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COPING STYLES AND ADJUSTMENT OF INTERNATIONAL GRADUATE STUDENTS

A Dissertation APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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Abstract

This study examined the relationship between styles of coping and adjustment in a sample of international graduate students (n = 392) studying in the U.S.A. The Coping Responses Inventory – Adult Form, the College Adjustment Scales, and a demographic survey were used. Separate principal components analyses were conducted on the two sets of scales (coping and adjustment). Subsequently, a series of additional analyses were performed including a multiple regression analysis, discriminant analyses, and a multivariate analysis of variance. The results indicated that the method of coping utilized by the international graduate students in this sample was related to adjustment. Sex was also found to relate to both coping and adjustment. Specifically, there was a correlation between approach coping and adjustment. Finally, there were significant differences between single and married participants on both approach coping and avoidance coping but not on the adjustment. The implications of these findings for international students are discussed

Coping Styles and Adjustment of International Graduate Students

Introduction

Open Doors (2003) reported that there were 582,996 international students studying in the United States of America (USA) in the academic year 2001/2002. Rubin (1997) reported that international students originated from 193 countries. The largest numbers of international students in the USA originated from Asia (56%), followed by students from Europe (14%), Latin America (12%), the Middle East (7%), Africa (6%), and North America (5%). Graduate students comprise approximately 45% of the international student population (Open Doors).

The literature indicates that in order for international students to adjust appropriately to graduate school, they need to adapt to both the host culture (Gulgoz, 2001) and the academic culture (Golde, 2000). Host culture in this instance refers to U.S. culture, such as American food, living environment, weather/climate, health care, the overall socio-cultural norms/customs and rules, intercultural contacts, and the American worldview and lifestyles. The academic environment includes proficiency in English, understanding and navigating one's way around the campus and the overall education system, making appropriate social contacts among other students, academics, administrators and staff, and gaining study skills conducive to being successful in the American academic environment. In addition, various studies have examined how international students' behaviors, cognitions, and emotions (e.g., loneliness, depression, homesickness, frustration, alienation, isolation, feelings of worthlessness and loss of status and identity) are impacted by the problems that they face during their adjustment to the overall U.S. culture and the U.S. academic culture (Angelova & Riatzantseva, 1999;

Bochner, 1972; Copeland & Norell, 2002; Dillard & Chisolm, 1983; Dillon, 1993; Heikinheimo & Shute, 1986; Kacmarek, Matlock, Merta & Ames, 1994; Kao & Gansneder, 1995; Klineberg & Hull, 1979; Krantz, Cook & Lund ,1990; Pedersen, 1988; Pederson, 1991; Rubin, 1993). Research in these areas has been approached from several perspectives including the individual, the interpersonal, the social, the economic, and the structural. Specifically, some of the factors that have been found to hinder or aid this adjustment have included coping abilities, cultural differences between the students' own cultures and the American culture, communication, marginalization, social support, fear, and perceived discrimination. (Bochner, 1972 ;Copeland & Norell, 2002; Kacmarek, Matlock, Merta & Ames, 1994; Pedersen, 1988; Pedersen, 1991).

Cross-Cultural Adaptation Models

There are several theories that seek to explain cross-cultural adaptation or the effects of contact with other cultures. Ward, Bochner and Furnham (2001) proposed that cross-cultural contact has positive and negative consequences. On one hand individuals' world views are broadened and on the other it can be anxiety- provoking and confusing. In examining cross-cultural adaptation, Lewthwaite (1997) explored several models that pertained to people's psychological adjustment to a new society. Firstly, the person goes through a process of meeting and managing crises, and, in the end, they are able to integrate their new and old identities. Secondly, cross-cultural adaptation is regarded as a learning process, where the foreigner facilitates adaptation by learning about the culture and gaining socio-cultural skills in order to participate. The third model posits that a typical international student goes through a psychological journey from the outside of a culture into the center. The fourth model is from a homeostatic perspective, where cross-

cultural adaptation is seen as dynamic. Through a continuous cycle, tension is reduced to the point where equilibrium is achieved.

To further explain the complexity of issues that international students faces during their adaptation to a new culture, Lewthwaite (1997) incorporated the communication model of Redmond and Bunyi (1993) and the cross-cultural adaptation process model of Anderson (1994) as a basis for his research. The communication model included communication skills, knowledge of the host culture, language competence, adaptation, communication effectiveness, and social integration. The cross-cultural adaptation process model incorporated additional information from psychology and psychological drive theory. This model views the student as facing major obstacles (e.g., starting school and other life changes) and, in order for adjustment to occur, the student has to respond in order to remove this obstacle. Cross-cultural adaptation was also examined by Cui, van den Berg and Jiang (1998) from a cognition-affect-behavior framework. This model also views cross cultural adaptation as being predicted by cultural empathy, communication competence, and social interaction. From this framework, cognition and emotion affect behavior, in other words, a person's cognitive abilities related to language and interpersonal skills provide the necessary tools for intercultural communication.

A more comprehensive and complex understanding is garnered when the adaptation process for international graduate students is viewed from all the perspectives presented. Furthermore, the above models place the adjustment 'processes' totally within the student's psychological control. Ward et al. (2001) wrote that cultural contact was not based solely on the student's psychological abilities to adjust, but also upon real barriers such as racial discrimination/segregation, some of which have been dismantled. For

example, many nations are changing from mono-cultural to multicultural societies, due partly to rising immigration and partly to influxes of refugees as a result of civil wars and other major disasters. In addition, many European countries, including France, Britain and Germany, and other Western countries such as the United States, Canada, and Australia, have been transforming into culturally diverse societies. Legal and moral forces have also aided in removing barriers such as racial discrimination and segregation that once stifled cultural diversity. Therefore, if segregation and formalized racial discrimination had not been dismantled in the courts, even with the best attitudes or psychological outlook, many international graduate students would not have been allowed the opportunity for cultural contact. Furthermore, this adjustment has been facilitated to an extent by a more positive outlook, in many cases from host countries. Ward et al. (2001) also suggested that there is a distinction between the processes of intercultural contact and institutional structure that facilitate or prevent positive contact. They stated that this could be at the national level and included policies on immigration, employment, education, and the social climate. At the international level there are policies regarding visas, education policies, and employment. Thus the models of cross-cultural adaptation are variable, with some seeing adaptation as being within the students' control, while other models assess the physical/external barriers that impede international students.

Several adaptation models have been developed. These models focus on the positive and negative aspects of exposure to other cultures, individuals' psychological adjustment to new societies, and communication. The models are heavily focused on the

international student's ability to effect change. However, a few of the models identify barriers that are external to the student that contribute to adjustment.

Social Interaction with the Host Culture

Several researchers (Cui et al., 1998; Lewthwaite, 1997) found that a significant predictor of cross-cultural adaptation was social interaction. Gulgoz (2001) stated that international graduate students need to become familiar with the American culture and should be particularly aware of cultural expectations. According to Situ, Austin, and Liu (1995), interaction with the host culture was less important for those international students occupied with merely surviving, as many were living near the poverty level in the cheapest off-campus dwellings. These students had many concerns regarding insurance costs and worried about falling ill while being away from home. The authors also found that there was ambivalence among the students regarding how much they should assimilate into the American culture. Maudeni (2001) found that assimilation can cause internal conflicts for the international students between maintaining cultural identity and adapting to the new culture. On the one hand, they may want to maintain their own culture and, according to Hewstone and Brown (1986), Phinney (1990), and Tajfel and Turner (1979), the maintenance of one's own cultural identity helps to maintain positive identity and self esteem. However, on the other hand, they may recognize certain negative outcomes, such as losing out on essential social and linguistic contact in the new culture or experiencing guilty feelings about not adjusting to a new culture.

Several studies examined social interaction from the perspectives of acculturation, assimilation, and biculturalism. It was noted that acculturation was about how the

sojourner, i.e., the student, related to the host culture by integrating to some extent with this culture, while still maintaining some separateness from the culture (Carmon, 1996; Grosvenor, 1997; Sodowsky & Plake, 1992). Suin, Khoo and Ahuna (1995) posited that many international students were not able to work with such ambiguity and instead experienced integration as assimilation, where one had to give up one's own culture. When interaction was viewed from such a perspective, some international students became resistant to this assimilation in order to maintain their cultural identity and thus thwarted social interaction. Suin et al. (1995) contended that when social interaction was framed in the context of biculturalism, the international student was able to adopt aspects of the dominant culture while maintaining their own cultural identity. This was regarded as a more useful experience for international students' adjustment as opposed to assimilation or resistance.

Another factor that impacted social interaction was the length of stay in the host country. Shih and Brown (2000) found that the length of stay in a foreign country and the age of the student were predictors of acculturation. In other words, the older the student and the shorter the residency in the U.S., the less likely they were to be acculturated. As a result of international graduate students' temporary status, they may not feel the necessity to adapt to a new environment. Therefore, while some level of acculturation or biculturalism is important for positive adjustment, unless students subscribe to this belief, they may decide not to interact with the host culture and instead interact only with other international students.

Similarities or differences in sojourners' culture were also found to impact social interaction. Gareis (1995) found that international students who were from cultures

similar to the one in which they were studying had less difficulty interacting with the host nationals. Another problem that was said to affect social interaction was the similarity/attraction hypothesis espoused by Ward et al. (2001). This hypothesis stated that people had a tendency to seek out, were more comfortable with, and in general preferred to be with people who were more similar to them.

Ward et al. (2001) posited that several other factors impeded social interaction, such as stereotyping, social categorization, and socialization. According to Ward et al., stereotyping can cause difficulties when certain traits that are alleged to categorize a group are then attributed to an individual. Socialization speaks to the core values that a person acquires early in life. More often than not these core values are a key influence in how one makes sense of the world, and so it may be difficult for a person to change without major cognitive dissonance and distress. This is particularly true if the international student considers his/her belief system to be in opposition to the belief system of the U.S. culture and so experiences barriers to positive social interaction upon entry to the U.S. culture.

Ward et al. (2001) also discussed how cultural syndromes have been postulated as a source of difficulty in social interaction with other cultures. According to the researchers, cultural syndromes pertain to peoples' attitudes, beliefs, norms, and behaviors. The three main cultural syndromes they identified that were relevant to intercultural contact for sojourners were cultural complexity, tight versus loose cultures, and individualism-collectivism. Thus, they posited that people from tight cultures have a preference for certainty and security. However, the cultural syndrome that has been focused on the most is individualism and collectivism. As a result of increased

intercultural contact, this concept of individualism and collectivism has become a major topic of discussion. Ward et al. stated that individualism-collectivism manifested in three areas; the personal; interpersonal; and the societal and institutional. Individualists appraise themselves in terms of their internal characteristics that differentiate them from others and make them unique. Collectivists view themselves in terms of how affiliated they are with the group. As a result of differing points of reference, when individualists and collectivists get together, they more often than not have different social attitudes, moral values, and behavior. Furthermore, differences will be seen in their cognitive styles and in the ways that they communicate, especially in the expression of emotions and wishes.

Sandhu and Asrabadi (1994) found that intercultural communication was impacted by feelings of the international students that they were not wanted. Their research indicated that many international students arrived with unrealistic expectations of receiving special treatment in the United States because it was deemed a country known for its generosity, advocacy of human rights, and democracy. However, what many international students found in reality was that their skills and knowledge were often undermined or underutilized and, often times, Americans had negative attitudes toward international students or at least lacked cultural sensitivity awareness. Sandhu and Asrabadi also found that fear was a major factor that influenced the international students' interactions with Americans. This fear was experienced because the students were unfamiliar with their location, worried about high crime rates, and were concerned about racial discrimination due to hostile relations that some international students' native countries (e.g., Iraq and Iran) had with America. In addition, Shibazaki and

Kashubeck-West (2001) found that individuals who were low in acculturation were more likely to be stereotyped because their behaviors were viewed as being more traditional. Therefore, such individuals may experience higher levels of discrimination. Furthermore, international students who lacked knowledge about the social norms of the host culture reported experiencing poorer treatment from members of the host country.

Studies have indicated that international students have to be able to interact at both the overt level and at the more subtle level, which means that understanding of the new culture is crucial, especially the cultural nuances. However, this is not always easy as there are other important concerns facing the student, such as succeeding academically, managing their living environment and issues related to assimilating into the American culture. It has also been found that social interaction is made more difficult when greater disparities exist between the host and international cultures. Social interaction has been found to be further affected by the similarity/attraction hypothesis, stereotyping, social categorization, socialization and cultural syndromes, feelings of not being wanted, and fear.

Social Support

Copeland and Norell (2002) studied the impact of social support among people who moved to another country. The study was based on the premise that social support helped combat stress and was associated with greater emotional well being. Support for international students was reported as coming from family, peers, and mentors. (Maudeni, 2001; Ulku-Steiner, Kurtz-Costes & Kinlaw, 2000; Ward et al., 2001). Positive social support was found to be a mediating factor in adjustment and was associated with lower levels of psychological distress (Shibazaki & Kashubeck-West,

2001). It was found that loss of social support after separation from families contributed to homesickness and loneliness (Sandhu & Asrabadi, 1994).

In summary, it has been found that positive social support greatly contributes to international students' ability to adjust to the U.S. culture and the U.S. academic environments. The findings suggest that family (Ward et al., 2001) and peer support (Gulgoz, 2001; Lewthwaite, 1997; Maudeni, 2001; Situ et al., 1995; Ulku-Steiner et al., 2000) are significant. However, while family support is helpful to adjustment, it also seems that the quality of the relationships and the demands of the family are paramount (Ford et al., 1996). In instances where the relationship is poor/demanding, and when combined with the demands of graduate school, family may be associated with additional stressors for students (Polson & Nida, 1998; Scheinkenmann 1988; Ulku-Steiner et al., 2000). What has been found to be particularly helpful to adjustment is having a mentor and a positive working relationship with faculty (Gulgoz, 2001; Lewthwaite, 1997; Maudeni, 2001; Situ et al., 1995; Ulku-Steiner et al., 2000).

Academic Adaptation

Ward et al. (2001) stated that the educational environment was reflective of the society, but on a smaller scale. Therefore, they posited that similar abilities need to be developed to facilitate adjustment to the education environment. These include learning general rules and regulations in order to effect positive adjustment. They also postulated that success and adaptation to a new educational environment often fell squarely on the international student, with very little assistance in this transition. Rosenblat and Christensen (1993) examined this phenomenon and found that graduate students were often left with little or no orientation to their college or academic program because there

was an assumption that graduate students were fully versed in what they should do. However, they found that many graduate students upon first entering their respective programs were just as confused and anxious as were new undergraduates. They found that an appropriate orientation of graduate students to their programs helped to facilitate better adjustment and alleviated much anxiety. Although this study was done on U.S. graduate students, it is also applicable to international graduate students, especially the ones who are new to the country. Luna and Cullen (1998) also explored the transition to graduate school and described it as a journey of transformation with students encountering challenges that were often unanticipated.

Research indicates that the academic adaptation of international graduate students has often been neglected. However, helping these students to adjust to this environment is paramount (Ward et al., 2001). Adjustment to the academic environment (which includes relationships with other students and professors, size and atmosphere of the classroom) is often markedly different from their previous academic cultures. (Gulgoz, 2001; Kao & Gansneder, 1995; Lewthwaite, 1997; Poyrazli, Arbona, Amaury, McPherson & Pisecco, 2002; Poyrazli , 2003) There are often disparities in learning styles of international students and the teaching styles of host professors (De Vita, 2001). Also, the international students often do not feel confident about their English proficiency, and they often face difficulties in understanding lectures, taking notes, reading academic literature, and understanding informal language (Angelova & Riatzantseva 1999; Mulligan & Kirkpatrick, 2000; Young, 1994).

