ABSTRACT

PORTELA-MYERS, HELOISA HELENA. The Relationship Between Culture Shock and Social Support of International Students. (Under the direction of Sylvia Nassar-McMillan and Edwin Gerler.)

In a preliminary qualitative study conducted by this researcher, social support emerged as an important positive variable in the international students’ transition into the United States. In light of the limited empirical research on culture shock and the findings of the preliminary qualitative study, the following research questions were examined in this study: 1. Is there a correlation between culture shock and: (a) socio-emotional support or (b) instrumental support? 2. Is there a difference in culture shock level for males and females? 3. What are the values of culture shock by ethnicity? 4. What are the values of culture shock by English proficiency? 5. What are the values of social support by English proficiency?

International students who volunteered to participate in the study completed the following instruments: the Culture Shock Questionnaire (Mumford, 1998), the Index of Sojourner Social Support (ISSS—Ong & Ward, 2005), and a demographic form. Descriptive statistics, t tests, correlation analyses, and a Main Effects ANOVA model were calculated for the data of 224 participants. All variables of social support and of culture shock were found to be negatively correlated, suggesting that international students who experience higher levels of culture shock are likely not to have a good social support system in place. There was no significant gender difference found within culture shock values, which may be explained by the directions of the differences between male and female scores for the two culture shock subscales (e.g., core culture shock and interpersonal stress). Black/Caribbean/African international students were the
ethnic group with the highest mean for culture shock scores, but the sample of students of this ethnicity was too small to ensure sound generalizability. International students who identified their English levels as advanced presented both the lowest mean for culture shock and the highest level of social support in the study sample. Finally, gender and English proficiency appeared as variables that significantly impacted interpersonal stress, while English proficiency was found to significantly influence culture shock.
THE RELATIONSHIP BETWEEN CULTURE SHOCK AND SOCIAL SUPPORT OF INTERNATIONAL STUDENTS

by

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DEDICATION

For those who have the courage to encounter the foreign
and celebrate their differences.

And those who travel to a foreign land
and learn how to build a home where they are.
BIOGRAPHY

Heloisa Helena Portela-Myers was born in Rio de Janeiro, Brazil. There, she attended the Federal University of Rio de Janeiro and obtained her Bachelor of Science in Psychology. She continued studying at the same university in order to attain her Clinical Psychology Licensure (CRP 05/22104), and she worked as a clinical psychology intern at the University’s Department of Applied Psychology from 1994 to 1996. Her final project for that program focused on women, sexuality, and psychoanalysis. Heloisa opened her private practice in Rio de Janeiro in 1996, and in March of 2000, she completed a Master of Science in Psychology, also at the Federal University of Rio de Janeiro. Her thesis, entitled “To love the foreign, an erotic possibility in contemporary times,” focused on love, sensuality, and modern times.

Heloisa lived in that warm, sunny, and musical beach-city of Rio de Janeiro until the end of the year 2000, when she immigrated to the United States to share a life with her husband, Phil. They landed in North Carolina, where she has lived since. Even though Heloisa’s move to this foreign land was a voluntary and happy one, she faced many challenges after reaching the United States. Although she did not have any major problems in communicating with people, it took a long time for her to grow roots and make the United States her second home.

The challenges to this new country included the fact that her license as a clinical psychologist did not transfer. In order to continue working in the clinical setting, Heloisa decided to go back to school for a Masters of Arts in Counseling. She completed the program at North Carolina Central University, in Durham, in 2003. While enrolled as a
student from 2002 to 2004, Heloisa also worked at Interact, counseling domestic violence and sexual assault victims and survivors.

Heloisa started pursuing her doctoral degree in Counselor Education at North Carolina State University, in Raleigh, in 2003. During this time, she worked as a graduate assistant at the Cooperative Education Program, providing career counseling to undergraduate and graduate students, many of whom were international students.

In regards to her teaching and research experience, Heloisa supervised and taught a Counseling Practicum to masters level counselors-in-training. She participated in the Preparing the Professoriate Program, to which Dr. Stanley Baker was a generous mentor. She also attended the Faculty Seminar: Campus Writing and Speaking Program and assisted or taught the following courses: Introduction to Counseling, School Counseling, and Career Planning & Personal Development. Heloisa conducted a qualitative preliminary study on international students’ acculturation issues in 2005, under the guidance of Dr. Pamela Martin.

Heloisa values social support and leadership. For that reason, she held several leadership positions, such as treasurer and later president for the Nu Sigma Chi Chapter of Chi Sigma Iota, and vice-president for the Counselor Education Graduate Student Association. She also founded Brasileirinho (a Brazilian student association) and the Argentine Tango Club. She is currently the secretary/treasurer for the North Carolina Association for Multicultural Counseling & Development.

Heloisa’s professional development and experiences also included advising students and presenting at local and national conferences. Most of her research and presentations have focused on immigrants, identity development, and multicultural
issues. She is a member of the American Counseling Association, the Association for Multicultural Counseling and Development, the Association for Counselor Education and Supervision, the International Association of Marriage and Family Counselors, the North Carolina Counseling Association, the North Carolina Association for Multicultural Counseling and Development, and Chi Sigma Iota.

Heloisa works as a Licensed Professional Counselor (LPC 4935) at Crabtree Creek Clinic. Since 2004, she has been providing children, adult, and family counseling services in English, Spanish, and Portuguese. She is also actively involved in the Triangle Brazilian community and in the Triangle Argentine tango community.
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CHAPTER I

Introduction

In a preliminary qualitative study conducted by this researcher, social support emerged as an important positive variable in the international students’ transition into the United States. International students explained that they initially needed a lot of practical assistance and informational support, such as answers about what things they should bring to America, help with finding an apartment and getting furniture, explanations about the educational system in the U.S., assistance in choosing classes and in communicating with others.

International students who participated in the semi-structure interviews for the preliminary qualitative study indicated the need for their social support to be diverse. One student explained: “I think that, when most students come here, their first friends will be the people from their own country. (…) Sometimes it is good, because the people from your own country understand more about yourself. And sometimes it is not that good [to have friends from your own country, because that does not help you] to develop your English skills. In this country everyone speaks English and you can’t survive in this country without speaking English.”

Rationale for the Study

The process of coming to a different country as an international student is not an easy one. When asked if the period after arriving to the United States was stressful, one female Malaysian student said, “Yeah, I remember (…) going to the shower to cry so that no one would see me. And then, when you walk out [of the shower] with red eyes, people think: oh, well, she got soap in her eyes! So that happened a lot the first few weeks.”
When asked about how she dealt with the stressful time, this student explained that aside from crying, she had friends who helped her a lot. She stated that one of her friends took her to the mall and told her what types of sweaters to buy, while another friend pulled clothes out the clearance rack and showed her the items that were being sold with a good price.

International students also explained that social companionship was an important role of social support. One of them declared: “As I started to make friends it was more of a moral support group. So you could just say: I had a bad day, and someone would do something else with it… like help you forget that your family is far away. There is nothing worse then hearing that there is a party going on, but you don’t know anybody that’s going to it.”

The preliminary qualitative study lead this researcher to question if there is a relationship between culture shock and social support. Would the international students who have a stronger social support experience less culture shock?

Purpose of the Study

The purpose of this study was to examine the ways in which social support influence culture shock. In order to do that, this research investigated both the relationship between culture shock and social support and the influence of other variables such gender, English proficiency, and ethnicity. Most researchers and practitioners agree that international students face a lot of stress after arriving to the host country, but many still do not know how to help them specifically. Studies on culture shock are limited and those on social support of international students are inconsistent. Furthermore, most studies have not investigated if there is a gender difference in the experience of culture
shock or in the development of social support. The study conducted provided insights on the roles of social support and the experience of culture shock specific to international students.

Culture shock is a mental health concern and is related to symptoms such as anxiety, depression, sleeping problems, fatigue, irritability, loneliness, forgetfulness, nostalgia, and feelings of not fitting in (Pedersen, 2004). By expanding the association between social support and culture shock of international students, the present study aims to provide a basis for the development of interventions that decrease international students’ stress and empower healthy outcomes and academic retention. Some international students may decide to return to their home country due to the high level of stress they face. Counselors and counselor educators may play a major role in assisting this population on learning how to cope with the challenges they face. In order to do so, however, professional counselors need to have a better understanding of the culture shock experience.

Importance of the Study

Even though the idea of culture shock first appeared over 50 years ago (Oberg, 1954), there is a dearth of empirical research on the subject. Most of the publications about culture shock are of a descriptive nature and do not measure the phenomenon nor validate the concept (Mumford, 1998). Many questions remain unanswered about the relationship between the culture shock experience and other variables such as gender, education level, and language proficiency.

In a preliminary qualitative study conducted by this investigator, social support emerged as an important component of international students’ adjustment and a helpful
element for coping with culture shock. The scientific interest in the concept of social
support derived from 1970s publications that alluded to a relationship between
psychiatric disorders and the lack of adequate social support (Kessler, Price, & Wortman,
1985). Several investigators have previously documented the psychological benefits of
social support (Ibañez et. al 2003; Kessler, Price, & Wortman, 1985; Meehan, Durlak, &
Bryant, 1993; Ong & Ward, 2005). These studies support the findings of social support
being a factor in decreasing stress and improving health outcomes. Nonetheless, research
on social support role in sojourners’ cross-cultural transitions is still non-conclusive due
to inconsistent results (Ong & Ward, 2005). No previous research on the specific
relationship between social support and culture shock has been found. The purpose of the
study conducted was to examine the ways in which social support influence culture
shock. Gender, ethnicity, and English proficiency were also examined in relationship to
culture shock and social support.

The further understanding of culture shock experience and social support role will
empower counselors to design intervention strategies to address the specific needs of the
international student population. Counseling interventions may increase international
students’ academic retention rates, increase their life satisfaction and decrease their
mental health problems, such as culture shock symptoms.

Research Questions

In light of the limited empirical research on culture shock and the findings of the
preliminary qualitative study conducted by this researcher, the following research
questions were examined in this study:
1. Is there a correlation between culture shock and: (a) socio-emotional support or (b) instrumental support?
2. Is there a difference in culture shock level for males and females?
3. What are the values of culture shock by ethnicity?
4. What are the values of culture shock by English proficiency?
5. What are the values of social support by English proficiency?

Assumptions and Limitations

There are certain assumptions that underlined this study. One of the first assumptions to note is the hypothesis that acculturation is an inescapable consequence of culture contact. Even though this assumption is prevalent among mental health professionals, researchers and authors, there are those who question if this premise is not a direct application of ethnocentric values (Gomes as cited in Cormier, 2001). The same warning should be posted about the supposition of culture shock as a universal and inevitable happening during international students’ adjustment to the new country. This principle is founded on the idea that important life transitions are accompanied by stress and discomfort. However, it is possible that non-Western cultures, for example, have a different perspective on this issue. This study was also based on the supposition that social support is an overall positive variable in someone’s life. Nevertheless, it is possible that social support has disadvantages as well, depending on the characteristics of those providing the social support. International students who participated in a preliminary qualitative study conducted by this researcher suggested, for example, that even though co-national individuals were of great help during their transition into the new country,
they also hindered the international student’s language improvements and culture-specific social learning.

