in fate control, negative worldviews, and avoidance and emotion-focused coping, some new discoveries were obtained that warrant future research. For instance, an association was found between self-construal, social beliefs, and coping behaviors that have been unexplored in both China and the U.S. These results suggest that there is room to expand current conceptualizations of coping in both Western and Eastern societies. In fact, it may be that the coping strategies employed in these cultures are more similar than different. In addition, the current study points to the co-existence of independent and interdependent self-construal in U.S. college students and the necessity of rethinking the relationship between self-construal and culture (individualistic vs. collectivistic).

Despite the current study's limitations discussed earlier, it adds to the current knowledge on the relationship between culture and coping. It also addresses the methodological limitations of previous cross-cultural studies of coping by paying greater attention to construct bias and construct equivalence. It may, therefore, provide a more accurate account of the influence of culture on coping.

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Table 1

Demographics and Counseling Experience

	Chinese Students (N=321)		U.S. Students (N=325)		Total (N=646)	
	%	N	%	N	%	N
Sex						
Men	36	114	45	147	40	261
Women	64	207	55	178	60	385
Year in College						
First	27	88	15	49	21	139
Second	36	115	10	34	23	149
Third	35	111	29	93	32	205
Fourth	2	6	33	107	18	114
Fifth or more	0	1	13	42	7	43
Marital Status						
Married	0	0	6	18	1	18
Single	90	289	72	234	81	523
Widowed	0	0	0	1	0	1
Engaged	10	32	22	71	16	103
Other	0	0	0	1	0	1
Ethnicity						
Han	97	311	0	0	48	311
Chinese minority	3	8	0	0	1	8
African Amr	0	0	7	24	4	24
European Amr	0	0	81	264	41	264
Hispanic Amr	0	0	2	7	1	7
Asian or Pacific	0	0	2	6	1	6
American Indian	0	0	1	3	0	3
Other	0	0	5	17	3	17
Religion						
None	85	273	17	55	51	328
Buddhism	12	37	0	0	6	37
Taoism	0	1	0	0	0	1
Marxism	0	1	0	0	0	1
Christianity	3	9	75	244	39	253
Muslim	0	0	1	2	0	2
Atheist	0	0	2	5	1	5
Agnostic	0	0	2	7	1	7
Other	0	0	1	4	1	4

Living Arrangement						
Live alone on campus	8	25	5	15	6	41
Live alone off campus	1	3	7	24	4	27
Live with family	23	75	16	49	19	126
Live with roommate	67	215	72	234	69	449
Other	1	3	8	3	6	41
Home Town/City						
Large city	55	171	11	36	32	206
Small city	12	39	37	121	21	134
Town	22	70	37	120	29	191
Village	11	36	15	48	13	86
other	0	1	0	0	0	2
Mother's Education						
Elementary	8	24	0	1	4	206
Middle	26	82	2	6	14	89
High	57	180	51	165	54	346
Bachelor	8	24	31	101	20	126
Masters	0	1	15	48	8	49
Doctoral	1	3	1	3	1	6
Father's Education						
Elementary	1	4	0	0	1	4
Middle	3	8	3	11	3	19
High	76	244	48	155	62	399
Bachelor	14	45	31	100	22	145
Masters	3	8	11	36	7	44
Doctoral	1	3	5	17	3	20
Vocational Counseling Experience (Chinese)						
	Men		Women			
Yes	12	14	8	17	10	31
No	88	100	92	190	90	290
Personal Counseling Experience (Chinese)						
	Men		Women			
Yes	8	10	5	10	6	20
No	92	104	95	197	63	301
Vocational Counseling Experience (U.S.)						
	Men		Women			
Yes	9	13	9	16	9	29
No	91	134	91	162	91	296
Personal Counseling Experience (U.S.)						
	Men		Women			
Yes	18	27	34	61	27	88
No	82	120	66	117	73	237

Table 2

Means and Standard Deviations of Family and Social Relationships and Family Income

	Chinese Students (N=321)		U.S. Students (N=325)	
	M	SD	M	SD
Family relationship	4.16	.86	4.34	.82
Social Relationship	4.00	.71	4.42	.72
Family Income (U.S.D)	8,634	13,981	90,671	61,326

Note: Family Relationship scores: 1: very distant. 5: very close. Social Relationship scores: 1: very distant. 5: very close.

Table 3

Results of MANOVA

	Wilks's Lambda	Approx. F	Hypoth. DF	Error DF	Sig. of F
Self-Construal					
Gender	.97	9.75	2	640	.000
Country	.83	66.93	2	640	.000
Gender by Country	.99	4.58	2	640	.011

Note: Significant at .05 level (2-tailed test)

Table 4

Correlations among and between Coping, Self-Construal and Social Beliefs, U.S. Sample (N = 325)

Subscale	1	2	3	4	5	6	7	8	9	10	11	12
CCS												
1. Self	--	.12*	.37**	-.22**	.08	.24**	.21**	.01	.23**	.12*	.09	.05
2. Help		--	.18**	.28**	.42**	.05	.20**	.09	.16**	-.05	.16**	.31**
CISS												
3. Task			--	-.13*	.09	.40**	.30**	-.09	.38**	.32**	.06	.17**
4. Emo				--	.31**	-.02	.08	.18**	.03	-.08	.20**	-.03
5. Avoid					--	.05	.21**	.15*	.07	-.15*	.28**	.08
SCS												
6. Ind						--	.35**	-.06	.36**	.32**	-.08	.07
7. Inter							--	-.15**	.31**	.31**	.08	.22**
SAS												
8. Cyn								--	.16**	-.13*	.43**	-.08
9. Rew									--	.45**	.24**	.24**
10. Com										--	-.15*	.11
11. Fate											--	.13*
12. Relg												--

Note: ** = $p < .001$; * $p < .01$, two tailed. Self refers to Self Regulation. Help refers to Help Seeking. Task refers to Tast-Oriented coping. Emo refers to Emotion-Oriented coping. Avoid refers to Avoidance coping. Ind refers to Independent self-construal. Inter refers to Interdependent self-construal. Cyn refers to Social Cynicism. Rew refers to Reward for Application. Com refers to Social Complexity. Fate refers to Fate Control. Relg refers to Religiosity.

Table 5

Correlations among and between Coping, Self-Construal and Social Beliefs, Chinese Sample (N = 321)

Subscale	1	2	3	4	5	6	7	8	9	10	11	12
CCS												
1. Self	--	.03	.43**	-.11*	.25**	.30**	.21**	.03	.25**	.22**	.13*	.16*
2. Help		--	-.04	.17*	.29**	-.19**	-.09	-.02	.00	-.24**	.08	-.04
CISS												
3. Task			--	-.10	.07	.45**	.19**	.04	.34**	.35**	-.03	.01
4. Emo				--	.34**	-.07	.04	.23**	-.04	-.02	.24**	.09
5. Avoid					--	-.01	.15**	.10	.10	.03	.12*	.04
SCS												
6. Ind						--	.30**	.16**	.31**	.47**	.05	.07
7. Inter							--	-.06	.40**	.45**	-.03	-.08
SAS												
8. Cyn								--	.02	.01	.39**	.05
9. Rew									--	.49**	-.01	.08
10. Com										--	.05	.08
11. Fate											--	.42**
12. Relg												--

Note: ** = $p < .001$; * $p < .01$, two tailed. Self refers to Self Regulation. Help refers to Help Seeking. Task refers to Tast-Oriented coping. Emo refers to Emotion-Oriented coping. Avoid refers to Avoidance coping. Ind refers to Independent self-construal. Inter refers to Interdependent self-construal. Cyn refers to Social Cynicism. Rew refers to Reward for Application. Com refers to Social Complexity. Fate refers to Fate Control. Relg refers to Religiosity.