Two other essential components of graduate school are research and working as graduate assistants. Gulgoz (2001) reported that often international students were not in

step with the current research trends in the U.S. and needed to seek out help to ensure that they were updated. He stated that this was often intimidating for the international students as the students often feel that, at the graduate level, they should have knowledge about the status of research in their chosen fields, and this can sometimes lead to further isolation for the student. In terms of assistantships, sometimes international graduate students experienced difficulty in their roles as teaching assistants. Gulgoz (2001) stipulated that while the assistantships, especially teaching assistantships, were often difficult for the international students, they were also useful because often it was their only source of teaching experience.

Coping

The following section will explore the literature on coping. This is necessary to facilitate understanding of the coping strategies that are utilized by international graduate students to help them navigate the process and stressors of being international graduate students. Stressful events in and of themselves do not necessarily cause difficulties. However, a situation can become stressful if the individual perceives it negatively and lacks either internal or external resources to manage the situation (Polson, 1992). Thus, how an individual copes or adapts to stress needs to be considered. Coping can be seen as utilizing behavior strategies such as problem solving, or buffering resources, such as having positive peer relationships.

Many models of coping have been presented. (Berry, 1997; Cassidy 2000; Chataway & Berry, 1989; Folkman & Lazarus, 1988; Holmes & Rahe, 1967; Lefcourt & Martin, 1984; Moos & Schaefer,1993; Noh & Kaspar, 2003). The emerging and persistent theme is that personal coping strategies mediate psychological manifestation of

social stresses. Coping responses are regarded as being on a continuum, whereby a person would approach the problem through confrontation or problem-avoidance (not dealing with the problem directly). When a person perceives that they are in control of a problem, they become more creative in generating problem solving methods, and their ability to solve the problem increases; thus, she or he will exhibit fewer symptoms of helplessness. This same person also has a more internal locus of control and is more motivated to achieve. This finding was corroborated by Lazarus (1993). He posited that during a major life event, the coping style used may be a significant predictor of future health or illness rather than the event itself. Wofford, Goodwin, and Daly (1999) and Noh and Kaspar (2003) also found that the most effective form of coping was active problem solving with passive, emotion-focused coping being less effective. Active coping has been said to be more effective in reducing the impact of depression and of perceived discrimination. Passive coping, on the other hand, has had negative mental health effects.

Ward et al. (2001) noted that the coping methodology used to understand and interpret intercultural experiences, especially adjustment, is similar to factors that are involved in transitional experiences. As a result, many researchers have recognized the importance of the life changes literature as also being relevant to cross cultural adaptation. Researchers have also considered other variables that are specific to cross-cultural transition and adjustment, as well as the usual stress and coping factors. In addition to assessment of life changes, personality, and social support, they have also considered cultural distance, acculturation strategies, and acculturation status. During acculturation, stress and coping are seen as a series of life changes which strain adjustment resources and activate coping responses. In considering life changes, it is

important to consider that individuals process stress-related information in different ways. In certain conditions some potential stressors are evaluated as threatening while, in other cases, it may be seen as challenging. Both individual differences and cultural factors affect cognitive appraisal of stress. How acculturating individuals perceived and appraised possible stressful situations tended to be influenced by situational and social factors as well as their acculturative experiences. For example, language and communication, discrimination, homesickness, and loneliness were found to be more problematic among Chinese sojourners than non-Chinese sojourners. Expectations also need to be considered because coping strategies and adjustive outcomes may be different due to the sojourner's expectations. Ying and Liese (1994) and Chiu (1995) have argued that realistic expectations, i.e., those that match actual experiences, facilitate adjustment. However, Kaczmarek, Matlock, Merta and Ames (1994) found that, while international students had a realistic expectation regarding adjusting to study in the U.S., they still experienced more difficult transitions than U.S. students. When they examined scores on the Student Adaptation to College Questionnaire, international students obtained scores that were lower than U.S. students on the social and institutional attachment and goal commitment subscales. Furthermore, there were also indications that international students had a more difficult time seeking help than U.S. students.

This section focused on how people cope or adapt to stress. The common theme from the coping literature is that a person's coping strategies mediate psychological manifestation of social stresses and coping responses as presented on a continuum from problem approach to problem avoidance. This notion is applicable to international

graduate students because they experience life changes as a result of their immigrant status and as graduate students.

Strategies for coping

Ward et al. (2001) reported that in spite of the interest in stress and coping and related research on cognitive appraisals and expectations, there were few published studies that examined coping strategies in relation to adaptive outcomes in sojourners. The studies that examined these phenomena will now be highlighted. Chataway and Berry (1989) investigated coping styles, satisfaction, and psychological distress in Chinese students in Canada. The results revealed a significant relationship between coping styles and satisfaction in dealing with salient problems. More specifically, Chinese students who engaged in positive thinking were more satisfied with their ability to cope; however, those who relied upon withdrawal and wishful thinking were less content with the management of their problems. Folkman and Lazarus (1985) distinguished between problem-focused and emotion-focused coping styles, indicating that task-oriented coping styles have better adaptive consequences. However, Ward et al. (2001) postulated that there may be cross-cultural variations in coping effectiveness. It was posited that there are primary and secondary coping strategies. Primary strategies utilize direct action in order to change the situation or environment that is causing the stressors. Secondary strategies are more cognitive than behavioral, and usually they attempt to reappraise and change the perceptions of events and situations that are stressful. It was also postulated that these coping styles were culturally based. For example, primary or direct coping strategies were more likely to be used by people from

individualistic cultures while people from collectivist cultures were likely to use secondary strategies more readily.

In addition to other ways of coping that were mentioned above, some international graduate students built in relaxation time and/or sought out therapy to help them adjust and successfully complete graduate school (Lewthwaite, 1997). The students who built in relaxation time reported that this was paramount to their success, but many more felt that they were unable to find enough time for recreational activities because extra time that they had was spent preparing projects and assignments in commensurate English. The result was that those students were so focused on accomplishing their tasks that they did not use or were unaware of available resources that could provide them with help and save them time (Flathman, Davidson & Sandford, 2001; Lewthwaite, 1997).

There is limited literature on the coping strategies employed by international students and graduate students generally. Furthermore, the literature that is available focuses predominantly on international students as a whole, coping strategies of undergraduates in particular, or on the American graduate student population.

Summary

The literature on the adjustment of international students to a new cultural and academic environment emphasizes the difficulties that these students encounter. Overwhelmingly, the studies focus on the many debilitating obstacles that international students face, such as linguistic problems, cultural alienation, homesickness, educational problems, and acculturation difficulties. However, the statistics indicate that in spite of these problems that are encountered by international graduate students, they continue to enroll in record numbers in education institutions all over the U.S.A. Studies have also

examined the coping strategies and adjustment of international students and the American graduate student population in general, but, there is an overall neglect of international graduate students.

Few studies have examined the positive aspects of graduate school. Lewthwaite (1997) reported that international graduate students were able to navigate the education system by allocating themselves relaxation time and establishing friendships. Noh and Kaspar (2003) revealed that international students adjusted to study in the USA by paying attention to their well-being. Additionally, the students sought out friends, formed relationships with others, made social contacts, looked beyond their own individual world views, sought support, managed problems, improved English language skills, and learned to discern when to worry and when not to worry. Overall, the students made it their responsibility to actively seek out positive experiences. In spite of the difficulties that international students are said to encounter, there continues to be a major influx of international students into the USA. This continued influx might also be an indicator that international students believe or have been informed of positive benefits of graduate studies.

Current Study

The purpose of this study is to extend the current research on cross-cultural adaptation, and to draw some attention to the specific needs of international graduate students. The past twenty years have seen a burgeoning of research about the international student population. However, thus far the majority of these studies have often been limited to the psychological difficulties that international students as a whole experienced in terms of adaptation and adjustment. While these studies are essential for

identifying the challenges that international students encounter, it is also important to look at the strengths of these students. What factors might contribute to successful adaptation? The aim of the current study was to examine the relationships of coping styles and adjustment in a sample of international graduate students. Hopefully, the findings obtained will provide meaningful assistance to people who work with graduate students in fostering more positive adjustment. The research question addressed in this study was: "What is the nature of the relationship between a set of adjustment indicators and a set of coping styles"?

Method

Participants

Participants were international students enrolled at the masters and doctoral levels at a large South-Central university. In the year 2004, there was a total of 1, 773 international students enrolled at the university. Of this total 1,055 were graduates. In terms of region of origin; 56% of international students were from Asia, 14% from Europe, 13% from Latin America, 3% from the Middle East, and 2% from other. Each participant was required to have been in the US for at least 6 months. A total of 650 research packets were distributed (see procedure section), of which 449 were returned. The total number of usable packets was reduced to 392, after 37 packets were eliminated due to missing data, and 20 more respondents were eliminated because they failed to meet the criteria for international status.

The final sample consisted of 392 participants, of which 224 (57.1%) were males and 168 (42.9%) were females. Of the sample, 291 (74.1%) were single, 93 (23.7%) were married, 7 (1.8%) were divorced, and 1 (.3%) checked other. The respondents were

divided into five ethnic groups based on their own designation on the returned surveys. Three hundred and twenty four participants (82.7%) described themselves as Asian, 20 (5.1%) as Middle Eastern, 19 (4.8%) as European, 15 (3.8%) as African, and 14 (3.6%) as Hispanic. The respondents originated from 22 countries including Bulgaria, China, Egypt, Germany, Honduras, India, Indonesia, Japan, Korea, Kuwait, Malaysia, Mexico, Nigeria, Peru, Philippines, Senegal, South Africa, Taiwan, Thailand, United Arab Emirates, United Kingdom and Vietnam. India had the highest number of respondents with 118 (30.1%), followed by Vietnam with 46 (11.7%), and China and Taiwan with 36 each (9.2%). The mean age was 28.6 years, and the range was 21years through 52 years. The mean number of years in graduate school was 2.8. The methods by which the student funded themselves included self-funding, family funding, funding by grants, funding by loans, and "other sources" of funding. Many of the respondents indicated two or more methods of funding their education. Indicated sources of funding were as follows: self-funded (n = 198); family-funding (n = 272); grants (n = 218); loans (n = 6); and "other" (n = 1). The majority of respondents (n = 309 or 78.8 %) planned on returning to their home country after completion of their studies, 48 (12.2%) planned to remain in the U.S.A, 33 (8.4%) were undecided, and 2 (.5%) did not respond to the question.

Instruments

A demographic survey was used. This instrument obtained information regarding country of origin, age, gender, marital status, financial situation, ethnicity, and number of years in the USA. In addition, the Coping Responses Inventory-Adult Form (CRI-Adult) and the College Adjustment Scales were used.

Coping Responses Inventory-Adult Form (*CRI-Adult*). The CRI-Adult is a self-report inventory that identifies coping strategies. It was developed by Rudolf Moos (1993). This survey identifies cognitive and behavioral responses that individuals have used to cope with recent problems or stressful situations. There are eight scales that describe Approach Coping styles and Avoidant Coping styles. The approach coping scales are Logical Analysis (cognitive attempts to understand and prepare mentally for a stressor and its consequence); Positive Reappraisal (cognitive attempts to construe and restructure a problem in a positive way while still accepting the reality of the situation); Seeking Guidance and Support (behavioral attempts to seek information, guidance, or support); and Problem Solving (behavioral attempts to take action to deal directly with the problem). The Avoidant Coping scales include Cognitive Avoidance (cognitive attempts to avoid thinking realistically about a problem); Acceptance or Resignation (cognitive attempts to react to the problem by accepting it); Seeking Alternative Rewards (behavioral attempts to get involved in substitute activities and create new sources of satisfaction); and Emotional Discharge (behavioral attempts to reduce tension by expressing negative feelings). Each of the eight scales contains six items. The individual responds to the CRI-Adult by selecting and describing a recent stressor and utilizes a four point scale varying from “not at all” to “fairly often” to indicate their use of each of the 48 coping items. This instrument is suitable to assess the coping responses of adults age 18 years and above and can be used with normal and inpatient populations.

The CRI-Adult was developed in five stages; identification of coping domains and initial inventory development; construction of a second version of the inventory; expansion of the item pool; field trial and revision of the inventory; field trial, final

inventory revision, and collection of normative data. During the fifth stage the inventory was administered to 1,800 adults. The group included 1,100 men and 700 women. The average age of participants was 61 years, and 90% were Caucasians. Of the total sample, 69% were married, 19% were separated or divorced, and 7% were widowed. The sample was moderately educated (mean = 14.2 years) and reported average to above average socioeconomic status (median personal income of $22,550 per year). For an item to be placed on a dimension, the item had to be deemed as conceptually related to that dimension – it had to have good content and face validity. Three judges were in agreement on this. Items were selected when the participants utilized the entire four-point response scale. Items were constructed with a moderate to high level of internal consistency. Each item was placed on only one dimension to increase conceptual clarity and minimize overlap among dimensions. Reported internal consistency reliability coefficients (Cronbach's alpha) for the eight scales were moderate for both men and women, ranging from .58 to .74. Internal consistency reliabilities in the current study ranged from .60 to .75.

Research indicated that the CRI-Adult is a valid instrument and can be used on a variety of different populations (Moos, 1993). There were two studies in which this instrument was used specifically with college students (Kirsch, Mearns, & Cantanzaro, 1990; Walton, 2002), although not with international students or with international samples. The CRI-Adult shows discrimination between patient and normal groups.

College Adjustment Scales (*CAS*; *Anton & Reed, 1991*). The CAS is a 108-item inventory with responses based on a 4-point Likert-type scale that assesses college adjustment across nine scales derived from factor analysis: (a) Anxiety, a measure of

clinical anxiety, focusing on common affective, and physiological symptoms; (b) Depression, a measure of clinical depression, focusing on common affective, cognitive, and physiological symptoms; (c) Suicidal Ideation, a measure of the extent of recent ideation reflecting suicide, including thoughts of suicide, hopelessness and resignation; (d) Substance Abuse, a measure of the extent of disruption in interpersonal, social academic, and vocational functioning as a result of substance use and abuse; (e) Self-Esteem, a measure of global self-esteem which taps negative self evaluations and dissatisfaction with personal achievement; (f) Interpersonal Problems, a measure of the extent of problems in relating to others in the campus environment; (g) Family Problems, a measure of difficulties experienced in relationships with family members; (h) Academic Problems, a measure of the extent of problems related to academic performance; and (i) Career Problems, a measure of the extent of problems related to career choice. The CAS was standardized on a sample of 1,146 college and university students throughout the United States. Women comprised 61% and men 38% of the sample. In terms of the ethnicity of the sample, 75% were Caucasian, 9% Black, 6% Hispanic and 10% other ethnic groups. The age range was 17 through 65 years, with a mean of 21.5 years and a standard deviation of 4.95 years. Approximately 25% of the sample were freshman, 18% were sophomores, 31% were juniors, 22%, were seniors, 2 % were graduate students, and 2% did not respond. Reported internal consistency reliability coefficients for the nine scales ranged from .80 to .92. Internal consistency reliabilities in the current study were high, ranging from .80 to .93.

Procedures

The study was submitted to the Institutional Review Board (IRB) at the University of Oklahoma, Norman Campus for review and approval. Following approval by the IRB, the researcher approached the International Student office at the University of Oklahoma and identified the various social clubs and organizations that were attended by international graduate students. A convenient sample of international graduate students at the university was utilized. The researcher then made requests to the organizers/chairs of these social clubs/organizations and attended scheduled meetings to solicit volunteers and explain the purpose and relevance of the study, as well as associated risks and benefits of participating in the study. Consent was sought verbally and in written form. Members were invited to obtain research packets from the researcher. Those who chose to participate were provided with a stamped addressed envelope and were asked to return the completed packet to the researcher. The packets included the instruments, demographic questionnaire and informed consent form. Participants were strictly advised not to put their names or any identifying information on the research instruments. The questionnaires were anonymous.