The following are other assumptions and some limitations of the study conducted:

1. Predictors chosen for the study were not exhaustive,
2. Study was limited to international students respondents,
3. Sample was limited to international students enrolled at North Carolina State University who volunteered to complete the instruments during the summer of 2006,
4. Subjects gave honest responses on the instruments administered,
5. Sample was limited to complete responses of the instruments, and
6. Lack of randomization was viewed as a minor threat to the study’s ability to determine correlation between variables.

Definitions of Terms

For the purpose of this dissertation study, it may be helpful to define the most important terminology and concepts that are being utilized throughout this work:

• Acculturation – process of cultural change triggered by the close contact between two cultural groups (Berry, 1980).

• Acculturation styles or modes – refers to four possible outcomes of the adaptation phase: (a) assimilation, (b) rejection, (c) deculturation, and (d) integration (Berry, 1980).

• Adaptation – the third phase of the acculturative process, during which the acculturative conflict is reduced and stabilized (Berry, 1980).
• Adjustment – a changing process triggered by stressful situation (Kessler, Price, & Wortman, 1985).

• Assimilation – one out of the four possible modes of adjustment, characterized by a positive relationship with the dominant society and a negative connection with the culture of origin. The individual maintains his or her original culture, values, and identity, but also becomes an integral part of the dominant society (Berry, 1980).

• Culture shock – a cumulative pervasive disorientation triggered by any radical change presenting unfamiliar or unexpected circumstances, such as those in a living/studying abroad experience.

• Deculturation – original name given by Berry (1980) for the concept of marginalization (see marginalization below).

• Emotional Support – refers both a type of social support (Finfgeld-Connett, 2005) and one of the four main functions for supportive behaviors (Ong & Ward, 2005). As a type of social support, emotional support refers to comforting gestures with the purpose of alleviating stress, anxiety, hopelessness or depression (Finfgeld-Connett, 2005).

• English proficiency – both level of comfort and of effectiveness in the use of the English language to communicate to others and receive information.

• Informational Support – refers to the communication of opinions and advices regarding a current personal difficulty (Ong & Ward, 2005).

• Instrumental support – consists on providing tangible goods, services, money, or shelter. Advocacy is an important characteristic of social support (Finfgeld-Connett, 2005).
• Integration – one out of the four possible modes of adjustment, characterized by a positive relationship with both the culture of origin (via retention) and with the dominant society. The individual does not retain his or her original cultural identity and adopts a mainstream cultural identity instead (Berry, 1980).

• International Students – individuals who are temporarily living abroad with the objective of furthering their education and who are currently enrolled in classes (see sojourners below).

• Marginalization – one out of the four possible modes of adjustment, characterized by a negative relationship by both the culture of origin and the dominant society. The individual does not retain the original cultural identity nor adopts a mainstream identity, living more on the fringes of both worlds (Berry, 1980).

• Psychological acculturation – individual phenomenon of change resulting from the continuous, first hand contact between two distinctive cultural groups (Berry, Kim, Minde, & Mok, 1987).

• Rejection – original name given by Berry (1980) for the concept of separation (see separation below).

• Separation – one out of the four possible modes of adjustment, characterized by a negative relationship to the mainstream society. The individual maintains his or her original cultural identity and dismisses the dominant society (Berry, 1980).

• Social Companionship – one of the four main functions for supportive behaviors. It relates to providing company for a variety of activities (Ong & Ward, 2005).
• Social Support – an advocative reciprocal interpersonal process that may ameliorate the impact of life stressors (Finfgeld-Connett, 2005; Kessler, Price, & Wortman, 1985).

• Sojourner – people who are temporarily living in a different culture.

• Supportive behaviors – behaviors that contribute to effective adjustment (in the case of international students). There are four functions of supportive behaviors: emotional support, social companionship, tangible assistance, and informational support (Ong & Ward, 2005).

• Tangible Assistance – one of the four main functions for supportive behaviors. It is a concrete form of help: through finances, services, or material aid (Ong & Ward, 2005).

Organization of the Study

This dissertation includes five chapters. Chapter 1, as presented above, consists of the rationale for the study, purpose, importance, research questions, assumptions, and limitations of the research that was conducted. Definitions of terms were also included to clarify some of the key terms used throughout this dissertation. Chapter 2 consists of a literature review on international students, as well as the framework of acculturation, culture shock, and social support. In chapter 3, the methods section, a thorough description of the participants and procedures of the study is provided, including a description of the instruments and research methods. Chapter 4 presents the results of the study. Tables are utilized whenever possible to summarize statistical results such as means, \( t \) tests, and ANOVA. Lastly, chapter 5 presents the summary, evaluation, and interpretation of the research results with respect to the original goal of the study.
Limitations of the study, suggestions for future research, and implications for counseling practice are also discussed in this final chapter.
CHAPTER II

Review of Related Literature & Theories

This chapter focuses on the review of related literature and theories and is divided into several sections. First, the population of interest (international students) is introduced. Then three relevant theoretical frameworks are discussed: acculturation theory (Berry, 1980; 2001; Berry et al., 1987), culture shock theory (Adler, 1975; Ferraro, 1990; Kohls, 1984; Oberg, 1954; Preston, 1985; Rhinesmith, 1985; Winkelman, 1994), and social support (Ward, 2004; Ward, Leong, & Low, 2004; Ong & Ward, 2005). Within these sections, research relevant to international student population is included. Other implications for research with international student population are discussed.

*International Students in the United States*

Until 2003 and since World War II, there has been a constant increase of international students on U.S. universities’ campuses (Mori, 2000). The Institute of International Education (IIE) reported in 2004 that although the number of international students enrolled in United States (U.S.) higher education institutions decreased by 2.4 percent in 2003/04, international students still accounted for a total of 572,509. This decline was the first overall decrease in foreign enrollments since 1971/72 (IIE, 2004). Included among the reasons for this overall decrease in foreign enrollments were difficulties in obtaining student visas, rising tuition costs, and international perceptions that foreign students may no longer be welcome in America—all of which seemed to happen as an effect of September 11th events. Still, the decline has been regarded as temporary and the U.S. continues to be the most favorable place in the world to seek the benefits of higher education (IIE, 2004).
According to the IIE (2004), India is the leading place of origin for international students who come to the U.S., followed by China, Korea, Japan, Canada, and Taiwan. Over half of all international students in the U.S. are Asian students (57%), followed by students from Europe (13%), Latin America (12%), Africa (7%), the Middle East (6%), North America (5%) and Oceania (1%; IIE, 2004). In regards to their fields of study, 19 percent of international students are in the business and management field, 17 percent of them are studying engineering and 12 percent are in the mathematics and computer sciences fields (IIE, 2004). The majority of international students (67%) fund their studies through family and personal sources. North Carolina is one of the 20 leading hosting states for international students and one of the few that has experienced a recent increase in foreign enrollments: up 3 percent to 8,826 (IIE, 2004). In 2004, the major concentration of post-secondary international students in NC was the following: 1,581 students are enrolled at Duke, 1,505 international students attend N.C.S.U., and 1,427 students go to University of North Carolina at Chapel Hill (Federation for American Immigration Reform, 2004).

Constantine, Anderson, Berkel, Caldwell and Utsey (2005) wrote a well-organized and sound qualitative research article examining the cultural experiences of African international college students in a predominantly White university in the mid-Atlantic region of the U.S. Their objective was to: “identify Kenyan, Nigerian, and Ghanaian college students’ pre- and post-sojourn perceptions of the U.S., challenges associated with being an international student, quality of interpersonal relationships in the U.S., and strategies for coping with their cultural adjustment concerns” (p. 59). Their final sample consisted of twelve African international undergraduate students, being four
of each of the three ethnicities in question. All participants had only lived in their home country prior to coming to the U. S. specifically to attend college.

Constantine et al. (2005) select the consensual qualitative research (CQR) methodology to follow because it provides systematic guidelines to rigorous scientific inquiry, utilizes multiple researchers for accuracy, and emphasizes the need for consensus among the research team in how to understand and explore the results. One of the limitations of the CQR methodology is that it uses semi-structure interviews as its single data source, which has restrictions even when saturation is reached. This disadvantage could have been eliminated should the authors have decided to include other data sources, such as participant observation, field notes, or focus groups (Morrow, 2005). Nevertheless, Constantine et al. show thoroughness in the procedure utilized, conducted pilot interviews with two Ghanaian undergraduate students, amended the interview protocol according with feedback received, and provided readers with the semi-structured interview protocol employed. The authors acknowledge and review their biases and expectations towards the research results in order to minimize their influence and to empower readers to assess if such influence existed.

In the study conducted by Constantine et al. (2005), participants responded to poster announcements placed in the International Student’s Office on campus. The final sample consisted of 12 out of the 16 students who initially volunteered to participate in the research. The ultimate number of participants ensured ethnic balance in the group, even though there was a gender inequality (eight men and four women). Participants were randomly assigned to interviewers and signed consent forms. All interviews were conducted in English, audiotaped, and transcribed. Transcriptions were reviewed for
accuracy and the qualitative analysis followed the CQR guidelines suggested by Hill, Thompson, and Williams (as cited by Constantine et al., 2005). Analyses of the interview content were conducted and each reviewer developed a start list of domains. Individual checks were performed and the research team established through consensus the final list of domains. The data analysis conducted by Constantine et al. used a team research meaning-focused approach with two levels of analysis, finding unique themes within the raw data first and then, looking across the data for common themes (Fossey, Harvey, McDermott, & Davidson, 2002). Both the data analysis and the cross-analysis were audited; and the auditor’s suggestions were incorporated in the final team revision of the data. All these procedures increased validity, accuracy, and trustworthiness of the study in question.

Finally, the authors presented the data in the following seven domains: (a) pre-sojourn perceptions of the U. S., (b) post-sojourn perceptions of the U. S., (c) cultural adjustment problems in the U. S., (d) responses to prejudicial or discriminatory treatment, (e) family or friendship networks, (f) strategies for coping with cultural adjustment problems, and (g) openness to seeking counseling to address cultural adjustment problems. A table was provided to clarify the categories and subcategories within each domain and followed the CQR terminology for the frequency of cases—instead of providing the specific numbers of occurrences for each case. If a category included all 12 cases, it was called general; if it applied to 6-11 cases, it was considered a typical category; and it was described as occasional it encompassed 3-5 cases. Categories that included less than 3 are not incorporated in the final results. In describing each of the
seven domains, the authors provide plenty of quotes from participants and showed both credibility and adequacy of their interpretations.

There are several potential limitations for the exploratory findings of the research done by Constantine et al. (2005). Although the size of their sample was consistent with other qualitative studies using CQR, its generalizability is limited. Also, the researchers’ interpretations of the data might have been influenced by their biases, expectations, and perceptions. The specific way questions were formulated, for example, may have affected the data obtained. The researchers suggest that other investigators replicate their study to increase validity. Another weakness is that the authors analyze data combining Kenyan, Nigerian, and Ghanaian. Even though the literature suggests that international students from the continent of Africa share fundamental cultural similarities, unique culture-specific issues associated with each of the three subgroups were lost. The authors also combine gender subgroups and did not explore gender-specific issues related to cultural experiences of African international college students.

