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ACCEPTANCE

This dissertation, INTERNATIONAL STUDENTS' PSYCHOLOGICAL AND SOCIOCULTURAL ADAPTATION IN THE UNITED STATES, by SEDA SÜMER, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree Doctor of Philosophy in the College of Education, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chair, as representatives of the faculty, certify that this dissertation has met all standards of excellence and scholarship as determined by the faculty. The Dean of the College of Education concurs.

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ABSTRACT

INTERNATIONAL STUDENTS' PSYCHOLOGICAL AND SOCIOCULTURAL ADAPTATION IN THE UNITED STATES

by

Seda Sümer

International students constitute an important cohort in the United States (U.S.) colleges and universities. In order for the U.S. colleges and universities to better accommodate the significant number of international students and to recruit them in the future, it is critical to identify factors that influence these students' acculturation and adjustment processes and provide professionals with guidelines for creating culturally appropriate services and programs for them. Therefore the current study examined international students' adaptation to the U.S. in relation to their acculturation levels, coping processes, and intent to stay in the U.S. after their graduation. Center for Epidemiologic Studies - Depression scale was used as a measure of psychological adaptation. In addition, Sociocultural Adaptation Scale, Acculturation Index, and Ways of Coping Questionnaire, were used to measure sociocultural adaptation, acculturation dimensions, and coping processes, respectively. A total of 204 F1 visa holding international students participated in the current study. This project was a cross-sectional, exploratory study that measured depression and sociocultural adaptation among international students. Cronbach's alpha for each instrument was calculated to determine the internal reliability for the current sample. Pearson product moment correlational

analyses were performed to examine the relations between interval variables. Analysis of variance was utilized to examine gender differences in coping processes. Multiple regression analyses were conducted in order to explore the predictors of international students' psychological and sociocultural adaptations. Results showed that in females identification with the host culture was associated with lower levels of depression, and Escape-Avoidance was associated with higher levels of depression. Identification with the host culture and Escape-Avoidance were predictors of sociocultural adaptation for both genders. Specifically, students who identified more strongly with the American culture were less likely to experience difficulty functioning in the U.S. In addition, these students were more likely to report higher levels of English proficiency, higher likelihood of staying in the U.S. after graduation, and lower levels of depression. The study identified important gender differences with regards to acculturation dimensions and coping processes. Implications and suggestions for future research were discussed.

INTERNATIONAL STUDENTS' PSYCHOLOGICAL AND SOCIOCULTURAL ADAPTATION IN THE UNITED STATES

by
Seda Sümer

A Dissertation

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CHAPTER 1

ACCULTURATION, INTERCULTURAL CONTACT, AND ADAPTATION AMONG INTERNATIONAL STUDENTS IN THE UNITED STATES

Introduction

History shows that people brought up in one culture have always traveled to other cultures with the purpose of trading, learning, teaching, or converting others. Although, in ancient times the ability to travel more than a few miles from one's place of birth was rare and considered a privilege, over the centuries this has changed (Bochner, 2006). Technological developments, changes in legal regulations, and increase in natural and human-made disasters have led to a steady increase in the prevalence and the ability for individuals to move across their national and ethnic boundaries (Bochner). Hence, today, intercultural contact is a worldwide experience. In our modern society, individuals are exposed to various levels of cultural influence either through sojourners or being members of a society that receives sojourners. However, although intercultural contact is prevalent in today's society, it is nowhere close to being easier to deal with.

In any society, culture provides individuals with normative information about its values and offers guides for behavior and thoughts. Sojourners, such as tourists, refugees, immigrants, and international students, at first, experience a lack of such normative information and guidance regarding how to think and behave in that culture. This information vacuum often leads to a significant amount of life stress. It is suggested that

the level of stress might even increase depending on the dissimilarity between the culture of an individual and the new culture (Yang & Clum, 1994).

Bochner (2006) suggests international students make up an important group of sojourners, and culture contact is an essential part of their sojourn. International students also constitute an important cohort in U.S. colleges and universities. The number had lowered over a two year period as a result of the stringent security measures imposed by the U.S. government in reaction to the September 11, 2001 tragedy (Singaravelu, 2007). However, the number stabilized in 2006 at roughly 564,766, representing several nations, and increased to a record high of 623,805 in 2008 (Institute of International Education; IIE, 2008). These students brought into the U.S. economy more than $15.5 billion in living experiences, tuition, and fees (IIE).

In spite of the differences in language and cultural backgrounds, international students share the challenges of acculturation (Thomas & Althen, 1989). Therefore, in our understanding of international students, it is important to recognize that "being an international student" represents a common minority identity in the U.S. (Schmitt, Spears, & Branscombe, 2003). They differ in their experiences from those of refugees, immigrants, and ethnic minorities within the U.S., largely as a result of immigration issues, the temporary nature of their stay in the U.S., the need to succeed in the U.S. academic system, and the need rapidly to learn to negotiate the demands of everyday living, communication, and behavior (Johnson & Sandhu, 2007; Misra & Castillo, 2004; Mori, 2000). International students experience unique adjustment issues and a sense of isolation as a result of studying in the U.S. (Singaravelu, 2007). Hence, it is expected that some international students will experience psychological distress (Berry, 1997).

Literature shows that the interaction of several factors influence the amount of psychological distress they experience and the way they cope with this stress. Researchers suggest that these factors can be grouped into three categories, namely macrosocial influences (e.g., legal constraints, discrimination, degree of tolerance for diversity, academic pressure), factors related to an individual's background (e.g., worldview, cultural distance from the U.S. culture), and individual factors (e.g., age, gender, English language proficiency, coping skills, personality; Aponte &Johnson, 2000; Berry, 1997). Consequently, these students present a somewhat different set of needs for counseling services.

In terms of providing mental health services, professional organizations such as the American Counseling Association (2005) and the American Psychological Association (2002) have made rigorous efforts to encourage the promotion and application of multiculturally competent practices among counselor trainees, counselors (Pope-Davis & Coleman, 1996), and psychologists. However, as Fouad (1991) argues, training programs for counselors and psychologists have not expanded these competencies to the provision of mental health services to this population. This is particularly grievous inasmuch as international students are thought to experience more psychological distress than U.S. students, and, in spite of this, the adjustment of these students are usually overlooked (Mori, 2000).

Therefore, in order for the U.S. colleges and universities to better accommodate the significant number of international students and to recruit them in the future, it is critical to identify factors that influence these students' adjustment. This information

would provide professionals with guidelines for creating culturally appropriate services and programs for them.

Models of Acculturation, Intercultural Contact, and Adaptation

Acculturation

Literature shows that studies of acculturation initially were directed at changes in the social structure, economic status, and political organization of groups (Berry, 1990; Redfield, Linton, Herskovits, 1936; Sam, 2006). Acculturation has been defined differently by different authors. Early on Redfiel and colleagues (1936) suggested that acculturation is a phenomenon that occurs "when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups" (pp. 149). More recently the International Organization for Migration (IOM; 2004) identified acculturation as "The progressive adoption of elements of a foreign culture (ideas, words, values, norms, behavior, institutions) by persons, groups or classes of a given culture." Sam (2006) argued that the IOM definition ignores the fact that acculturation might also involve "rejection of" or "resistance to" cultural aspects, and that it cannot be simply defined as the "*adoption* of foreign cultural elements" (Sam).

However, with psychology's attention to individual differences, focus of acculturation research expanded to include changes at the individual level; changes in identity, values, attitudes, and behavior (Berry, 1990; Sam, 2006). Johnson & Sandhu (2007) defined acculturation as "changes in values, and behaviors that result from sustained contact with a second culture" (pp. 13). Graves (1967) referred to individual-

level changes as "psychological acculturation". For the purpose of this paper the use of the term acculturation will refer to psychological acculturation.

As previous studies in psychological acculturation reveal, there are two main theoretical approaches for studying acculturation on individual-level. These approaches are uni-dimensional and bi-dimensional models (Castro, 2003).

Uni-dimensional models. Uni-dimensional models assume that acculturation is a gradual and inevitable process of assimilation into the host-culture. Cultural adjustment occurs on a continuum; that is, as individuals adopt the cultural aspects of the host-culture, they lose some of the aspects of their home-culture (Gordon, 1964). For instance, it is expected that immigrants' proficiency in their first language will diminish as they become more fluent in the host-culture's language (Arends-Toth & van de Vijver, 2006). In other words, this model predicts that individuals' psychological adaptation in the host-culture will increase as they give up their home-cultures, and fully assimilate to the new culture (Grossman, Wirt, & Davis, 1985).

Bi-dimensional models. Bi-dimensional models of acculturation, in contrast to uni-dimensional models, posit that maintaining one's original culture and adoption of the mainstream culture are two independent dimensions (LaFromboise, Coleman & Gerton, 1993; Sanchez & Fernandez, 1993). For instance, immigrants' proficiency in speaking their first language is not assumed to influence their ability to speak the language of the host-culture.

Berry (1997) has developed the most widely researched bi-dimensional acculturation model. His conceptualization of acculturation includes four acculturation strategies that are based on the dichotomization of the two fundamental dimensions of

acculturation: maintenance of original cultural identity, and maintenance of relations with other groups. The four acculturation strategies are assimilation, integration, separation, and marginalization. The assimilation strategy refers to a preference for relinquishing one's home-culture to more fully participate in the new culture. The integration strategy involves to a preference for both maintaining one's home-culture and participating in the new culture. The separation strategy refers a preference for maintaining one's home-culture without participating in the new culture, and the marginalization strategy involves non-adherence to neither of the two cultures (Berry).

Berry (1997) argues that the particular acculturation strategy that individuals use might significantly influence the success or failure of their adaptation efforts. In support of his argument, research findings demonstrated that the integration strategy was associated with the best psychological adjustment; the marginalization strategy was associated with worst; and the assimilation and separation strategies were associated with an intermediate level of adjustment (Berry, 1997; Dona & Berry, 1994; Phinney, 1991; Ward & Rana-Deuba, 1999). Similar results were found in a study that examined the acculturation and adaptation of immigrant youth from 13 countries (Berry, Phinney, Sam, and Vedder, 2006). Specifically, those youth with an integration profile reported the best psychological and sociocultural adaptation outcomes, while those with a diffuse profile had the worst; in this study diffuse profile referred to the lack of commitment to a direction or purpose in these young people's lives.

Ward & Rana-Deuba (1999) examined the two dimensions and four strategies of acculturation and their relationship to international aid workers' adjustment in Nepal, and found that strong home-culture identification predicted enhanced psychological well-

being, whereas strong host- culture identification was associated with better sociocultural adaptation. In addition, acculturation strategies were related to psychological adjustment outcomes. Specifically, international aid workers who utilized an integration strategy reported better psychological adjustment than others, whereas those who utilized an assimilation strategy reported fewer social difficulties.