Participants were provided with an opportunity to enter their names in a drawing for an opportunity to win a $100.00 Wal-Mart gift voucher. The gift voucher was provided directly from the researcher to the winning participant to protect the identity of the person.

Results

Principal Components Analyses

Both sets of scales (coping and adjustment) were subjected to principal components analyses (PCA) using SPSS. Prior to performing PCA, the suitability of the data for analysis was assessed. Inspection of the correlation matrices indicated the presence of many coefficients of .3 and above. The Kaiser-Meyer-Oklin value for the College Adjustment Scale was .89, and for the Coping Responses Inventory was .65, exceeding the recommended value of .6 (Bryant & Yarnold, 2001; Pallant, 2003; Tabachnick & Fidell, 2001). Bartlett's Test of Sphericity for both scales (Bryant & Yarnold, 2001; Pallant, 2003; Tabachnick & Fidell, 2001) was statistically significant, supporting the factorability of the correlation matrices.

Principal components analysis of the eight coping scales revealed the presence of two components with eigenvalues exceeding 1.0, explaining 31.29% and 23.32% of the variance, respectively. An inspection of the scree plot revealed a clear break after the second component. Using Catell's (1966) scree test, a decision was made to retain these two components. To help in the interpretation of these two components, Varimax and Promax rotations were performed. The rotated solution revealed the presence of simple structure (Tabachnick & Fidell, 2001). A simple structure is desirable because it involves each of the variables relating strongly to only one component, each component being represented by a number of variables with high structure coefficients, and both components showing a number of high structure coefficients. The two-component solution explained a total of 54.61% of the variance. See Table 1. The interpretation of the two components was consistent with previous research on the CRI-I scales, with

approach coping scales relating strongly to component one and avoidant coping scales relating strongly to component two.

Principal components analysis of the nine adjustment scales revealed the presence of one component with an eigenvalue exceeding 1.0, explaining 67.58% of the variance. See Table 2. An inspection of the scree plot revealed a clear break after the first component. The results of these analyses support the use of the CAS as a global measure of adjustment and support the use of avoidant coping and approach coping as two distinct dimensions. Component scores for coping and adjustment were generated and saved for use in subsequent analyses.

Multiple Regression Analysis

A multiple regression analysis using forward entry was conducted in which component scores on the two coping components (Avoidant Coping and Approach Coping) were use to predict adjustment. Table 3 displays results of this analysis. After step 1, with Avoidance coping in the equation, R^2 = .16, indicating that 16% of the variance in adjustments is associated with avoidance coping. After step 2, with Approach coping added into the equation, R^2 = .25, suggesting that 25% of the variance in adjustment is related to coping style. The incremental increase in variance accounted for by the addition of Approach Coping (9%) was statistically significant. The overall model was significant, F (2, 389) = 66.3, p < .000.

Disciminant Analysis

In order to explore the relationship between sex and adjustment, a discriminant analysis was conducted using the nine adjustment scales of the CAS as discriminating variables and sex as the group variable. The single discriminant function was found to be

statistically significant, χ^2 (9) = 65.84, $p < .001$. The canonical correlation of .40 indicates that the discriminant function shares 16% variance with group membership. Table 4 presents the structure coefficients and the standardized discriminant function coefficients for the nine scale scores on the discriminant function. As reflected in the table, most of the CAS scales correlate at least moderately with the discriminant function. Examining the standardized discriminant function coefficients, it is evident that Family Problems and Suicidal Ideation scales have considerable redundancy. Pearson product moment correlations among the nine adjustment scales are presented in Table 5 and reflect a high degree of intercorrelation among scales. Table 6 presents the means, standard deviations, and F- ratios for men and women on the nine adjustment scales. Men scored significantly higher (reflecting more adjustment difficulties) on all but the Anxiety scale. Table 7 is a summary of the discriminant analysis. The overall correct classification based on the relationship was found to be 72.7% or an improvement of 22.7% over random expectation. The correct classification for males (67%) was somewhat lower than the correct classification for females (80.4%)

In order to explore the relationship between sex and coping, a second discriminant analysis was conducted using the eight coping scales of the CRI as discriminating variables and sex as the group variable. The single discriminant function was statistically significant, χ^2 (8) = 34.15, $p < .0001$. The canonical correlation of .29 indicates that the discriminant function shares 8% variance with group membership. Table 8 presents the structure coefficients and standardized discriminant function. As reflected in the table, four of the scales, (Acceptance or Resignation, Cognitive Avoidance, Problem Solving, Positive Reappraisal) have moderate correlations with the discriminant function. Pearson

product moment correlations among the eight coping scales are presented in Table 9. Most of these correlations fall within the low to moderate range. Table 10 presents the means, standard deviations, and F-ratios for men and women on the eight coping scales. As can be seen in the table, statistically significant differences between men and women were found on only three scales (Problem Solving, Cognitive Avoidance and Acceptance/Resignation). Men scored higher than women on all three scales. Table 11 is a summary of the discriminant analysis. The overall correct classification based on the relationship was found to be 59.4% or an improvement of only 9.4% over random expectation. The correct classification for males (62.1%) was slightly higher than the correct classification for females (56%).

Multivariate Analysis of Variance

Finally, a multivariate analysis of variance (MANOVA) was conducted to explore whether or not significant mean differences occurred between single and married participants on the two coping factors and the single adjustment factor. The multivariate effect was statistically significant [Wilks $\Lambda = .946$, $7(3,380) = 7.20$, $p < .001$]. The means, standard deviations, and F- ratios for single and married individuals are presented in Table 12. As can be seen in the table, significant mean differences for single and married participants were found on both the approach coping and avoidance coping components, but not on the adjustment component. Married participants scored significantly higher than single participants on approach coping and significantly lower than single participants on avoidance coping.

Discussion

This study examined the relationship between coping styles and adjustment in a sample of international graduate students. The findings suggest that there is a significant relationship between these variables. Specifically, there was a positive relationship between approach coping and adjustment, and a negative relationship between avoidance coping and adjustment (Please note higher adjustment scores on the CAS indicate poorer adjustment). This finding was consistent with the literature that showed that approach coping was the more useful way of coping, while avoidant coping indicated dysfunctional adjustment. Polson (1992) suggested that coping ranged on a continuum from adaptive to maladaptive, and when people used behavior strategies such as problem solving or buffering resources such as positive peer relationships, positive adjustment was facilitated. In addition, when a person perceived that they were in control of a problem, they became more creative in generating problem solving methods, and their ability to solve the problem increased; thus, she/he exhibited fewer symptoms of helplessness. The same person also had a more internal locus of control and was more motivated to achieve. Holahan, Moos and Schaefer (1996) found that freshmen who adjusted more effectively to college utilized active coping, which served as a mediator between optimism and subsequent adjustment. They found that adaptive coping may be greatest during stressful periods. Schaefer and Moos (1992) found that confronting stressful situations and coping with them effectively fostered development of resilience. Thus, when students were in new crisis situations, they developed new coping abilities and strengthened personal and social resources.

Lazarus (1993) posited that during a major life event, the coping style used was a significant predictor of future health or illness rather than the event itself. Wofford and Daly (1999) and Noh and Kaspar (2003) found that the most effective form of coping was active problem solving with emotion-focused being less effective. A consistent finding from Folkman and Lazarus (1985) was that students who engaged in positive thinking were more satisfied with their ability to cope; however, those who relied upon withdrawal and wishful thinking were less content with the management of their problems. They distinguished between problem-focus and emotion focus, which are parallel to approach coping and avoidant coping. Noh and Kaspar (2003) also found that international students in the U.S. adjusted by focusing on their well-being, seeking support, managing problems, and actively seeking out positive experiences.

The finding of a positive relationship between approach coping and adjustment can be explained from the perspective that this is an identification of the resilience and strengths of the international graduate students to persist under conditions that were contributing to psychological problems (Kacmarek et al., 1994; Pedersen,1991). Lewthwaite (1997) found that students who encountered major obstacles responded in order to remove the obstacles. In other words, all adjustments are viewed as recurring processes of surmounting hindrances and problem solving. Therefore, the student is able to motivate him/herself and by achieving integration of the self to overcome the problem.

This finding regarding the relationship between coping and adjustment is useful in two major ways. First, international graduate students should be mentored and supported in the use of active coping strategies such as problem solving, seeking support and guidance, and utilizing positive reappraisal. Second, there should be an institutional focus

on removal of commonly encountered barriers by international graduate students. Cui, van den Berg, and Jiang (1998) and Ward et al. (2001) found that removing certain external barriers greatly helped the international graduate students. One way in which this could occur is through appropriate structured orientation upon students' arrival to campus and thereafter as needed. Rosenblat and Christensen (1993) found that when graduate students were given an appropriate orientation to their graduate programs, this helped to facilitate better adjustment and alleviated much anxiety. If this orientation is routinely implemented by each university, especially at the departmental level, this may go along way to help international students cope more effectively with the challenges that confront them.

Another way to assist international graduate students would be to develop a strong mentoring program. Mentors should be drawn from pools of academic advisors/professors who work with international students, other international graduate students, and American students. Lewthwaite (1997) found that many international students appreciated offers of hospitality, friendship, and guidance. However, it is essential that mentors are provided with training to help them develop an understanding of some of the adjustment needs of the international graduate student, especially if the mentors have little or no experience working with international graduate students. Apart from sound common sense, another reason for training is a result of what Gulgoz (2001) reported. He found that some professors were very accommodating to international graduate students while others were not, and training for all professors working with international graduate students may facilitate greater understanding and facilitate better relationships.

International students should be advised and encouraged to seek appropriate help. Lewthwaite (1997) and Gulgoz (2001) found that international graduate students were not equipped to tap professors' resources, for example some may assume that it is inappropriate to request help from a professor. Orientation to size and atmosphere of the classroom was essential to assist international graduate students to recognize that this was a normal part of the graduate experience in the American classroom and that it was both expected and okay. This may help to facilitate some of the adjustment difficulties experienced in the classroom as reported by Kao and Gansneder (1995) and Lewthaite (1997). In addition this may help to increase confidence and self efficacy. Poyrazli (2003) found that students who experienced high academic self-efficacy were more likely to approach challenging situations without experiencing incapacitating anger or confusion. Also, Thompson and Klopf (1995) found that international students lacked assertiveness and this often stopped them from asking for help.

Additional forms of assistance that would likely contribute to the adjustment of international students might include help in developing meaningful relationships with other students and professors; familiarization with informal English; note-taking strategies and so forth. The measures could be incorporated into an initial orientation and then through ongoing programs such as work shops. Holahan, Moos and Schaefer (1996) found that when social resources were available, they strengthened emotional support which led to increased self-esteem and increased self-confidence. In addition, social resources also provide information and guidance that help in assessing threat and developing coping methods.

Another important finding in this study was the relationship between sex and adjustment. Men scored significantly higher than women on all of the adjustment scales except anxiety, indicating that men experienced more adjustment difficulties than women. One of the few studies that focused on gender differences in adjustment and acculturation was conducted by Tang and Dion (1999). They found that Chinese male students were more traditional than their female Chinese peers with respect to beliefs about gender roles and family hierarchy. As a result of the males' ascription to a more traditional gender role, they experienced a more difficult time with adjustment than female students. Several studies have also indicated that Asian women experienced less adjustment difficulties because Asian women have more egalitarian attitudes than Asian men (Chia, Moore, Lam, Chuang & Cheng, 1994; Tang & Dion, 1999). These findings are consistent with the concept of gender roles. Almost every society uses gender in assigning expectations and in determining distinct roles for men and women. In most societies it is men who predominate in positions of public importance, dominate and control family resources, and are most likely to be assigned status and power as their birth right (Reid & Comas-Dias, 1990; Smiler, 2004).

While there is a move to change these socially ingrained roles and integrate new information into a more complex model of the social construction of gender (Levant, 1995; Pleck 1995), these ascribed roles continue to inform the way gender is perceived in many societies (Levant, 1995; Robertson, Woodford, Lin, Danos, & Hurst, 2002). The traditional stereotypical masculine role is one in which men are successful, strong, in control, able to solve problems without assistance, and generally suppress all emotions except anger (Good, Sherrod & Dillon, 2000; Hollis, 1994; Pleck 1995; Reissman 1990).

The stereotypic feminine role is to be expressive, empathic, sensitive, and nurturing (Wang, Heppner, & Berry, 1997).

Research indicates that people are often pressured to conform to gender role stereotypes because violations of gender roles lead to social sanctions/negative reactions, especially when the violators are men. (Archer, 1994; Aubé & Koestner, 1992; Martin, 1990; McCreary, 1994; McCreary, Wong, Weiner, Engle & Nelson, 1996). The concept of masculine gender role strain has been proposed to describe what may happen when a man believes that he is not meeting societal expectations of masculinity. (Mcreary, 1996; Pleck, 1995). According to Pleck (1995), gender role strain occurs when stereotypical societal norms about gender ideals, which are often contradictory, inconsistent, and unattainable, are internalized by an individual. As a result gender ideals are violated by many people, and these people often experience condemnation and negative psychological outcomes such as depression.

Therefore, it may be more difficult for the international male graduate student to develop a coherent sense of self when he must learn to negotiate and adapt his identities according to multiple role expectations across competing cultures. (Yeh & Huang, 1996; Yeh & Huang, 2000). One of the role expectations would be to perform at a high academic level. Sue and Okazaki (1990) found that academic achievement was a culturally sanctioned method of achieving financial security and social status among Chinese Americans, and children were expected by their parents to perform well academically. Another role expectation, which is closely linked to academic performance, is the maintenance of the masculine gender role. Therefore, male international graduate students may experience what Heifner (1997) refers to as the lack

of connectedness to others, because of traditional masculine socialization. He reported that when men were struggling with meeting external demands from family and society and with meeting their own internal needs such as happiness and satisfaction, men lacking connectedness with others struggled to maintain control of their lives. According to Heifner, men who are unable to resolve these issues are prone to chronic loneliness, lower self esteem, higher trait anxiety, and greater social mistrust.

In the case of international female students, McCreary et al. (1996) found that even though women experienced stress in the same situations that were associated with gender role strain in men, gender role strain was not as salient for women and did not lead to the same negative outcomes as it did for men. The authors attributed this difficulty to the fact that women are socialized to a different set of role expectations. In addition; women are also said to be more relational than men, possess greater number of friendships, and express their feelings more than men; this tends to help towards recovery from psychological distress. It may be useful to provide psycho-educational workshops, or round table discussions to explore how gender role identity may impact international students. These psycho-educational forums should place an emphasis on the male gender role strain, because of the identified negative experiences that some male international graduate students face.

Another finding of this study was that sex was somewhat related to coping. On three scales (Problem Solving, Cognitive Avoidance and Acceptance/Resignation) there were significant differences between men and women. Men scored slightly higher than women. There are no studies on international graduate students that have explored these gender differences in coping. General studies which looked at differences in coping

between men and women usually found that men used more problem focused strategies, whereas women used more emotion focused and avoidance coping. (Billings & Moos, 1981; Folkman & Lazarus, 1980; Stone & Neale, 1984).