Table 6

Canonical Analysis of Self-Construal, Social Beliefs and Coping, U.S. sample (N=325)

	Standardized Canonical Coefficients (Structure Coefficient)		
	Function one	Function two	Function three
Predictors			
Self-Construal			
Independent	.44 (.72)	-.15 (-.25)	-.30 (-.25)
Interdependent	.36 (.73)	.49 (.21)	-.26 (-.13)
Social Beliefs			
Social Cynicism	-.14 (-.08)	.38 (.55)	-.04 (-.15)
Reward for Application	.36 (.74)	-.10 (-.10)	.20 (.13)
Social Complexity	.04 (.46)	-.63 (-.65)	-.10 (-.05)
Fate Control	.25 (.29)	.35 (.64)	-.27 (-.08)
Religiosity	.12 (.40)	.11 (.12)	.95 (.87)
Criterion			
Coping			
Task Oriented	.81 (.93)	-.46 (-.32)	-.07 (-.03)
Emotion Oriented	.14 (.08)	.28 (.58)	-.57 (-.25)
Avoidance	.12 (.34)	.68 (.82)	-.37 (-.13)
Self-Regulation	.23 (.54)	.12 (-.06)	-.40 (-.21)
Seek-Help	.18 (.43)	.24 (.55)	1.07 (.68)
Canonical Correlation	.53	.44	.33
Canonical R-Squared	.28	.19	.11
Canonical Eigenvalue	.40	.24	.12
F (n = 325)	6.57** (df=35)	4.76** (df=24)	2.92* (df=15)

Note: ** = $p < .001$; * = $p < .01$: canonical loadings equal or greater than .45 were underlined.

Table 7

Canonical Analysis of Self-Construal, Social Beliefs and Coping, Chinese Sample (N = 321)

	Standardized Canonical Coefficients (Loadings)	
	Root one	Root two
Predictors		
Self-Construal		
Independent	.68 (.90)	-.07 (.05)
Interdependent	-.01 (.43)	.57 (.36)
Social Beliefs		
Social Cynicism	-.02 (.09)	.27 (.48)
Reward for Application	.27 (.63)	-.05 (.06)
Social Complexity	.29 (.72)	-.22 (.03)
Fate Control	-.11 (-.07)	.66 (.84)
Religiosity	.08 (.13)	.26 (.47)
Criterion		
Coping		
Task Oriented	.83 (.92)	-.29 (-.05)
Emotion Oriented	-.01 (-.14)	.80 (.79)
Avoidance	-.02 (.03)	.08 (.49)
Self-Regulation	.26 (.62)	.65 (.45)
Seek-Help	-.30 (-.26)	.08 (.21)
Canonical Correlation	.53	.38
Canonical R-Squared	.28	.15
Canonical Eigenvalue	.39	.17
F (n = 321)	5.28** (df=35)	3.11** (df=24)

Note: ** = $p < .001$; * = $p < .01$: canonical loadings equal or greater than .45 were underlined

Table 8

Correlations among and between Coping, Self-Construal, and Social Beliefs, Combined Male Sample (N = 261)

Subscale	1	2	3	4	5	6	7	8	9	10	11	12
CCS												
1. Self	--	0.6	.29**	-.08	.08	.14*	.26**	.08	.28**	.21**	.14*	0.6
2. Help		--	.16*	.32**	.51**	-.02	.11	-.03	.08	-.13*	.14*	.27**
CISS												
3. Task			--	-.09	.12*	.51**	.45**	-.13**	.44**	.48**	-.07	.21**
4. Emo				--	.38**	-.04	-.06	.23*	-.04	-.17**	.20**	.03
5. Avoid					--	.04	.13*	.07	.04	-.12	.19**	.18**
SCS												
6. Ind						--	.50**	-.10	.41**	.50**	-.20**	.17**
7. Inter							--	-.17**	.54**	.46**	-.14*	.17**
SAS												
8. Cyn								--	-.10	-.06	.41**	-.23**
9. Rew									--	.61**	-.00	.24**
10. Com										--	-.18**	.10
11. Fate											--	.20**
12. Relg												--

Note: ** = $p < .001$; * $p < .01$, two tailed. Self refers to Self Regulation. Help refers to Help Seeking. Task refers to Tast-Oriented coping. Emo refers to Emotion-Oriented coping. Avoid refers to Avoidance coping. Ind refers to Independent self-construal. Inter refers to Interdependent self-construal. Cyn refers to Social Cynicism. Rew refers to Reward for Application. Com refers to Social Complexity. Fate refers to Fate Control. Relg refers to Religiosity.

Table 9

Correlations among and between Coping, Self-Construal, and Social Beliefs, Combined Female Sample (N = 385)

Subscale	1	2	3	4	5	6	7	8	9	10	11	12
CCS												
1. Self	--	-.15**	.31**	-.25**	.05	.07	.15**	.16**	.12*	.21**	.25**	-.11*
2. Help		--	.23**	.21**	.35**	.28**	.15**	-.20**	.18**	-.05	-.11*	.33**
CISS												
3. Task			--	-.06	.16**	.45**	.18**	-.17**	.31**	.19**	-.08	.19**
4. Emo				--	.27**	.05	.18**	.12*	.04	-.01	.14**	.09
5. Avoid					--	.18**	.25**	-.02	.13	-.07	.05	.12*
SCS												
6. Ind						--	.20**	-.16**	.30**	.17**	-.14**	.26**
7. Inter							--	-.04	.25**	.31**	.10*	.09
SAS												
8. Cyn								--	.10	.09	.55**	-.15**
9. Rew									--	.31**	.14**	.15**
10. Com										--	-.08	.05
11. Fate											--	.02
12. Relg												--

Note: ** = $p < .001$; * $p < .01$, two tailed. Self refers to Self Regulation. Help refers to Help Seeking. Task refers to Tast-Oriented coping. Emo refers to Emotion-Oriented coping. Avoid refers to Avoidance coping. Ind refers to Independent self-construal. Inter refers to Interdependent self-construal. Cyn refers to Social Cynicism. Rew refers to Reward for Application. Com refers to Social Complexity. Fate refers to Fate Control. Relg refers to Religiosity.