The research conducted by Constantine et al. (2005) indicated a shift in the participants’ beliefs about the U. S. and what the country has to offer. Prior to sojourning, participants focused on the academic and personal opportunities the country offered in terms of better educational system and personal freedom. On the other hand, their post-sojourning perceptions centered on broader range of issues, including the disparity of educational and economic power between White Americans and other ethnicities. This finding supported the notion of race playing an important role in the cultural adjustment of African international students. The authors explain that the role of race becomes a salient issue after sojourning because most Kenyan, Nigerian, and Ghanaian international
students have grown up in racially homogeneous contexts. Surprisingly, the authors did not question if race would have received the same significance should these students be attending a historically black college instead of a predominantly White institution. The difference in acculturation of African international students who attend predominantly White institutions and Black historical colleges is a good topic for future research. All participants reported having experienced prejudicial or discriminatory treatment upon arriving in the U. S. It would be interesting for other researchers to investigate if such encounters with discrimination are specific to Kenyan, Nigerian, and Ghanaian or common to international students in general. Also, it would be important to examine the impact of racial and discriminatory experiences on their acculturative stress and the adjustment process. Constantine et al. suggest, for example, that African international students use diverse coping strategies that focus on basic daily survival in many times difficult or hostile environments. They caution counselors to not erroneously anthologize these students’ strong and supportive family and peer alliances. They explain that their findings were consistent with the literature, which suggests the salience of personal relationships in the lives of international students and how these connections represent essential aspects of self-identity. Most of the African international students in their investigation showed no openness to seek counseling to address social adjustment problems. Their results reiterate the well-documented underutilization of formal mental health services by African international students. The authors promote the de-stigmatization of counselors and of mental health seeking behaviors and the availability of culturally relevant counseling services.
Constantine et al. (2005) conducted a sound study about the acculturation experiences of African international students. The article was well written and pleasant to read. The writers provide enough evidence for their data analysis and interpretation. Their results support the idea of culture shock being a process that takes place at many different levels simultaneously. Their findings of different pre-sojourn and post-sojourn perceptions corroborate with the development of new, internalized constructs that fit the new situation. Additionally, this study data substantiate the idea that culture shock and the process of acculturation impact international students’ coping mechanism.

Although international students face additional stressors when compared to the general U.S. student body, mental health services have been significantly underutilized by this population (Mori, 2000). These students present some unique experiences and concerns, many of which relate to their experiences with acculturation and culture shock. Psychological acculturation refers to the individual phenomenon of change resulting from contact with a distinct cultural group (Berry et al., 1987) and is part of the experience of being an international student. The theory of culture shock, on the other hand, relates to the anxiety that emerges from adapting to a new culture. Culture shock is considered an unavoidable part of the transition into a new cultural environment—hence it is an inevitable part of the international student’s experience. Both these concepts will be explored further in the following sections.

**Acculturation Theory**

According to Berry (2001), the concept of acculturation first appeared in 1936 and related to a group process that involved contact between two cultural groups which resulted in various cultural changes in each of them. Berry explains that only three
decades later the individual level of such a phenomenon was recognized and became known by the term psychological acculturation—a term that was coined by Graves (as cited in Berry, 2001). Psychological acculturation is the individual phenomenon of change resulting from the continuous, first hand contact between two distinctive cultural groups (Berry et al., 1987). Berry (1980) suggests that contact between different cultures may influence individuals to change their style of speech, social behavior, attitudes, beliefs, and customs such as choice of food or celebration of holidays. It is important to note that even though Berry (1980) emphasizes the individual level of acculturative changes, the author continues referring to the group perspective and the interaction between individuals and groups.

Berry (1980) proposes three phases to acculturation. Phase one is represented by the physical or symbolic contact between two groups and is the core of the acculturation process. Contacts between groups change in reference to the nature (i.e., immigration, asylum, etc), purpose (for international students, for example, the purpose of contact is study), duration (a student who comes to the U.S. for a semester will have a different experience than someone who comes to the U.S. for three years), and permanence (does the student intend to stay in the U.S. after finishing his or her studies?) and all these variables will influence acculturation. Berry explains, for example, that one should expect that the acculturation change would be minimal in an accidental, mutually desired, short-term contact. When the contact is against the will of a group (an invasion, for example) and over a long period if time, Berry suggests that the changes will be more intense.

Berry (1980) proposes the second phase of the acculturation process be called conflict. Conflict describes the group’s resistance to change. It incorporates the fact that groups
do not give up easily on their values and culture. Adaptation is the third phase of the process and refers to ways of reducing and stabilizing the conflict. Berry (1980) focuses most of his writings on this last phase, many times neglecting the other phases of his theory.

Berry (1980) recommends counselors to use adaptation as the guiding concept in dealing with acculturation. He recommends adaptation be understood as the reduction of the acculturative conflict. He proposes six psychological domains through which an individual will adapt after facing the acculturative conflict: (a) language, (b) cognitive style, (c) personality, (d) identity, (e) attitude, and (f) acculturative stress. The language adaptation is the most evident. Following contact between two cultures, one may notice a language shift, which is more likely to take place in the non-dominant group.

During the adaptation phase, there are four possible acculturation modes: (a) assimilation, (b) rejection/separation, (c) deculturation/marginalization, and (d) integration (Berry, 1980; Berry et al., 1987). Assimilation occurs without retention of one’s cultural identity and when one creates a positive relationship with the dominant society; rejection happens when there is retention of one’s original cultural identity and dismissal of the dominant society; deculturation takes place when there is no retention of original cultural identity or positive relationship with the dominant society; and integration occurs when there is a positive relationship with both the culture of origin (via retention) and with the dominant society.

Berry (1980) poses two key yes/no questions as differentiators of these modes of acculturation: (a) Are positive relationships with the dominant society to be sought, and (b) is the cultural identity of value to be retained? The individual in the assimilation and
integration modes of acculturation would answer yes to the question of seeking positive relationship with the dominant society. The difference between the modes is that in the assimilation mode individuals renounce their cultural identity and adopt the mainstream society culture. In the integration mode the individuals retain their cultural heritage while joining the dominant society. Conversely, individuals in both rejection and deculturation modes of acculturation answer no to the same question (the need of maintaining a positive relationship with the dominant society). According to Berry, the difference between these two modes of acculturation (rejection and deculturation) relies on the fact that people in the rejection mode self-impose the withdrawal from the larger society (whereas maintaining their culture), while those in the deculturation mode alienate themselves from both their original culture and the dominant one.

Berry et al. (1987) classify acculturating groups according to their degree of voluntariness, mobility, and permanence of contact. According to these criteria, there are five groups: (a) immigrants, (b) refugees, (c) native people, (d) ethnic groups, and (e) sojourners. All groups experience similar challenges and share fundamental similarities, but also have unique experiences. Berry et al. proposed, for example, that sojourners (those only temporarily in contact with the host culture and lacking a more permanent support system, such as international students) might experience more mental health problems and acculturative stress than those permanently established and settled.

Shih and Brown (2000) suggest international students also face the stress of ensuring their academic training in the U. S. will be relevant and functional in their home country as well as the U.S., in case the student decides to remain there. The uncertainty of their future destination is a variable that increases stress while hindering future plans.
In 1987, while maintaining the major concepts explained earlier, Berry et al. changed some of the terminology for the modes of acculturation. They presented four modes of acculturation: (a) assimilation, (b) integration, (c) separation, and (d) marginalization. The concepts of assimilation and integration modes maintained the original idea and terminology. In the assimilation mode, individuals do not maintain their cultures and identities of origin and seek to interact with the dominant culture. In integration, there is an interest in both maintaining the original culture and being an integral part of the dominant society. Separation and marginalization are the new terminology utilized. The concept of separation seems to be the same as the previously discussed concept of rejection in which individuals value their culture of origin and at the same time, wish to avoid interaction with others. Lastly, the concept of marginalization presented in 1987 appears to refer to what was previously called deculturation. In marginalization, individuals experience little interest in maintaining their culture of origin, while at the same time they devalue relationships with the larger society.

As theories evolve, it is common for authors to change the terminology they originally used. However, considering how the above concepts form the base of Berry’s psychological acculturation framework, it seems that it would have been appropriate for the author to point out the shift in terminology (rejection/separation and deculturation/marginalization). It also may have provided further insight if the author had discussed his reasons for such a change.

It is worth noting how Berry et al. (1987) describe the interaction between individuals and the larger society. They explain that one may “avoid interaction” (p. 495) with the larger society, but in reality such an attempt can only be partially successful.
Avoidance could be considered a style of interaction. It would be better to think of interaction in terms of a positive or negative nature. In a positive interaction, one would have the desire to relate to the larger society, while in a negative interaction, there would be resistant instead. It seems logical that rather than avoiding interaction all together, individuals in the marginalization mode interact in a negative way with both their culture of origin and the culture of resettlement.

Another weakness of the acculturation theory is that even though Berry et al. (1987) mention identity, the authors do not emphasize this facet of acculturation. Identity is a crucial issue and needs more attention within psychological acculturation. The relationship and interaction between the larger society and the individual, for example, may be seen as a function of the individual’s identity development. Emphasizing the possible relationship between the modes of acculturation and the individual’s identity development, however, does not infer that the modes of acculturation are in a hierarchical order of progress, but rather that the individual’s identity development influences and is influenced by the acculturation process and modes.

The psychological acculturation theory can be considered a developmental theory. According to Miller (1989), a developmental theory has three tasks: (a) to describe changes within one or more areas of behavior, (b) to describe changes in the interaction among various areas of behavior, and (c) to explain the path of development that has been described. Based on this perspective, the psychological acculturation theory proposed by Berry (1980) can be recognized as a developmental theory because: (a) it focuses on cultural changes over time, (b) it explains implications of such changes to other areas of that person’s life, and (c) it proposes phases and models according to which one can
understand the acculturation changes immigrants, refugees, native people, ethnic groups and sojourners may go through. The psychological acculturation theory also provides a framework to understand acculturation change and has stimulated further research.

Although Berry’s (1980) theory is a developmental theory, the acculturation modes the author created are not in any specific order or hierarchy. It is curious that even though Berry is well recognized as the author who widened the field of acculturation in psychology, much of the current literature refers to acculturation levels and developmental stages instead of modes or styles. In reality, no research seems to have established either a hierarchical order to these modes or a common course of development through acculturation stages. Acculturation should not be considered a linear process with only one successful solution. As a result, it is the examinee’s preference to utilize Berry’s original terminology of acculturation mode instead of level or stage when referring to the four possible outcomes of acculturation.

Assuming acculturation stages to be hierarchically ordered could be a conceptual mistake (Bachay, 1998). Even those who are in a marginalization mode are also, in fact, acculturated. They are indeed interacting with both their culture of origin and their culture of resettlement in a negative way. They are relating to these cultures and responding to the acculturative conflict. The problem with the marginalization mode of acculturation is the marginalized individual seems to experience greater levels of tension, stress, conflict, and isolation. In the examinee’s opinion, this may in fact be the least successful mode of acculturation in that the person will experience the most mental health problems. Counselors should not judge any acculturation mode negatively, nor
should they try to move the individual out of any particular mode. Counselors’ goals should be to help the person understand the variables influencing the conflict.