However, Sigmon (1995) carried out studies with undergraduate students and found contradictory findings, where it was females who used more problem focused strategies than males in the university arena. There are two major theories that explore gender differences in how individuals cope with stressful events. One such theory, socialization theory (Pearlin & Schooler 1978), suggests that women are taught to be more open in their expression of emotions and to act more passively. Men on the other hand are taught to approach situations in an active and problem focused manner. The other theory, role constraint theory (Rosario, Shinn, Morch, & Huckabee 1988), explained gender differences in coping with stressors as a function of men and women occupying different social roles and the differing constraints that are placed on role occupancy by men and women. In other words, socialization theory predicts that gender differences in coping strategies would be found across all social and situation roles. Role constraint theory, on the other hand, predicts that when individuals occupy the same social roles, gender differences in coping strategy would disappear. While men in this sample scored higher on Problem solving (one of the elements of more adaptive coping), they also scored higher on Cognitive Avoidance and Acceptance and Resignation, (two of the elements of maladaptive coping). Therefore, this may explain why women experienced better adjustment than men. This would seem to more closely fit role constraint theory.

Finally, there were significant differences between single and married participants on both the approach coping and avoidance coping factors, but not on the adjustment factors. This can be explained by findings which suggested that positive social support was a mitigating factor in adjustment. The family, especially the marital relationship, was seen as primary source of support (Ward et al., 2001). Ulku-Steiner et al. (2000) found that spouses were a major buffer in reducing adjustment stressors. In addition social support, especially that provided by friends, was particularly helpful to graduate students (Gulgoz, 2002; Lewthwaite, 1997; Maudeni, 2001; Ulku-Steiner et al. 2000). Therefore while there was a difference in coping, but no differences in adjustment, this may have been due the social support that they received from spouse and/or friends.

Limitations

A major limitation of this study relates to the composition of the sample. Findings may have been affected by the homogeneity of this international graduate sample. This particular sample was predominantly Asian, (82.7%), with Indian students being the largest group at 30.1%. It is important to note that international students originate world wide, with Asian students comprising 56% of the international student population in the U.S. In addition, only 22 countries were represented in this sample, while the international student census shows that international students originate from 193 countries. The study was conducted within a suburban cultural area and, therefore, may not be generalizable to other international graduate student groups. Finally this study was correlational, and so no inference can be made regarding the causal nature of relationships among the variables examined.

Future Research

There is clearly a need for continued research in this area using both quantitative and qualitative methodologies. The sample in this study was predominantly Asian. Future studies should use more diverse international groups. There is a need for instrument development that is relevant to the needs and interests of international students in particular. Future studies should include measures of acculturation where available. Finally, there is also a need for future research looking at gender differences and intra-group differences within the international graduate student population.

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Table 1

Principal Components Analysis of Eight Coping Response Inventory Scales

Scale	Component 1	Component 2	h^2
Logical Analysis	.74	-.15	.57
Positive Reappraisal	.82	.13	.68
Seeking Guidance/Support	.65	-.06	.43
Problem Solving	.79	-.12	.64
Cognitive Avoidance	.03	.82	.67
Acceptance or Resignation	-.12	.78	.62
Seeking Alternative Reward	.47	.29	.31
Emotional Discharge	.02	.68	.46
Eigenvalues	2.50	1.87	
% of Total Variance	31.25	23.37	
Sums of Squared Loadings After Rotation	2.50	1.87	

Table 2

Principal Components Analysis of Nine College Adjustment Scales

Scales	Component 1	h^2
Academic Problems	.78	.61
Anxiety	.85	.73
Interpersonal Problems	.89	.78
Depression	.89	.80
Career Problems	.79	.63
Suicidal Ideation	.78	.61
Substance Abuse	.74	.54
Self Esteem	.81	.66
Family Problems	.85	.72
Eigenvalue	6.08	
% of Total Variance	67.58	

Table 3

Multiple Regression Analysis Using CRI Components to Predict Adjustment

Steps	CRI Factor Entered	*B*	*R*	*F* Equation	Significance of *F* for Equation	R^2 Increment	*F* Increment	Significance of *F* Increment	Zero Order *r*
1	Avoidance Coping	.40	.40	72.74	.000	.16	72.74	.000	.40
2	Approach Coping	-.31	.50	66.33	.000	.10	50.70	.000	-.30

Table 4

Structure Coefficients and Standardized Discriminant Function Coefficients for the Nine CAS Scales

College Adjustment Scales	Structure Coefficients	Standardized Discriminant Function Coefficients
Substance Abuse	.70	.56
Family Problems	.62	.14
Career Problems	.60	.34
Interpersonal Problems	.50	.74
Suicidal Ideation	.48	.07
Academic Problems	.48	.71
Self Esteem Problems	.32	-.39
Depression	.32	-.33
Anxiety	.19	-.99

Table 5

Pearson Product Moment Correlations For Nine College Adjustment Scales

	AP	AN	IP	D	CP	SI	SA	SE	FP
Academic Problems		.73	.59	.66	.59	.47	.46	.67	.62
Anxiety			.78	.82	.57	.60	.51	.64	.61
Interpersonal Problems				.80	.66	.64	.58	.71	.73
Depression					.60	.68	.64	.70	.67
Career Problem						.54	.55	.70	.67
Suicidal Ideation							.69	.50	.69
Substance Abuse								.43	.64
Self Esteem									.64
Family Problems									

All correlations are statistically significant at the .001 level

Table 6

Means, Standard Deviations, and F- ratios for Men and Women on the Nine College Adjustment Scales

	Mean	SD	Mean	SD		
	Men		Women			
Scale	(*n* = 224)		(*n* = 168)		*F*	*p*
Academic Problems	18.17	4.93	16.29	3.90	16.78	.000
Anxiety	21.71	7.75	20.52	6.45	2.57	.110
Interpersonal Problems	20.35	6.12	17.92	4.87	18.03	.000
Depression	18.89	6.81	17.20	4.88	7.47	.007
Career Problems	18.95	6.38	15.99	4.58	25.95	.000
Suicidal Ideation	16.80	5.57	14.78	3.59	16.85	.000
Substance Abuse	14.99	5.07	12.63	1.04	35.17	.000
Self Esteem	21.78	5.69	20.21	5.36	7.60	.006
Family Problems	18.50	5.82	15.74	3.94	28.24	.000

Table 7

Discriminant Analysis Classification Results

	Predicted Group Membership		
Actual Group Membership	Male	Female	Total
Male Count	150	74	224
Female	33	135	168
Male %	67	33	100
Female	19.6	80.4	100

Note: 72.7% of original grouped cases correctly classified

Table 8

Structure Coefficients and Standardized Discriminant Function Coefficients for the Eight Coping Response Inventory Scales

CRI- Scales	Structure Coefficients	Standardized Discriminant Function Coefficients
Acceptance or Resignation	.44	.26
Cognitive Avoidance	.44	.55
Problem Solving	.33	.78
Positive Reappraisal	-.30	-.92
Seeking Guidance/Support	.22	.23
Seeking Alternative Reward	.19	-.21
Emotional Discharge	-.15	.16
Logical Analysis	-.06	-.01

Table 9

Pearson Product Moment Correlations for Eight Coping Response Inventory Scales

	LA	PR	SG	PS	CA	AR	SR	ED
Logical Analysis		.50*	.35*	.45*	-.11*	-.10	.25*	-.09
Positive Reappraisal			.39*	.56*	.14*	-.08	.27*	.16*
Seeking Guidance/Support				.42*	.04	-.06	.12*	-.07
Problem Solving					-.08	-.11*	.27*	-.08
Cognitive Avoidance						.54*	.13*	.31*
Acceptance/Resignation							.07	.31*
Seeking Alternative Reward								.16*
Emotional Discharge								

*Correlations are statistically significant at .05 level

Table 10

Means, Standard Deviations and F-ratios for Men and Women on Eight Coping Response Inventory Scales

	Mean	SD	Mean	SD		
	Men (n = 224)		Women (n = 168)		F	p
Logical Analysis	12.19	2.70	12.29	3.13	.13	.724
Positive Reappraisal	12.04	3.23	12.64	3.22	3.31	.070
Seeking Guidance/Support	10.38	3.52	9.92	3.35	1.76	.185
Problem Solving	12.87	3.30	12.20	3.28	3.90	.049
Cognitive Avoidance	8.85	3.79	7.78	4.28	6.88	.009
Acceptance/Resignation	8.82	3.96	7.80	3.57	6.96	.009
Seeking Alternative Reward	10.09	4.22	9.63	3.70	1.28	.258
Emotional Discharge	6.36	3.89	6.69	3.33	.80	.373

Table 11

Discriminant Analysis Classification Results

	Predicted Group Membership		
Actual Group Membership	Male	Female	Total
Male Count	139	85	224
Female	74	94	168
Male %	62.1	37.9	100
Female	44	56	100

Note: 59.4% of original grouped cases correctly classified

Table 12

Means, Standard Deviations, and F- Ratios for Single and Married Participants

	Mean	SD	Mean	SD		
	Single		Married			
Component	(n = 291)		(n = 93)		*F*-Ratio	*p*
Approach Coping	-.08	.95	.34	1.05	13.270	.000
Avoidance Coping	.08	-.23	-.23	1.05	6.938	.009
Adjustment	.05	.99	-.12	.99	1.928	.166

APPENDIX A

Cover Letter

Cover Letter

Date

I am a graduate student under the direction of Professor Jody Newman in the Educational Psychology Department at the University of Oklahoma-Norman Campus. I invite you to participate in a research study being conducted under the auspices of the University of Oklahoma-Norman Campus, entitled Coping Styles and Adjustment of International Graduate Students. The purpose of the study is to explore relationships among a set of adjustment indicators and a set of coping sets in a sample of international graduate students.

As a reward for you participating in this survey you may enter your name in a drawing for one $100 Wal-Mart gift certificate. To enter the drawing you will need to send me an email at marquis6@sbcglobal.net with your name. This is because I will NOT know whom actually submitted surveys, since by design, they are anonymous. Your entries will be treated confidentially. I will personally hold the drawing and will notify the winner by email to make arrangements to receive the gift certificate.

Your participation will involve completing a demographic survey, the Coping Responses Inventory and the College Adjustment Scales. These inventories should only take about 30-45 minutes. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time. These questionnaires are anonymous and you are asked not to write your names on them. Results of this study may be published, but because your responses will be anonymous, there will be no way you or your responses can be identified. In fact, the published results will be presented in summary form only. All information you provide will remain strictly confidential.

The findings from this project will provide information useful to those who work with international graduate students in facilitating smoother transitions to the American Academic environment with no cost to you other than the time it takes to complete the survey.

If you have any questions about this research project, please feel free to call me at (281) 793-5032 or Dr. Jody Newman at (405) 325-5974 or e-mail jlnewman@ou.edu or marquis6@sbcglobal.net. Questions about your rights as a research participant or concerns about the project should be directed to the Institutional Review Board at The University of Oklahoma-Norman Campus at (405) 325-8110 or irb@ou.edu

By returning this questionnaire in the envelope provided, you will be agreeing to participate in the above described project. To participate you must be 21 years of age or older.

Thanks for your consideration!

Sincerely,
Monica Stedford
Graduate Student



APPENDIX B

Demographic Survey

Coping Styles and adjustment of international graduate students

Demographic Survey

1. **Age**:_____
2. **Sex**: Male _____ Female _____
3. **Marital Status?** Single ___ Married ___Divorced ___ Widowed___ Other___
4. **What is your native language?** _____
5. **In which country were you born?** _____
6. **Have you lived in other countries?** Yes ____ No ___ If yes name country (s) and length of time you lived there _____
7. **What year are you in your graduate program?** 1st___ 2nd ___ 3rd___ 4th ___5th ___ 6 or more____
8. **Are you currently on a student visa?** Yes_____ No____ Other status_____
9. **How do you fund your education/living expenses?** Self __ Family ___ Grants __ Loans_____ Other____
10. **How much total time have you spent in the U.S. in months?** _____ Please include all previous visits.
11. **What was your TOEFL score?** _____
12. **Did you take English courses after entering the USA?** Yes____ No____ If yes how many? _____
13. **Do you plan on returning home after studying?** Yes **____** No____ If yes, to which country will you return?_____
14. **Are you involved in extracurricular activities?** Yes **____** No ____ If yes what?_____

APPENDIX C

Institutional Review Board Approval



The University of Oklahoma

OFFICE OF HUMAN RESEARCH PARTICIPANT PROTECTION

July 8, 2004

Ms. Monica Stedford
Educational Psychology
ECH 321
CAMPUS MAIL

Dear Ms. Stedford:

Your research application, "Coping Styles and Adjustment of International Graduate Students," has been reviewed according to the policies of the Institutional Review Board and found to be exempt from the requirements for full board review. Your project is approved under the regulations of the University of Oklahoma - Norman campus Policies and Procedures for the Protection of Human Subjects in Research Activities.

Should you wish to deviate from the described protocol, you must notify this office, in writing, noting any changes or revisions in the protocol and/or informed consent document, and obtain prior approval. Changes may include but are not limited to adding data collection sites, adding or removing investigators, revising the research protocol, and changing the subject selection criteria. A copy of the approved informed consent document(s) is attached for your use.

Should you have any questions, please contact me at 325-8110 or irb@ou.edu.

Cordially,

E. Laurette Taylor, Ph.D.
Chair
Institutional Review Board – Norman Campus (FWA #00003191)

FY2004-391

cc: Dr. Jody Newman, Educational Psychology

APPENDIX D

Dissertation Prospectus

UNIVERSITY OF OKLAHOMA

GRADUATE COLLEGE

COPING STYLES AND ADJUSTMENT OF INTERNATIONAL GRADUATE STUDENTS

A Dissertation Prospectus

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for

degree of

Doctor of Philosophy

By

MONICA STEDFORD

Norman, Oklahoma

2004

CHAPTER 1

Introduction

Open Doors (2003) reported that there were 582,996 international students studying in the United States of America (USA) in the academic year 2001/2002. Rubin (1997) reported that international students originated from 193 countries. International students comprise 3.9 % of the total enrollment in higher education in the USA. The most popular areas of study among international students are business and management. The large research universities enroll 41 % of all international students. California is the leading host followed by New York, Texas, Massachusetts, Florida and Illinois. Leading places of origin of international students are India, China, Korea, Japan, Taiwan, Canada, Mexico, Turkey, Indonesia and Thailand. The largest numbers of international students in the USA originated from Asia (56%), followed by students from Europe (14%), Latin America (12%), the Middle East (7%), Africa (6%) and North America (5%). Graduate students comprise approximately 45% of the international student population. In the overall student population in the USA, international students are enrolled in greater proportions at the higher academic level; 2.7% of all bachelors degree students, 11.4% of masters degree students, and 33% of all doctoral students. Approximately one-fifth of all doctoral degrees awarded by institutions in the USA and one-third of all doctorates in engineering, mathematics, and the physical and biological sciences are earned by international students. (Open Doors)

The USA is viewed as an education destination that promotes a strong foundation for careers (Open Doors, 2003). A study carried out by the U.S. Education Foundation in India (USEFI) in February, 2002, revealed that the major factors that have contributed to the increase in the number of international students from India were the variety and flexibility of the education system in the USA. Researchers ascertained that, as a result of the better quality of the American education system, international students found that studying in the USA not only helped them to improve their career preparation, but also improved their employment prospects once they completed their studies. Education is also viewed by many people in the upper socioeconomic segments of various societies as an investment in the future, and so many people from the upper middle class are prepared to save towards education abroad for their children (Open Doors, 2003). International students are also viewed as beneficial to the United States on two counts, as economic contributors and as intercultural ambassadors (Open Doors, 2003; Princeton Review, 2002). A report from Open Doors (2003) indicated that international students contributed nearly 12 billion dollars to the U.S. economy, and approximately 75% of all international student funds were derived from personal and family sources or sources outside the USA. According to the Princeton Review, a number of colleges and universities consider it very important to have a population of international students on their campuses. It is believed that having international students on their campuses promotes intercultural friendship. They posited that talented and hard working international students were excellent role models for U.S. students and, at the graduate level, filled key research positions, especially in engineering and the sciences, where it is most difficult to attract enough qualified home (American) students.