Table 10

Correlations among and between Coping, Self-Construal, and Social Beliefs, U.S. Male Sample (N = 147)

Subscale	1	2	3	4	5	6	7	8	9	10	11	12
CCS												
1. Self	--	0.17*	.30**	-.04	.13	.28*	.30**	.03	.31**	.15	.04	0.09
2. Help		--	.13	.41**	.48**	-.04	.14	.11	.17*	-.11	.27**	.29**
CISS												
3. Task			--	.05	.48*	.52**	-.02	.48**	.44**	.46**	-.03	.26**
4. Emo				--	.37**	.02	.00	.32*	.07	-.12	.27**	-.03
5. Avoid					--	.02	.11	.21**	.06	-.20*	.33**	.12
SCS												
6. Ind						--	.57**	.01	.48**	.42**	-.05	.15
7. Inter							--	-.16	.49**	.40**	.05	.28**
SAS												
8. Cyn								--	.03	-.16	.37**	-.15
9. Rew									--	.53**	.12	.37**
10. Com										--	-.20*	.11
11. Fate											--	.17*
12. Relg												--

Note: ** = $p < .001$; * $p < .01$, two tailed. Self refers to Self Regulation. Help refers to Help Seeking. Task refers to Tast-Oriented coping. Emo refers to Emotion-Oriented coping. Avoid refers to Avoidance coping. Ind refers to Independent self-construal. Inter refers to Interdependent self-construal. Cyn refers to Social Cynicism. Rew refers to Reward for Application. Com refers to Social Complexity. Fate refers to Fate Control. Relg refers to Religiosity.

Table 11

Correlations among and between Coping, Self-Construal, and Social Beliefs, U.S. Female Sample (N = 178)

Subscale	1	2	3	4	5	6	7	8	9	10	11	12
CCS												
1. Self	--	0.13	.52**	-.31**	.06	.30*	.18**	-.20	.12	.12	.02	.05
2. Help		--	.19*	.18*	.35**	.12	.21*	.14	.23**	.03	.16*	.31**
CISS												
3. Task			--	-.13	.15	.32**	.17*	-.12	.29**	.19**	.12	.11
4. Emo				--	.20**	-.11	.16*	.21**	.01	-.07	.16*	-.06
5. Avoid					--	.08	.29**	.14	.09	-.13	.27**	.03
SCS												
6. Ind						--	.12	-.09	.28**	.20**	-.10	.02
7. Inter							--	-.06	.21**	.26**	.14	.19*
SAS												
8. Cyn								--	.21**	-.16*	.45**	-.02
9. Rew									--	.33**	.34**	.17*
10. Com										--	-.07	.12
11. Fate											--	.12
12. Relg												--

Note: ** = $p < .001$; * $p < .01$, two tailed. Self refers to Self Regulation. Help refers to Help Seeking. Task refers to Tast-Oriented coping. Emo refers to Emotion-Oriented coping. Avoid refers to Avoidance coping. Ind refers to Independent self-construal. Inter refers to Interdependent self-construal. Cyn refers to Social Cynicism. Rew refers to Reward for Application. Com refers to Social Complexity. Fate refers to Fate Control. Relg refers to Religiosity.

Table 12

Correlations among and between Coping, Self-Construal, and Social Beliefs, Chinese Male Sample (N = 114)

Subscale	1	2	3	4	5	6	7	8	9	10	11	12
CCS												
1. Self	--	.08	.42**	-.12	.17	.22*	.34**	-.06	.29**	.32**	.12	.21*
2. Help		--	.06	.17	.45**	-.29	-.07	.09	-.06	-.22	.18	.03
CISS												
3. Task			--	-.05	.13	.46**	.32**	.04	.42**	.49**	-.00	-.04
4. Emo				--	.40**	-.18	-.17	.21*	-.18	-.27**	.16	.10
5. Avoid					--	-.15	.04	.16	-.01	-.08	.16	.11
SCS												
6. Ind						--	.33**	.13	.37**	.60**	-.20*	-.06
7. Inter							--	-.03	.59**	.51**	-.23*	-.11
SAS												
8. Cyn								--	-.17	.11	.32**	-.09
9. Rew									--	.67**	-.08	.08
10. Com										--	-.13	.02
11. Fate											--	.50**
12. Relg												--

Note: ** = $p < .001$; * $p < .01$, two tailed. Self refers to Self Regulation. Help refers to Help Seeking. Task refers to Tast-Oriented coping. Emo refers to Emotion-Oriented coping. Avoid refers to Avoidance coping. Ind refers to Independent self-construal. Inter refers to Interdependent self-construal. Cyn refers to Social Cynicism. Rew refers to Reward for Application. Com refers to Social Complexity. Fate refers to Fate Control. Relg refers to Religiosity.

Table 13

Correlations among and between Coping, Self-Construal, and Social Beliefs, Chinese Female Sample (N = 207)

Subscale	1	2	3	4	5	6	7	8	9	10	11	12
CCS												
1. Self	--	.02	.49**	-.11	.28**	.37**	.18*	.05	.21**	.21**	.15*	.13
2. Help		--	.01	.07	.16*	.02	.08	-.13	.08	-.01	.02	-.08
CISS												
3. Task			--	-.10	.06	.44**	.19**	.02	.32**	.28**	-.06	.05
4. Emo				--	.27**	.03	.19**	.25**	.05	.11	.32**	.12
5. Avoid					--	.08	.20**	.08	.14*	.05	.07	-.00
SCS												
6. Ind						--	.28**	.18*	.32**	.33**	.18*	.17*
7. Inter							--	.00	.28**	.37**	.11	-.04
SAS												
8. Cyn								--	.10	.19**	.45**	.13
9. Rew									--	.33**	.05	.09
10. Com										--	.12	.10
11. Fate											--	.35**
12. Relg												--

Note: ** = $p < .001$; * $p < .01$, two tailed. Self refers to Self Regulation. Help refers to Help Seeking. Task refers to Tast-Oriented coping. Emo refers to Emotion-Oriented coping. Avoid refers to Avoidance coping. Ind refers to Independent self-construal. Inter refers to Interdependent self-construal. Cyn refers to Social Cynicism. Rew refers to Reward for Application. Com refers to Social Complexity. Fate refers to Fate Control. Relg refers to Religiosity.

Table 14

Canonical Analysis of Self-Construal, Social Beliefs and Coping by Gender, Combined Sample

	Standardized Canonical Coefficients (Loadings) Male		Standardized Canonical Coefficients (Loadings) Female	
	Root one	Root two	Root one	Root two
Predictors				
Self-Construal				
Independent	.45 (.82)	-.04 (-.03)	.54 (.79)	.30 (.25)
Interdependent	.23 (.72)	.52 (.32)	.16 (.33)	.48 (.62)
Social Beliefs				
Social Cynicism	-.09 (-.17)	.33 (.30)	-.28 (-.47)	.22 (.53)
Reward for Application	.17 (.73)	.30 (.23)	.35 (.50)	.01 (.33)
Social Complexity	.41 (.82)	-.69 (-.34)	-.17 (.06)	.16 (.42)
Fate Control	.11 (-.12)	.34 (.63)	-.13 (-.30)	.58 (.72)
Religiosity	.01 (.24)	.43 (.52)	.33 (.57)	-.23 (-.12)
Criterion				
Coping				
Task Oriented	.97 (.97)	-.12 (.10)	.73 (.79)	.06 (.29)
Emotion Oriented	-.01 (-.15)	.27 (.56)	-.08 (.10)	.61 (.42)
Avoidance	-.00 (.03)	.41 (.78)	.16 (.41)	.21 (.37)
Self-Regulation	.14 (.40)	.40 (.40)	-.27 (-.09)	.85 (.75)
Seek-Help	-.18 (-.02)	.48 (.78)	.48 (.72)	-.17 (-.08)
Canonical Correlation	.61	.42	.59	.44
Canonical R-Squared	.38	.18	.34	.19
Canonical Eigenvalue	.61	.21	.52	.24
F (n= 261 (M); 385 (F))	6.27** (df=35)	3.59** (df=24)	8.76** (df=35)	5.45** (df=24)

Note: ** = $p < .001$; * = $p < .01$: canonical loadings equal or greater than .45 were underlined.