All immigrants, refugees, native people, ethnic groups, and sojourners will, at some level, have to negotiate biculturalism. Biculturalism is more evenly balanced within the integration mode. Biculturalism is based on the individual identity being a function of the interaction between his or her ethnic identity of origin and the ethnic identity related to the country of resettlement (Jackson, 1995)—for example, Brazilian and American or Hmong and American. Biculturalism is the capability of functioning “comfortably in more than one cultural mode of operation” (Kohls, 1984, p. 12). Many different authors (e.g., Adler, 1975; Arredondo, 1986; Arredondo-Down, 1981; Bemak, 1989; Kohls, 1984; Winkelman, 1994) have suggested biculturalism is the ideal goal for the acculturation process (or, in Berry’s words, it is the ideal mode of acculturation). This idea is also reflected in Poston’s (1990) Biracial Identity Development Model, in which the author proposes five stages for the identity development of a biracial person. For Poston (1990), the last stage represents whole integration of both identities, achievement of biculturalism, and consideration of the diverse identity as a positive asset.

Professional counselors should respect the value of each of the four modes of acculturation. At the same time, counselors have a duty to challenge their clients and help them move towards a more comfortable solution for the conflict, which could be represented by the integration mode of acculturation. The bicultural mode of operation may be more optimistic and productive, and less stressful, but also has internal conflicts. Future research needs to verify these assumptions.
Miller (1989) proposed four modes of interaction between theories and fact: (a) the model, (b) deductive theory, (c) functional theory, and (d) inductive theory. Berry’s psychological acculturation theory is in the model category. Miller (1989) explained that the model works as a framework for research. Berry established acculturation as part of psychology, leading to a large increase in production of research, instruments, and theory development. His theory of acculturation provides guidance for research in the field.

Overall, Berry’s psychological acculturation theory is a valuable contribution to the fields of counseling, while increasing our understanding of the adjustment process of sojourners (including international students). However, it is important to question the widespread assumption that acculturation is a natural consequence of contact between cultures. Gomes (as cited in Cormier, 2001), for example, considers one as applying ethnocentric values when assuming that acculturation is an inescapable consequence of culture contact. The author considers the acculturation paradigm to be a recasting of the evolutionist thinking according to which less advanced cultures would inevitably give away to more advanced ones.

Another significant concern is that Berry (1980) never formulated a way for gender to be taken into consideration in the acculturation process of individuals. Neither has the author explained how gender might influence the acculturative path of an individual. Further research is necessary to investigate if there is a relationship between acculturation and the gender of the individual.

The relationship between acculturation and vocational identity, on the other hand, seems to be one that has started to be explored. Shis and Brown (2000) conducted a study with international students with the following purpose in mind: “explore (a) the
relationship between acculturation level and vocational identity, (b) the extent to which background variables of age, gender, educational level, length of U.S. residency and Test of English as a Foreign Language (TOEFL) score predict acculturation level, and (c) the extent to which background variables and acculturation level predict vocational identity among a sample of Taiwanese international students at two Midwestern universities” (p.43). The authors hypothesize that Taiwanese international students with an Asian identity (i.e., low acculturated) would have lower vocational identity.

The final study sample was composed of 112 graduate and undergraduate Taiwanese international students (90 graduate and 22 undergraduate). Sixty-seven participants were male and 45 were female. Twenty three percent of the participants resided in the U. S. for less than two years, 35 percent had been here for 2-4 years, 21 percent for 4-6 years, and 21 percent for more than 6 years. The majority of participants had TOEFL scores that indicated at least that they met the requirement for undergraduate admission into an U.S. institution. The final number of participants represented a 62 percent response rate (minus two surveys that were not included in the analysis due to incomplete data). Although there is no consensus of what is an appropriate return rate for surveys, some authors recommend at least a 50 percent return rate in order for results to be reflective of the population in question (Heppner, Kivlighan, & Wampold, 1999).

Shis and Brown (2000) suggest that career-decision making attitudes, skills, and competencies are the heart of career development. Holland, Gottfredson, and Power (1980) propose most of the difficulties in career decision making to be explained by at least one of these three constructs: (a) vocational identity problems, (b) insufficient information or training, and (c) environmental or personal barriers. Vocational identity is,
one of the three central realms for career decision-making process and career
development (Holland, Gottfredson, & Power, 1980). It refers to a clear understanding of
career aspirations, interest, and abilities and is related to decisiveness, maturity, and self-
confidence in career decision-making (Holland, Gottfredson, & Power, 1980).

Shis and Brown (2000) utilize the Suinn-Lew Asian Self-Identity Acculturation
Scale (SL-ASAI; Suinn, Ahuna, & Khoo, as cited by Shis & Brown, 2000), which was
developed to evaluate cognitive, attitudinal, and behavioral content, covering the
following areas: (a) language, (b) identity, (c) friendship, (d) behaviors, (e)
generation/geographic background, and (f) attitudes. Even though the authors of the SL-
ASIA scale reported a Cronbach’s alpha coefficient of .91, the internal consistency
reliability for the sample of this study was .76—which still reflected reasonable stability.

To measure vocational identity, Shis and Brown (2000) utilize My Vocational
Situation (MVS; Holland, Daiger, & Power, as cited by Shis & Brown, 2000). The MVS
measured: (a) the need for occupational information, (b) the perceived external obstacles
to a chosen occupational goal, and (c) one’s possession of a clear and stable career
identity. The authors of the MVS indicate that the estimate of reliability ranged from .86
to .89, with a test-retest reliability coefficient of about .75 for intervals of 1 to 3 months
(Holland, Johnston, and Asama, as cited by Shis & Brown, 2000). Shis and Brown
obtained a Cronbach’s alpha coefficient of .81 for this sample. The information acquired
via the demographic form (e.g., gender, age, educational level, length of residency in the
U. S., and TOEFL scores) was used to analyze the relationships among acculturation
level and vocational identity.
In order to increase response rate and understanding, all materials presented to Taiwanese international students were translated to Chinese and examined by an outside rater. Heppner et al. (1999) pointed out the importance of translation of questions into participants’ native language. Nonetheless, they also advocated that a successful translation involves back-translation and de-centering, which were missing in this study. Still, considering that the participants of this research were all international students who had shown enough proficiency in English to attend an U.S. university, the translation of the material was not crucial to the study.

A Pearson’s Product Moment Correlation was calculated to investigate the relationship between acculturation level and vocational identity, revealing a negative correlation between them (r = -.27, p < .01) and showing no support for the research hypothesis. Contrary to what the authors expected and previous literature suggested, Taiwanese international students who reported an Asian identity (i.e., low acculturation) were more likely to have a clear understanding of their career aspirations and abilities. A stepwise multiple regression analysis was performed to verify the degree to which demographic variables predicted acculturation level. Age and length in the U.S. (R = .43, F (2,104) = 11.67, p < .0001) emerged as significant predictors for acculturation level. Taiwanese international students who were older or who resided in the U.S. for shorter amount of time were less acculturated. Age and acculturation level (R = .34, F (2,104) = 6.71, p < .01) were significant predictors of vocational identity. Participants who were older and those who held an Asian identity scored higher in vocational identity.

These results may reflect Taiwanese international students’ commitment to return to their home country. It would have been interesting to question participants about their
plans for the future to determine if that variable influences the results. Other studies had previously reported a positive relationship between age and vocational identity (Shis & Brown, 2000). On the other hand, other authors propose bicultural identity to be the optimal status of acculturation for Asian Americans—presuming a hierarchical order of the process of acculturation. This assumption was not confirmed by the results of Shis and Brown’s study. Even though many authors assume biculturalism to be of a higher status, these research findings suggest that such supposition could be a conceptual mistake. All different identities and acculturation modes should be understood as having potential advantages. Further research is needed to investigate these crucial issues.

Overall, Shis and Brown (2000) designed a very thorough study that support’s Berry’s (1990) concept of modes of acculturation. One concern, however, is that the study was based on self-report questionnaires. It is important to use caution in interpreting the findings due to the potential for biased response sample.

*Culture Shock Theory*

Culture shock is an important phenomenon in the lives of international students. It is a subjective and internal experience representing the process of initial adjustment to unfamiliar events and unexpected circumstances (Pedersen, 1995). In the words of Pedersen (1995), “culture shock: (1) is a process and not a single event, (2) may take place at many different levels simultaneously as the individual interacts with a complex environment, (3) becomes stronger or weaker as the individual learns to cope or fails to cope, (4) teaches the individual new coping strategies which contribute to future success, and (5) applies to any radical change presenting unfamiliar or unexpected circumstances. Situations of culture shock abroad provide metaphors for better understanding culture
shock related to physical health, environmental disaster, economic failure, psychological crises, or any radical change in lifestyle” (p. vii). Culture shock is a pervasive disorientation that does not strike suddenly, but rather, is cumulative, building up slowly from a sequence of small events that are hard to identify (Kohls, 1979). When individuals are unaware of what is expected of them or what to expect from others, they may experience a nonspecific state of uncertainty; resulting in the development of new, internalized constructs of self, others, and the environment that fit the new situation (Pedersen). Culture shock happens before these constructs are in place.

The term culture (or cultural) shock was first introduced by Kalvero Oberg (1954) in a presentation to the Women’s Club of Rio de Janeiro, Brazil, to describe anxiety that emerges from adapting to a new culture. Oberg explains the anxiety results from losing all familiar cues and symbols that orient social interaction. Some examples of these cues are: how to greet people, how to give tips, when to accept invitations, or when to take something serious or not. The cues may be gestures, non-verbal behaviors, facial expressions, customs, or words. Culture shock is associated with feelings of loss of a familiar environment, stress, frustration, helplessness, fear, withdrawal, irritability, and homesickness (Kohls, 1979; Oberg, 1960; Oberg, 1954; Winkelman, 1994).

Since its first appearance, the concept of culture shock has been established as an unavoidable part of the transition into a new cultural environment. Still, it is common for people experiencing culture shock not to be aware of it. Until recently, culture shock was assumed to be a negative phenomenon and was treated like a disease by some authors (such as Oberg, 1954; Kohls, 1979). Recently, however, explanations of culture shock
have highlighted the educational model and described the adjustment period as a time of growth and development (Pedersen, 1995).

Petersen (1995) provides several different explanations for culture shock: (a) culture shock as the consequence of an encounter to a new environment or situation, (b) as caused by ineffectiveness of intercultural or interpersonal communication, (c) as a threat to the emotional well-being of the sojourner, (d) as inappropriate behaviors that are caused by needs and wants, and (e) as a growth and learning experience. Other authors (Furnham & Bochner, 1986) suggest (a) grief and bereavement, (b) external locus of control, (c) selective migration, (d) migrant expectations, (e) life-events and illness, (f) social support, (g) value difference, and (h) social skills to be the justification for culture shock. These explanations are not mutually exclusive, even though they differ in their theoretical origin and limitations. For example, the grief and bereavement hypothesis of culture shock perceives immigration as a movement of loss. The concept of grieving has been applied to many areas of human experience. It is a non-specific understanding of culture shock and predicts universal experiences of loss despite motivation, expectations, or reactions of the host culture (Furnham & Bochner). The locus of control theory, on the other hand, is fatalistic and explains culture shock as determined by the forces of others or fate. It emphasizes the roles of expectations and motivations, but does not take into consideration temporal, generational, or therapeutic aspects (Furnham & Bochner). The selective migration theory is one of the least psychological and oldest explanations of culture shock and it derives from the Darwinian idea of natural selection, according to which, all living organisms that cope best with the demands of the environment will prevail (Furnham & Bochner). The problem in the latter theory is the idea of selection is
ambiguous and does not cover free choice issues (on the part of the international student or the host country authorities).