In addition, a study that investigated the acculturation dimensions and psychological adjustment among Vietnamese youths living in a primarily Anglo-American community found that involvement in the U.S. culture predicted positive functioning across personal (distress, depression, self-esteem), interpersonal (family relationships), and achievement (school GPA) domains, and involvement in Vietnamese culture predicted positive family relationships (Nguyen, Messe, & Stollak, 1999).

Intercultural Contact

The core concept that underlies the process of acculturation is intercultural contact. Researchers suggest that social identification, culture learning, and stress and coping frameworks represent broad and comprehensive conceptual bases for the study of intercultural contact and change (Ward, Bochner, & Furnham, 2001). Specifically, stress and coping framework emphasizes the affective component of intercultural contact and change; social identity framework offers a cognitive perspective; and cultural learning framework offers a behavioral analysis of intercultural contact and change.

Social identification framework. Social identification theories mainly focus on internal mental processes such as perceptions, attributions, expectations, attitudes, and values held, rather than external behaviors (Ward, Bochner, & Furnham, 2001), and they are concerned with the way people view themselves, and others. An important element of

intercultural contact and change based on social identification theories involves changes in cultural/ethnic identity. Broadly cultural/ethnic identity includes the recognition, categorization or identification of oneself as a member of an ethnic/cultural group. Social identification theories suggest that various dynamic and complex factors influence individuals' definition, redefinition, and construction of their ethnic identity. At an individual level these factors might include age, gender, class and education; at a group level they might include permanence of cross-cultural relocation, motivation for immigration; at a social context level, these factors might include existence of prejudice and discrimination, and cultural diversity in a society (Ward, Buchnam, & Furnham). Social identification theories argue that, identity change consequently might influence individuals' cross-cultural adaptation through self-esteem, psychological well-being, and acquisition of social skills

Culture learning framework. The culture learning approach has its foundations in social and experimental psychology and Argyle's (1969) work on social skills and interpersonal behaviors (Masgoret & Ward, 2006). Over the decades, culture learning has developed into two trends. The first trend revolves around the framework of communication styles or communication competence (Bochner, 1982). The second trend is more of a broadened perspective on cultural differences in communication styles, norms, and values. It focuses on the definition and prediction of sociocultural adaptation, which refers to the ability to negotiate social demands in a new cultural environment (Masgoret & Ward).

The culture learning framework stresses the significance of social skills and social interactions. It is based on the assumption that cross-cultural difficulties occur because

individuals have difficulties handling daily social interactions. Culture learning approaches intercultural contact and change by first identifying the cross-cultural differences in verbal and nonverbal communication, rules, norms and practices that contribute to misunderstandings between cultures (Masgoret & Ward, 2006). It then focuses on exploring ways to minimize confusing and frustrating interactions due to intercultural misunderstandings. The culture learning approach suggests that intercultural effectiveness is attained as any other desirable skill or behavioral goal (Masgoret & Ward), in that, adaptation can be achieved through learning the culture-specific skills and behaviors that are required to negotiate a new cultural environment (Bochner, 1972).

Stress and coping framework. The stress and coping framework of intercultural contact and change begins with some type of causal agent placing a load or demand on the organism (Aldwin, 1994; Lazarus, 1990). In the case of acculturation, these demands refer to experiences of having to deal with two cultures in contact, and having to participate in these two cultures at different levels (Berry, 2006). The stress and coping model suggests that under these circumstances, individuals consider the meaning of their experiences; they evaluate and appraise them as either a source of difficulty or as a source of opportunity. Therefore, the outcome of these appraisals might vary among individuals. Acculturation experiences may be viewed either as providing opportunities and interesting experiences or as limiting opportunities and diminishing experiences that provide meaning to life. In other words, when individuals appraise acculturation experiences as not being problematic, adaptive changes take place in the acculturating individuals with minimal difficulty, and these adaptive changes may be described as adjustment (Ward, 1996; Ward & Kennedy, 1993).

However, if the individual experiences greater levels of conflict, and appraises these experiences as problematic, then acculturative stress results. The stress and coping model suggests that acculturative stress is simply a stress reaction that occurs when individuals face problems rooted in the experience of acculturation and recognize that these conflicts cannot be handled simply by adjusting or assimilating to the new culture (Lazarus & Folkman, 1984).

In an attempt to cope with these problematic experiences, individuals utilize various types of coping strategies. Within the general stress and coping approach, Lazarus & Folkman (1984) identified two main ways of coping: (1) problem-focused coping that refers to the attempt to change or solve the problem; (2) emotion-focused coping that refers to the attempt to regulate the emotions associated with the problem. In addition to these coping strategies, Endler and Parker (1990) identified a third strategy, avoidance-oriented coping, which encompasses behavioral disengagement, denial, venting of emotions, the inability to see the potentially positive aspects of change, and mental disengagement.

Another key distinction regarding coping strategies was made by Diaz-Guerrero (1979). He identified two ways of coping: active and passive coping. Similar to problem-focused coping, active coping seeks to alter the situation that is appraised as problematic. It is suggested that these types of coping might have limited success if the problematic situation appraised by the acculturating individual lies within the host-culture, and when the host-culture is not willing to accommodate the needs of these individuals. Diaz-Guerrero defined passive coping as utilizing patience and self-modification, which is similar to the assimilation acculturation strategy. Berry (2006) argued that these strategies

can be effective if the host-culture has positive attitudes towards, and is willing to accept, acculturating individuals; otherwise, the passive coping strategies might lead to exclusion or domination.

Literature shows that there are significant relationships between ways of coping, acculturative strategies, and psychosocial adjustment. For instance, Schmitz (1992) found among immigrants in Germany that integration is positively correlated with task oriented coping, segregation is positively correlated with emotion and avoidance oriented coping, and assimilation is positively correlated with both task and emotion oriented coping. Ward & Kennedy (2001) examined the relationship between coping styles and psychological adjustment among British expatriates living in Singapore. Authors found that three coping styles were associated with psychological adjustment (i.e., fewer depression symptoms). The avoidant coping style was negatively correlated with psychological adjustment. Use of humor in coping with stress, and utilizing the coping styles of planning, active coping, and suppression of competing activities, predicted more positive psychological adjustment. Another study that examined the relationship between coping style, academic satisfaction, and psychological adjustment among Hong Kong Chinese undergraduates studying at a Canadian university showed that students who indulged in self-blame, wishful thinking, and withdrawal reported lower levels of academic satisfaction and that those who employed a detached coping style experienced greater psychological distress (Chataway and Berry, 1989).

Cross (1995) studied stress and coping among international students in the U.S., and found that direct coping strategies such as active coping and planning in dealing with academic demands were associated with lower levels of perceived stress. Also, a study

that focused on the coping styles of African, Asian, and Latin international students in the U.S. (Moore & Constantine, 2005), found that the primary types of coping styles used were social support and forbearance.

It is suggested that individuals from interdependent and collectivistic cultures such as African, Asian, and Latin American international college students, are more likely to value interpersonal connections, possess high interdependent self-conceptions, and therefore place greater importance on relational coping strategies when faced with problematic situations (Cross, 1995; Mori, 2000). In contrast, many individuals from independent cultures such as the U.S., Canada, Germany, and Australia, are more likely to value uniqueness and regard themselves as separate individuals (Constantine, Gainor, Ahluwalia, & Berkel, 2003). Therefore, it is suggested that these individuals might be more likely to utilize more direct coping strategies that are commonly used in Western cultures such as assertive self-disclosure, expression one's own thoughts, and confronting others (Lucas, 2002; Ptacek, Pierce, Eberhardt, & Dodge, 1999).

Adaptation

Adaptation refers to the process of adjustment to the existing conditions in the environment (Castro, 2003). In this paper the two terms, adaptation and adjustment will be used interchangeably. Within the framework of acculturation research, adaptation is commonly referred to as the level of "fit" between the acculturating individual and the mainstream cultural environment (Berry & Sam, 1997), and it is an ongoing process. Therefore, adaptation can be understood as the continuing psychological outcomes of acculturation processes.

Adaptation refers to the development of cultural and social skills, sensibility to the beliefs, values, and norms of the new culture and the acquisition of adequate communication skills for interacting effectively with the host-culture (Castro, 2003). It is suggested that when individuals are culturally and socially competent, they can maintain active social relations and perform successfully within the new society (LaFromboise, Coleman, & Gerton, 1993). Consequently, the development of effective cultural and social skills is reflected in a positive personal and ethnic identity, personal satisfaction, and good mental health (Castro).

Adaptation of international students is influenced by many challenges they face such as decline in their social and economic status, separation from their family and friends, lack of English proficiency, and isolation from their cultural backgrounds (Pedersen, 1991; Sandhu, 1995; Sandhu & Asrabadi, 1998). In the 1960s and 70s, research conceptualizing international students' adaptation in the U.S. mostly focused on academic performance (Halamandaris & Power, 1999). During this period, the goal of research was to better understand the factors contributing to international students' academic success, with the expectation that academic success was related to positive adaptation outcomes. In later years, research suggested that a more comprehensive definition of adaptation was necessary. Hence, definition of adaptation in current literature includes psychosocial aspects of adaptation, such as satisfaction with social and academic life, lack of loneliness, psychological well-being, and depression (Halamandaris & Power).

Tseng (2002) differentiated four major categories in explaining the adaptation of international students in the U.S.: general living, academic, socio-cultural, and personal-

psychological adaptation. He referred to general living adaptation as getting used to U.S. food, living environment, transportation, climate, and financial and health care systems. Academic adaptation included proficiency in English, knowledge about the U.S. educational system, and effective learning skills. He referred to socio-cultural adaptation issues as culture shock, culture fatigue, perceived discrimination, new social/cultural customs, norms, regulations, and roles. Personal-psychological adaptation issues, on the other hand, referred to homesickness, loneliness, depression, isolation, frustration, and loss of identity or status.

More frequently studied approach to adaptation suggests that adaptation can be broadly divided into two categories: psychological and sociocultural (Ward & Kennedy, 1993). Ward (2001) suggested that psychological adaptation is best understood form a stress and coping framework, whereas sociocultural adaptation best understood from a culture learning framework. She further argued that psychological and sociocultural adaptations are influenced by different sets of variables. Psychological adaptation is influenced by personality traits, coping strategies, and available social support, whereas sociocultural adaptation is influenced by length of residence in the new culture, cultural knowledge, language ability, and acculturation strategy (Ward, 1996).

Psychological adaptation refers to a positive sense of identity, life satisfaction, psychological well-being, and “good” mental health (Castro, 2003). Literature shows that the most common measures of psychological adaptation have been self-esteem (e.g., Grossman, Wirt, & Davids, 1985) and psychological adjustment (e.g., Roccas, Horenczyk, & Schwartz, 2000) reflected in measures of anxiety, depression, and psychosomatic symptoms (Ryder, Alden, & Paulhus, 2000).