Table 15

Canonical Analysis of Self-Construal, Social Beliefs and Coping by Gender (U.S.)

	Standardized Canonical Coefficients (Loadings) Male			Standardized Canonical Coefficients (Loadings) Female		
	Root one	Root two	Root three	Root one	Root two	Root three
Predictors						
Self-Construal						
Independent	.34 (.80)	.18 (.04)	.52 (.31)	.50 (.55)	-.31 (-.47)	-.24 (-.21)
Interdependent	.34 (.80)	-.39 (-.22)	-.19 (-.13)	.58 (.71)	.56 (.29)	-.09 (-.03)
Social Beliefs						
Social Cynicism	-.00 (-.10)	-.37 *(-.52)*	.37 (.59)	-.13 (.05)	.52 (.54)	.60 (.49)
Reward for Application	.31 (.79)	-.28 (-.23)	.05 (-.07)	.17 (.50)	-.36 (-.34)	.24 (.26)
Social Complexity	.27 (.72)	.57 *(.45)*	-.02 (-.03)	-.23 (.09)	-.34 (-.50)	-.07 (-.04)
Fate Control	-.03 (-.05)	-.40 *(-.76)*	.18 (.15)	.43 (.49)	.10 (.31)	-.41 (.07)
Religiosity	.03 (.32)	-.23 (-.38)	-.76 (-.74)	.14 (.31)	-.30 (-.30)	.81 (.76)
Criterion						
Coping						
Task Oriented	.92 (.95)	.12 (.02)	-.06 (-.20)	.09 (.68)	-.57 (-.57)	-.12 (-.23)
Emotion Oriented	.20 (-.02)	-.24 *(-.63)*	.84 (.51)	.17 (.16)	.51 (.65)	-.19 (.13)
Avoidance	-.10 (-.00)	-.54 *(-.85)*	.22 (.10)	.48 (.70)	.62 (.55)	-.27 (-.02)
Self-Regulation	.27 (.51)	-.15 (-.25)	.31 (.12)	.35 (.56)	.02 (-.43)	-.54 (-.43)
Seek-Help	-.11 (.09)	-.44 *(-.80)*	-.99 (-.50)	.30 (.61)	-.23 (-.03)	.99 (.77)
Canonical Correlation	.65	.49	.37	.52	.44	.36
Canonical R-Squared	.43	.24	.14	.27	.20	.13
Canonical Eigenvalue	.74	.31	.16	.36	.24	.15
F (n = 147 (M); 178 (F))	4.40** (df=35)	2.74** (df=24)	1.72* (df=15)	3.61** (df=35)	2.89** (df=24)	2.04* (df=15)

Note: ** = $p < .001$; * = $p < .01$: canonical loadings equal or greater than .45 were underlined.

Table 16

Canonical Analysis of Self-Construal, Social Beliefs and Coping by Gender (Chinese)

	Standardized Canonical Coefficients (Loadings)		
	Male	Female	
	Root one	Root one	Root two
Predictors			
Self-Construal			
Independent	.51 (.81)	.68 (.89)	-.32 (-.06)
Interdependent	.16 (.54)	.14 (.49)	.37 (.31)
Social Beliefs			
Social Cynicism	-.39 (-.14)	.02 (.22)	.26 (.54)
Reward for Application	-.09 (.61)	.29 (.62)	-.16 (-.08)
Social Complexity	.62 (.86)	.23 (.60)	-.00 (.13)
Fate Control	.26 (-.16)	-.05 (.16)	.75 (.89)
Religiosity	-.17 (-.05)	.08 (.22)	.13 (.34)
Criterion			
Coping			
Task Oriented	.71 (.77)	.75 (.91)	-.52 (-.37)
Emotion Oriented	.02 (-.46)	.26 (.16)	.89 (.86)
Avoidance	-.32 (-.22)	.03 (.26)	-.10 (.23)
Self-Regulation	.20 (.48)	.38 (.72)	.50 (.13)
Seek-Help	-.45 (-.45)	.03 (.07)	-.09 (-.04)
Canonical Correlation	.68	.53	.43
Canonical R-Squared	.46	.28	.19
Canonical Eigenvalue	.85	.39	.23
F (n = 114 (M); 207 (F))	2.97** (df=35)	3.88** (df=24)	2.67** (df=15)

Note: ** = $p < .001$; * = $p < .01$: canonical loadings equal or greater than .45 were underlined.

APPENDIX A

CISS, English Version

Instructions: The following are ways people react to various difficult, stressful, or upsetting situations. Please circle a number from 1 to 5 for each item. Indicate how much you engage in these types of activities when you encounter a difficult, stressful, or upsetting situation.

	Not at all				Very much
1. Schedule my time better.	1	2	3	4	5
2. Focus on the problem and see how I can solve it.	1	2	3	4	5
3. Think about the good times I've had.	1	2	3	4	5
4. Try to be with other people.	1	2	3	4	5
5. Blame myself for procrastinating.	1	2	3	4	5
6. Do what I think best.	1	2	3	4	5
7. Preoccupied with aches and pains.	1	2	3	4	5
8. Blame myself for having gotten into this situation.	1	2	3	4	5
9. Window shop.	1	2	3	4	5
10. Outline my priorities.	1	2	3	4	5
11. Try to go to sleep.	1	2	3	4	5
12. Treat myself to a favorite food or snack.	1	2	3	4	5
13. Feel anxious about not being able to cope.	1	2	3	4	5
14. Become very tense.	1	2	3	4	5
15. Think about how I have solved similar problems.	1	2	3	4	5
16. Tell myself that it is really not happening to me.	1	2	3	4	5
17. Blame myself for being too emotional about the situation.	1	2	3	4	5
18. Go out for a snack or meal.	1	2	3	4	5
19. Become very upset.	1	2	3	4	5
20. Buy myself something.	1	2	3	4	5
21. Determine a course of action and follow it.	1	2	3	4	5
22. Blame myself for not knowing what to do.	1	2	3	4	5
23. Go to a party.	1	2	3	4	5
24. Work to understand the situation.	1	2	3	4	5