Furnham and Bochner (1986) suggest the social learning/social-skills approach to be the most useful theory for culture shock. According to this approach, culture shock happens when individuals do not master the social conventions of the society and are unaware of the rules of social behavior that underline interpersonal conduct. Empirical evidence suggests that certain elements of social interaction—such as non-verbal behaviors, facial expressions, how to express attitudes, feelings and emotions, proxemic posture, gaze patterns—vary between cultures (Furnham & Bochner). This theory not only predicts different reactions for different groups, but also suggests a reliable intervention, via cultural and social skills training.

The reality is that any important life transition will likely result in stress and discomfort. Pedersen (1995) suggests that maintaining self-esteem and personal integrity (and consequently, self-efficacy) should be primary goals of someone experiencing culture shock. Finally, the development of a support system is crucial to help international students reconstruct their identities and roles in the new cultural setting.

There are six indicators that culture shock adjustment is taking place: (a) familiar cues on how to behave are missing or have a different meaning, (b) values that the individual consider good and desirable are no longer respected by the host culture, (c) anxiety, depression, or hostility are triggered by cultural disorientation, (d) there is dissatisfaction with the new ways and idealization of the way things were, (e) recovery skills no longer seem to work, and (f) there is a sense that the culture shock and discrepancy are permanent (Pedersen, 1995).
Many writers seem to agree there are different phases to culture shock and they all suggest different models to understand it (Adler, 1975; Ferraro, 1990; Kohls, 1984; Oberg, 1954; Pedersen, 1995; Preston, 1985; Rhinesmith, 1985). Winkelman (1994) presents the following four primary phases of culture shock as representative of the commonality among the different models: (a) the honeymoon or tourist phase; (b) the crises or culture shock phase; (c) the adjustment, reorientation, and gradual recovery phase; and (d) the adaptation, resolution, or acculturation phase.

Winkelman (1994) explains that the honeymoon phase happens when there is a brief encounter with the new culture (maybe on a vacation or a business trip). This phase has also been seen as the initial contact with the host culture (Oberg, 1960). Typically, during this first phase, one experiences a high level of interest, excitement, euphoria, fascination, positive expectations, and idealizations about the new culture. Even if anxiety or stress is present, it is normally experienced in a positive way. Winkelman suggests that the excitement might be related to the lack of real encounter with the new culture. Kohls (1984) clarifies the emphasis during this phase is on similarities between the new culture and the culture of origin. Oberg (1954) believes this honeymoon stage reflects a superficial experience of the new culture. Generally, individuals in this stage do not need to cope with real conditions of life within the new culture.

The culture shock phase is the period of crisis per se. Many authors suggest different timeline for this to surfaces: for example, Winkelman (1994) suggests it emerges within a few weeks to a month, while Oberg (1960) says it may come within few days or just after six months. Some immigrants may experience this irritated and hostile stage immediately upon arrival—for example when they enter the airport and realize they
cannot understand written signs or talk to people. Winkelman states that some of the
typical experiences during this phase are: (a) life does not make sense, (b) there is a sense
of lacking control of one's life, (c) there is a feeling of being taken advantage of, and (d)
and there is a general over-sensitiveness. Preston (1985) emphasizes the disorientation
and anxiety that come without warning. Kohls (1979, 1984) explains that immigrants
start to interpret the new culture by focusing on the troubling differences from their
culture of origin. This phase is characterized by an intense homesickness and longing to
return home. Sometimes, it may result in isolation or in the decision to go back to the
country of origin.

The third phase of the culture shock process occurs when international students
start understanding the causes of their frustrations and acknowledge the different cultural
rituals, clues, and values (Winkelman, 1994). They begin to find specific solutions for
adjusting effectively to the new cultural environment. Adjustment and adaptation are key
concepts in this phase. Adjustment occurs when the immigrants develop culturally
appropriate problem-solving skills and begin to accept the host culture in a positive way
(Winkelman). Further evidence of reaching this stage is when the immigrants start to joke
about the differences between their culture of origin and their host culture (Oberg, 1954).

According to Winkelman (1994), the fourth phase occurs when an adaptation,
resolution, and acculturation process take place. He points out that effective acculturation
will inevitably cause personal changes to occur. Bicultural identity is the suggested
successful outcome of this stage (Arredondo-Down, 1981; Winkelman). Oberg (1954)
explains during this stage, sojourners understand the cues of social interaction, accept the
traditions of the host country as another way of living, and even start enjoying the new
customs. Some international students celebrate Thanksgiving, although this holiday tradition was not part of their culture prior to coming to the U. S.. Even though the new foreign environment has not changed, the transformation in the international students’ attitudes results in different interaction with their host country and its people.

Petersen (1995) suggest that the culture shock has five stages instead of four: (a) the honeymoon stage, (b) the disintegration stage, (c) the reintegration stage, and (e) the autonomy stage, and (e) the interdependence stage. It is always possible that the international student regress to an earlier stage from time to time while evolving towards a synthesis. Petersen explains that stage 1 is marked by detachment, stage 2 is characterized by self-blame, stage 3 illustrates hostility, stage 4 brings a new perspective and is balanced, and stage 5 portray a multicultural identity. The author clarifies that the third stage (reintegration stage) marks the beginning of the recovery and is the most volatile stage of all. It is when the anger turns outward at others who are to blame at the situation. In stage 4, the individual has an impartial and balanced view of the situation, perceiving positive and negative aspects of the host culture. Petersen describes the autonomy stage as the achievement of the idealized bicultural or multicultural identity. In Petersen’s words:

(…) the individual has moved from alienation to a new identity that is equally comfortable, settled, accepted, and fluent in both the old and new cultures. (…) The differences between the visitor and the host culture are no more or less significant than the differences between any two residents of that host culture. The new culture has been internalized to the point where the visitor accurately and appropriately acknowledges some ownership, responsibilities and privileges
in that new host culture. Ideally, that fifth-stage person will be referred to as a bicultural or multicultural person. (p.245)

The phases of culture shock have been described as a U-shaped curve, from excitement and optimism, passing through feelings of failure and depression, culminating in the recovery at a new level of cheerfulness (Petersen, 1991). Petersen (1995) suggests that it is rare for sojourners to achieve the same high level of functioning in the host culture they had in their home culture, suggesting a backward J-curve as more authentic. Others authors (Gullahorn & Gullahorn, as cited in Petersen, 1991) proposed the curve to shaped like a W to accommodate both the acculturation to the host culture and the re-acculturation after the sojourner returns home. It is possible, considering that culture shock is a multidimensional process, for the sojourner to be functioning at a higher level in one dimension than in others (Petersen, 1995). In addition, the developmental curve may be seen as two-directional, where the international student may regress and progress at different levels (Petersen, 1995).

Berry, Poortiga, Segall, and Dasen (1992) suggest using the concept of acculturative stress instead of culture shock. The authors explain two reasons for the preferred terminology. First, they believe the term shock to have pathological overtones, while the concept of stress highlights a theoretical basis of how people deal with stressors (negative experiences) by engaging in diverse coping strategies. Therefore, the authors propose that the term stress opens its interpretation to encompass both advantageous and prejudicial experiences. Secondly, Berry et al. prefer to reinforce the notion that stress is acculturative and its source lays in the interaction between cultures (hence, acculturative), rather than in one culture only.
During a stress situation, normal functioning is disrupted by environmental stressors, requiring the individual to develop new coping mechanisms and to adapt to a new situation (Berry et al., 1987). In acculturative stress, the source of stressors relates to the process of acculturation (Berry et al., 1987). Individuals experiencing acculturative stress may suffer from the following symptoms: confusion, anxiety, depression, feelings of alienation, psychosomatic illnesses, and identity confusion (Berry et al., 1987). It is understood here that acculturative stress is equivalent to culture shock and these terms are utilized interchangeably in this examination.

In 1987, Berry et al. explain there are five major factors moderating the relationship between acculturation and stress: (a) nature of the host society, (b) type of acculturation group, (c) modes of acculturation, (d) demographic and social characteristics of individual, and (e) psychological characteristics of the individual. Further, the larger society’s tolerance level for cultural diversity will influence the intensity of mental health problems sojourners face. If a society has an assimilationist ideology, for example, new comers experience more problems than if a society has a pluralist multicultural ideology.

A major weakness of the theory of culture shock is little theory-testing research has been done. Furnham and Bochner (1986) attribute this lack of research to the fact many of the culture shock theories have been developed in other setting and for other problems and applied to culture shock (for example, the psychoanalytical understanding of culture shock as grief and loss). The authors say culture shock theories are rarely set up in a formal and prepositional manner and consequently, lack being empirically tested. There is also a dearth of research studying the effect of culture contact on the host
culture. Territoriality, ethnocentrism, competitiveness, positive identity of a culture, avoidance of dissimilarities, search for control, interaction fatigue, and cultural heterogeneity are some of the topics that could be investigated in relation to the host societies (Furnham & Bochner).

Furnham and Bochner (1986) suggest that a good theory of culture shock should integrate a logically consistent framework with empirical findings. The authors propose there is great deal of additional work to be done in regards to culture shock theory. Another weakness of the culture shock theory is the assumption that it is an inevitable phenomenon. Even with empirical data it would be difficult to generalize to all immigrants, refugees, native people, ethnic groups, and sojourners—aside from anyone else who may experience culture shock due to a radical life-changing event. Nevertheless, the culture shock theory is very appropriate and applicable to the international student population. It provides not only a framework for future research in the field, but also guidelines for counseling practice. Overall, this theory seems to work well together with the theory of acculturation and they seem to complement each other.

*Social Support Theory*

Social support has been included as part of this research because it emerged as an important component of international students adjustment in a preliminary qualitative study conducted by this investigator. According to Kessler, Price, and Wortman (1985), the scientific interest in social support comes from paper reviews published in the 1970s demonstrating an association between psychiatric disorders and either the absence of adequate social support or the disruption of social networks. Since then, social support has been investigated as a possible protective factor to good health. Social support can be
understood as referring to “the mechanisms by which interpersonal relationships presumably protect people from the deleterious effects of stress” (Kessler, Price, & Wortman, 1985, p.541). It may also be seen as social relationships that either directly or indirectly assist individuals or insert them into a web of social associations that are perceived to be loving, caring, and readily available (Ibañez et. al 2003). Social support may come as formal support from people outside the social network of the individual (for example, mental health professionals, doctors, police) or informal social support provided by the individual’s social network, which includes family and friends (Ibañez et. al 2003). The importance of formal social support is increased when informal social support is not available, as it may be the case of most international students due to their geographic relocation.

In an attempt to clarify the concept of social support, Finfgeld-Connett (2005) performed a meta-synthesis of findings from qualitative studies and linguistic analyses. The author explains that social support is “an advocative interpersonal process (…) that is centered on the reciprocal exchange of informational and is context specific” (p. 5). The author also suggests that there are two types of social support: emotional support and instrumental support. Emotional support refers to comforting gestures with the purpose of alleviating stress, anxiety, hopelessness or depression (Finfgeld-Connett, 2005). Examples of emotional social support are: being available, being physically present, expressing concern, sending cards or flowers, talking on the phone or communicating via email. Instrumental support, on the other hand, consists on providing tangible goods, services, money, or shelter. Examples of instrumental support are: providing supplies, furniture, and food, giving someone a ride, or assisting with household tasks. The author
emphasized that advocacy is an important characteristic of social support; and it may appear in the form of motivation, empowerment, reassurance, reinforcement, affirmation, validation, and encouragement of the recipient. Finfgeld-Connett (2005) also points out that social support network must view the individual with unconditional positive regard, and caring, and be available, reliable and trustworthy.