Background of the problem

For the purpose of this study, the international graduate student is someone who is studying at the masters or doctoral level and is enrolled in a university on international status. The international graduate student's experience is considered unique in two main ways, being in a graduate program and being on international status. Many authors consider the graduate experience in and of it self to be very stressful (Golde, 2000; Morton & Worthley, 1995; Toews, Lockyer, Dobson & Brownell, 1993). Stress affects the ability to learn effectively, and tension and anxiety often result from the inability to reduce stress. Therefore, if stress is not reduced, it may frustrate comprehension, block learning and perhaps even interrupt interests in academic and clinical training (Polson, 1992). Although no one completes graduate level education without experiencing stress (Krantz, Cook & Lund, 1990; Polson & Nida,1998), nevertheless, it appears that there are times when graduate students experience higher levels of stress when compared to undergraduates, in response to demands of course work, field work and research deadlines, seminar presentations and defense of theses or dissertations. Morton and Worthley (1995) noted specifically that sometimes problems completing theses and dissertations are attached to difficulties related to mentoring, that is, sometimes students do not receive sufficient support from their chairs and/or committee members and become disillusioned. Morton and Worthley also stated that graduate students have to be able to transition from structured course work to a more autonomous way of working in order to manage and complete research. Golde (2000) contended that students are integrated and socialized into their respective academic departments because if they are disconnected from their departments, they are less likely to complete the program. There

are also other contributing stressors, such as continued employment in conjunction with attending graduate school and balancing academic and social life. In addition to navigating these "normal" realms of graduate school, international graduate students are faced with language barriers, social adjustments to another environment, and separation from family and support systems. These stressors maybe compounded by fear of failure (Lewthwaite, 1997). Although fear of failure is a natural part of being human, it is of particular importance for international students, whose families often have high expectations of them. Furthermore, Situ, Austin and Liu (1995) stated that, for some Chinese students, failure is unacceptable because when the student is not successful in their academic goals, this brings shame on the student as well as the family.

Statement of the Problem

Several authors have suggested that international students have more psychological problems than their U.S. counterparts (Dillard & Chisolm, 1983; Klineberg & Hull, 1979; Krantz, Cook & Lund ,1990; Pederson, 1991). The main contributing factors to these psychological problems were identified as being: language barriers, (Angelova & Riatzantseva, 1999; Dillon, 1993; Heikinheimo & Shute, 1986; Kao & Gansneder, 1995; Lewthwaite, 1997; Rubin, 1993); effects of culture shock and social adjustment (Bochner, 1972; Kacmarek, Matlock, Merta & Ames, 1994; Pedersen, 1991); and separation from family support systems (Copeland & Norell, 2002; Pedersen, 1988). One of the first studies that investigated the nature of these psychological problems experienced by international students was conducted by Klineberg and Hull (1979). It was found that psychological problems sometimes manifested itself in the forms of homesickness, loneliness and depression. Others conceptualized and demonstrated that

high anxiety, (Pedersen, 1991), stress, frustration, fear, and pessimism (Chiu, 1995; Dillard & Chilsolm, 1983), perceived alienation and racial discrimination (Heikinheimo & Shute, 1986) and psychosomatic disorders (Thomas & Althen, 1989) also contributed to psychological problems. Despite the psychological problems that these students face, often they do not seek help such as counseling (Flathman, Davidson & Sandford, 2001). Counseling interventions may be a worthwhile endeavor as indicated by Chiu (1995), who found that certain students experiencing anticipatory fear could be helped using the stress inoculation technique.

Few studies have examined the positive aspects of graduate school. Lewthwaite (1997) reported that international graduate students were able to navigate the education systems by allocating themselves relaxation time and establishing friendships. Noh and Kaspar (2003) revealed that international students adjusted to study in the USA by paying attention to their well being. Additionally, the students sought out friends, formed relationships with others, made social contacts, looked beyond their own individual world view, sought support, managed problems, improved English language skills and knew when to worry and when not to worry. Overall, the students made it their responsibility to actively seek out positive experiences. In spite of the difficulties that international students are said to encounter, there continues to be a major influx of international students into the USA. This continued influx might also be an indicator that international students believe or have been informed of positive benefits of graduate studies.

The purpose of this study is to extend the current research on cross-cultural adaptation, and to draw some attention to the specific needs of international graduate students. The past twenty years have seen a burgeoning of research about the

international student population. However, thus far the majority of these studies have often been limited to the psychological difficulties that international students as a whole experienced in terms of adaptation and adjustment. While these studies are essential for identifying the challenges that international students encounter, it is also important to look at the strengths of these students. What factors might contribute to successful adaptation? The aim of the current study is to examine the coping techniques that international graduate students utilize in achieving successful adjustment and completion of graduate studies. Hopefully, the findings obtained will provide meaningful assistance to people who work with graduate students in fostering more positive adjustment.

CHAPTER II

Literature Review

The literature indicates that in order for international students to adjust appropriately to graduate school, they need to adapt to both the host culture and the academic culture. Host culture in this instance refers to U.S. culture, such as American food, living environment, weather/climate, health care, the overall socio-cultural norms/customs and rules, intercultural contacts, and the American worldview and lifestyles. The academic environment includes proficiency in English, understanding and navigating one's way around the campus, and the overall education system, making appropriate social contacts among other students, academics, administrators, and staff, and gaining study skills conducive to being successful in the American academic environment. In addition, various studies have examined how international students' behaviors, cognitions and emotions (for example, loneliness, depression, homesickness, frustration, alienation, isolation, feelings of worthlessness and loss of status and identity) are impacted by the problems that they face during their adjustment to the overall U.S. culture and the U.S. academic culture. Research in these areas has been approached from several perspectives including the individual, the interpersonal, the social, the economic, and the structural. Specifically, some of the factors that have been found to hinder or aid this adjustment have included coping abilities, cultural differences between the students own culture and the American culture, communication, marginalization, social support, fear and perceived discrimination.

Cross-cultural adaptation Models

Ward, Bochner and Furnham (2001) presented two general perspectives regarding the effects of contact with other cultures. The first perspective hypothesized that an individual's exposure to another culture apart from one's own is beneficial and will serve to broaden one's worldview and provide a different cultural perspective from the usual expectant one. Minimally, it will provide a break from normal routines and activities. The second perspective viewed exposure to another culture as non-beneficial, and as causing stress and possibly harm. Instead of providing a positive personal experience, this new environment is anxiety provoking, confusing and may even lead to manifestation of mental or physical illness. The authors proposed that both viewpoints are true because cross-cultural contact has positive and negative consequences. Therefore, the conditions under which the contact is made must be considered.

In examining cross-cultural adaptation, Lewthwaite (1997) explored several models that pertained to people's psychological adjustment to a new society. Firstly, the culture shock model views the international student as experiencing an initial high and then a "bottoming out" as a result of cultural maladjustment and then returning to cultural adjustment and acceptance. This is referred to as the U-shaped curve, first proposed by Oberg (1960). An extension of this model is the idea of crisis of personality or identity. This is said to cause difficulties with a foreigner's familiar sense of reference, thus causing disruption when they have contact with an unfamiliar culture. The person goes through a process of meeting and managing crises, and in the end they are able to integrate their new and old identities. Secondly, cross-cultural adaptation is regarded as a

learning process. The foreigner must move from a position of ignorance regarding the new culture, and facilitate adaptation by learning about the culture, and gaining socio-cultural skills in order to participate. Emanating from this approach were two other concepts that facilitate adaptation; intercultural communication and appropriate behavior. The third model posits that a typical international student goes through a psychological journey from the outside of a culture into the center. During this step by step process the international student experiences a reduction in feelings of ignorance, and resentment, and reaches better empathy and understanding. The fourth model is from a homeostatic perspective, where cross-cultural adaptation is seen as dynamic. Through a continuous cycle, tension is reduced to the point where equilibrium is achieved. Initial disruption in equilibrium occurs for the international graduate student because her/his life is disrupted. Lewthwaite asserted that these models were inadequate in and of themselves to explain the complex issues faced by international students. The author contended that many entities were neglected, such as individual adaptation strategies, cognitive factors, and, in some cases, the fact the people actually thrive on stress. As a result, Lewthwaite adapted two other models to form the basis for his research: the communication model from Redmond and Bunyi (1993), and the cross-cultural adaptation process model from Anderson (1994). The communication model has six components including communication skills, knowledge of the host culture, language competence, adaptation, communication effectiveness, and social integration. Lewthwaite found that it was essential to communicate in a culturally appropriate way, because this level of communication helped to facilitate empathy, sensitivity to other cultures, listening and perspective taking. Thus, international students must be able to readily adapt to others

and their culture. Otherwise egocentric communication often occurred and messages were sent making sense only to the individual without adapting to differences. Thus, to help the international student's adjustment, cultural knowledge can be gained prior to arrival. The second model is the cross-cultural adaptation process model. This is an amalgamation of the other models that were mentioned, including incorporation of additional information from psychology and psychological drive theory. This model views students as facing major obstacles (e.g., starting school and other life changes) and, in order for adjustment to occur, the student has to respond in order to remove this obstacle. All adjustments are seen as recurring processes of surmounting hindrances and problem solving. Thus, the student needs to be able to motivate him/herself and, by achieving integration, can overcome the problem. For the new graduate students, obstacles may occur as a result of a new experience with the American culture or the American higher education processes, or it could be generated internally (homesickness, loneliness). For adjustments to occur, there has to be equilibrium between the person and the environment. International graduate students can be affected by the environmental demands. As a consequence, many aspects of the person could be impacted such as values and beliefs, interpersonal relationships and skills. Therefore, the person chooses to respond to these obstructions and in so doing makes his/her own adjustment.

Cross-cultural adaptation was also examined by Cui, van den Berg and Jiang (1998) from a cognition-affect-behavior framework. This model is similar to the latter two models proposed above. This model views cross cultural adaptation as being predicted by cultural empathy, communication competence and social interaction. From this framework, cognition and emotion affect behavior, in other words, a person's

cognitive abilities related to language and interpersonal skills provide the necessary tools for intercultural communication. Generally, the cross-cultural adaptation theories are not an integrated whole, and in and of themselves, are insufficient to explain the adaptation process that international graduate students face. However, a more comprehensive and complex understanding is garnered when the adaptation process for international graduate students is viewed from the perspectives presented by Lewthwaite (1997) and Cui et al. (1998). Furthermore, the above models place the adjustment 'processes' totally within the student's psychological control.

Ward et al. (2001) wrote that cultural contact was not based solely on the student's psychological abilities to adjust, but also upon real barriers such as racial discrimination/segregation, some of which have been dismantled. For example, many nations are changing from mono-culture to multicultural societies, due partly to rising immigration, especially from poorer to richer countries, and by refugees as a result of civil wars and other major disasters. In addition, many European countries, including France, Britain and Germany and other Western countries such as the United States, Canada, and Australia have been transforming into culturally diverse societies. Legal and moral forces have also aided in removing barriers such as racial discrimination and segregation that once stifled cultural diversity. Therefore, if segregation, and racial discrimination had not been dismantled in the courts, even with the best attitudes or psychological outlook, many international graduate students would not have been allowed the opportunity for cultural contact. Furthermore, this adjustment has been facilitated to an extent by a more positive outlook, in many cases from host countries. Ward et al. (2001) also suggested that there is a distinction between the processes of

intercultural contact and institutional structure that facilitate or prevent positive contact. They stated that this could be at the national level and included policies on immigration, employment, education, and the social climate. At the international level there are policies regarding visas, education policies, and employment. Thus the models of cross-cultural adaptation are variable, with some seeing adaptation as being within the students' control, while other models assess the physical/external barriers that impede international students.

Several adaptation models have been developed. These models focus on the positive and negative aspects of exposure to other cultures, individuals' psychological adjustment to new societies, and communication. The models are heavily focused on the international student's ability to effect change. However, a few of the models identify barriers that are external to the student that contribute to adjustment.

Social Interaction with the Host Culture

Several researchers (Cui et al., 1998; Lewthwaite, 1997) found that a significant predictor of cross-cultural adaptation was social interaction. Gulgoz (2001) stated that international graduate students need to become familiar with the American culture and should be particularly aware of cultural expectations. He argued that if the international graduate student does not have an understanding of the culture generally, this could impede progress in graduate school. It is important to note that because behavior varies from culture to culture, what is acceptable in one culture may not be acceptable in another. Furthermore, what can be even more debilitating for international students are not the overt behaviors, but behaviors that are more subtle and difficult to comprehend. For example, Gulgoz stated that because Americans tended to smile at people, this was

misconstrued by some international students as an interest in dating, and some innocent bodily contacts were also interpreted as sexual harassment. Lewthwaite found that some students who lived with host families experienced this as stressful but, nonetheless, some of the students who stayed in contact with their host families were able to gain insightful information from the host families about the host culture. Those who stayed in student housing had little opportunity to establish contact with off campus communities. There were social and linguistic benefits in interacting with the host culture, but academic workload and perceived lack of fluent social English complicated these tasks. Students felt that to succeed academically they needed all the available time to study, especially when they had papers, and this left them little time for social interaction with the host culture. According to Situ, Austin and Liu (1995), interaction with the host culture was less important for those international students occupied with merely surviving, as many were living near the poverty level in the cheapest off campus dwellings. These students had many concerns regarding insurance costs and worried about falling ill while being away from home. The authors also found that there was ambivalence among the students regarding how much they should assimilate into the American culture. Maudeni (2001) found that assimilation can cause internal conflicts for the international students between maintaining cultural identity and not adapting to the new culture. On the one hand, they may want to maintain their own culture and, according to Hewstone and Brown (1986), Phinney (1990), and Tajfel and Turner, (1979) the maintenance of one's own cultural identity helps to maintain positive identity and self esteem. However, on the other hand, they may recognize certain negative outcomes, such as losing out on essential social and

linguistic contact in the new culture or experiencing guilty feelings about not adjusting to a new culture.

Social interaction was also viewed by many researchers as acculturation. Sodowsky and Plake (1992) noted that acculturation was about how the sojourner, i.e., the student, related to the host culture by integrating to some extent with this culture, yet still maintaining some separateness from the culture. This was reiterated by Maudeni (2001) in his study about African students studying in Britain. He found that the students who adjusted satisfactorily were those who were able to maintain their cultural identities, as well as adopting some of the norms, practices and lifestyles of the host country. According to some researchers (Carmon, 1996; Grosvenor 1997) this acculturation strategy of integration would only work if international students bought into this strategy. Suin, Khoo and Ahuna (1995) posited that many international students were not able to work with such ambiguity and instead experienced integration as assimilation, where one had to give up one's own culture. When interaction was viewed from such a perspective, some international student became resistant to this assimilation in order to maintain their cultural identity and thus thwarted social interaction. Suin et al. (1995) contended that when social interaction was framed in the context of biculturalism, the international student was able to adopt aspects of the dominant culture while maintaining their own cultural identity. This was regarded as a more useful experience for international students' adjustment as opposed to assimilation or resistance.