25.	"Freeze" and don't know what to do.	1	2	3	4	5
26.	Take corrective action immediately.	1	2	3	4	5
27.	Think about the event and learn from my mistakes.	1	2	3	4	5
28.	Wish that I could change what had happened or how I felt.	1	2	3	4	5
29.	Visit a friend.	1	2	3	4	5
30.	Worry about what I am going to do.	1	2	3	4	5
31.	Spend time with a special person.	1	2	3	4	5
32.	Go for a walk.	1	2	3	4	5
33.	Tell myself that it will never happen again.	1	2	3	4	5
34.	Focus on my general inadequacies.	1	2	3	4	5
35.	Talk to someone whose advice I value.	1	2	3	4	5
36.	Analyze the problem before reacting.	1	2	3	4	5
37.	Phone a friend.	1	2	3	4	5
38.	Get angry.	1	2	3	4	5
39.	Adjust my priorities.	1	2	3	4	5
40.	See a movie.	1	2	3	4	5
41.	Get control of the situation.	1	2	3	4	5
42.	Make an extra effort to get things done.|	1	2	3	4	5
43.	Come up with several different solutions to the problem.	1	2	3	4	5
44.	Take time off and get away from the situation.	1	2	3	4	5
45.	Take it out on other people.	1	2	3	4	5
46.	Use the situation to prove that I can do it.	1	2	3	4	5
47.	Try to be organized so I can be on top of the situation.	1	2	3	4	5
48.	Watch TV.	1	2	3	4	5

APPENDIX B

CISS, Chinese Version

说明：*本测评量表反映了人们面对生活中种种不同的困难、压力和苦恼情况下的各种应对方式。每个陈述后有１至５的数字. 请从中选出一个反应您面对困难, 压力, 或苦恼情况下采用这种应对方式程度的数字，并在上面画圈。*

面临困难, 压力, 或苦恼情况下	***从未***	***很少***	***有时***	***经常***	***很频繁***
1. 更好的安排我的时间	1	2	3	4	5
2. 把精力放在问题上, 看我该如何解决	1	2	3	4	5
3. 想想我曾拥有的快乐时光	1	2	3	4	5
4. 尽量和他人呆在一起	1	2	3	4	5
5. 因为延误事情而自责	1	2	3	4	5
6. 做我认为最好的	1	2	3	4	5
7. 过于关注身体的疼痛	1	2	3	4	5
8. 为陷入当前境地而自责	1	2	3	4	5
9. 逛街	1	2	3	4	5
10. 按事情的轻重缓急排列顺序	1	2	3	4	5
11. 试着入睡	1	2	3	4	5
12. 给自己吃喜欢的食物或零食	1	2	3	4	5
13. 为不能应付感到焦虑	1	2	3	4	5
14. 开始非常紧张	1	2	3	4	5
15. 想想自己是如何解决类似问题的	1	2	3	4	5
16. 告诉自己事情并没有真正发生在自己身上	1	2	3	4	5
17. 为自己对此事过于情绪化而自责	1	2	3	4	5
18. 出去吃饭或吃点零食	1	2	3	4	5
19. 感到非常难过	1	2	3	4	5
20. 给自己买点什么	1	2	3	4	5

21. 决定行动方案并付诸实施	1	2	3	4	5
22. 为不知如何应对而自责	1	2	3	4	5
23. 参加聚会	1	2	3	4	5
24. 尽力了解情况	1	2	3	4	5
25. “呆了”, 不知如何应对	1	2	3	4	5
26. 立即纠正行动	1	2	3	4	5
27. 对事件进行反思，从错误中吸取教训	1	2	3	4	5
28. 希望我能够改变已经发生的事情或改变我的感受	1	2	3	4	5
29. 拜访朋友	1	2	3	4	5
30. 为我即将做的事情感到忧虑	1	2	3	4	5
31. 和某个特别的人待在一起	1	2	3	4	5
32. 散步	1	2	3	4	5
33. 告诉我自己这事再也不会发生了	1	2	3	4	5
34. 专注于自己的不足之处	1	2	3	4	5
35. 和一个我看重其意见的人聊聊	1	2	3	4	5
36. 作出反应前对问题进行分析	1	2	3	4	5
37. 给朋友打电话	1	2	3	4	5
38. 生气	1	2	3	4	5
39. 调整我的轻重缓急	1	2	3	4	5
40. 看电影	1	2	3	4	5
41. 控制住事态	1	2	3	4	5
42. 格外努力把事情办成	1	2	3	4	5
43. 想出几个不同的解决方案	1	2	3	4	5
44. 暂时放一放, 将自己置身于其外	1	2	3	4	5
45. 向别人泄忿	1	2	3	4	5
46. 通过此事证明我行	1	2	3	4	5
47. 妥当安排, 以便游刃有余	1	2	3	4	5
48. 看电视	1	2	3	4	5

APPENDIX C

CCS, English Version

We want to know how you cope when you experience stress. Please response based on your experience and usual ways of coping. There is no right or wrong answers, just respond as you honestly do.

	Almost Never	Occasionally	Often	Almost Always
1. Face the problems and devise the solution	1	2	3	4
2. Forbear and remain calm	1	2	3	4
3. Maintain optimism and self-confidence	1	2	3	4
4. Seek help from spouse	1	2	3	4
5. Seek help from friends	1	2	3	4
6. Seek help from superiors	1	2	3	4
7. Seek help from relatives	1	2	3	4
8. Seek help from parents	1	2	3	4
9. Seek help from fortune-tellers	1	2	3	4
10. Seek help from professionals	1	2	3	4
11. Seek help from in-laws	1	2	3	4
12. Resign to what is inevitable	1	2	3	4
13. Believe that the problem will be resolved	1	2	3	4
14. Believe that doing nothing solves all	1	2	3	4
15. Make one feeling not so stressful	1	2	3	4
16. Seek help from supernatural power	1	2	3	4

APPENDIX D

CCS, Chinese Version

***说明**: 以下我们想知道当您遇到压力时会作出的反应. 请您按着您的感受和日常如何处理压力的方法作答. 请您注意这些答案无所谓对或错. 请您只要按照您的实况作答就可以了.*

面临压力情况下	***差不多从未***	***偶尔***	***时常***	***差不多总是***
1. 面对问题想办法	1	2	3	4
2. 忍耐冷静	1	2	3	4
3. 乐观自信	1	2	3	4
4. 向配偶请求帮助	1	2	3	4
5. 向朋友请求帮助	1	2	3	4
6. 向导师请求帮助	1	2	3	4
7. 向亲戚请求帮助	1	2	3	4
8. 向父母请求帮助	1	2	3	4
9. 向专业人事(如辅导员,心理咨询师,等)请求帮助	1	2	3	4
10. 向相士/算命先生请求帮助	1	2	3	4
11. 向配偶的父母请求帮助	1	2	3	4
12. 自己看开一点	1	2	3	4
13. 相信 “船到桥头自然直”.	1	2	3	4
14. 以不变应万变	1	2	3	4
15. 用办法开解自己(如娱乐,饮酒)	1	2	3	4
16. 祈求神明帮助	1	2	3	4

APPENDIX E

SCS, English Version

This is a questionnaire that measures a variety of feelings and behaviors in various situations. Listed below are a number of statements. Read each one as if it referred to you. Beside each statement write the number that best matches your agreement or disagreement. Please respond to every statement. Thank you.