Sociocultural adaptation refers to the ability to "fit in" the new cultural environment and to negotiate interactions with members of the new culture effectively. It incorporates communication and social interaction skills, and it is characterized by the development of adequate social and cultural skills to handle daily social situations and demands of the mainstream cultural context. Most common measures of sociocultural adaptation have examined the level of difficulty experienced in performing daily tasks such as understanding the local language, making friends, participating in social activities, or managing school or work related issues (Ward & Rana-Deuba, 1999). Sociocultural adaptation involves an understanding of the new culture's norms and values. Masgoret & Ward (2006) note that sociocultural adaptation does not necessitate international students to accept a new set of norm and values of the new culture, but it requires them to be aware of value differences and be prepared to effectively deal with them.

Literature on acculturation and adaptation demonstrates that acculturation dimensions (identification with home-culture and identification with host-culture) are associated with different adaptation outcomes. Specifically, Ward and Rana-Deuba (1999) suggest that individuals who identify weakly with their home-culture experience more problems in psychological adjustment, whereas individuals who identify weakly with the host-culture experience more difficulties in sociocultural adaptation.

In the previously discussed study by Berry et al. (2006), psychological and sociocultural adaptations were differentially affected by the particular acculturation profile adopted. Individuals with an ethnic (home-culture) profile reported moderately good psychological adaptation but poorer sociocultural adaptation, whereas those with a

national (host-culture) profile reported moderately poor psychological adaptation, and slightly negative sociocultural adaptation.

The outcomes reported by Berry et al. (2006) were supported by the results of a study of British residents in Hong Kong by Ward & Kennedy (2001). They found that a strong British identity and cultural distancing from the Chinese were associated with increased social difficulty. In addition, Wang & Mallinckrodt (2006) examined adult attachment and acculturation as predictors of Chinese/Taiwanese international students' psychosocial adjustment in the U.S. Attachment avoidance was a significant predictor for both sociocultural difficulties and psychological distress. They also found that acculturation to the U.S. culture was a significant predictor for Chinese international students' psychosocial adjustment.

As Ward and colleagues suggested both psychological and sociocultural forms of adaptation are important outcomes of acculturation (Searle & Ward, 1990; Ward & Kennedy, 1993). In addition, research demonstrated that these two components of cross-cultural adaptation are conceptually related but empirically distinct. They draw from different theoretical foundations; psychological adaptation is based on stress and coping framework, and sociocultural adaptation is based on culture learning framework. As mentioned before, they are predicted by different variables (Ward, Bochner, & Furnham, 2001). Across a range of studies that included diverse groups such as foreign diplomats, aid workers and business people it was found that the relationship between psychological and sociocultural adaptation was stronger under circumstances that involved a greater level of social and cultural integration (Masgoret & Ward, 2006; Ward & Kennedy, 1999), such that in sedentary groups (e.g., indigenous people or multi-ethnic groups in

plural societies) this relationship was stronger compared to groups in cross-cultural transition (e.g., immigrants, sojourners, or refugees). Ward and colleagues also noted that the relationship between the two adaptation outcomes is stronger among acculturating individuals who are coming from cultural backgrounds that are similar to the host-culture (Searle & Ward, 1990; Ward & Kennedy, 1993).

As it was mentioned earlier, within the stress and coping framework it is assumed that individuals are able to effectively deal with life stressors, and achieve a variety of adaptation outcomes ranging from negative to positive. Specifically, negative adaptation outcomes refer to anxiety, depression, social alienation, psychosomatic symptoms, and identity confusion (Berry & Sam, 1997; LaFromboise, Coleman, & Gerton, 1993; Phinney, 1991). Positive adaptation outcomes refer to a clear sense of personal and cultural identity, good mental health, high self-esteem, and the attainment of efficient cultural and social skills. Some of the variables that affect positive adaptation relate to the length of time individuals have been exposed to the host-culture, their coping styles (e.g., task-oriented, emotion-oriented, avoidance-oriented coping), perceived social support, personal characteristics (e.g., gender, age, ethnicity), and acculturation strategies (Berry, 1997; Ward & Kennedy, 1993).

Finally, although psychological acculturation and adaptation fundamentally appear to be similar constructs, it is important to differentiate the psychological changes that underlie acculturation from the psychological and sociocultural outcomes of acculturation. Specifically, psychological acculturation is used in referring to the process of change at the individual level that occur as a result of intercultural contact, such as changes in an individual's values, identity, and attitudes. On the other hand, the term

adaptation is used to describe the personal long-term outcomes of these processes such as psychological well-being, mental health, and attainment of efficient cultural and social skills (Castro, 2003).

Conclusions

As previously mentioned, international students share the challenges of acculturation even though they might be coming from different cultural and religious backgrounds, (Thomas & Althen, 1989). Therefore, in our understanding of international students, it is important to recognize that "being an international student" represents a common minority identity in the U.S. (Schmitt, Spears, & Branscombe, 2003). In addition, international students face different adjustment difficulties than of ethnic minorities, individuals who migrate to, or seek refuge in the U.S.; they deal with issues related to the temporary nature of their stay in the U.S., and the need to succeed in the U.S. academic system (Misra & Castillo, 2004; Mori, 2000). Therefore, it anticipated that international students will encounter various degrees of psychological distress (Berry, 1997).

Professional organizations for counseling and psychology encourage and support multiculturalism, and multiculturally competent practices (ACA, 2005; APA, 2002). Although research shows that international students tend to experience more problems than other students, and that they are far more likely than American students to terminate therapeutic relationships prematurely (Pedersen, 1991; Mori, 2000), multicultural competencies have not expanded to specifically include working with international student population as a culturally diverse group (Fouad, 1991; ACA; APA).

With the significant number of international students studying in the U.S., and for the U.S. to better accommodate and maintain recruitment of these students, it is important to identify and understand the factors that influence these students' adjustment in the U.S., and how they cope with the process of acculturation. Research geared to this purpose would be helpful in providing professionals with guidelines for creating culturally appropriate services and programs for international students.

References

Argyle, M. (1969). *Social interaction*. London: Methuen.

American Counseling Association. (2005). *ACA code of ethics*. Alexandria, VA: Author.

American Psychological Association. (2002). Ethical principles of psychologists and code of conduct. *American Psychologist, 57*, 1060 – 1073.

Aldwin, C. (1994). *Stress, coping and development*. New York, NY: Guilford Press.

Aponte, J. F., & Johnson, L. R. (2000). Role of culture in the intervention and treatment of ethnic populations. In J. F. Aponte & J. Wohl (Eds.), *Psychological interventions and cultural diversity* (2nd ed., pp. 18 – 39). Needham Heights, MA: Allyn & Bacon.

Arends-Toth, J., & Van de Vijver, F. J. R. (2006). Issues in the conceptualization and assessment of acculturation. In M. H. Bornstein & L. R. Cote (Eds.), *Acculturation and parent-child relationships: measurement and development* (pp. 33-62). Mahwah, NJ: Lawrence Erlbaum Associates.

Berry, J. W. (1990). Psychology of acculturation: Understanding individuals moving between cultures. In R. Brislin (Ed.), Applied cross-cultural psychology (pp. 232 – 253). Newbury Park, CA: Sage.

Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology, 46*, 5 – 68.

Berry, J. W. (2006). Stress perspectives on acculturation. In D. L. Sam, & J. W. Berry (Eds.), *The Cambridge Handbook of Acculturation Psychology* (pp. 43 – 57). New York, NY: Cambridge University Press.

Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). Immigration youth: Acculturation, Identity, and Adaptation. *Applied Psychology, 55*, 303-332.

Berry, J. W. & Sam, D. (1997). Acculturation and adaptation. In J. W. Berry, M. H. Segall & Ç. Kağıtçıbaşı (Eds.), *Handbook of cross-cultural psychology,* Vol. III: *Social behavior and applications* (pp. 291 – 326). Boston, MA: Allyn & Bacon.

Bochner, S. (1972). Problems in culture learning. In S. Bochner & P. P. Wicks (Eds.), *Overseas students in Australia* (pp. 65-81). Sydney: The New South Wales University Press.

Bochner, S. (1982). The social psychology of cross-cultural relations. In S. Bochner (Ed.), *Cultures in contact: Studies in cross-cultural interaction* (pp. 5-44). Oxford: Pergamon.

Bochner, S. (2006). Sojourners. In D. L. Sam, & J. W. Berry (Eds.), *The Cambridge Handbook of Acculturation Psychology* (pp. 181 – 197). New York, NY: Cambridge University Press.

Castro, V. S. (2003). Acculturation and psychological adaptation. Westport, CT: Greenwood Press.

Chataway, C. J., & Berry, J. W. (1989). Acculturation experiences, appraisal, coping and adaptation: A comparison of Hong Kong Chinese, French and English students in Canada. *Canadian Journal of Behavioral Science, 21*, 295 – 301.

Constantine, M. G., Gainor, K. A., Ahluwalia, M. K., & Berkel, L. A. (2003). Independent and interdependent self-construals, individualism, collectivism, and harmony control in African Americans. *Journal of Black Psychology, 29,* 87-101.

Cross, S. E. (1995). Self-construals, coping, and stress in cross-cultural adaptation. *Journal of Cross-Cultural Psychology, 26*, 673 – 697.

Diaz-Guerrero, R. (1979). The development of coping style. *Human Development, 22*, 320-331.

Doná, G., & Berry, J. W. (1994). Acculturation attitudes and acculturative stress of Central American refugees. *International Journal of Psychology, 29*(1), 57 – 70.

Endler, N., & Parker, J. (1990). Multidimensional assessment of coping. *Journal of Personality and Social Psychology, 58*, 844-854.

Fouad, N. A. (1991). Training counselors to counsel international students: Are we ready? *The Counseling Psychologist, 19*, 66 – 71.

Gordon, M. (1964). *Assimilation in American life.* London: Oxford University Press.

Graves, T. D. (1967). Psychological acculturation in a tri-ethnic community. *Southwestern Journal of Anthropology, 23*, 337 – 350.

Grossman, B., Wirt, T., & Davis, A. (1985). Self-esteem, ethnic identity, and behavioral adjustment among Anglo and Chicano adolescents in West Texas. *Journal of Adolescence, 8*, 57-68.

Halamandaris, K. F., & Power, K. G. (1999). Individual differences, social support, and coping with the examination stress: A study of the psychosocial and academic adjustment of first year home students. *Personality and Individual Differences, 26*, 665-685.