According to Ong and Ward (2005), there are four main functions for supportive behaviors: emotional support, social companionship, tangible assistance, and informational support. Emotional support is explained as displays of love, care, concern, and sympathy; social companionship relates to belongingness to a social group that provides company for a variety of activities; tangible assistance is a concrete form of help (through finances, services, or material aid); while informational support refers to the communication of opinions and advices regarding a current personal difficulty (Ong & Ward, 2005).

The psychological benefits of social support have been well documented (Ibañez et. al 2003; Kessler, Price, & Wortman, 1985; Meehan, Durlak, & Bryant, 1993; Ong & Ward, 2005). Social support has been conceptualized as having the important role of buffering negative impact of stressful life events (Meehan, Durlak, & Bryant, 1993), improve mental health, and increase sense of personal competence (Finfgeld-Connett, 2005). Depression has been consistently shown to be negatively related to social support (Kessler, Price, & Wortman, 1985). Social support has also been found to be significantly related to positive dimensions of mental health, such as happiness, gratification, and self-confidence (Meehan, Durlak, & Bryant, 1993). Some authors suggest that social support
enhance adjustment by increasing one’s positive affect, sense of mastery, self-confidence, or sense of personal satisfaction (Meehan, Durlak, & Bryant, 1993).

Jou and Fukada (1995) studied the effects of three dimensions of support (needed, perceived, and actual) on the cross-cultural adjustment of Chinese students in Japan. Ninety-two Chinese students completed the Social Support Scale for Chinese Students in Japan (Jou, 1993, as cited in Jou & Fukada, 1995), the Freshmen Transition Questionnaire (Baker, 1981, as cited in Jou & Fukada, 1995), and the Adjustment Scale for Foreign Students in Japan (Uehara, 1988, as cited in Jou & Fukada, 1995). Correlational analysis and multiple regression analysis indicated that: (a) the relationship between the need for support and adjustment was strongly negative, (b) the relation between actual support and adjustment was positive, and (c) there was no overall association of perceived support and adjustment.

Even though previous research has shown social support to be a significant factor in reducing stress, ameliorating acculturative stress, and promoting health outcomes, sojourner research on coping with cross-cultural transitions has yielded inconsistent results in regards to the role of social support (Ong & Ward, 2005). Ong and Ward (2005) suggest that the inconsistent findings result from the weak conceptualization and operationalization of the social support construct. While health researchers adopted social support as a multidimensional construct, acculturation researchers have utilized it as a unitary one (Ong & Ward, 2005).

Concerning sojourners’ social support, Ong and Ward’s (2005) study showed that sojourners’ social network consisted of both local (51%) and overseas (49%) ties. The majority of local ties were composed of other foreigners (74.8%), while the majority of
the overseas ties came from the sojourners’ home countries (73.9%). Furthermore, 77.8 percent of the respondents felt that oversea ties were much stronger, closer, and more familiar compared to local ties, serving more personal needs of spiritual, emotional, moral, and psychological support. Local ties, on the other hand, provided respondents with more of the management of day-to-day events, with practical and physical assistance.

Another issue to be considered is that much of the research has been done with inadequate measures of sojourner social support scales, which do not address the specific characteristics of social support of the sojourning population (Ong & Ward, 2005). Some of the specific characteristic of sojourners’ social support system are: (a) it is a major source of stress due to the disruption of a person's social support with relocation, (b) its availability is a primary strategy for coping with acculturative stress, (c) dysfunctional effects and restraints of support may be present when recipients and providers face similar threatening and uncertain conditions (Fontaine, 1986; Adelman, 1988). Additionally, sojourners are forced to develop new ways to obtain the required support, which may include long-distance communication.

Adopting an instrument that has been designed for the specific purpose of measuring the social support of sojourners is a crucial element to a sound research with international students. The Index of Sojourner Social Support (ISSS—Ong & Ward, 2005) was develop specifically to be measure sojourners’ social support and incorporates both the theory of social support and the particularities of the construct to sojourners. It was chosen as an instrument in this study for its specific design to measure sojourner’s social support.
Summary

Based on the theoretical framework of acculturation theory (Berry, 1980; 2001; Berry et al., 1987), culture shock theory (Adler, 1975; Ferraro, 1990; Kohls, 1984; Oberg, 1954; Preston, 1985; Rhinesmith, 1985; Winkelman, 1994), and social support theory (Ward, 2004; Ward, Leong, & Low, 2004; Ong & Ward, 2005), this study examined if there is a relationship between social support and culture shock. Culture shock level was studied as it relates to the gender, ethnicity, and English proficiency. Additionally, the study conducted investigated if English proficiency influences social support.

Acculturation theory (Berry, 1980; 2001; Berry et al., 1987) provided an important general framework to understand international students’ individual psychological changes resulting from being in their new environment. Culture shock theory (Adler, 1975; Ferraro, 1990; Kohls, 1984; Oberg, 1954; Preston, 1985; Rhinesmith, 1985; Winkelman, 1994), on the other hand, offered a structure to understand the subjective point of view of the crisis phase of the acculturation period. As such, culture shock was one of the main variables studied in this dissertation. Finally, social support theory (Ward, 2004; Ward, Leong, & Low, 2004; Ong & Ward, 2005) presented a possible protective mechanism to help international students shield themselves from the stress of culture shock and the acculturation processes. As social support had not before been explored in relation to culture shock specifically, this presented an excellent opportunity to do so.
CHAPTER III

Method

Participants

*Population.* The population for this study consisted of international students enrolled at NCSU in 2006. Graduate, undergraduate, special students, male, and female students were invited to participate in the study. The minimum required age for participants was 18. OIS reported that more than 1,500 international students have been enrolled yearly at NCSU since 2001 (OIS, 2004). More specifically, there were 1,577 international students enrolled at North Carolina State University in 2005-2006 (OIS, 2005a). Of this total, 1,385 were graduate students, 142 were undergraduate students and 50 were special students (OIS, 2005a). More then half of the international student body enrolled at this university was studying engineering (OIS, 2005b).

*Description of the Sample.* According to the Office of International Services (OIS; personal communication, June 14, 2006) 1884 international students fit the research criteria during the summer 2006. International students who were enrolled in the 2006 Summer Institute in English were also invited to participate in the study.

The participants for this investigation consisted of 287 international students at North Carolina State University. The sample included men and women, with ages varying from 18 to 45. Participants were enrolled at NCSU in various levels of study (undergraduate, masters, doctorate, or summer institute) and reported diverse levels of English proficiency. International students representing 53 different countries and different ethnicities (Asian, European, Latino(a)/Hispanic, and Black/Caribbean/African) participated in the study.
Data Collection Procedures

The data were gathered via the Web. McGothlin (2003) suggests that Internet-based data collection has become a very popular methodological approach in psychological research. The author also advocates that Internet-based research is more beneficial than postal mailing surveys in regards to data collection, data entry, and data analysis. Carini, Hayek, Kuh, Kannedy, and Ouimet (2003) indicate that Web-based research is a cost-effective method to improve response rates, especially among computer-savvy respondents such as college students. In a study investigating the modes of research, the authors found small distinctions in responses of college students to paper surveys and Web-based surveys (Carini et al., 2003).

Considering that this study was conducted with international students enrolled at North Carolina State University, the Web-based data collection seemed to be the most appropriate methodology to be utilized. Internet World Stats (2005) showed that there were 202,888,307 Internet users in the U. S. as of June 2005, which represented 68.5 percent of the population. NCSU ranked 22\textsuperscript{nd} place in the Yahoo Internet Life’s (2000) America’s Most Wired Colleges Survey. A recent survey by the NCSU College of Engineering (2005) showed that 97 percent of incoming freshmen owned computers. Moreover, all new incoming undergraduate students are expected to own a laptop computer.

The OIS assisted the investigator by determining which students fit the study criteria and forwarding an e-mailed to 1884 international students. The e-mail invited them to participate in the study. Aside from a paragraph of encouragement written by OIS staff, the initial e-mail (see Appendix B) included: (a) a short description of the
study, (b) a request for participation in the study, and (c) a hyperlink to the Web page. The e-mail also acted as an informed consent. Students were advised that the completion and electronic submission of the survey indicated their consent for participation in the study. When students clicked on the hyperlink, they were directed to the Internet-based version of the questionnaires and demographic form.

One week after the initial e-mail was sent out, a follow up e-mail was sent to participants as a reminder (see Appendix C). The second e-mail request contained the same basic content as the initial e-mail.

The questionnaires were hosted at SurveyMonkey.com, a Web site designed for professionals who are interested in collecting data electronically. The electronic instruments consisted of a total of 7 pages, with the last one being dedicated solely to thanking international students for their participation. The electronic pages were created with a colorful background (maroon, yellow, and orange). The last “thank you” page contained the main investigator’s picture, contact information, and a link to her personal Web page. International students who participated in the study remained anonymous. No individual identifying information was collected.

International students who volunteered to participate in the study received, reviewed, and completed the following documents: (a) an e-mail consent form (see Appendix A and B), (b) a demographic form (see Appendix C), (c) the Culture Shock Questionnaire (Mumford, 1998; see Appendix D), and (d) The Index of Sojourner Social Support (ISSS—Ong & Ward, 2005; see Appendix E).
**Instruments**

*Demographic form.* International students who volunteered to participate in this study filled out a demographic form (see Appendix C), which asked them to provide information such as: their gender, age, level of study at NCSU, major, native language, country of origin, and ethnicity. They were asked to rate their English proficiency among the following three levels: (a) advanced: fluent with minor language difficulties, (b) intermediate: difficulties in one of the following areas: speaking, listening, reading, or writing, and (c) beginner: great difficulties in some of the following areas: speaking, listening, reading, or writing. They were also asked who they get their social support from (family abroad, co-nationals, other international students, Americans, or other), their plans for after graduation, and how long ago they arrived in the U.S.

*Culture Shock Questionnaire.* Mumford’s (1998) Culture Shock Questionnaire (CSQ) consists of 12 Likert-type questions with three possible answers each (see Appendix D). The scale contains seven core culture shock items (such as “do you feel strain from the effort to adapt to a new culture?”) and five interpersonal stress items (such as “do you feel anxious or awkward when meeting local people?”).

The core of the questionnaire was derived directly from the six aspects of culture shock delineated by Taft (1977): (a) strain due to the effort required to make necessary psychological adaptations, (b) a sense of loss regarding friends, status, profession, and possessions, (c) experiences of being rejected by and/or rejecting members of the new culture, (d) confusion in role, role expectations, values, feelings, and self-identity, (e) surprise, anxiety, and even disgust after becoming aware of cultural differences, and (f)
feelings of impotence because of the lack of coping mechanisms to deal with the new environment.