	Strongly Disagree	Moderately Disagree	Slightly Disagree	No Opinion	Slightly Agree	Moderately Agree	Strongly Agree
1. I should be judged on my own merit.							
2. I respect the majority's wishes in groups of which I am a member.							
3. Being able to take care of myself is a primary concern for me.							
4. My personal identity is very important to me.							
5. I try to abide by customs and conventions at work.							
6. I give special consideration to others' personal situations so I can be efficient at work.							
7. I prefer to be self-reliant rather than dependent on others.							
8. I am a unique person separated from others.							
9. I will sacrifice my self-interest for the benefit of my group.							
10. If there is a conflict between my values and the values of groups of which I am a member, I follow my values.							
11. It is better to consult with others and get their opinions before doing anything.							
12. It is important to consult close friends and get their ideas before making a decision.							
13. I try not to depend on others.							
14. My relationships with others are more important than my accomplishments.							
15. I consult with others before making important decisions.							
16. I take responsibility for my own actions.							
17. I respect decisions made by my							

group.							
18. I will stay in a group if they need me, even when I am not happy with the group.							
19. It is important for me to act as an independent person.							
20. I should decide my own future on my own.							
21. What happens to me is my own doing.							
22. I consult with co-workers on work-related matters.							
23. I enjoy being unique and different from others.							
24. I maintain harmony in groups of which I am a member.							
25. I am comfortable being singled out for praises and rewards.							
26. I stick with my group even through difficulties.							
27. I help acquaintances, even if it is inconvenient.							
28. I don't support a group decision when it is wrong.							
29. I remain in the groups of which I am a member if they need me, even though I am dissatisfied with them.							

APPENDIX F

SCS, Chinese version

说明: *这是一个为量度感觉及行为而设计的问卷。请仔細阅读下列各项，并选出最能反映您对句子的评分。答案并沒有对錯之分，所有答案都会保持机密。请尽量诚实地回答所有问题。*

	极不同意	*不同意*	***轻微不同意***	*无意见*	***轻微同意***	*同意*	*极同意*
1. 我的判断应基于我的优点。	1	2	3	4	5	6	7
2.在我作出重要决定前，我会与其他人商议。	1	2	3	4	5	6	7
3. 我会与同学商量一些与学习有关的事情。	1	2	3	4	5	6	7
4.我首要的关注是能夠照顾自己。	1	2	3	4	5	6	7
5.我会为了我小组的利益而牺牲我自己的利益。	1	2	3	4	5	6	7
6. 个人身份对我是非常重要的.	1	2	3	4	5	6	7
7．我宁愿依赖自己也不依赖他人。	1	2	3	4	5	6	7
8. 即使困难重重，我也会留在我的小组。	1	2	3	4	5	6	7
9. 如果小组需要我，即使我在当中感到不愉快，我仍会留在这小组。	1	2	3	4	5	6	7
10. 我是一个独特的和与其他人不同的人。	1	2	3	4	5	6	7
11. 尊重我小组所作的决定。	1	2	3	4	5	6	7
12. 如果我的价值观与我的小組价值观有冲突，我会跟从我自己的价值观	1	2	3	4	5	6	7
13. 我会保持我的小组合谐。	1	2	3	4	5	6	7
14.我尝試不依赖他人。	1	2	3	4	5	6	7

15. 我尊重我小组多数人的决定。	1	2	3	4	5	6	7
16. 对我自己的行为负责任。	1	2	3	4	5	6	7
17.对我來說，作为一个行事独立的人是重要的。	1	2	3	4	5	6	7
18.如果小组需要我，就算我不滿意他們，我也会留在這小组。	1	2	3	4	5	6	7
19. 我的將來应由自己來決定。	1	2	3	4	5	6	7
20.发生在我身上的事是我自己的行为。	1	2	3	4	5	6	7
21. 我在工作时会遵守传统和习俗。	1	2	3	4	5	6	7
22.因为我对他人个别情況給予特别考虑，所以我能有效率地工作。	1	2	3	4	5	6	7
23.我享受作為一个独特及与别不同的人。	1	2	3	4	5	6	7
24.在做任何事情前，与别人商量及听取他們的意见是较好的。	1	2	3	4	5	6	7
25. 我感到单独地被挑选出來嘉许奨赏是自在的。	1	2	3	4	5	6	7
26.即使是不方便，我也会帮助相识的人。	1	2	3	4	5	6	7
27. 作出决定前，与好友商量及听取其意见是重要的。	1	2	3	4	5	6	7
28. 我与其他人的关系比我的成就更重要。	1	2	3	4	5	6	7
29.当我的小组所作的决定是错误时，我不会支持。	1	2	3	4	5	6	7

APPENDIX G

SAS, English Version

The following sentences are statements related to beliefs. Please read each statement carefully, and circle the number that most closely reflects your opinion.

	Strongly Disbelieve	*Disbelieve*	*No Opinion*	*Believe*	*Strongly Believe*
1. Religious faith contributes to good mental health.	1	2	3	4	5
2. Caution helps avoid mistakes.	1	2	3	4	5
3. Good luck follows if one survives a disaster.	1	2	3	4	5
4. Human behavior changes with the social context .	1	2	3	4	5
5. Religion makes people escape from reality.	1	2	3	4	5
6. People may have opposite behavior on different occasions.	1	2	3	4	5
7. One's appearance does not reflect one's character.	1	2	3	4	5
8. Fate determines one's successes and failures.	1	2	3	4	5
9. Religious people are more likely to maintain moral standards.	1	2	3	4	5
10. Ghosts or spirits are people's fantasy.	1	2	3	4	5
11. Individual effort makes little difference in the outcome.	1	2	3	4	5
12. There is a supreme being controlling the Universe.	1	2	3	4	5
13. One who does not know how to plan his or her future will eventually fail.	1	2	3	4	5

14. There are phenomena in the world that cannot be explained by science.	1	2	3	4	5
15. Knowledge is necessary for success.	1	2	3	4	5
16. Young people are impulsive and unreliable.	1	2	3	4	5
17. It is rare to see a happy ending in real life.	1	2	3	4	5
18. Mutual tolerance can lead to satisfactory human relationships.	1	2	3	4	5
19. Individual characteristics, such as appearance and birthday, affect one's fate.	1	2	3	4	5
20. Females need a better appearance than males.	1	2	3	4	5
21. Adversity can be overcome by effort.	1	2	3	4	5
22. Every problem has a solution.	1	2	3	4	5
23. One has to deal with matters according to the specific circumstances.	1	2	3	4	5
24. Competition brings about progresses.	1	2	3	4	5
25. There is usually only one way to solve a problem.	1	2	3	4	5
26. Most disasters can be predicted.	1	2	3	4	5
27. To deal with things in a flexible way leads to success.	1	2	3	4	5
28. Old people are usually stubborn and biased.	1	2	3	4	5
29. A person's talents are inborn.	1	2	3	4	5
30. Good deeds will be	1	2	3	4	5