Johnson, L. R., & Sandhu, D. S. (2007). Isolation, adjustment, and acculturation issues of international students: Intervention strategies for counselors. In H. D. Singaravelu & M. Pope (Eds.), A Handbook for Counseling International Students in the United States (pp. 13 – 36). Alexandria, VA: American Counseling Association.

Institute of International Education. (2006). *Open doors on the web*. Retrieved July 8, 2009 from http://opendoors.iienetwork.org/?p=131590

International Organization for Migration. (2004). International migration law: Glossary on migration. Retrieved on May 16, 2007 from http://www.iom.int/jahia/webdav/site/myjahiasite/shared/shared/mainsite/published_docs/serial_publications/Glossary_eng.pdf

Lazarus, R. (1990). Theory-based stress measurement. *Psychological Inquiry, 1*, 3-13.

Lazarus, R., & Folkman, S. (1984). *Stress, coping, and appraisal*. New York: Springer.

LaFromboise, T., Coleman, H. L., & Gerton, J. (1993). Psychological impact of biculturalism: Evidence and theory. *Psychological Bulletin, 114*, 395 – 412.

Lucas, G. A. (2002). Coping style, need for cognition, and college students' attitudes toward psychological counseling. *Dissertation Abstracts International, 62*, 3808.

Masgoret, A., & Ward, C. (2006). Culture learning approach to acculturation. In D. L. Sam, & J. W. Berry (Eds.), *The Cambridge Handbook of Acculturation Psychology* (pp. 58-77). New York, NY: Cambridge University Press.

Misra, R., & Castillo, L. G. (2004). Academic stress among college students: Comparison of American and international students. *International Journal of Stress Management, 11*, 132 – 148.

Moore, J. L., & Constantine, M. G. (2005). Development and initial validation of the collectivistic coping styles measure with African, Asian, and Latin American International students. *Journal of Mental Health Counseling, 27,* 329 – 347.

Mori, S. (2000). Adressing the mental health concerns of international students. *Journal of Counseling and Development, 78*, 137-144.

Nyguen, H. H., Messe, L. A., & Stollak, G. E. (1999). Toward a more complex understanding of acculturation and adjustment: Cultural involvements and psychosocial functioning in Vietnamese youth. *Journal of Cross-Cultural Psychology, 30*, 5 -31.

Pedersen, P. B. (1991). Counseling international students. *The Counseling Psychologist, 19*, 10 – 58.

Phinney, J. (1991). Ethnic identity and self-esteem: A review and integration. *Hispanic Journal of Behavioral Sciences, 13*, 193 – 208.

Pope-Davis, D. B., & Coleman, H. L. K. (Eds.). (1996). *Multicultural counseling competencies: Assessment, education, and training, and supervision*. Thousand Oaks, CA: Sage.

Ptacek, J. T., Pierce, G. R., Eberhardt, T. L., & Dodge, K. L. (1999). Parental relationships and coping with life stress. *Anxiety, Stress, & Coping, 12*, 427-453.

Redfield, R., Linton, R., & Herskovits, M. J. (1936). Memorandum on the study of acculturation. *American Anthropologist, 38*, 149 – 152.

Roccas, S., Horenczyk, G., & Schwartz, S. H. (2000). Acculturation discrepancies and well-being: The moderating role of conformity. *European Journal of Social Psychology, 30*, 323-334.

Ryder, A., Alden, L., & Paulhus, D. (2000). Is acculturation unidimensional or bidimensional? *Journal of Personality and Social Psychology, 79*, 49-65.

Sanchez, J., & Fernandez, D. (1993). Acculturative stress among Hispanics: A bidimensional model of ethnic identification. *Journal of Applied Social Psychology, 23*, 654-668.

Sam, D. L. (2006). Acculturation and health. In D. L. Sam, & J. W. Berry (Eds.), *The Cambridge Handbook of Acculturation Psychology* (pp. 452–468). New York, NY: Cambridge University Press.

Sandhu, D. S. (1995). An examination of the psychological needs of the international students: Implications for counseling and psychotherapy. *International Journal for the Advancement of Counseling, 17*, 229–239.

Sandhu, D. S., & Asrabadi, B. R. (1998). An acculturative stress scale for international students: A practical approach to stress measurement. In C. P. Zalaquett & R. J. Wood (Eds.), *Evaluating stress: A book of resources* (Vol. 2, pp, 1–33). Lanham, MD: Scarecrow Press.

Schmitt, M. T., Spears, R., & Branscombe, N. R. (2003). Constructing a minority group identity out of shaded rejection: The case of international students. *European Journal of Social Psychology, 33*, 1-12.

Schmitz, P. G. (1992). Immigrant mental and physical health. *Psychology and Developing Societies, 4*, 117–131.

Searle, W., & Ward, C. (1990) The prediction of psychological and sociocultural adjustment during cross-cultural transitions. *International Journal of Intercultural Relations, 14,* 449 – 464.

Singaravelu, H. D. (2007). *Preface*. In H. D. Singaravelu & M. Pope (Eds.), A Handbook for Counseling International Students in the United States (pp. ix – xi). Alexandria, VA: American Counseling Association.

Thomas, K., & Althen, G. (1989). Counseling foreign students. In P. B. Pedersen, J. G. Draguns, W. J. Lonner, & J. E. Trimble (Eds.), Counseling across cultures (3rd ed., pp. 205 – 241). Honolulu, HI: University of Hawaii Press.

Tseng, W. (2002). International students' strategies for well-being. *College Student Journal, 4*, 591-597.

Ward, C. (1996). *Acculturation*. In D. Landis & R. S. Bhagat (Eds.), Handbook of intercultural training (2nd ed, pp. 124 – 147). Thousand Oaks, CA: Sage.

Ward, C. (2001). The ABCs of acculturation. In D. Matsumoto (Ed.), *The handbook of culture and psychology* (pp. 411 – 445). New York, NY: Oxford University Press.

Ward, C., Bochner, S., & Furnham, A. (2001). The psychology of culture shock. New York, NY: Routledge.

Ward, C., & Kennedy, A. (1993). Acculturation and cross-cultural adaptation of British residents in Hong Kong. *The Journal of Social Psychology, 133*, 395 – 397.

Ward, C., & Kennedy, A. (1999). The measurement of sociocultural adaptation. *International Journal of Intercultural Relations, 23*, 659 – 677.

Ward, C., & Kennedy, A. (2001). Coping with cross-cultural transition. *Journal of Cross-Cultural Psychology, 32*, 636 – 642.

Wang, C. D., & Mallinckrodt, B. (2006). Acculturation, attachment, and psychosocial adjustment of Chinese/Taiwanese international students. *Journal of Counseling Psychology, 53*, 422 – 433.

Ward, C., & Rana-Deuba, A. (1999). Acculturation and adaptation revisited. *Journal of Cross-Cultural Psychology, 30,* 422 – 442.

Yang, B., & Clum, G. A. (1994). Life stress, social support, and problem-solving skills predictive of depressive symptoms, hopelessness, and suicide ideation in an Asian student population: A test of a model. *Suicide & Life – Threatening Behavior, 24*, 127 – 135.

CHAPTER 2

INTERNATIONAL STUDENTS' PSYCHOLOGICAL AND SOCIOCULTURAL ADAPTATION IN THE U.S.

Introduction

The United States attracts more international students than any other country in the world (Institute of International Education; IIE, 2008a). In 2008, U.S., as the top host destination, hosted 20% of the 2.9 million worldwide international students who sought post-secondary level education in a foreign country, followed by United Kingdom (13%) and France (8%; IIE). Also in 2008, the number of international students in U.S. increased by 7% to a record high of 623,805 representing several nations with India being the leading country of origin followed by China, and South Korea (IIE, 2008b). Despite language and cultural background differences international students share a common minority identity of "being an international student" in the U.S. (Schmitt, Spears, & Branscombe, 2003). This common identity is established based on their shared experience of acculturation, and provides international students with a natural support network (Schmitt et al., 2003).

The experiences of international students differ from those of refugees, immigrants, and ethnic minorities within the U.S. (Singaravelu, 2007). International students experience unique adjustment issues related to the temporary nature of their stay in the U.S., the need to succeed in the U.S. academic system, and the need rapidly to learn to negotiate the demands of everyday living, communication, and behavior

(Johnson & Sandhu, 2007; Misra & Castillo, 2004; Mori, 2000). In addition, research shows that international students experience more psychological distress than U.S. students in general, and, in spite of this, the adjustment of these students is usually overlooked (Mori). Therefore, in order for U.S. colleges and universities to better accommodate the significant number of international students and to recruit them in the future, it is critical to identify factors that influence their acculturation and adjustment processes and provide professionals with guidelines for creating culturally appropriate services and programs for them.

Acculturation

Literature shows that studies of acculturation initially focused on changes in the social structure, economic status, and political organization of groups (Berry, 1990; Redfield, Linton, & Herskovits, 1936; Sam, 2006). However, with psychology's attention to individual differences, the focus of acculturation research expanded to include changes at the individual level; changes in identity, values, attitudes, and behavior (Berry; Sam). Johnson and Sandhu (2007) defined acculturation as "changes in values, and behaviors that result from sustained contact with a second culture" (pp. 13). Graves (1967) referred to individual-level changes as "psychological acculturation". In this paper, the term acculturation will refer to psychological acculturation.

Berry (1997) developed the most widely researched bi-dimensional acculturation model. The core construct of Berry's model is that psychological and behavioral changes occur as a result of an individual's sustained contact with members of other cultural groups (Ward & Rana-Deuba, 1999). Berry's conceptualization of acculturation includes four acculturation strategies that are based on the dichotomization of the two fundamental

dimensions: maintenance of original cultural identity, and maintenance of relations with other groups. The four acculturation strategies are assimilation, integration, separation, and marginalization. The assimilation strategy refers to a preference for relinquishing one's home-culture to more fully participate in the new culture. The integration strategy involves a preference for both maintaining one's home-culture and participating in the new culture. The separation strategy refers to a preference for maintaining one's home-culture without participating in the new culture, and the marginalization strategy involves non-adherence to either of the two cultures (Berry).

Research suggests that the particular acculturation strategy that individuals use might significantly influence the success or failure of their adaptation efforts (Berry, 1997). Specifically, as demonstrated by a study among immigrant youth, who came from 26 different cultural backgrounds and lived in 13 countries (i.e., Australia, Canada, Israel, New Zealand, and the U.S.), the integration strategy was associated with the best psychological and sociocultural adaptation; the marginalization strategy was associated with the worst; and the assimilation and separation strategies were associated with an intermediate level of adjustment (Berry, Phinney, Sam, & Vedder, 2006). Ward (2001) suggested that psychological adaptation is best understood from a stress and coping framework, whereas sociocultural adaptation best understood from a culture learning approach. She further argued that psychological and sociocultural adaptations are influenced by different sets of variables. Psychological adaptation is influenced by personality traits, coping strategies, and available social support, whereas sociocultural adaptation is influenced by length of residence in the new culture, cultural knowledge, language ability, and acculturation strategy (Ward, 1996).