Another factor that impacted social interaction was the length of stay in the host country. Shih and Brown (2000) found that the length of stay in a foreign country and the age of the student were predictors of acculturation. In other words, the older the student

and the shorter the residency in the U.S., the less likely they were to be acculturated. As a result of international graduate students' temporary status, they may not feel the necessity to adapt to a new environment. Therefore, while some level of acculturation or biculturalism is important for positive adjustment, unless students subscribe to this belief, they may decide not to interact with the host culture and instead interact only with other international students. Shih and Brown noted that when international students chose to interact only with other international students, this was found to be less functional and created additional stress. Furthermore, Shih and Brown found that keeping one's cultural identity provided the sojourner with a temporary sense of belonginess and familiarity. Therefore, on a short-term basis they gained support and encouragement from an identity that was consistent and familiar.

Similarities or differences in sojourners' culture were also found to impact social interaction. Gareis (1995) found that international students who were from cultures similar to the one in which they were studying had less difficulty interacting with the host nationals. The authors investigated the ability of international students to make friendships on campus with American students by comparing the experiences of students from Germany, India, and Taiwan. They found that students from India and Taiwan had a more difficult time than German students during their interaction with the American students. One major difficulty that was cited was that the German students' concept of friendship was more similar to that of the American culture, whereas the concept of friendship for Indian and Taiwanese students was markedly different. The authors found that the Indian and Taiwanese students' initial experience of the American students was an overwhelming sense of friendliness, only to discover that this friendliness tended to be

superficial. The ability of the German students to interact with the American students more easily can also be explained by applying the theory proposed by Ward et al. (2001). This theory stated that if the sociocultural features of various societies were assessed, it would be found that they were located on a continuum of close to distant. Therefore, Germany and America would be culturally closer than India or Taiwan and America. They denoted that this was further impacted by the structure and values of these societies. These include attitudes towards religion, status of women, individualism-collectivism, legal systems, government and attitudes toward authority and so on. Thus, this close-distant cultural hypothesis may be an indicator of the level of difficulties that the international student may experience.

Another problem that was said to affect social interaction was the similarity/attraction hypothesis espoused by Ward et al. (2001). This hypothesis stated that people had a tendency to seek out, were more comfortable, and in general preferred to be with people who were more similar to them. Ward et al. posited that several other factors impeded social interaction, such as stereotyping, social categorization, and socialization. According to Ward et al., stereotyping can cause difficulties when certain traits that are alleged to categorize a group are then attributed to an individual. During social categorization, there is usually the in-group, where people are classified as being of the group. Then there is the out-group where people are classified as belonging to the other group. Generally, the in-group is usually more favored or accepted. In the case of socialization, this speaks to the core values that a person acquires early in life. More often than not these core values are a key influence in how one makes sense of the world and so it may be difficult for a person to change without major cognitive dissonance and

distress. This is particularly true if the international student considers his/her belief system to be in opposition to the belief system of the U.S. culture, and so presents barriers to positive social interaction upon entry to the U.S culture.

Ward et al. (2001) also discussed how cultural syndromes have been postulated as a source of difficulty in social interaction with other cultures. According to the researchers, cultural syndromes pertain to peoples' attitudes, beliefs, norms and behaviors. The three main cultural syndromes they identified that were relevant to intercultural contact for sojourners were cultural complexity, tight versus loose cultures, and individualism-collectivism. Thus, they posited that people from tight cultures have a preference for certainty and security. They value predictability, and so are likely to perceive people from loose cultures as unreliable, and lacking discipline. People from complex cultures placed a high value on time, which is greatly associated with money. In complex cultures, time like money, is viewed as a commodity to be judiciously saved or spent. Thus, people from complex cultures are likely to view others from less complex cultures as rude, lazy or disrespectful because they operate on elastic time. However, the cultural syndrome that has been focused on the most is individualism and collectivism. Ward et al. wrote that the relationship between individual and society has been a source of great debate. This debate rests on the balance between the freedom of the individual and the common goal of the group. Many of the common social institutions include the family, the political systems, industrial relations, delivery of health, education, and criminal justice services, and the creation and appreciation of art. As a result of increased intercultural contact, this concept of individualism and collectivism has become a major topic of discussion. Hofstede (1984) examined the balance between the interests of the

individual and the group. Initially, 117,000 employees of a multinational company with branches in 40 countries participated in the study. Later on he extended his study to include 50 national cultures. His study focused on how the nature of the person-group relationship varied according to the cultures in which they lived. An ecological factor analysis of the mean country scores was completed. The findings were that the countries were classified along four bipolar dimensions (Individualism-Collectivism; Power-Distance; Certainty-Avoidance; Masculinity-Femininity). The construct that received the most discussion was Individualism-Collectivism. The countries that were predominantly associated with Individualism were European and North American Countries, with the United States, Australia and Great Britain occupying the first three ranks of the individualism-collectivism spectrum, while Asian countries emerged as predominantly collectivist. Ward et al. stated that Individualism-Collectivism manifested in three areas; the personal level; interpersonal level; and the societal and institutional level. At the personal level, this is how people define themselves in relation to others. What is crucial here is how the person defines him or herself. Does the person define the self as being distinct and separate from other people and groups? Or, does the person define the self in terms of the group? Independent and interdependent are terminologies often used to refer to this phenomenon. Individualists appraise themselves in terms of their internal characteristics that differentiate them from others and make them unique. Collectivists view themselves in terms of how affiliated they are with the group. Thus, they have a social identity that results from being a member of the group with whom they share common goals and from the fulfillment of particular social roles in relation to designated others.

In terms of interpersonal correlates, the interests of the group are paramount in collectivist cultures. The individual is expected to place the group ahead of personal aspirations and goals. The general characteristics of collectivist societies are interdependence, cooperation and maintenance of close social networks, both among the individuals and the groups to which they belong. The result is that the group (i.e., extended family, employer, church or social association) rewards the person for his/her loyalty by offering group protection and care. On the other hand, people in individualistic cultures are loosely associated with each other or to their groups. They will expect or demand that their personal aspirations are taken care of even if it thwarts the objectives/goals of the group. The individualist tends to function independently, with the primary focus of taking care of self and their immediate family. Competition is valued over cooperation. Although individualists tend to associate themselves with many groups, their memberships tend to be superficial and often transient. If the relationships become costly, the individualist will abandon these relationships. Collectivists are attuned to the norms and constraints that regulate behavior in the group. Individualists, however, are more direct in their expressions and emphasis is on explicit communication irrespective of the consequences.

In terms of the social correlates, self –worth is assessed in terms of how one is valued by the group. Collectivists value harmony and view this as a source of satisfaction. They also place a high premium on family relationships, religious beliefs, and loyalty to institutions and authority and being law abiding. All these are said to contribute to positive self-esteem. There is a tendency for collectivist societies to emphasize conformity and uniformity in beliefs, customs and practices. The individualistic culture

values independence, uniqueness, individual talent, personal achievement, influence and recognition. These are the hallmarks of self worth and positive self esteem.

As a result of these differing points of reference, when individualists and collectivists get together, they more often than not have different social attitudes, moral values, and behavior. Furthermore, differences will be seen in their cognitive styles, and the way that they communicate, especially in the expression of emotions, and wishes.

Sandhu and Asrabadi (1994) found that intercultural communication was impacted by feelings of the international students that they were not wanted. Their research indicated that many international students arrived with unrealistic expectations of receiving special treatment in the United States because it was deemed a country known for its generosity, advocacy of human rights, and democracy. However, what many international students found in reality was that their skills and knowledge were often undermined or underutilized and, often times, Americans had negative attitudes toward international students or at least lacked cultural sensitivity awareness. Sandhu and Asrabadi described nationals as being preoccupied with their own concerns, not willing to form alliances or acquaintances to assist international students. Sandhu and Asrabadi also found that fear was a major factor that influenced the international students' interactions with Americans. This fear was experienced because the students were unfamiliar with their location, worried about high crime rates, racial discrimination, and hostile relations that some international students' native countries (e.g., Iraq and Iran) had with America. As a consequence, the students were fearful of a backlash of negative behaviors toward them. In addition Shibazaki and Kashubeck-West (2001) found that individuals who were low in acculturation were more likely to be stereotyped because

their behaviors were viewed as being more traditional. Therefore, such individuals may experience higher levels of discrimination. Furthermore, international students who lacked knowledge about the social norms of the host culture reported experiencing poorer treatment from members of the host country. Lewthwaite (1997) also found similar results. He reported that students who did not feel integrated into the new society were more fearful of being ill while away from their home support and some were concerned about losing touch with their own culture. Thus, international students often turned to each other for support.

Studies have indicated that international students have to be able to interact at both the overt level and at the more subtle level, which means that understanding of the new culture is crucial, especially the cultural nuances. However, this is not always easy as there are other important concerns facing the student, such as succeeding academically, managing their living environment, and issues related to assimilating into the American culture. It has also been found that social interaction is made more difficult when greater disparities exist between the host and international cultures. Social interaction has been found to be further affected by the similarity/attraction hypothesis, stereotyping, social categorization, socialization, and cultural syndromes, feelings of not being wanted and fear.

Social Support

Copeland and Norell (2002) studied the impact of social support among people who moved to another country. The study was based on the premise that social support helped combat stress and was associated with greater emotional well being. Support for international students was reported as coming from family, peers and mentors. (Maudeni,

2001; Ulku-Steiner, Kurtz-Costes & Kinlaw, 2000; Ward et al., 2001). Positive social support was found to be a mediating factor in adjustment and was associated with lower levels of psychological distress (Shibazaki & Kashubeck-West, 2001). It was found that loss of social support after separation from families contributed to homesickness and loneliness (Sandhu & Asrabadi, 1994). The family, especially the marital relationship, was seen as a primary source of social support (Ward et al., 2001). Positive adjustment, however, was contingent upon the quality of the marital relationship and so the better the marital relationship, the better the adjustment. A poor marital relationship was found to contribute additional stressors in the form of anxiety, depression, and psychosomatic complaints. In addition, students who had left their spouses at home experienced more loneliness, frustration, and concern for their families. Being away from home and the possibility of becoming sick was very anxiety provoking (Redmond & Bunyi, 1993). However, the findings on family support were contradictory. While some students who had their families with them experienced the family relationship as a buffer during the adjustment periods, other students who had their families with them found the demand of graduate school and family obligations very taxing. The resulting outcome was an increase in the students' stress level. (Polson & Nida, 1998). This was particularly significant when the graduate student was female, was not in a committed relationship, worked full time and had children (Hudson & O'Regan, 1994). However, Ford, Wetchler, Ray and Neider (1996) reported that students with children did not report significant differences in stress relative to students with no children. But, interestingly enough, the spouses of students with children reported a higher level of stress. Therefore, the implications were that although the students themselves were not directly affected, their

spouses were, and so this could likely cause strain in the relationships. Scheinkenmann (1988) reported that graduate school had a negative impact on students' marriages. Ulku-Steiner et al. (2000) found that while spouses were a major buffer in reducing adjustment stressors, having a family was also a liability because it placed limitations on the time and effort the graduate student had to expend on studies. Ford et al. (1996) investigated the stressors and enhancers associated with being in a marriage and family therapy graduate program for students and their families. The results indicated that both trainees and their spouses found the graduate school experience significantly more enhancing than stressing. There were no significant differences in the stress reported by trainees with children and trainees without children. Overall, the findings indicated that family support was very important. An even more significant aspect of social support was the support provided by friends, and development of friendships with both nationals and host members was significantly related to positive adjustments (Gulgoz, 2001; Lewthwaite, 1997; Maudeni, 2001; Situ et al., 1995; Ulku-Steiner et al., 2000). The previous studies also indicated that social support was very important for international students. Some of the respondents were members of university clubs and societies but tended to associate with groups from their own culture. Some reported that it was easier to relax after the demands of academic study around people who were from their own culture. Furthermore, they could obtain information from home. Lewthwaite (1997) stated that an extension of this social support was that students who met with others from similar background/culture helped each other to feel good about their culture. This support/networking also functioned as a way of buffering them from the perceived individualism of the host culture. Maudeni (2001) found that while there were positive

aspects of support (helping with survival skills, finding traditional foods, and helping with cultural identity) when this association was limited to interactions with other international students only, it prevented meaningful intercultural relationships with host students and nationals, which were essential for positive adjustment. Nevertheless, peer support was seen as a significant source of social support. Ulku-Steiner et al. found that peers provided much emotional and academic support. The importance of peer support was that it helped to reduce negative stressors and served to facilitate students' adjustment into the academic community. Specifically, peers helped in library location and offered general personal support. Ward et al. noted that there were three distinct patterns of peer networks. The first was compiled of friendships with fellow nationals, and this helped the international students to rehearse, express and affirm/ maintain the values of their culture of origin. Secondly, networking with host nationals helped the international students in achieving academic and professional goals. This network usually consisted of other students, professors, counselors, administrators, and government officials, and such relationships were usually formal. Thirdly, the network, which is composed of non-compatriot foreign students, provided recreational activities, as well as mutual support based on shared foreignness. Finally, mentors were seen as critical in the support of graduate students and no less so with international graduate students. Ulku-Steiner et al. found that good mentors helped students to gain confidence in their abilities in their chosen field of study. They stated that graduate students whose mentoring relationships were positive exhibited lower rates of attrition. Mentors helped to foster positive academic self concept, were sensitive to family concerns and helped in stress reduction. Goplerud (1980) was among the first to study the importance of social support

of faculty for graduate students and, although the study did not include international graduate students, it helped to corroborate later studies which highlighted the importance of faculty support for international students. He found that psychological difficulties encountered by graduate students were ameliorated by positive social support. Those who were socially isolated reported more psychological health problems than those who felt socially supported, i.e., had prior social support or developed support immediately. He also found that when students had satisfactory relationships with the faculty, it was linked to a reduced likelihood of experiencing health or emotional problems during this high risk period. Faculty were seen as the dominant figures in the social setting and provided students (especially new students) with feedback that enabled students to prioritize, evaluate their performance, and assess their aptitude for graduate work. He stated that quality feedback was essential to reducing students' distress.

In summary, it has been found that positive social support greatly contributes to international students' ability to adjust to the U.S. culture and the U.S. academic environments. The findings suggest that family and peer support are significant. However, while family support is helpful to adjustment, it also seems that the quality of the relationships and the demands of the family are paramount. In instances where the relationship is poor/demanding, and when combined with the demands of graduate school, family may be associated with additional stressors for students. What has been found to be particularly helpful to adjustment is having a mentor and a positive working relationship with faculty.

Academic Adaptation

Ward et al. (2001) stated that the educational environment was reflective of the society, but on a smaller scale. Therefore, they posited that similar abilities need to be developed to facilitate adjustment to the education environment. These include learning general rules and regulations in order to effect positive adjustment. They also postulated that success and adaptation to a new educational environment often fell squarely on the international student, with very little assistance in this transition. Rosenblat and Christensen (1993) examined this phenomenon and found that graduate students were often left with little or no orientation to their college or academic program because there was an assumption that graduate students were fully versed in what they should do. However, they found that many graduate students upon first entering their respective programs were just as confused and anxious as were new undergraduates. They found that an appropriate orientation of graduate students to their programs helped to facilitate better adjustment and alleviated much anxiety. Although this study was done on U.S. graduate students, it is also applicable to international graduate students, especially the ones who are new to the country. Luna and Cullen (1998) also explored the transition to graduate school and described it as a journey of transformation with students encountering challenges that were often unanticipated. They noted that individualist and collectivist perspectives were highly influential in the education system.