rewarded, and bad deeds will be punished.					
31. One's behaviors may be contrary to his or her true feelings.	1	2	3	4	5
32. There are certain ways to help us improve our luck and avoid unlucky things.	1	2	3	4	5
33. One will succeed if he/she really tries.	1	2	3	4	5
34. Failure is the beginning of success.	1	2	3	4	5
35. Humility is dishonesty.	1	2	3	4	5
36. To experience various life styles is a way to enjoy life.	1	2	3	4	5
37. Religious beliefs lead to unscientific thinking.	1	2	3	4	5
38. Social justice can be maintained if everyone cares about politics.	1	2	3	4	5
39. Current losses are not necessarily bad for one's long-term future.	1	2	3	4	5
40. To plan for possible mistakes will result in fewer obstacles and will make things easier to achieve.	1	2	3	4	5
41. Power and status makes people arrogant.	1	2	3	4	5
42. All things in the universe have been determined.	1	2	3	4	5
43. Powerful people tend to exploit others.	1	2	3	4	5
44. People will stop working hard after they secure a comfortable life.	1	2	3	4	5
45. The various social institutions in society are biased towards the rich.	1	2	3	4	5

46. Beliefs in a religion helps one understand the meaning of life.	1	2	3	4	5
47. It is easier to succeed if one knows how to take short-cuts.	1	2	3	4	5
48. King-hearted people are easily bullied.	1	2	3	4	5
49. Old people are a heavy burden on society.	1	2	3	4	5
50. The just will eventually defeat the wicked.	1	2	3	4	5
51. A modest person can make a good impression on people.	1	2	3	4	5
52. Beliefs in a religion makes people good citizens.	1	2	3	4	5
53. People deeply in love are usually blind.	1	2	3	4	5
54. Kind-hearted people usually suffer losses.	1	2	3	4	5
55. To care about societal affairs only brings trouble for yourself.	1	2	3	4	5
56. There are many ways for people to predict what will happen in the future.	1	2	3	4	5
57. Hard working people will achieve more in the end.	1	2	3	4	5
58. Significant achievement requires one to show no concern for the means needed for that achievement.	1	2	3	4	5
59. Harsh laws can make people obey.	1	2	3	4	5
60. Most people hope to be repaid after they help others.	1	2	3	4	5

APPENDIX H

SAS, Chinese Version

说明: *以下是一些与您的信念有关的句子，请小心阅读每个句子，然后，在最能代表您的意见的数字上画圈。答案並沒有对错之分，请按照您的想法回答便可。答案只作研究之用，絕對保密！请回答所有问题，多谢合作！*

	极不相信	***不相信***	***无意见***	***相信***	***极为相信***
1. 宗教信仰有助精神健康。	1	2	3	4	5
2. 做事谨慎能避免出錯。	1	2	3	4	5
3. 大难不死，必有后福。	1	2	3	4	5
4. 人的行为会随环境而改变。	1	2	3	4	5
5. 宗教使人逃避现实。	1	2	3	4	5
6. 在不同的场合可以有相反的行为表现。	1	2	3	4	5
7. 外表不能反映一个人的好坏。	1	2	3	4	5
8. 命运决定人的得失。	1	2	3	4	5
9. 有宗教信仰的人更加坚守道德标准。	1	2	3	4	5
10. 鬼神是人幻想出來的。	1	2	3	4	5
11. 人的努力对事情的成败影响很小。	1	2	3	4	5
12. 冥冥中有一个主宰。	1	2	3	4	5
13. 懂得为将來打算的人，最终多会失败。	1	2	3	4	5
14. 世界上有些现象不是科学可以解释的。	1	2	3	4	5
15. 有真才实学，做事才会成功。	1	2	3	4	5
16. 年轻人容易冲动，做事不可靠。	1	2	3	4	5
17.美满的结局在现实生活中十分罕见。	1	2	3	4	5

18. 互相容忍能使人际关系美满。	1	2	3	4	5
19.个人的特征例如长相、出生日期等，会影响一个人的命运。	1	2	3	4	5
20. 女性比男性更需要有好看的外貌。	1	2	3	4	5
21. 通过努力可以扭转逆境。	1	2	3	4	5
22. 任何问题都有解决的办法。	1	2	3	4	5
23. 处事要视乎情况，不可一成不变。	1	2	3	4	5
24. 竞争帶來进步。	1	2	3	4	5
25.通常解决问题的正确方法只有一个。	1	2	3	4	5
26. 大部份灾难性的事都可以预测。	1	2	3	4	5
27. 处事有弹性才能成功。	1	2	3	4	5
28. 老人通常固执、偏见。	1	2	3	4	5
29. 人的才能是与生俱來的。	1	2	3	4	5
30. 善有善报，恶有恶报。	1	2	3	4	5
31.外在的行为与內心感受可能完全反。	1	2	3	4	5
32. 有些方法可以帮助我們趋吉避凶。	1	2	3	4	5
33. 有志者事竟成。	1	2	3	4	5
34. 失败是成功的开始。	1	2	3	4	5
35. 谦虚是虚伪的表现。	1	2	3	4	5
36. 尝试不同的生活方式是一种生活趣。	1	2	3	4	5
37. 宗教信仰使人存有不科学的思想。	1	2	3	4	5
38. 人人关心政治可维持社会公义。	1	2	3	4	5
39. 眼前利益受损，对长远来说未必是坏事。	1	2	3	4	5
40. 办事要预计有出错的可能，这样才会顺利。	1	2	3	4	5
41. 权力和地位使人骄傲自大。	1	2	3	4	5
42. 世事冥冥中早有安排。	1	2	3	4	5
43. 有权势的人傾向剝削其他人。	1	2	3	4	5

44. 有了舒适的生活条件之后，人就会停止努力上进。	1	2	3	4	5
45. 社会的各种制度是有利於有钱人的。	1	2	3	4	5
46. 宗教信仰可以帮助理解人生意义。	1	2	3	4	5
47. 懂得走捷径才容易成功。	1	2	3	4	5
48. 做人太善良会被欺负。	1	2	3	4	5
49. 年老的人为社会帶來沉重的负担。	1	2	3	4	5
50. 正义的人最终必定可以战胜邪恶人。	1	2	3	4	5
51. 谦虛可得到他人好感。	1	2	3	4	5
52. 宗教信仰令人成为好市民。	1	2	3	4	5
53. 热恋中的人往往会盲目。	1	2	3	4	5
54. 好心的人通常吃亏。	1	2	3	4	5
55. 关注社会事务只会为自己帶來烦恼。	1	2	3	4	5
56. 人們可以用很多方法去预测將來会发生什么事。	1	2	3	4	5
57. 勤奋的人最后成就必定更大。	1	2	3	4	5
58. 做大事就要不择手段。	1	2	3	4	5
59. 严刑峻法可促使人們遵守法紀。	1	2	3	4	5
60. 大部份人帮别人后都想得到回抱。	1	2	3	4	5

APPENDIX I

Demographic Information, English Version

Please fill out the following demographic information:

1. What is your gender?
    a. Male
    b. Female

2. What is your age?

3. What is your marital status?
    a. Married/Cohabiting
    b. Single
    c. Widowed
    d. Engaged/In a committed relationship