Research among international aid workers in Nepal found that strong home-culture identification predicted enhanced psychological well-being, whereas strong host-culture identification was associated with better sociocultural adaptation (Ward & Rana-Deuba, 1999). Similarly a study among Vietnamese youth reported that involvement in the U.S. culture predicted positive functioning across personal (distress, depression, self-esteem), interpersonal (family relationships), and achievement (school GPA) domains; involvement in Vietnamese culture predicted positive family relationships (Nguyen, Messe, & Stollak, 1999).

Literature on acculturation presents consistent empirical evidence that maintenance of both original cultural identity and relations with other groups is associated with better adaptation outcomes (Berry, Phinney, Sam, & Vedder, 2006). Specifically, identification with home-culture is associated with psychological well-being, and identification with host-culture is associated with positive functioning in daily living (Nguyen, Messe, & Stollak, 1999; Ward & Rana-Deuba, 1999). In line with the literature, the current study utilized the two dimensions of acculturation in examining this variable: identification with home culture and identification with host culture.

Coping

The stress and coping model of intercultural contact and change begins with some type of causal agent placing a load or demand on the organism (Aldwin, 1994; Lazarus, 1990). In the case of acculturation, these demands refer to experiences of having to deal with two cultures in contact, and having to participate in these two cultures at different levels (Berry, 2006). The stress and coping model suggests that under these circumstances, individuals consider the meaning of their experiences; they evaluate and

appraise them as either a source of difficulty or as a source of opportunity. Hence, the outcome of these appraisals might vary among individuals depending on whether an individual views acculturation experiences as providing opportunities and interesting experiences or as limiting opportunities and diminishing experiences that provide meaning to life.

Literature shows that there are significant relationships between ways of coping, acculturative strategies, and psychosocial adjustment. For instance, Schmitz (1992) found among immigrants in Germany that integration is positively correlated with task oriented coping, segregation is positively correlated with emotion and avoidance oriented coping, and assimilation is positively correlated with both task and emotion oriented coping. Also, Kennedy (1994) reported a positive relationship between using humor as a way of coping and lower levels of mood disturbance among international students in New Zealand. Chataway and Berry (1989) investigated coping styles, satisfaction and psychological distress among Chinese students in Canada. In this study, the authors reported a significant relationship between coping styles and satisfaction in dealing with important life problems. Specifically, Chinese students who engaged in positive thinking reported higher levels of satisfaction with their ability to cope. However, students who used withdrawal and wishful thinking as ways of coping reported being less content with the management of their problems. In addition, detachment was significantly related to an increase in psychological and psychosomatic symptoms (Chataway & Berry).

Ward and Kennedy (2001) investigated the coping styles and psychological adjustment of British expatriates in Singapore. The authors reported that approach coping and coping humor were associated with lower levels of depression. Conversely,

avoidance coping predicted higher levels of depression. Similarly, Berno and Ward (1998) reported that avoidant styles were also associated with greater psychological adjustment problems among international students in New Zealand. In addition, Kennedy's (1998) research with Singaporean students, who were studying abroad, revealed that direct, approach-oriented coping strategies predicted psychological well-being.

Literature on coping suggests a relation between styles of coping and adjustment outcomes. Overall, studies suggested that coping strategies such as positive thinking, approach coping, and using humor predicted psychological well-being, whereas withdrawal, wishful thinking, and avoidance predicted adjustment problems (Berno & Ward, 1998; Chataway & Berry, 1989; Kennedy, 1994; Ward & Kennedy, 2001). The current study examined coping variable through 8 coping processes: confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem solving, and positive reappraisal.

Gender

As one of the relevant demographic variables, gender has been examined in relation to stress, coping, and adjustment among various groups such as international students, American college students, and immigrants. Studies that examined international students showed that female students had higher emotional, physiological and behavioral reactions to stressors (Misra, Crist, & Burant, 2003), and also were more likely to feel homesick and lonely than male students (Rajapaksa & Dundes, 2002). In contrast, Poyrazli, Arbona, Nora, McPherson, & Pisecco (2002) reported that male international students scored higher on the loneliness scale than did female international students. In

the same study no differences between men and women were found in terms of general adjustment. Studies among American college students regarding gender in relation to coping demonstrated that women scored higher on emotion-oriented coping, avoidance-oriented coping, distraction, and social diversion, whereas men scored higher on task-oriented coping (Endler & Parker, 1994; Cosway , Endler, Sadler, & Deary, 2000).

In summary, stress, coping, and adjustment research regarding gender differences has revealed mixed results. In an effort to offer greater clarity, the current study examined relationships among gender variables and adjustment and coping.

Intent to Stay in the U.S.

Toward the end of their studies, international students usually finalize their decisions about where to live after their graduation, either at home or in the U.S. (Khoo, Abu-Rasain, & Hornby, 1994). Despite their initial intention to be in the U.S. only for a temporary period of time, a number of international students encounter extensive periods of indecisiveness as they evaluate the advantages and disadvantages of either staying in the U.S. or returning to their home country (Thomas & Althen, 1989). Mori (2000) suggested that this decision-making process is likely to be complicated as it involves international students' future career plans as well as their altered sense of identity.

International students' decisions about whether to stay in the U.S. after graduation or not might influence their motivation to adjust to U.S. society in many domains such as culture, food, values, language, and interactions with host-nationals; in other words, their sociocultural adaptation in the U.S. An intention to stay in the U.S. may motivate students to become more familiar with U.S. culture. Literature does not provide empirical evidence regarding the influence of this variable on adaptation of international students.

The current study aims to contribute to the literature in this regard. Hence, we hypothesized that international students who plan to stay in the U.S. after graduation are more strongly motivated to become involved in its culture and would, therefore, experience less difficulty in sociocultural adaptation.

Adaptation

Adaptation refers to the process of adjustment to the existing conditions in the environment (Castro, 2003). Within the framework of acculturation research, adaptation is commonly referred to as the level of "fit" between the acculturating individual and the mainstream cultural environment (Berry & Sam, 1997), and it is an ongoing process. Therefore, adaptation can be understood as the continuing psychological and behavioral outcomes of acculturation processes. For the purpose of this paper, the terms adjustment and adaptation will be used interchangeably.

Current literature suggests that intercultural adaptation can be broadly divided into two categories: psychological and sociocultural (Ward & Kennedy, 1993). In a study of British residents in Hong Kong by Ward and Kennedy (2001), the authors found that a strong British identity and cultural distancing from the Chinese were associated with increased social difficulty. In addition, Wang and Mallinckrodt (2006) examined adult attachment and acculturation as predictors of Chinese/Taiwanese international students' psychological and sociocultural adaptations in the U.S. Attachment avoidance, which involves an excessive need for self-reliance and fear of interpersonal intimacy or dependence, was a significant predictor for both sociocultural and psychological adaptation difficulties. They also found that acculturation to the U.S. culture was a significant predictor for Chinese international students' psychological and sociocultural

adaptation. The current study used a measure of depression in examining psychological adaptation.

In spite of the general interest in the constructs of stress and coping, acculturation, and adaptation, relatively few published studies have actually examined coping strategies and acculturation in relation to adaptive outcomes among international students in the United States. As indicated earlier, studies involving gender differences in coping and psychological adjustment have shown mixed results. Moreover, the variable of intent to stay in the U.S. has not yet been studied in relation to the acculturation and coping strategies used by international students, although it is suggested that for many international students it might be stressful to finalize the decision to whether return to their home country or stay in the U.S. (Thomas & Althen, 1989). Further research in this area is needed to clarify this relationship for international students. Better understanding the adjustment processes of international students in relation to coping and their intention to stay in the U.S. after graduation might offer useful information regarding how to tailor services provided to international students in college and university settings. Therefore, the current study aims to contribute to an understanding of international students' psychological and sociocultural adaptation in the U.S. in relation to their coping strategies, acculturation dimensions, gender, and intent to stay in the U.S. after graduation. Based on the review of the literature, the following hypotheses are generated:

1. Identification with host culture will be associated with fewer difficulties in sociocultural adaptation.
2. Identification with home culture will be associated with fewer problems with psychological adaptation.

3. Higher likelihood of intent to stay in the U.S. after graduation will be associated with fewer difficulties in sociocultural adaptation.

In addition to these hypotheses, the current study also aims to answer the following research questions:

4. Will acculturation dimensions, coping processes, and intent to stay in the U.S. after graduation predict psychological adaptation among international students?
5. Will acculturation dimensions, coping processes, and intent to stay in the U.S. after graduation predict sociocultural adaptation difficulties among international students?
6. Are there gender differences in predicting psychological adaptation and sociocultural adaptation?

Method

Participants

A total of 204 international students participated in the current study. Participants held an F-1 type of student visa, which is given to individuals who engage in full course of academic or language study in an accredited educational program in the U.S. Participants were recruited via an invitational email through Offices of International Students and Services at eight different college campuses located in the eastern region of the U.S. Fifty-one percent of the participants were women and 48% were men (1% of the participants did not respond). The age of the students ranged from 17 to 50, with an average of 26.75 years (*SD* = 5.66). The educational levels of participants were doctoral (48%), master's (28%), undergraduate (21%), and other (2%). Students' GPA ranged from 2.00 to 4.00 (*M* = 3.64, *SD* = .34). In terms of race-ethnicity, 51% percent of the

participants were Asian/Pacific Islander, followed by 19% White European, 9% Spanish/Hispanic/Latino/a, 4% Middle Eastern, 7% Black, and 9% identified themselves in the "other" category (1% of the participants did not respond). The current sample was representative of overall international student population in the U.S. in terms of the ratio for race-ethnicity of students for the general population, which is as follows: 54% Asian/Pacific Islander, followed by 5% White European, 4% Spanish/Hispanic/Latino/a, 2% Middle Eastern, and 1% Black (IIE, 2008b).

Only 26% percent of the participants were married, and 20% of them reported residing with their spouses in the U.S. Seventy-two percent were single and 2% were divorced. The length of stay of the participants in the U.S. ranged from 2 months to 120 months (10 years), with an average of 45 months (3.7 years; *SD* = 25.77).