According to Lewthwaithe (1997) the western education system is perceived as being very individualistic and competitive. This was reiterated by Gulgoz (2001) who stated that this was especially so of the American education system. Gulgoz suggested that such a system could lead to aggressive behavior among students. This can foster an

environment where it appears that there is a lack of cooperation among students, hiding of information or notes, not sharing important information or materials, and even deceiving of peers. This may be difficult to handle for international students who are accustomed to a more cooperative way of working on assignments. Gulgoz stated that a cooperative way of working could be misconstrued as cheating in some American universities. He suggested that international students managed this problem by forming support groups to help them cope with this difference when they found the new method of learning difficult. The other factors that helped or hindered academic adjustment were the role of the advisor/professor, class room atmosphere, English comprehension and writing, working, and conducting therapy (applicable to international students in clinical programs).

The role of the academic advisor or key professors was pivotal in helping students adjust. Many students reported that in comparison to professors in their own countries, the professors in the host university were very approachable and very interested in them as students. They offered hospitality, friendship and guidance. (Lewthwaite, 1997). Gulgoz (2001) also stated that academic advisors who agreed to work with international graduate students were often culturally aware, and this cultural awareness helped to facilitate academic adjustments. However, there were some incongruities faced by both advisors/professors and students. Gulgoz reported that while some professors were very accommodating, there were those who did not value international students as much as they would a native student. Furthermore, students needed to reconsider the role of the student and the advisor/professor. Whereas in their original countries many students had a respectful distance between themselves and the advisor, often in the United States this

was very different and frequently the relationships between professor and students were more relaxed. For example, students called professors by their first names, socialized with the professors, and talk to their advisors as they talk to a friend. However, this was sometimes very difficult for some international students to accept or even practice. Gulgoz also claimed that the American culture is very much based upon the principle of reciprocity, in other words if an American does a favor for someone, then that favor is expected to be reciprocated. He asserted that this was as true between the advisor and the student as it was in social interactions. Therefore, international students who viewed the advisor/professor as someone who was there to serve the student needed to reevaluate this approach as the advisor/professor may find this offensive and could be resentful towards the student. At the other extreme were students who were reluctant to utilize their professor adequately because they perceived their advisors/professor as being too busy, and they did not want to bother them. This was especially true when students' advisors were away or not available (Lewthwaite). Both authors stated that many international students felt ill equipped to elicit the professors' resources.

The size and atmosphere of the classroom can present ambiguities for many international students (Kao & Gansneder, 1995). Lewthwaite (1997) reported that students identified small academic groups as both stressful and comforting. It helped them to come to terms with feelings of isolation and provided a good format for the discussion of research topics. They were also surprised at the amount of interaction and questioning that occurred in seminars and lectures and when they compared themselves to the host culture, felt that they were unable to participate in the discussions as much as they would like. This they reported caused them concern about their own roles in the

group. Many of the students indicated that because of their perceived linguistic inadequacies, they were not able to contribute to discussion and, hence, felt that they were freeloaders and that they were judged as such by the home students in the group. (Lewthwaite, 1997). The difficulties experienced by international students with classroom interactions also reflect the concept of the Individualistic-Collectivist culture. According to Ward et al. (2001), generally students from individualistic cultures tended to speak out in class through questioning, and responding to questions, and participating in debates. Students from collectivist cultures tended not to want to bring attention to themselves and, preferred instead to fit in, and were less likely to interact verbally. They would refrain from questioning and debating with the professor because it was often seen as inappropriate to challenge the professor, which could result in loss of face. Power and distance were also important in the intercultural classroom. In high power distance cultures, students often sought to show teachers respect and to keep formal and distant relationships with them. Kao and Gansneder (1995) studied the speaking frequency of international graduate students in the U.S. classroom. They found that males from the British Commonwealth spoke in class most often. Women from Asian countries with English as their official language were the second most frequent participators. Age and gender were not significant factors. The implication from the study was the more competence and comfort the international student felt about their English, the more likely they were to speak in class. This finding was supported by Poyrazli, Arbona, Amaury, McPherson and Pisecco (2002) and Poyrazli (2003). They found that international students who were proficient in the English language tended to gain higher GPAs, and the more proficient their reading and writing fluency in English, the more likely they

were to report better adjustment. A study by Poyrazli (2003) examined international students' assertive abilities and how this translated into the academic arena. The study found that students who perceived themselves as assertive reported a high level of academic efficacy. In other words, they felt both comfortable, and competent in their understanding of English, and felt at ease when speaking in the classroom. Therefore, English proficiency, assertiveness, and academic self efficacy contributed to better adjustment. For example, students who were more assertive and efficacious were more likely to initiate academic interactions or ask for academic help through use of writing centers and asking about assignments from professors or classmates. In addition, they found that high academic self-efficacy was likely to help students approach challenging situations without experiencing incapacitating anger or confusion. High self efficacy also helped to make the students feel that they were competent, and had the capacity to manage academic problems, and situations. The result was that students experienced better academic adjustment. Thompson and Klopf (1995) found that many international students lacked assertiveness. The result was that this lack of assertiveness often caused confusions for these students when they came in contact with the U.S. culture, which is highly assertive. This confusion for international students was further compounded due to their lack of assertiveness; they would not ask for much needed help, and, in the absence of any solicitation, this help was often not forth coming. In addition, some students found it difficult to adapt to the U.S. classroom atmosphere which was often more relaxed than their classrooms in their home countries. On the one hand, students could drink coffee or sodas in class and frequently ask questions, but at the same time students were expected to be in class on time and to meet deadlines for assignments (Gulgoz, 2001).

Furthermore, students were sometimes marginalized in the classroom and were deliberately excluded from small group formation during seminars or were ignored during discussions. Other areas of difficulties that were identified were learning styles/teaching styles, understanding lectures, taking notes, reading academic literature and understanding informal ways of speaking English. De Vita (2001) found that international students had different learning styles when compared to host nationals. He noted that the traditional method of uniform instruction is ineffective in a diverse student population. He postulated that the difficulty that emerged for international students might stem from the mismatch between the instructor's teaching style and the student's learning style. Therefore, the learning styles of many international students may not be compatible with the usual methods of instruction in the host country. He noted that one's culture influenced one's learning style because education, like other things, is culture based. Therefore, teaching styles and learning styles in one culture may be ineffective when applied to another cultural group.

In his study De Vita (2001) found that, with the exception of the visual-verbal dimension, the variety of learning styles exhibited by international students had a greater range than those displayed by home students. He asserted that it was important for lecturers to use a variety of teaching styles to help facilitate students' learning styles. He stated that it was inevitable that there would be mismatches between learning styles and teaching styles, but when these mismatches were constant, frustration, and disengagement occurred, especially in a multicultural classroom where international students were often confronted with culture shock and/or language barriers. He concluded

that utilization of a range of teaching styles was more likely to accommodate all the students' learning styles, at least some of the times.

Many international students who scored high on the TOEFL (Test of English as a Foreign Language) and had mastered the language faced difficulties with English that was spoken in a different accent. This was further complicated by the everyday vocabulary, which often incorporated slang and topics of conversation that were unfamiliar and culturally specific. Lewthwaite (1997) noted that perceived communication competence was very important to adjustment. There was a disparity between the fact that most international students were admitted to graduate courses based on their high linguistic ability on indicators such as the TOEFL, but when it came to "rules for speaking" and "turn taking" and other sociolinguistic knowledge, it appeared that they felt hindered. Mulligan and Kirkpatrick (2000) found that some students, especially students for whom English was a second language, had particular difficulties in understanding lectures and taking notes. The researchers found that many lecturers did not accommodate the cultural and linguistic diversity in their classrooms. Additionally, if the students' English skills were not well developed, they were unable to achieve higher order or deep learning through interpretation of the immediate context of the lecture because the students were unable to proceed beyond bottom up processing. They argued, however, that students who were English speaking and who spoke English as a second language were both capable of engaging in deep and shallow learning, depending on their needs. However, because of linguistic difficulties (e.g., focusing on grammatical structure, sentence length, and cues which were indicators of important information in a

lecture), students who spoke English as a second language were likely to adopt shallow learning with greater frequency than home (U.S.) students.

Mulligan and Kirkpatrick (2000) also noted that listening in a second language contributed to difficulties in deep learning and overall comprehension for many international students because listening in a second language required different skills from those involved in reading comprehension. The researchers identified two problems that listeners faced, and this was found to be particularly evident when listening in a second language. Firstly, listeners generally have less control over the text than do readers; this was associated with time processing. Secondly, understanding the vocabulary and grammar of a new culture or discipline is associated phonological and lexico-grammatical knowledge. The mismatch in learning styles for many international students is compounded by the fact that, in the western culture, the emphasis is placed on reading and writing skills rather than on listening skills. Thus, students who spoke English as a second language were often ill prepared for lectures in western universities because they found themselves struggling with many areas of lecture comprehension (Mulllighan & Kirkpatrick, 2000). To further reiterate the point, many international students struggled to distinguish between material that was critical to the main point of the lectures and irrelevant materials such as asides and jokes. Young (1994) also explored the difficulties that many students for whom English were a second language had in understanding lectures because of difficulty in identifying the overall structure of lectures. Young stated that the ways in which lectures were delivered required the listener to concentrate over an extended period of time without the opportunity for clarification of meaning through dialogue. The listener was also required to multi-task because, in

addition to listening, the listener was often required to take notes and integrate information from various sources such as visual presentations and handouts. Thus, many international students struggled to recognize the macrostructure of lectures. The consequence of this lack of understanding was frustration and having to expend extra time in order to achieve comprehension. Mullighan and Kirkpatrick found that many of the students for whom English was a second language indicated that they did not understand much of the lecture content and were highly reliant on review strategies to understand lectures. This they stated was due to students being able to focus on only a single task at a time, which compounded the difficulty faced by these students as Young previously highlighted. Mulligan and Kirkpatrick continued by stating that, during lectures, students tended to focus on note taking rather than active listening. The students for whom English was a second language often became so focused on getting on paper the content of the lecture that often they missed the opportunity to organize and clarify key information that was pertinent to their learning goals. Students for whom English was a second language also found it difficult to identify metapragmatic signaling of changes in the topic or emphasis. Clear signaling of topics was found to be particularly important for all students, especially where English was a second language, many of whom could not identify the differences between elaboration on a topic and the introduction of new information. Many students with English as second language (ESL) reported more difficulty in keeping up with note taking. Again, because they were less likely to be able to identify the main themes in a lecture, they were more likely to attempt to take more detailed notes, which may not be needed, and so the overall quality of their notes were found to be poor. Mullighan and Kirkpatrick found that ESL students were prepared to

make the extra effort, but they also desired explications of major concepts to facilitate deeper understanding. Thus, they liked lecturers who were approachable and who encouraged further interaction and questioning.

The emphasis on writing was also a major problem because it was often the end product by which students' successes were measured. Gulgoz (2001) stated that because the American system emphasized writing, international students who were not accustomed to this practice often faced difficulty in adapting to the volume of writing that was required. As a result, many students faced adjustments and fatigue. There were difficulties writing papers because of grammar difficulties and structuring. Many students relied on word processors, which helped, but did not solve all the problems. These difficulties with writing were found be a persistent problem throughout graduate school. Angelova and Riatzantseva (1999) explored the linguistic and cultural backgrounds of four international graduate students and their adaptation to the requirements of discipline-specific written discourses during the first year of studies in the U.S. The results from their studies indicated that international graduate students who were not familiar with U.S. academic writing needed help for smoother adjustment to the requirements of the new academic environment. Many students expressed such discomfort with their command of the English language that they felt that professors and host students viewed them with disdain. As a result, they surmised that if they faced any type of discrimination it was their fault because their English was inadequate.

Two other essential components of graduate school are research and working as graduate assistants. Gulgoz (2001) reported that often international students were not in step with the current research trends in the U.S. and needed to seek out help to ensure that

they were updated. He stated that this was often intimidating for the international students as the students often feel that, at the graduate level, they should have knowledge about the status of research in their chosen fields, and this can sometimes lead to further isolation for the student. In terms of assistantships, sometimes international graduate students experienced difficulty in their roles as teaching assistants. Gulgoz (2001) stipulated that while the assistantships, especially teaching assistantships, were often difficult for the international students, they were also useful because often it was their only source of teaching experience. Sometimes, accents became an issue as some host students used this as an excuse to blame the graduate assistant for their own lack of effort. Finally, international graduate students who were in counseling programs encountered additional problems especially in the delivery of therapeutic services. Therapy is based on communication that emphasizes empathy, which is often affected by having similar cultural background or a good knowledge of the client's culture. Therefore, the international student who did not understand the American culture, which included American subcultures, faced difficulties in therapy sessions. Gulgoz emphasized that familiarization with American culture included an awareness of expectations. When the international graduate student did not have an understanding of the culture generally, and, the demands of the graduate program specifically, this seriously impeded their progress and success.

In summary, research indicates that the academic adaptation of international graduate students has often been neglected. However, helping these students to adjust to this environment is paramount. Adjustment to the academic environment (which includes relationships with other students and professors) is often markedly different from their

previous academic cultures. There are often disparities in learning styles of international students and the teaching styles of host professors. Also, the international students often do not feel confident about their English proficiency, and they often face difficulties in understanding lectures, taking notes, reading academic literature and understanding informal language.

Coping

The following section will explore the research on coping. This is necessary to facilitate understanding of the coping strategies that are utilized by international graduate students to help them navigate the process and stressors of being international graduate students. Stressful events in and of themselves do not necessarily cause difficulties. However, a situation can become stressful if the individual perceives it negatively and lacks either internal or external resources to manage the situation (Polson, 1992). Thus, how an individual copes or adapts to stress needs to be considered. Coping can be seen as utilizing behavior strategies such as problem solving, or buffering resources, such as having positive peer relationships. Polson explored the definition of coping and defined coping as “any effort, healthy or unhealthy, conscious or unconscious, to prevent, eliminate, or weaken stressors, or to tolerate their effects in the least hurtful manner” (p. 509). This definition places coping on a continuum from adaptive or healthy coping, to maladaptive, unhealthy coping. Furthermore, the individual’s well being is influenced not only by the amount of stress experienced but also by how well the individual copes with stress, and so coping is described as a process. For the individual to cope, he or she undergoes a cognitive process of appraisal or assessment of the stressors and their potential threat to well being. An emotional reaction follows this assessment. The

individual then selects coping strategies or behaviors to respond to the threat from the stressor event. Thus, Polson deemed that coping involves a transactional process of cognition linked to behavior. He posited that if we are to see coping as a continuum (adaptive coping), this type of coping may be seen as adjustment to stressors and their demands for change. Adaptive coping denotes successful management of stressors before these stressors escalate into full-blown crises. Adaptive coping reduces the body's increased physiological mobilization to manage perceived or actual threats. A person's emotions serve as signals to effective adjustment. Feelings of apprehension, tension, irritation, as physiological responses to stress, should be short lived and eventually replaced with feelings of satisfaction or a sense of well being. Unresolved distress may eventually lead to personal or family crises. Although this may not mean disaster, crisis does imply a state of disorganization, disruptiveness, or incapacitation.

Many models of coping have been presented. (Berry, 1997; Cassidy 1994; Chataway & Berry, 1989; Folkman & Lazarus, 1988; Holmes & Rahe, 1967; Martin & Lefcourt, 1983; Moos & Schaefer; Noh & Kaspar, 2003). The emerging and persistent theme is that personal coping strategies mediate psychological manifestation of social stresses. Coping responses are regarded as being on a continuum, whereby a person would approach the problem through confrontation or problem-avoidance (not dealing with the problem directly). When a person perceives that they are in control of a problem, they become more creative in generating problem solving methods and their ability to solve the problem increases; thus she or he will exhibit fewer symptoms of helplessness. This same person also has more internal locus of control and is more motivated to achieve. This finding was corroborated by Lazarus (1993). He posited that during a major

life event, the coping style used may be a significant predictor of future health or illness rather than the event itself. Wofford and Daly (1999) and Noh and Kaspar (2003) also found that the most effective form of coping was active problem solving with passive, emotion-focused coping being less effective. Active coping has been said to be more effective in reducing the impact of depression and of perceived discrimination. Passive coping, on the other hand, has had negative mental health effects.