4. What is your living arrangement?
    a. Live alone on campus
    b. Live alone off campus
    c. Live with (a) family member(s) (parents, spouse/partner, other family members)
    d. Live with (a) roommate(s)
    e. Other:_____

5. What is your ethnicity (For Chinese participants)?
    a. Han
    b. Other: _____

    What is your ethnicity (For U.S. participants)?
    a. African American
    b. European American
    c. Hispanic American
    d. Asian or Pacific Islander
    e. American Indian or Alaskan Native
    f. Other: _____

6. Are you an international student (For U.S. participants)?
    a. Yes
    b. No.

7. What is your religion?

8. What is your year in college?
    a. First/Freshman
    b. Second/Sophomore
    c. Third/Junior
    d. Fourth/Senior
    e. Fifth or more

9. What is your major?

10. Approximately, what is your family's total annual income?

11. What is your mother's occupation?_____

12. What is your father's occupation?_____

13. What is your mother's educational status?
    a. Had no schooling and is illiterate
    b. Can read and write but did not complete elementary school
    c. Completed elementary school (5th grade)
    d. Completed middle school (8th grade)
    e. Completed high school
    f. Completed Bachelor's Degree
    g. Completed Master's Degree
    h. Completed Doctorate Degree

14. What is your father's educational status
    a. Had no schooling and is illiterate
    b. Can read and write but did not complete elementary school
    c. Completed elementary school (5th grade)
    d. Completed middle school (8th grade)
    e. Completed high school
    f. Completed Bachelor's Degree
    g. Completed Master's Degree
    a. Completed Doctorate Degree

15. What is the type of place you lived in the longest before you came to college?
    a. small village in the country/ rural setting
    b. town
    c. small city
    d. big city

16. Please circle a number that most accurately describe the quality of your relationship with your family members

Very distant				Very close
1	2	3	4	5

17. Please circle a number that most accurately describe the quality of your relationship with your friends

Very distant				Very close
1	2	3	4	5

18. Have you ever seen a counselor/psychologist for vocational problems?
    a. Yes
    b. No

19. How many times have you seen a counselor/psychologist for vocational problems? (not number of sessions, but number of times you sought their services)_____

20. Have you ever seen a counselor/psychologist for personal problems?
    a. Yes
    b. No

21. How many times have you seen a counselor/psychologist for personal problems? (not number of sessions, but number of times you sought their services)_____

APPENDIX J

Demographic Information, Chinese Version

***说明**: 请回答以下关于您个人情况的问题. 请在适合您个人情况的答案上划圈.*

1. 您的性别
    a. 男
    b. 女

2. 您的年龄 _____

3. 您的婚姻状况
    a. 已婚/同居
    b. 单身
    c. 丧偶
    d. 定婚/以确定恋爱关系

4. 您的居住状况
    a. 单独住校
    b. 单独住校外
    c. 和家庭成员一块住(包括父母, 配偶/伴侣, 其他家庭成员)
    d. 和室友同住
    e. 其他_____

5. 您的宗教信仰_____

6. 您的民族
    a. 汉族
    b. 其他_____

7. 您的年级

   a. 大学一年级
   b. 大学二年级
   c. 大学三年级
   d. 大学四年级
   e. 五年或以上

8. 您的专业_____

9. 您家庭的总收入大约_____

10. 您母亲的职业_____

11. 您父亲的职业_____

12. 您母亲的教育程度

   a. 无学历或文盲
   b. 小学
   c. 中学
   d. 高中
   e. 大专
   f. 本科
   g. 硕士
   h. 博士

13. 您父亲的教育程度

   a. 无学历或文盲
   b. 小学
   c. 中学
   d. 高中
   e. 大专
   f. 本科
   g. 硕士
   h. 博士

14. 上大学之前, 您居住的区域

   a. 农村
   b. 镇
   c. 小城市
   d. 大城市

15. 请选择最能反映您与家人关系的数字

非常疏远 非常亲近

1 2 3 4 5

16. 请选择最能反映您与朋友关系的数字

非常疏远 非常亲近

1 2 3 4 5

17. 您曾经寻求过职业咨询吗?

a. 有过
b. 没有

18. 您有过几次参加职业咨询的经历? _____

19. 您曾经因个人问题寻求心理咨询吗

a. 有过
b. 没有

20. 您有过几次参加心理咨询的经历? _____

APPENDIX K

Opening Script, English Version

Dear research participants,

The purpose of this study is to gain an understanding of the way your cope with stressful events. If you decide to participate in the study, your involvement will take about 45 minutes of your time. We will ask you to fill out a survey package that consists of six questionnaires that are related to your coping. There are no foreseeable risks or benefits from your participation because this is an assessment study and not a treatment study.

Your participation is completely voluntary and you will be free to refuse or stop at any time without penalty. Your grades or class standing will not be affected in any way if you decide to stop. (For U.S. students enrolled in a counseling psychology class) your will earn one credit hour for your participation, or (for other U.S. students) you will have a chance to win a $25 gift certificate. All information will be number coded and strictly confidential. Your identity will not be revealed and your data will be anonymous.

The six questionnaires in this package include questions about your coping strategies for stressful events, attitudes toward help seeking, self-construal, social beliefs, as well as a demographic sheet asking you for some background information. There is a separate instruction to each questionnaire. Please read the instruction to each questionnaire very carefully before answering.

Thank you very much for your participation.

Sincerely,

Hong Ying Chen, M.S.
Principal investigator
Department of Counseling Psychology and Guidance Services,
TC 622 Ball State University
Phone: 765-285-2490
Email: hchen@bsu.edu

For questions about your rights as research subject, please contact Melanie L. Morris, Coordinator of Research Compliance, Office of Academic Research and Sponsored Programs, Ball State University, Munie, IN 47306, (765)285-5070, irb@bsu.edu

APPENDIC L

Opening, Chinese Version
开头语

这个研究是为了了解您面对压力或逆境的应对方式. 问卷大该需要 30-45 分钟完成. 整份问卷包括六套分问卷. 您的参与不会带来给您任何正副面影响, 因为这个研究属测量性质, 而非治疗性质.

您的参与是完全自愿的. 您可以在任何时候拒绝或停止参与. 如果您选择停止参与, 您的学习考核或成绩不会受到任何影响. 您提供的信息将被编号, 采取匿名方式, 绝对保密. 您的个人身份不会受到透露.

六套分问卷涉及您应对压力或逆境的方式, 对寻求心理咨询的态度, 对自己作为主体的看法, 根本的信念, 以及有关您的背景信息. 每套分问卷之前都有说明. 在回答每套问卷请仔细阅读相关说明.

非常感谢您的参与.

陈红缨
波尔大学咨询心理学系
教育学院 622
电话号码: 765-285-2490
邮箱: hchen@bsu.edu

关于作为参与者权利方面的事宜, 请联系波尔大学学术研究所 Melanie L. Morris. 地址为: Office of Academic Research and Sponsored Programs, Ball State University, Muncie, IN 47306. 电话是: (765)285-5070, 邮箱是: irb@bsu.edu