According to Mumford (1998), the reliability analysis on the seven core culture shock items yielded Cronbach’s coefficient of 0.75. The reliability analysis for the five interpersonal stress items yielded Cronbach’s coefficient of 0.52. The five interpersonal stress items were individually significantly correlated with the culture shock score. A reliability coefficient on the 12 items yielded Cronbach’s coefficient of 0.79. Each one of the three possible answers for the CSQ receives the following scoring: first response equals to two points, second response is equal to one point, and the third answer receives zero points. The total score is calculated by summing the points for each answer, which produces a range of scores of 0-24 points. High scores relate to a higher level of culture shock. Details of the pilot study, selection of items and external validity of the CSQ can be found in Mumford (1998).

**The Index of Sojourner Social Support.** The Index of Sojourner Social Support (ISSS—Ong & Ward, 2005; see Appendix E) consists of 18, 5-point Likert-type questions: 1 (no one would do this), 2 (someone would do this), 3 (a few would do this), 4 (several would do this), and 5 (many would do this). The scale can be scored as a single factor of social support by summing all item scores. The scale produces a scoring range of 18 to 90. Higher scores in this scale relate to a strong social support system.

Alternatively, scores may be calculated for Socio-emotional Support (items: 1, 4, 6, 7, 11, 14, 16, 17) and for the Instrumental Support subscale (items: 2, 3, 5, 8, 10, 12, 13, 15, 18). Participants were instructed to read each description carefully and consider whether they know people who would perform the behaviors described. An example of socio-
emotional support item is: “Listen and talk with you whenever you feel lonely or depressed.” One of the instrumental support subscale items is: “explain things to make your situation clearer and easier to understand.”

The ISSS was created specifically for the measure of social support for sojourners. The instrument was created based on a multidimensional understanding of the social support construct. The construction and validation of the ISSS Scale were based on three studies. In the first study, 54 English-speaking individuals who were either working or studying in Singapore completed a questionnaire that contained: (a) a qualitative section with open-ended questions about the sojourner’s current social network, the differences in supportive functions provided by local versus oversea ties, difficulties experienced by sojourners in Singapore, and the help from others in dealing with these difficulties; and (b) a quantitative section including 43 statements portraying various supportive behaviors that respondents assessed in terms of their relevance to sojourner adaptation. Participants’ responses about encountered difficulties were divided into two categories: the ones that reflected social-cultural adjustment issues and the ones that reflected psychological adjustment problems. The possible supportive acts to cope with such difficulties were analyzed in regard to their reflection of the four functional dimensions of support: (a) emotional support, (b) social companionship, (c) tangible assistance, or (d) informational support. A chi-square analysis was conducted for the quantitative section. Only the items which were statistically significant to more than 50 percent of the responses ($p < .05$) were selected to be included in the ISSS scale. Based on the results of study 1, 64 items were generated for the ISSS, with 16 items being related to each of the four functional dimensions of support.
During study two, Ong and Ward (2005) focused on the construction and validation of the ISSS Scale. The authors utilized the available literature on social support from both health and cross-cultural psychology and selected the following constructs to provide concurrent, convergent, discriminant, and incremental validation to the ISSS scale: (a) received supportive behaviors, (b) interpersonal trust, (c) sense of mastery, (d) locus of control, (e) depression, and (f) social desirability. A total of 426 sojourners in Singapore participated in this study. Of them, the first 314 contributed data to the initial establishment of the ISSS. The initial 64 items of the proposed ISSS were subject to a four-factor PCA with Promax rotation ($\kappa = 4$) in an attempt to eliminate marginal and inappropriate items. Item elimination also consisted of content analysis and inspection of the interitem and item-total correlation. The final ISSS Scale was derived from this study, with a total of 18 items and two factors (9 items comprising socio-emotional support and 9 items including instrumental support). The Cronbach’s alpha of the socio-emotional support sub-scale was .92 ($M = 23.8$, $SD = 7.32$), and for the instrumental support sub-scale it was .91 ($M = 26.6$, $SD = 7.22$). The Cronbach’s alpha for the entire ISSS scale was .94 ($M = 50.39$, $SD = 13.14$).

Finally, Ong and Ward (2005) utilized the data from the remaining 112 participants for a preliminary cross-validation of the instrument. Both internal and external procedures were validated in the ISSS. An 18 x 18 covariance matrix was generated for each of the sub-samples, and a referent indicator was selected for each of the two factors. The multiple-groups covariance structure analysis showed that ISSS holds a stable two-factor internal structure (socio-emotional support and instrumental support) and a logical external structure of nomological relationships to: (a) received
social support, (b) locus of control, (c) sense of mastery, (d) interpersonal trust, (e) depression, and (f) social desirability. The instrument was shown to have adequate and stable construct validity and scale reliability.

Data Scoring

Both the Index of Sojourner Social Support (ISSS; Ong & Ward, 2005) and the Culture Shock Questionnaire (CSQ; Mumford, 1998) scoring directions were supplied by their developers. Due to the objective nature of the scoring of both instruments, no special training was needed. The direction of each scale item was noted and the scores for each of the six scales (e.g., social support, social-emotional support, instrumental support, culture shock, core culture shock, interpersonal stress) were calculated.

Overview of Statistical Analysis Procedures for Each Research Question

The following procedures were utilized to analyze the data for each of the questions accordingly:

1. For research question one, Is there a correlation between culture shock and: (a) socio-emotional support or (b) instrumental support?, a Pearson Product-Moment Correlation was calculated. The Pearson's Correlation reflects the degree of linear relationship between social support and culture shock. The results may range from +1 to −1, with +1 indicating a perfect positive linear relationship between the variables.

2. In order to answer the research question number two, Is there a difference in culture shock level for males and females?, and considering the variables in question are continuous, a t test was performed between the means for the culture shock level for males and females. The t test indicates whether the means of two groups are statistically different.
3. The third research question, *What are the values of culture shock by ethnicity?*, was analyzed by the calculation of descriptive statistics. A frequency distribution is presented, giving special attention to the range and average of culture shock scores for different cultures of origin.

4. The fourth research question, *What are the values of culture shock by English proficiency?*, was also analyzed by the computation of descriptive statistics, which are being presented in chapter 4 in a table format. Difference and variation of scores will be discussed.

5. Descriptive statistics were calculated for the fifth research question, *What are the values of social support by English proficiency?*

*Summary*

This chapter included a description of the research method, its participants, instruments, research procedure, and types of analysis that were utilized to examine the data. Chapter 4 focuses on the statistical analyses of the research collected. It includes a summary of the results answering the research questions presented above.
CHAPTER 4

Results

This chapter includes results of the data analytic procedures. First, descriptive statistics for the participants are presented. Then, results for each of the five research questions are reported. Tables are utilized to summarize descriptive statistics and significant findings.

The researcher conducted a multi-step data analysis procedure. She followed a series of functional and statistical steps: organized the data, scored inventories, eliminated incomplete or invalid data; compiled descriptive statistics summaries (numbers of subjects, range, mean, standard deviation); performed $t$ tests, correlation analyses, and a Main Effects ANOVA model.

Discard of Invalid Data

The first step in the analysis of the data collected was to scan through the instruments and discard any blank entries. During this process, one entry was recognized as phony data. The data from this inventory were deleted from all statistical analysis. This phony entry was recognized by the following answers among others: (a) “235” years old, (b) “dish washing” as the level of studies at NCSU, (c) “Redneck” as ethnicity, and (d) “campaign for president” as plans for after graduation. The total of 287 participants remained in the study analysis.

Descriptive Statistics

The participants for this investigation consisted of 287 international students at North Carolina State University. The sample included men and women (62.9% men and 37.1% women), with ages varying from 18 to 45. Participants were enrolled at NCSU in
undergraduate, masters, doctoral, or summer institute programs. The majority of participants (76%) reported as having advanced level of English, which was explained as “fluent with minor language difficulties.” International students came from 53 different countries and were of different ethnicities (e.g., Asian, European, Latino(a), and Black/Caribbean/African). See Table 1 for a further breakdown of selected demographics variables.

Table 1

*Selected Demographic Variables*

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Table 1 continued

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<tr>
<td>English as a Second Language</td>
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<td>0.3%</td>
</tr>
<tr>
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<td>1</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

English Proficiency

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Advanced</td>
<td>218</td>
<td>76.0%</td>
</tr>
<tr>
<td>Intermediate</td>
<td>49</td>
<td>17.1%</td>
</tr>
<tr>
<td>Beginner</td>
<td>3</td>
<td>1.0%</td>
</tr>
<tr>
<td>Skipped this question</td>
<td>17</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

Ethnicity

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>189</td>
<td>65.9%</td>
</tr>
<tr>
<td>Black/Caribbean/African</td>
<td>6</td>
<td>2.1%</td>
</tr>
<tr>
<td>European</td>
<td>39</td>
<td>13.6%</td>
</tr>
<tr>
<td>Latino (a)/Hispanic</td>
<td>25</td>
<td>8.7%</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>25</td>
<td>8.7%</td>
</tr>
<tr>
<td>Skipped this question</td>
<td>3</td>
<td>1.0%</td>
</tr>
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</table>

Country of Origin

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Algeria</td>
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<td>0.3%</td>
</tr>
<tr>
<td>Antigua</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Argentina</td>
<td>6</td>
<td>2.0%</td>
</tr>
<tr>
<td>Bangladesh</td>
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<td>0.3%</td>
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Table 1 continued

<table>
<thead>
<tr>
<th>Country</th>
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<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Belgium</td>
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<td>0.3%</td>
</tr>
<tr>
<td>Brazil</td>
<td>4</td>
<td>1.4%</td>
</tr>
<tr>
<td>Canada</td>
<td>3</td>
<td>1.0%</td>
</tr>
<tr>
<td>Chile</td>
<td>2</td>
<td>0.7%</td>
</tr>
<tr>
<td>China</td>
<td>28</td>
<td>9.7%</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Cyprus</td>
<td>3</td>
<td>1.0%</td>
</tr>
<tr>
<td>Ecuador</td>
<td>3</td>
<td>1.0%</td>
</tr>
<tr>
<td>Egypt</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Estonia</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>France</td>
<td>4</td>
<td>1.4%</td>
</tr>
<tr>
<td>Greece</td>
<td>2</td>
<td>0.7%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Hungary</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>India</td>
<td>119</td>
<td>41.4%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>4</td>
<td>1.4%</td>
</tr>
<tr>
<td>Iran</td>
<td>6</td>
<td>2.0%</td>
</tr>
<tr>
<td>Israel</td>
<td>2</td>
<td>0.7%</td>
</tr>
<tr>
<td>Jamaica</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Jordan</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Kenya</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Korea</td>
<td>8</td>
<td>2.7%</td>
</tr>
</tbody>
</table>
Table 1 continued

<table>
<thead>
<tr>
<th>Country</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lebanon</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Mexico</td>
<td>4</td>
<td>1.4%</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Pakistan</td>
<td>3</td>
<td>1.0%</td>
</tr>
<tr>
<td>Panama</td>
<td>2</td>
<td>0.7%</td>
</tr>
<tr>
<td>Peru</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Philippines</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Poland</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Portugal</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Romania</td>
<td>4</td>
<td>1.4%</td>
</tr>
<tr>
<td>Russia</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Singapore</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Slovakia</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>South Africa</td>
<td>2</td>
<td>0.7%</td>
</tr>
<tr>
<td>South Korean</td>
<td>7</td>
<td>2.4%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>7</td>
<td>2.4%</td>
</tr>
<tr>
<td>Thailand</td>
<td>5</td>
<td>1.7%</td>
</tr>
<tr>
<td>Trinidad</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Turkey</td>
<td>10</td>
<td>3.4%</td>
</tr>
<tr>
<td>UK</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>USSR</td>
<td>2</td>
<td>0.7%</td>
</tr>
</tbody>
</table>
Table 1 continued

<table>
<thead>
<tr>
<th>Country</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venezuela</td>
<td>7</td>
<td>2.4%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Yemen</td>
<td>1</td>
<td>0.3%</td>
</tr>
<tr>
<td>Skipped this question</td>
<td>14</td>
<td>4.8%</td>
</tr>
</tbody>
</table>

Note. N = 287.