Measures

Demographics Questionnaire. Participants were asked to complete a 12-item demographics questionnaire that gathered information regarding gender, age, marital status, world region, race/ethnicity, length of stay in the U.S., and participant's intent to stay in the U.S. after graduation. International students' intent to stay was determined by asking them "How likely it is that you would stay in the U.S. after graduation, if possible?" They were asked to respond on a 4-point Likert scale with responses ranging from 1 (not likely) to 4 (very likely). An unpublished study examined this variable as the "Residency Plan" by asking "Do you plan to remain in the U.S. after graduation?" and participants were provided with a 6-point Likert scale (1 = not at all to 6 = definitely; Omonishi, Chung, Gange, 2008). In the current study, the item attempted to measure the likelihood of staying in the U.S. if it were possible rather than a concrete plan to do so. In

addition, this variable was entered in the data analyses as a categorical variable. Although the responses were collected on a Likert-type scale, they do not represent a linear range on a continuum.

Center for Epidemiologic Studies-Depression (CES-D). The CES-D (Radloff, 1977) was used to measure depression as an indication of international students' psychological adjustment. This instrument contains 20 items and includes six components which are depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance. Participants were asked to indicate within the last week how often they experienced the symptoms related to depression, with responses ranging from 1 (rarely or none of the time) to 4 (most or all of the time). The scores for all 20 items were added, with possible total scores ranging from 20 to 80. Reliability and validity of this scale have been tested in general and psychiatric populations; results of this study suggested internal reliability coefficients of .85 for the general population, and .90 for the psychiatric population (Radloff). Also, in a later study Radloff (1991) reported coefficient alphas of .87 for college student population, and a range of .84 to .87 for the general population. The validity of this instrument is supported by a significant correlation with the Symptom Checklist -90 (.83), another measure of depression, by discrimination of psychiatric inpatients from the general population, and by correlations with clinical ratings of depression such as the Hamilton Clinician's Rating Scale (.44; Radloff, 1977). The alpha coefficient of this instrument for the current sample was .77.

Socio-Cultural Adaptation Scale (SCAS). The SCAS (Ward & Kennedy, 1999) was used to measure participants' sociocultural adaptation, the degree of difficulty that

they encounter in daily social situations as a result of cultural differences. The SCAS contains 29 items that inquire about the difficulty participants experience in situations such as making friends with local people, going to social events, and adapting to the local accommodations. Participants were asked to indicate the amount of difficulty they have experienced with each item, using a 5-point Likert scale with responses ranging from 1 (*no difficulty*) to 5 (*extreme difficulty*). Higher scores are considered indicative of more difficulties. Previous research that used this scale with students studying overseas, such as Chinese students in Singapore and Japanese students in New Zealand, reported internal reliability alpha coefficients of .85 and .88, respectively (Ward & Kennedy). The instrument's construct validity was supported by significant correlations (range = .20 - .62, M = .38) between sociocultural adaptation and psychological adjustment as measured by the Zung Self-rating Depression Scale (Ward & Kennedy). In addition, the internal reliability of this instrument was reported to be .94 among Chinese international students living in the U.S. (Wang & Mallinckrodt, 2006). Internal reliability coefficient for SCAS for the current sample was .93.

Ways of Coping Questionnaire (WAYS). The WAYS was utilized to measure coping processes of international students. The WAYS measures thoughts and actions an individual uses to cope with a specific stressful situation (Folkman & Lazarus, 1988). The WAYS consists of 66 items which are distributed into eight scales: confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem solving, and positive reappraisal. The internal consistencies of these scales range from .61 (distancing) to .79 (positive reappraisal). Folkman and Lazarus (1985) argued that measuring test-retest reliability for Ways of

Coping Questionnaire is problematic given coping is a process that changes over time and depending on the situation. Items of the questionnaire provide face validity in measuring coping processes, and its wide use in coping research literature suggests the soundness of its theoretical underpinnings. Participants were asked to respond on a 4- point Likert scale, with responses ranging from 0 (does not apply and/or not used) to 3 (used a great deal). For the current study, participants were asked to answer the items on WAYS based on their experiences in response to stressful situations and/or problems associated with life in the United States, such as homesickness, prejudice, and communication difficulties. Scoring was computed for each participant by simply summing all the points for each scale. Cronbach's alpha coefficients for WAYS subscales f or the current sample were as follows: WAYS - Confrontive coping scale (.65), WAYS
- Seeking social support scale (.81), WAYS – Distancing (.66), WAYS - Self-Controlling scale (.66), WAYS - Accepting responsibility scale (.66), WAYS – Escape-avoidance scale (.70), WAYS – Planful problem solving scale (.72), and WAYS – Positive reappraisal scale (.77).

Acculturation Index (AI). The AI (Ward & Kennedy, 1994) was used to measure participants' acculturation dimensions. The AI measures two independent dimensions of acculturation attitudes, which are (1) attitudes toward the home culture and (2) attitudes toward the host culture (e.g., the dominant culture in the United States), and four acculturation strategies: integration, separation, assimilation, and marginalization. The AI consists of 21 items that assess values, cognitive, and behavioral domains of acculturation (e.g., pace of life, religious beliefs, food, and recreational activities). Participants were asked to consider two questions regarding their current life styles in regards to these

items, “How similar are your experiences and behaviors to those of people sharing your culture of origin?” and “How similar are your experiences and behaviors to those of European Americans in the U.S.?” This instrument uses a 7-point Likert scale with responses ranging from 1 (*not at all similar*) to 7 (*very similar*). The approach results in two independent scale scores, indicating cultural identification toward the home culture and identification toward the host (U.S.) culture. Scores range from 21 to 147 for each scale; higher scores indicate higher identification. Previous research (Ward & Kennedy; Ward & Rana-Deuba, 1999) that studied Chinese immigrants in Singapore, and sojourners in New Zealand reported internal reliabilities for home culture scale ranging from .91 to .94, and for host culture scale ranging from .89 to .97. Wang and Mallinckrodt (2006) who studied Chinese international students in the U.S. reported coefficient alphas for the home culture subscale as .95, and .92 for the host culture subscale. Although it appears that there is not any published validity study regarding this instrument, the findings of studies that utilized Acculturation Index have been consistent with theory and literature regarding acculturation. This instrument is used in several studies measuring acculturation and has face validity in measuring this construct. For the current sample reliability coefficient of the Identification with host culture subscale was .93, and of the Identification with home culture subscale it was .94.

Procedures

The current study was conducted online. Participants were recruited through international students’ offices at eight universities in the eastern region of the United States. An invitational e-mail was forwarded to all of the international students who are included in the listserv of these offices. This e-mail briefly informed students about the

study, and invited them to participate at a designated website. Participation in this study was voluntary and anonymous; no identifiable information was collected.

Web-based data collection procedures entail a concern for internet accessibility by the targeted population (Gosling, Vazire, Srivastava, & John, 2004). Nevertheless, international students frequently use the internet for communication with their families and friends in their home countries, and are provided easy access to the internet at their campuses (e.g., computer labs, libraries). Therefore, for this particular population accessibility of the internet may not present a significant concern.

Literature suggests that in order to minimize the effects of repeat responders, it is important to match consecutive responses on key demographic characteristics like age, gender, degree sought, and race-ethnicity (Gosling et al., 2004). Therefore, a set of item responses were compared among consecutive responses to identify duplicate or near-duplicate entries, and if any matched responses were detected, only the first entry was kept for data analyses.

Plan of Data Analysis

This project was a cross-sectional, exploratory study in which depression and sociocultural adaptation was measured among international students. Cronbach's alpha for each instrument was calculated to determine the internal reliability for the current sample. Pearson product moment correlational analyses were performed to examine the relations between interval variables. Analysis of variance was utilized to examine gender differences in coping processes. Multiple regression analyses were conducted in order to explore the predictors of international students' psychological and sociocultural adaptations.

Results

Correlational Analyses

Pearson product moment correlation analyses were performed to look at the relation between interval variables used in the study **(**see Table 1). The means, standard deviations, and range of scores for these variables are also presented in Table 1. Analyses indicated that depression was negatively correlated with international students' intent to stay in the U.S. after graduation (r = -.17, p <.05), and perceived English proficiency (r = -.18, p < .05). Students who reported lower likelihood of staying in the U.S. and lower levels of perceived English proficiency reported higher levels of depression.

Similarly, sociocultural adaptation difficulty was found to be negatively correlated with intent to stay (r = -.16, p < .05) and perceived English proficiency (r = -.34, p < .01). Students who had higher likelihood of staying in the U.S. and higher level perceived proficiency in English reported lower levels of sociocultural adaptation difficulties. It was also found that depression and sociocultural adaptation difficulty were intercorrelated (r = .38, p < .01). Students who scored high on the depression measure also scored high on the sociocultural adaptation measure, indicating that students with greater sociocultural adaptation difficulties also reported higher levels of depression.

Identification with home culture was only correlated negatively with gender (r = -.23, p < .01). In other words, female students reported higher levels of identification with their home cultures than male students. Identification with the host culture was positively correlated with intent to stay (r =.31, p < .01) and perceived English proficiency (r =.36, p < .01), and negatively correlated with depression (r = -.24, p < .01), and sociocultural adaptation (r = -.46, p < .01). Specifically, students who reported higher levels of

identification with the American culture reported higher likelihood of staying in the U.S. after graduation, higher levels of perceived English proficiency, lower levels of depression, and lower levels of difficulty in sociocultural adaptation. In addition, the two subscales –identification with home culture and identification with host culture – were not correlated, indicating the independence of these scales ($r = .11$, $p > .05$).

In terms of examination of coping processes, it is important to note that 77 of the 204 participants did not respond to any of the WAYS items. This might have been due to it being the longest questionnaire with 66 items and been placed as the last questionnaire on the survey website. The number of participants who did not respond to the WAYS items was balanced in terms of gender distribution (39 females and 38 males). The independent t-test results indicated that participants who skipped the WAYS items (M = 25.20, SD = 4.80) were younger than participants who responded to these items (M = 27.68, SD = 5.94). In addition, Pearson's correlation coefficient suggested that education level of participants was positively correlated with responding to WAYS items ($r = .19$, $p > .01$). Specifically, participants who responded to WAYS items tended to have higher levels of education.

Depression was positively correlated with three of the WAYS coping processes: Self-Controlling ($r = .21$, $p < .05$), Accepting Responsibility ($r = .28$, $p < .01$), and Escape-Avoidance ($r = .37$, $p < .01$). Self-Controlling coping process refers to one's efforts to regulate one's feelings and actions; Accepting Responsibility coping process refers to acknowledging one's own role in the problem with a simultaneous efforts of trying to put things right; Escape-Avoidance coping process refers to wishful thinking and behavioral efforts to escape and avoid the problem.