Ward et al. (2001) noted that the coping methodology used to understand and interpret intercultural experiences, especially adjustment, is similar to factors that are involved in transitional experiences. As a result, many researchers have recognized the importance of the life changes literature as also being relevant to cross cultural adaptation. Researchers have also considered other variables that are specific to cross-cultural transition and adjustment, as well as the usual stress and coping factors. In addition to assessment of life changes, personality and social support, they have also considered cultural distance, acculturation strategies and acculturation status. During acculturation, stress and coping are seen as a series of life changes which strain adjustment resources and activate coping responses. In considering life changes it is important to consider that individuals process stress related information in different ways. In certain conditions some potential stressors are evaluated as threatening, while in other cases it may be seen as challenging. Both individual differences and cultural factors affect cognitive appraisal of stress. How acculturating individuals perceived and appraised possible stressful situations tended to be influenced by situational and social factors as well as their acculturative experiences. For example, language, and communication, discrimination, homesickness, and loneliness were found to be more

problematic among Chinese sojourners than non-Chinese sojourners. Expectations also need to be considered because coping strategies and adjustive outcomes may be different due to the sojourner's expectations. Ying and Liese (1994) and Chiu (1995) have argued that realistic expectations, i.e., those that match actual experiences, facilitate adjustment. Ying and Liese investigated the impact of how one anticipated a problem would influence how one adjusts. They examined students from Taiwan and found that those who anticipated that they were going to have problems in social interaction in the U.S. were more depressed after they arrived. Chiu investigated how international students responded to novelty and ambiguity during adjustment to a new culture. She used levels of anticipatory fear. The first was high anticipatory fear; people with high anticipatory fear magnified the difficulty that they will encounter later on and experienced feelings of vulnerability and emotional distress prior to, during and at the end of a stressful experience. The second level of anticipatory fear was low; people with low anticipatory fear tended to think about the upcoming situation and initially presented a calm and optimistic appearance when facing an impending stressful event. However, they were likely to neglect considerations of all possible outcomes, including difficulties, and so were unprepared for trying/difficult situations. The third level of anticipatory fear was moderate anticipatory fear; these people considered the pros and cons of the stressors and the management of the stressors. In coping with stressors of novelty and uncertainty, the moderate anticipatory fear group demonstrated more adaptive outcomes than either the high or low group. This was consistent with the stress and coping literature, which highlighted the negative consequences of unexpected stress as well as the positive effects of providing realistic and accurate information prior to the occurrence of stress-provoking

experiences. Although Kaczmarek, Matlock, Merta and Ames (1994) found that when they examined scores on the Student Adaptation to College Questionnaire, international students obtained scores that were lower on the social and institutional attachment and goal commitment subscales. This indicated that while international students had a realistic perception about adjusting to the college environment, they experienced a more difficult time transitioning than the U.S. students. Most importantly, there were also indications that they had a more difficult time seeking help.

This section focused on how people cope or adapt to stress. The common theme from the coping literature is that a person's coping strategies mediate psychological manifestation of social stresses and coping responses as presented on a continuum from problem approach to problem avoidance. This is applicable to international graduate students because they experience life changes as a result of their immigrant status and as graduate students.

Strategies for coping

Ward et al. (2002) reported that in spite of the interest in stress and coping and related research on cognitive appraisals and expectations, there were few published studies that examined coping strategies in relation to adaptive outcomes in sojourners. The studies that examined these phenomena will now be highlighted. Chataway and Berry (1989) investigated coping styles, satisfaction and psychological distress in Chinese students in Canada. They used Folkman's and Lazarus' (1985) Ways of Coping Scale which includes the assessment of 8 distinct coping strategies: problem solving, wishful thinking, detachment, social support, positive thinking, self blame, tension reduction, and withdrawal responses. The results revealed a significant relationship

between coping styles and satisfaction in dealing with salient problems. More specifically, Chinese students who engaged in positive thinking were more satisfied with their ability to cope; however, those who relied upon withdrawal and wishful thinking were less content with the management of their problems. Folkman and Lazarus (1985) distinguished between problem-focused and emotion-focused coping styles, indicating that task oriented coping styles have better adaptive consequences. However, Ward et al.(2002) postulated that there may be cross-cultural variations in coping effectiveness. It was posited that there are primary and secondary coping strategies. Primary strategies utilize direct action in order to change the situation or environment that is causing the stressors. Secondary strategies are more cognitive than behavioral, and usually they attempt to reappraise and change the perceptions of events and situations that are stressful. According to Ward et al., in the most simplistic terms, "primary strategies imply changing the environment to suit the self, and secondary strategies involve changing the self to suit the environment" (p. 78). It was also postulated that these coping styles were culturally based. For example, primary or direct coping strategies were more likely to be used by people from individualistic cultures while people from collectivist cultures were likely to use secondary strategies more readily.

In addition to other ways of coping that were mentioned above, some international graduate students built in relaxation time and/or sought out therapy to help them adjust and successfully complete graduate school. The students who built in relaxation time reported that this was paramount to their success, but many more felt that they were unable to find enough time for recreational activities because extra time that they had was spent preparing projects and assignments in commensurate English. The

result was that students were so focused on accomplishing their tasks that they did not use or were unaware of available resources that could provide them with help and save them time.

In the case of counseling, Lewthwaite (1997) found that although none of the students in his study saw a counselor, overall there were no major objections to seeing a counselor. Some reported that they would only discuss academic and financial problems, but would not discuss personal issues. Flathman, Davidson and Sandford (2001) reported that international students found it difficult to access mental health services. However, from their studies they found that when international graduate students did access counseling, the predominant presenting problems were relationship or marriage issues followed by depression. Some of the more unique concerns of the graduate students were adjusting to the U.S. culture, dealing with war trauma, issues around sexual orientation, surviving sexual assault, returning home and legal issues. More students stated that the major interferences were with their personal functioning rather than academic functioning, although some did have difficulties with academic functioning. What the authors were able to surmise was that it was not necessarily that international students presented problems that were different from American students, but that there were some unique issues such as visa status, adaptation to U.S. culture, decisions about returning home from the U.S. and dealing with trauma and war. How the counselor managed this was paramount to helping the student. The authors stated that it was important for the counselor to work from the student's point of reference, where culture was integrated into the counseling process in order to help the international graduate student to adjust.

There is limited literature on the coping strategies employed by international students and graduate students generally. Furthermore, the literature that is available focuses predominantly on international students as a whole, coping strategies of undergraduates in particular, or on the American graduate student population. The available literature on American graduate students indicates that graduate students utilize several types of coping strategies. Some students engage in positive thinking and tend to be more satisfied with their coping abilities. Students who use task oriented coping styles tend to have better adaptation. Some students cope by building in relaxation time, although most report spending any extra time available doing academic work. Finally, some students, (both from the American graduate student population and the international student population) seek counseling, although it appears that there is ambivalence towards seeking counseling. Many international students find it difficult to access mental health resources, and among those who do, many indicate they would limit the content of their interventions to academic and financial difficulties.

Summary

The literature on the adjustment of international students to a new cultural and academic environment emphasizes the difficulties that these students encounter. Overwhelmingly, the studies focus on the many debilitating obstacles that international students face, such as linguistic problems, cultural alienation, homesickness, educational problems, and acculturation difficulties. However, the statistics indicate that in spite of these problems that are encountered by international graduate students, they continue to enroll in record numbers in education institutions all over the U.S.A.

While studies have examined the coping strategies and adjustment of international students and the American graduate student population in general, there is an overall neglect of international graduate students. Therefore, the aim of this study is to explore relationships among a set of adjustment indicators and a set of coping styles in a sample of international graduate students. Specifically, the research question to be addressed is "what is the nature of dimensions underlying the relationship between the sets of adjustment indicators and coping styles"? International graduate students compose a unique body within the academic arena. They encounter adjustment processes both because of their international status and because of their graduate student status. Thus, this study aims to combine these two unique phenomena to ascertain how they navigate their new educational environment in order to facilitate successful adjustment and completion of their degree. Hopefully, findings will prove useful to those who work with international graduate students in facilitating smoother transitions to the American academic environment.

CHAPTER III

Method

Participants

Participants will be solicited from the University of Oklahoma. A convenient sample of international graduate students will be utilized for the study. The size of the sample will be approximately 400. The sample size was estimated using power analysis and reviewing the sample sizes that were presented in the studies from the literature reviews. Murphy and Myors (1998) reported three steps in the process of determining power. The first step is to establish a critical value for statistical significance. The second step is to estimate the effect size and the third step is to determine where the critical values in relation to distribution of test statistics are expected in the study. Using these criteria an alpha of .05 was established. Using the F table from Murphy and Myors, power for one group at the .5 level is 23.65, indicating 200 participants would be a good estimate. However, a factor analysis will be conducted on two of the instruments, and so it necessary to increase the number of participants to 400 in order to complete these analyses effectively. The participants will be international students enrolled at the masters or doctoral level.

Instruments

A demographic survey will be used. This instrument will obtain information regarding country of origin, age, gender, marital status, financial situation, ethnicity, number of years in the USA. In addition, the Coping Responses Inventory-Adult Form (CRI-Adult) and the College Adjustment Scales will be used.

Coping Responses Inventory-Adult Form (*CRI-Adult*). The CRI-Adult is a self-report inventory that identifies coping strategies. It was developed by Rudolf Moos (1993). This survey identifies cognitive and behavioral responses that individuals have used to cope with recent problems or stressful situations. There are eight scales that describe Approach Coping styles and Avoidant Coping styles. The approach coping scales are Logical Analysis (cognitive attempts to understand and prepare mentally for a stressor and its consequence); Positive Reappraisal (cognitive attempts to construe and restructure a problem in a positive way while still accepting the reality of the situation); Seeking Guidance and Support (behavioral attempts to seek information, guidance, or support); and Problem Solving (behavioral attempts to take action to deal directly with the problem). The Avoidant Coping scales include Cognitive Avoidance (cognitive attempts to avoid thinking realistically about a problem); Acceptance or Resignation (cognitive attempts to react to the problem by accepting it); Seeking Alternative Rewards (behavioral attempts to get involved in substitute activities and create new sources of satisfaction); and Emotional Discharge (behavioral attempts to reduce tension by expressing negative feelings). Each of the eight scales contains six items. The individual responds to the CRI-Adult by selecting and describing a recent stressor and utilizes a four point scale varying from “not at all” to “fairly often” to indicate their use of each of the 48 coping items. There is also a set of 10 items that provides additional information on how the individual appraises the stressor and the outcome. This instrument is suitable to assess the coping responses of adults age 18 and above and can be used with normal and inpatient populations.

The CRI-Adult was developed in five stages; identification of coping domains and initial inventory development; construction of a second version of the inventory; expansion of the item pool; field trial and revision of the inventory; field trial, final inventory revision, and collection of normative data. During the fifth stage the inventory was administered to 1,800 adults. The group included 1,100 men and 700 women. The average age was 61 years and 90% were Caucasians. Of the total population 69% were married, 19% were separated or divorced and 7% were widowed. The population was moderately educated (mean = 14.2 years) and average to above average socioeconomic status (median personal income of $22,550 per year). For an item to be placed on a dimension, the item had to be deemed as conceptually related to that dimension – it had to have good content and face validity. Three judges were in agreement on this. Items were selected when the participants utilized the entire four-point response scale. Items were constructed with a moderate to high level of internal consistency. Each item was placed on only one dimension to increase conceptual clarity and minimize overlap among dimensions. Reported internal consistency reliability coefficients (Cronbach's alpha) for the eight scales are moderate for both men and women, they range from .58 to .74.

Research indicated that the CRI-Adult is a valid instrument and can be used on a variety of different populations (Moos, 1993). There are two studies in which this instrument was used specifically with college students (Kirsch, Mearns, & Cantanzaro, 1990; Walton, 2002), although not with international student or with international populations. The CRI-Adult shows discrimination between patient and normal groups.

College Adjustment Scales (*CAS*; *Anton & Reed, 1991*). The CAS is a 108-item inventory with responses based on a 4-point Likert-type scale that assesses college

adjustment across nine scales derived from factor analysis: (a) Anxiety, a measure of clinical anxiety, focusing on common affective, and physiological symptoms; (b) Depression, a measure of clinical depression, focusing on common affective, cognitive, and physiological symptoms; (c) Suicidal Ideation, a measure of the extent of recent ideation reflecting suicide, including thoughts of suicide, hopelessness and resignation; (d) Substance Abuse, a measure of the extent of disruption in interpersonal, social academic, and vocational functioning as a result of substance use and abuse; (e) Self-Esteem, a measure of global self-esteem which taps negative self evaluations and dissatisfaction with personal achievement; (f) Interpersonal Problems, a measure of the extent of problems in relating to others in the campus environment; (g) Family Problems, a measure of difficulties experienced in relationships with family members; (h) Academic Problems, a measure of the extent of problems related to academic performance; and (i) Career Problems, a measure of the extent of problems related to career choice. The CAS was standardized on a sample of 1,146 college and university students throughout the United States. Women comprised 61% and men 38% of the sample. In terms of the ethnicity of the sample, 75% were Caucasian, 9% Black, 6% Hispanic and 10% other ethnic groups. The age range was 17 through 65 years, with a mean of 21.5 and a standard deviation of 4.95 years. Approximately 25% of the sample were freshman, 18% were sophomores, 31% were juniors, 22%, were seniors, 2 % were graduate students, and 2% did not respond. Reported internal consistency reliability coefficients for the nine scales range from .80 to .92.

Procedures

The study will be submitted to the Institutional Review Board (IRB) at the University of Oklahoma, Norman Campus for review and approval. Following approval by the IRB, the researcher will approach the International Student office at the University of Oklahoma to identify the various social clubs and organizations that are attended by international graduate students. A convenient sample of international graduate students at the university will be utilized. The researcher will then make a request to the organizers/chairs of these social clubs/organizations to attend scheduled meetings in order to solicit volunteers and explain the purpose and relevance of the study, as well as associated risks and benefits of participating in the study. Consent will be sought verbally and in written form. Members will be invited to obtain research packets from the researcher. Those who chose to participate will be provided with a stamped addressed envelope and will be asked to return the completed packet to the researcher. The packets will include the instruments, demographic questionnaire and informed consent. Participants will be strictly advised not to put their names or any identifying information on the research instruments. The questionnaires will be anonymous and coded so that scores on each test can be associated for purpose of data analysis.

Participants will be provided with an opportunity to enter their names in a drawing for an opportunity to win a $100.00 Wal-Mart gift voucher. As there will be no way of associating returned packets with names submitted for the drawing, the researcher will assume an ‘honor basis’. The gift voucher will be provided directly from the researcher to the participant to protect the identity of the person.

Data Analysis

Descriptive statistics will be computed to organize and summarize the data set. Each set of scales, both coping and adjustment scales, will be factor analyzed initially to obtain a more accurate picture of the actual dimensionality within each set. Then, relationships among variables will be analyzed using canonical correlation. This method of analysis is used to investigate relationships among two or more variable sets. This method enables the researcher to examine the dimensionality of interrelationships among variables. (Thompson, 2002). Finally, a series of multiple regression analyses will be conducted to further examine relations between the two variable sets.

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