Table 1 - *Bivariate Correlations, Means, Standard Deviations, and Range of Scores*

	1	2	3	4	5	6	7
1. Gender	-	-.02	-.07	-.02	-.15	.01	-.09
2. Age		-	.27**	-.00	-.05	.07	-.07
3. Length of Stay			-	.14	-.03	-.02	.04
4. Intent to Stay				-	-.17*	-.16*	.31**
5. Depression					-	.38**	-.24**
6. Sociocultural Adaptation						-	-.46**
7. Identification w/ Host Cult.							-
8. Identification w/ Home Cult.							
9. Self Controlling							
10. Accepting Responsibility							
11. Escape - Avoidance							
12. Seeking Social Support							
13. English Proficiency							
Mean		26.75	45.24	2.61	38.67	57.17	78.21
Standard Deviation		5.66	25.77	1.06	7.60	17.79	22.78
Range		17-50	2-120	1-4	20-64	29-120	26-140

* $p < .05$. ** $p < .01$.

Table 1 (Continued) - *Bivariate Correlations, Means, Standard Deviations, and Range of Scores*

	8	9	10	11	12	13
1. Gender	-.23**	-.02	-.12	-.09	-.22*	.01
2. Age	.08	.03	-.09	-.15	.00	-.02
3. Length of Stay	-.14	.13	.01	.07	.12	.07
4. Intent to Stay	-.10	-.07	-.07	-.04	.03	.15*
5. Depression	.14	.21*	.28**	.37**	.12	-.18*
6. Sociocultural Adaptation	.09	.27**	.21*	.38**	.01	-.34**
7. Identification w/ Host Cult.	.11	-.22*	-.19*	-.21*	-.02	.36**
8. Identification w/ Home Cult.	-	-.03	.00	.00	.06	.06
9. Self Controlling		-	.50**	.55**	.50**	-.26**
10. Accepting Responsibility			-	.57**	.43**	-.36**
11. Escape - Avoidance				-	.36**	-.15
12. Seeking Social Support					-	-.06
13. English Proficiency						-
Mean	105.23	8.79	4.42	6.67	7.42	13.60
Standard Deviation	24.55	4.06	2.87	4.35	4.60	2.57
Range	33-147	0-19	0-12	0-17	0-18	6-16

* $p < .05$. ** $p < .01$.

Sociocultural adaptation also was positively correlated with Self-Controlling ($r = .27$, $p < .01$), Accepting Responsibility ($r = .21$, $p < .05$), and Escape-Avoidance ($r = .38$, $p < .01$). In other words, students who made greater use of the three coping processes when confronting stressful situations associated in the U.S. (i.e., homesickness, prejudice, and communication difficulties) reported higher levels of depression and sociocultural adaptation difficulties.

Analysis of Variance

Individual analyses of variance were performed to examine gender differences in coping processes. Results showed that female students reported significantly higher utilization of positive reappraisal, F (1, 122) = 8.04, $p < .01$, and seeking social support, F (1, 123) = 6.26, $p < .05$ than male students. There were no significant gender differences for other coping processes.

In addition, mean differences of four responses (1= Not likely, 2= Somewhat likely, 3= Likely, 4= Very likely) to the item regarding intent to stay were examined for the two dependent variables: depression and sociocultural adaptation. There were no significant mean differences for sociocultural adaptation. For depression, however, there were significant mean differences between “Somewhat likely” (n = 46, M = 38.12, SD = 7.21) and “Likely” (n = 32, M = 36.22, SD = 5.43), as well as between “Somewhat likely” and “Very likely” (n = 39, M = 36.95, SD = 7.49), F (3, 139) = 5.12, $p < .01$. There were no significant mean differences between “Not Likely” (n = 26, M = 38.12, SD = 7.21) and the other categories.

Multiple Regression Analyses

Two multiple regression analyses were performed for each criterion variable: depression and sociocultural adaptation. Based on significant bivariate correlations the following predictor variables were allowed to enter the regression model: intent to stay in the U.S. after graduation, Escape-Avoidance, Self-Controlling, and Accepting Responsibility coping processes, and identification with host culture. Two hundred and four international students participated in the study; however, only complete data for 123 was entered for regression analyses. Separate regression analyses were conducted for female and male students.

Depression. When these predictor variables were regressed on depression for female students, the resulting model was significant (F (5, 58) = 5.61, $p < .01$) and accounted for 33% of the variance (see Table 2). The standardized beta coefficients for identification with the host culture ($\beta = -.40$) and Escape-Avoidance ($\beta = .47$) were significant. Consequently, among female students higher identification with host culture was associated with lower levels of depression, and greater use of Escape-Avoidance was associated with higher levels of depression. When the predictor variables were regressed for male students the resulting model was not significant.

Sociocultural Adaptation. When intent to stay in the U.S. after graduation, Escape-Avoidance, Self-Controlling, Accepting Responsibility, and identification with the host culture were used as predictor variables, the resulting model was significant for both female and male students.

Table 2 - *Summary of Multiple Regression Analysis for Variables Predicting Depression for Females (N = 64)*

Variable	*B*	*SE B*	*β*
Intent	-.34	.83	-.05
Identification with Host Culture	-.14	.04	-.40**
Escape-Avoidance	.89	.26	.47**
Self-Controlling	-.07	.26	-.04
Accepting Responsibility	-.57	.39	-.20

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

Specifically, for female students the predicting model accounted for 27% of the variance in sociocultural adaptation (F (5, 58) = 5.65, $p < .01$; see Table 3). For male students the model accounted for the 26% of the variance (F (5, 53) = 5.15, $p < .01$; see Table 4). For both females and males, only the standardized beta coefficients for the Escape-Avoidance coping process (β= .32 for females; β=.35 for males) and identification with host culture (β= -.43 for females; β= -.33 for males) were significant. The signs of the beta coefficients showed that higher identification with the American culture was associated with lower levels of sociocultural adaptation difficulties and greater use of Escape-Avoidance was associated with higher levels.

Table 3 - *Summary of Multiple Regression Analysis for Variables Predicting Sociocultural Adaptation for Females (N = 64)*

Variable	*B*	*SE B*	*β*
Intent	.45	2.03	.03
Identification with Host Culture	-.36	.10	-.43**
Escape-Avoidance	1.47	.64	.32*
Self-Controlling	.30	.63	.06
Accepting Responsibility	-.42	.96	-.06

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

Table 4 - *Summary of Multiple Regression Analysis for Variables Predicting Sociocultural Adaptation for Males (N = 59)*

Variable	*B*	*SE B*	*β*
Intent	-2.63	2.18	-.16
Identification with Host Culture	-.26	.11	-.33*
Escape-Avoidance	1.36	.61	.35*
Self-Controlling	-.11	.63	-.03
Accepting Responsibility	-.82	.85	-.14

* $p < .05$.

Discussion

In this study international students were examined in terms of their psychological and sociocultural adaptation to the U.S. Depression was used as a measure of psychological adaptation. Acculturation, eight coping processes, and intent to stay in the U.S. were used to predict depression and sociocultural adaptation. Results showed that for female students identification with the host culture was associated with lower levels of depression, and Escape-Avoidance coping process, which is defined as wishful thinking and includes behavioral efforts to escape or avoid the problem, was associated with higher levels of depression. This finding is consistent with the results of several previous studies that investigated the relationship between the coping strategies/styles and adjustment of international students and expatriates (Berno & Ward, 1998; Chataway & Berry, 1989; Ward & Kennedy, 2001). In addition, this finding supported previous research studies that had examined gender differences in coping with life stressors (Cosway, Endler, Sadler, & Deary, 2000; Endler & Parker, 1994; Misra, Crist, & Burant, 2003; Rajapaksa & Dundes, 2002).

Besides its role in predicting depression, Escape-Avoidance was useful as a predictor of sociocultural adaptation for both genders. In particular, students who made greater use of this coping process were more likely to report higher levels of difficulty in sociocultural adaptation. This outcome supports previous research findings (Wang & Mallinckrodt, 2006; Ward & Kennedy, 2001). Identification with the host culture was also a predictor of sociocultural adaptation for both genders. Specifically, students who identified more strongly with the American culture were less likely to experience difficulty functioning in the U.S. In addition, these students were more likely to report

higher levels of English proficiency, higher likelihood of staying in the U.S. after graduation, and lower levels of depression, all of which suggest that international students who become more familiar with, and take part in, American culture (i.e., food, customs, holidays) experience less difficulty in functioning in the American society. These results provide support to the findings of previous studies by Nguyen, Messe, and Stollak (1999) and Ward and Rana-Deuba (1999).

Female students were more likely to report identification with their home cultures than their male counterparts. Also, female students were more likely to use Positive Reappraisal and Seeking Social Support as coping processes. This finding supports previous literature that suggests that women are more likely to rely on coping efforts that affect their emotional responses to stress (Endler & Parker, 1994). Positive reappraisal refers to "efforts to create positive meaning by focusing on personal growth" and Seeking Social Support refers to "efforts to seek informational, tangible, and emotional support". Results suggest that female students might rely more on coping processes that influence their internal states in dealing with stressful situations within the context of living in the U.S. compared to male students (Chun, Moos, & Cronkite, 2006).

Further findings of this study showed that students who reported using Self-Controlling, Accepting Responsibility, and Escape-Avoidance as ways of coping were more likely to report higher levels of depression and greater difficulty in sociocultural adaptation. Self-Controlling coping refers to one's effort to regulate his/her feelings and actions, and Accepting Responsibility refers to acknowledging one's own role in the problem along with efforts to put things right. Perhaps a theme shared by these coping processes is a preference for more indirect ways of managing stress rather than more

direct ways such as asserting one's self, expressing one's own thoughts, or confronting others--all coping approaches that are more frequently used in individualistic cultures as compared to collectivistic cultures (Lucas, 2002) with the intent to influence the external environment (Chun, Moos, & Cronkite, 2006). Because avoidance-focused coping might not be very functional in the U.S. culture, international students who make greater use of this coping strategy might experience more psychological and sociocultural adaptation problems.

Findings of the current study suggest that students who report lower likelihood of staying in the U.S. typically have lower levels of English proficiency, higher levels of depression, and greater difficulty in sociocultural adaptation. These students might be less motivated to get involved in American culture due to their intention to return home. It might be speculated that less involvement in the U.S. culture therefore might reduce the opportunities to improve English proficiency and create more difficulties in day-to-day functioning. Students who reported that it is "somewhat likely" for them to stay in the U.S. reported higher levels of depression than students who reported that it is "likely" or "very likely". An explanation of this finding can be that students who have more certainty about their future plans/intentions may be spared the stress associated with indecision and be more prepared to take solid steps toward their goals.

Implications

In this study, we found that identification with the host culture and the use of Escape-Avoidance as a coping process were related to depression and sociocultural adaptation difficulties. In terms of counseling services, it might be useful to train international students to use more direct ways of coping that are commonly used in

Western cultures such as U.S. This would have to be done delicately, however, to avoid the appearance of discounting coping processes commonly used in their home cultures.

Students who identified more with American culture showed less depression and less difficulty in sociocultural adaptation. Counseling centers might provide outreach programs to international students to help them gain greater familiarity with the customs, non-verbal behaviors, slang, and other culture-specific aspects of living in the U.S. This additional exposure may help them to feel more connected to the host culture and provide them with greater opportunities to improve their English proficiency.

International students' intention to stay in the U.S. after graduation might contribute as a buffer for symptoms of depression and increase motivation to get involved in the mainstream culture. Therefore, in clinical practice settings, particularly in college and university counseling centers, it might be helpful to understand whether an international student plans to stay in the U.S. after graduation or not. It is important for college/university mental health counselors to be aware of the possible impact of this variable on international students' overall presenting concerns and well-being.

Limitations and Suggestions for Further Research

The data for this study was collected online. Due to the policy of international student offices at the universities that data collection took place, we were unable to send out a reminder email to the international students to participate in the study which has shown to increase the response rate in web-based studies (Cook, Heath, & Thompson, 2000). As a result the return rate for our study was less than 10%. The results of this study were correlational in nature and included special case of correlation/regression

analysis (ANOVA), and caution should be exercised in drawing causal conclusions about depression and sociocultural adaptation.

Interpretations of the results of this study should take into consideration the mild to moderate amounts of depression and sociocultural difficulties reported. The depression mean was 2 on a 1-4 point scale and the sociocultural adaptation mean was 2 on a 1-5 point scale. The modest amounts of depression and sociocultural adaptation difficulties reported may be a function of less depressed students being more likely to volunteer for a research project on the internet.

The race-ethnicity groups in our sample did not have an equal number of participants, thus, making it difficult to comment on the effects of race and ethnicity on depression and sociocultural adaptation difficulties. Additionally, because large numbers of participants did not respond to the Ways of Coping Questionnaire, our analyses of the relationships between these coping processes and depression and sociocultural adaptation may be somewhat questionable.

In the current research, depression was investigated as a measure of psychological adjustment. Even though depression and anxiety are mostly co-morbid conditions that are highly correlated, focusing on anxiety as the dependent measure might be interesting, given that anxiety symptoms might be easier to observe than symptoms of depression.

Finally, although it is widely used in recent acculturation research, psychometric information regarding the Acculturation Index was not available. However, it has face validity as a measure of acculturation and the findings of the current study have been consistent with the literature on acculturation.

References

Aldwin, C. (1994). *Stress, coping and development*. New York, NY: Guilford Press.

Berno, T., & Ward, C. (1998, April). *Psychological and sociocultural adjustment of international students in New Zealand.* Paper presented at the Annual Meeting of the Society of Australian Social Psychologist, Christchurch, New Zealand.

Berry, J. W. (1990). Psychology of acculturation: Understanding individuals moving between cultures. In R. Brislin (Ed.), *Applied Cross-Cultural Psychology* (pp. 232–253). Newbury Park, CA: Sage.

Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology, 46*, 5–68.

Berry, J. W. (2006). Stress perspectives on acculturation. In D. L. Sam & J. W. Berry (Eds.), *The Cambridge handbook of acculturation psychology* (pp. 43–57). New York, NY: Cambridge University Press.

Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). Immigration youth: Acculturation, identity, and adaptation. *Applied Psychology, 55*, 303-332.

Berry, J. W., & Sam, D. (1997). Acculturation and adaptation. In J. W. Berry, M. H. Segall, & Ç. Kağıtçıbaşı (Eds.), *Handbook of cross-cultural psychology,* Vol. III: *Social behavior and applications* (pp. 291–326). Boston, MA: Allyn & Bacon.

Castro, V. S. (2003). *Acculturation and psychological adaptation*. Westport, CT: Greenwood Press.

Chataway, C. J., & Berry, J. W. (1989). Acculturation experiences, appraisal, coping and adaptation: A comparison of Hong Kong Chinese, French and English students in Canada. *Canadian Journal of Behavioral Science, 21*, 295–301.

Chun, C., Moos, R. H., & Cronkite, R. C. (2006). Culture: A fundamental context for the stress and coping paradigm. In P. T. P. Wong & L. C. J. Wong (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 29–54). NewYork, NY: Springer Science + Business Media, Inc.

Cook, C., Heath, F., & Thompson, R. L. (2000). A meta-analysis of response rates in web-or internet-based surveys. *Educational and Psychological Measurement, 60*, 821-836.

Cosway, R., Endler, N. S., Sadler, A. J., & Deary, I. J. (2000). The coping inventory for stressful situations: Factorial structure and associations with personality traits and psychological health. *Journal of Applied Biobehavioral Research, 5*, 121–143.

Dona, G., & Berry, J. W. (1994). Acculturation attitudes and acculturative stress of Central American refugees. *International Journal of Psychology, 29* (1), 57–70.

Endler, N. S., & Parker, J. D. A. (1994). Assessment of multidimensional coping: Task, emotion, and avoidance strategies. *Psychological Assessment, 6*, 50–60.

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: A study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology, 48*, 150–170.

Folkman, S., & Lazarus, R. S. (1988). *Manual for the ways of coping questionnaire.* Palo Alto: Consulting Psychologists Press.

Graves, T. D. (1967). Psychological acculturation in a tri-ethnic community. *Southwestern Journal of Anthropology, 23*, 337–350.

Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? A comparative analysis of six perceptions about internet questionnaires. *American Psychologist, 59*, 93-104.

Institute of International Education. (2008a). *Atlas of student mobility*. Retrieved July 8, 2009 from http://www.atlas.iienetwork.org/?p=48027

Institute of International Education. (2008b). *Open doors on the web*. Retrieved July 8, 2009 from http://opendoors.iienetwork.org/?p=131590

Johnson, L. R., & Sandhu, D. S. (2007). Isolation, adjustment, and acculturation issues of international students: Intervention strategies for counselors. In H. D. Singaravelu & M. Pope (Eds.), *A handbook for counseling international students in the United States* (pp. 13–36). Alexandria, VA: American Counseling Association.

Kennedy, A. (1994). *Personality and psychological adjustment during cross-cultural transitions: A study of the cultural fit proposition.* Unpublished master's thesis, University of Centerbury, New Zealand.

Kennedy, A. (1998, April). *Acculturation and coping: A longitudinal study of Singaporeans studying abroad.* Paper presented at the Annual Meeting of the Society of Australian Social Psychologist, Christchurch, New Zealand.

Khoo, P. L. S., Abu-Rasain, M. H., & Hornby, G. (1994). Counseling foreign students: A review of strategies. *Counseling Psychology Quarterly, 7*, 117–131.

Lazarus, R. (1990). Theory-based stress measurement. *Psychological Inquiry, 1*, 3-13.

Lucas, G. A. (2002). Coping style, need for cognition, and college students' attitudes toward psychological counseling. *Dissertation Abstracts International, 62*, 3808.

Misra, R., & Castillo, L. G. (2004). Academic stress among college students: Comparison of American and international students. *International Journal of Stress Management, 11*, 132–148.

Misra, R., Crist, M., & Burant, C. J. (2003). Relationship among life stress, social support, academic stressors, and reactions to stressors of international students in the United States. *International Journal of Stress Management, 10*, 137-157.

Mori, S. (2000). Addressing the mental health concerns of international students. *Journal of Counseling and Development, 78*, 137-144.

Nyguen, H. H., Messe, L. A., & Stollak, G. E. (1999). Toward a more complex understanding of acculturation and adjustment: Cultural involvements and psychosocial functioning in Vietnamese youth. *Journal of Cross-Cultural Psychology, 30*, 5-31.

Omonishi, M., Chung, B. Y., & Gagne, P. (2008). Asian international students' residency plan, acculturation, English fluency, and openness to counseling. *Unpublished Manuscript.*

Poyrazli, S., Arbona, C., Nora, A., McPherson, R., & Pisecco, S. (2002). Relation between assertiveness, academic self-efficacy, and psychological adjustment among international graduate students. *Journal of College Student Development, 43*, 632-642.

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385–401.

Radloff, L. S. (1991). The use of the center for epidemiologic studies depression scale in adolescents and young adults. *Journal of Youth and Adolescence, 20*, 149–166.

Rajapaksa, S., & Dundes, L. (2002). It's a long way home: International student adjustment to living in the United States. *College Student Retention, 41*, 15-28.

Redfield, R., Linton, R., & Herskovits, M. J. (1936). Memorandum on the study of acculturation. *American Anthropologist, 38*, 149–152.

Sam, D. L. (2006). Acculturation and health. In D. L. Sam, & J. W. Berry (Eds.), *The Cambridge Handbook of Acculturation Psychology* (pp. 452 – 468). New York, NY: Cambridge University Press.

Schmitt, M. T., Spears, R., & Branscombe, N. R. (2003). Constructing a minority group identity out of shaded rejection: The case of international students. *European Journal of Social Psychology, 33*, 1-12.

Schmitz, P. G. (1992). Immigrant mental and physical health. *Psychology and Developing Societies, 4*, 117–131.

Singaravelu, H. D. (2007). *Preface*. In H. D. Singaravelu & M. Pope (Eds.), *A handbook for counseling international students in the United States* (pp. ix – xi). Alexandria, VA: American Counseling Association.

Thomas, K., & Althen, G. (1989). Counseling foreign students. In P. B. Pedersen, J. G. Draguns, W. J. Lonner, & J. E. Trimble (Eds.), *Counseling across cultures* (3rd ed., pp. 205–241). Honolulu, HI: University of Hawaii Press.

Ward, C. (1996). Acculturation. In D. Landis & R. S. Bhagat (Eds.), *Handbook of intercultural training* (2nd ed, pp. 124–147). Thousand Oaks, CA: Sage.

Ward, C. (2001). The ABCs of acculturation. In D. Matsumoto (Ed.), *The handbook of culture and psychology* (pp. 411–445). New York, NY: Oxford University Press.

Ward, C., & Kennedy, A. (1993). Acculturation and cross-cultural adaptation of British residents in Hong Kong. *The Journal of Social Psychology, 133*, 395–397.

Ward, C., & Kennedy, A. (1994). Acculturation strategies, psychological adjustment, and sociocultural competence during cross-cultural transitions. *International Journal of Intercultural Relations, 18*, 329–343.

Ward, C., & Kennedy, A. (1999). The measurement of sociocultural adaptation. *International Journal of Intercultural Relations, 23*, 659–677.

Ward, C., & Kennedy, A. (2001). Coping with cross-cultural transition. *Journal of Cross-Cultural Psychology, 32*, 636–642.

Wang, C. D., & Mallinckrodt, B. (2006). Acculturation, attachment, and psychosocial adjustment of Chinese/Taiwanese international students. *Journal of Counseling Psychology, 53*, 422–433.

Ward, C., & Rana-Deuba, A. (1999). Acculturation and adaptation revisited. *Journal of Cross-Cultural Psychology, 30,* 422–442.