Elimination of Incomplete Data. There were a number of subjects who only partially completed the inventories provided. Participants who did not complete both instruments (e.g., Culture Shock Questionnaire and The Index of Sojourner Social Support) were eliminated from the analysis of both inventories. Participants who missed answering questions related to any of the variables utilized in this study (e.g., gender, socio-emotional support, instrumental support, social support, core culture shock, interpersonal stress, culture shock, ethnicity, and English proficiency) also had their data eliminated from the final data analysis. From the data of 287 participants, 54 of these did not complete one of the two inventories and 9 had important data missing. The final remaining data of 224 participants were utilized in further data analysis.

Statistical distributions. Table 2 provides the properties of statistical distributions for each of the following six variables: socio-emotional support, instrumental support, social support, core culture shock, interpersonal stress, and culture shock. More specifically, Table 2 reports the mean, standard deviation, and range for each one of those variables in the sample of international students studied.
Table 2

_Statistical Distribution_

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-Emotional Support</td>
<td>26.18750</td>
<td>7.62523</td>
<td>9 - 45</td>
</tr>
<tr>
<td>Instrumental Support</td>
<td>27.61161</td>
<td>7.84697</td>
<td>9 - 45</td>
</tr>
<tr>
<td>Social Support</td>
<td>53.79911</td>
<td>14.73015</td>
<td>21 - 90</td>
</tr>
<tr>
<td>Core Culture Shock</td>
<td>5.22768</td>
<td>2.69311</td>
<td>0 - 12</td>
</tr>
<tr>
<td>Interpersonal Stress</td>
<td>2.14732</td>
<td>1.72054</td>
<td>0 - 8</td>
</tr>
<tr>
<td>Culture Shock</td>
<td>7.37500</td>
<td>3.84013</td>
<td>1 - 20</td>
</tr>
</tbody>
</table>

_Note_. N = 224.

Research Questions Findings

Research question one. Is there a correlation between culture shock and: (a) socio-emotional support or (b) instrumental support?

Pearson Product-Moment Correlation Coefficients were calculated between all the culture shock (e.g., core culture shock, interpersonal stress, culture shock) and the social support (e.g., socio-emotional support, instrumental support, and social support) variables. Pearson Product-Moment Correlation indicates the degree of linear relationship between two variables, ranging from +1 to -1. A correlation of +1 reflects that there is a perfect positive linear relationship between variables. All correlation coefficients calculated indicated significant negative relationship between the variables. Table 3 presents a 3 x 3 correlation matrix with these results.
Table 3

*Pearson Product-Moment Correlation Coefficients*

<table>
<thead>
<tr>
<th></th>
<th>Core Culture Shock</th>
<th>Interpersonal Stress</th>
<th>Culture Shock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-Emotional Support</td>
<td>-0.32942</td>
<td>-0.30974</td>
<td>-0.36980</td>
</tr>
<tr>
<td></td>
<td>p &lt; .0001</td>
<td>p &lt; .0001</td>
<td>p &lt; .0001</td>
</tr>
<tr>
<td>Instrumental Support</td>
<td>-0.34507</td>
<td>-0.28604</td>
<td>-0.37016</td>
</tr>
<tr>
<td></td>
<td>p &lt; .0001</td>
<td>p &lt; .0001</td>
<td>p &lt; .0001</td>
</tr>
<tr>
<td>Social Support</td>
<td>-0.35435</td>
<td>-0.31272</td>
<td>-0.38862</td>
</tr>
<tr>
<td></td>
<td>p &lt; .0001</td>
<td>p &lt; .0001</td>
<td>p &lt; .0001</td>
</tr>
</tbody>
</table>

The squares of Pearson Product-Moment Correlation Coefficients ($r^2$) were also calculated in order to verify how much of the changes in one of the variables could be accounted for by the variation in the other variable. The highest value among these $r^2$ calculated was between culture shock and social support (both variables represent total scores for the Culture Shock Questionnaire and the ISSS respectively). The square of Pearson Product-Moment Correlation Coefficients between culture shock and social support indicated that 15 percent of the variance in culture shock could be accounted for by the changes in the social support variable. It is not surprising that the strongest $r^2$ was between these two variables, considering that they are calculated by the sum of their subscales. The weakest relationship among the variables, on the other hand, was between instrumental support and interpersonal stress, which accounted for only eight percent of the variance. One may expect, indeed, interpersonal stress to be more closely related to socio-emotional support than to instrumental support, since the latter can be delivered by
anyone, even by strangers, which may decrease anxiety-provoking feelings. Table 4 presents these findings.

Table 4

*Square of Pearson Product-Moment Correlation Coefficients ($r^2$)*

<table>
<thead>
<tr>
<th></th>
<th>Core Culture Shock</th>
<th>Interpersonal Stress</th>
<th>Culture Shock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-Emotional Support</td>
<td>0.10852</td>
<td>0.09594</td>
<td>0.13675</td>
</tr>
<tr>
<td>Instrumental Support</td>
<td>0.11907</td>
<td>0.08182</td>
<td>0.13702</td>
</tr>
<tr>
<td>Social Support</td>
<td>0.12556</td>
<td>0.09779</td>
<td>0.15103</td>
</tr>
</tbody>
</table>

The results to research question 1a, pertaining to a possible correlation between culture shock and socio-emotional support, confirmed that there is a significant negative relationship between these two variables. Concurrently, the results to research question 1b, which inquired about a possible correlation between culture shock and instrumental support, also indicated that there is a significant negative relationship between these two variables. The results indicate that international students who have a stronger social support may experience less culture shock than those who have a weaker social support system in place.

*Research question two.* Is there a difference in culture shock level for males and females?

Inferential statistics were utilized in order to verify if there were differences between males and females in their level of culture shock. In general, the purpose of
using inferential statistics is to assess the probability that an observed difference between groups is a dependable one, which can lead the researcher to make inferences from the data collected to more general conditions. The \( t \) test was the inferential test performed to establish if there were any significant differences between means for the level of culture shock in males and females.

As Table 5 shows, the mean for female culture shock was 7.4 (\( n = 90 \)) and the mean for male culture shock was 7.3 (\( n = 134 \)). A Student’s \( t \) test between male and female for culture shock was not significant, indicating no statistical gender difference for culture shock.

When the data were analyzed more closely, however, and when both culture shock subscales were considered, the investigator noticed that the gender difference in scores for both subscales occurred in reverse directions. As Table 5 shows, the mean for female core culture shock was higher than the mean for male core culture shock. A Student’s \( t \) test between male and female culture shock levels was not significant at a \( p \)-value of .05. Nevertheless, the difference between male and female core culture shock level was significant at a \( p \)-value of .09: \( t \) (222) = 1.70, \( p = 0.09 \). The difference of means for interpersonal stress between females and males, on the other hand, was borderline significant: \( t \) (222) = -1.93, \( p = 0.0545 \) and in the reverse direction of the difference in core culture shock.

Even though there was no initial research question about the difference in female and male social support scores, the researcher decided to run a Student’s \( t \) test for the social support variables (e.g., socio-emotional support, instrumental support, and social support). The socio-emotional support \( t \) test showed to be significantly different for
females and males ($t(222) = 3.40, p = 0.0008$), while instrumental support was not statistically different. For both social support subscales (e.g., socio-emotional support and instrumental support), female means were higher than male means for the variables. Finally, support appeared to be significantly different for males and females: $t(222) = 2.54, p = 0.0118$). Table 5 summarizes these results.

Table 5

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
<th>Diff.</th>
<th>$t(df) = \text{xx, } p = \text{xx}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core CS</td>
<td>5.6</td>
<td>4.9776</td>
<td>0.6224</td>
<td>$t(222) = 1.70, p = 0.0900$</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>1.8778</td>
<td>2.3284</td>
<td>-0.451</td>
<td>$t(222) = -1.93, p = 0.0545$</td>
</tr>
<tr>
<td>CS</td>
<td>7.4778</td>
<td>7.306</td>
<td>0.1718</td>
<td>$t(222) = 0.33, p = 0.7435$</td>
</tr>
<tr>
<td>SoEmSu</td>
<td>28.256</td>
<td>24.799</td>
<td>3.457</td>
<td>$t(222) = 3.40, p = 0.0008$</td>
</tr>
<tr>
<td>InstSup</td>
<td>28.556</td>
<td>26.978</td>
<td>1.5779</td>
<td>$t(222) = 1.48, p = 0.1404$</td>
</tr>
<tr>
<td>SocSup</td>
<td>56.811</td>
<td>51.776</td>
<td>5.035</td>
<td>$t(222) = 2.54, p = 0.0118$</td>
</tr>
</tbody>
</table>

*Note.* Core CS = core culture shock, Interpersonal = interpersonal stress, CS = culture shock, SoEmSu = socio-emotional support, InstSup = instrumental support, SocSup = social support, Diff. = Difference.

The results to research question two, which inquired about a possible gender difference in culture shock, indicated there was no significant difference between culture shock for males and females. The difference between male and female core culture shock level was shown to be significant only at a $p$-value of .09. In contrast, the difference between male and female interpersonal stress was significant and in the reverse direction of the difference in core culture shock.

*Research question three.* What are the values for culture shock by ethnicity?
In order to answer this question, descriptive statistics were calculated. A frequency distribution is presented in Table 6 below, with the mean scores for culture shock for each one of the four ethnicities represented in this sample (e.g., Asian, Black/Caribbean/African, European, Latino). Culture shock scores can potentially range from 0 to 24. The mean (with standard deviation in parentheses) for culture shock levels of Black/Caribbean/African international students was 8.60 (3.71), the highest of the sample. Unfortunately, this ethnical group represented only 2.1 percent of the sample. Latino students, on the other hand, showed the lowest mean for culture shock, which was 6.38 (2.78) and represented 8.7 percent of international students who participated in the study.

Table 6

Descriptive Statistics for Culture Shock by Ethnicity

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>Range</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>7.66</td>
<td>7</td>
<td>3.94</td>
<td>1-20</td>
<td>147</td>
</tr>
<tr>
<td>Black/Caribbean/African</td>
<td>8.60</td>
<td>8</td>
<td>3.71</td>
<td>4-14</td>
<td>5</td>
</tr>
<tr>
<td>European</td>
<td>6.50</td>
<td>6</td>
<td>3.78</td>
<td>1-16</td>
<td>32</td>
</tr>
<tr>
<td>Latino (a)</td>
<td>6.38</td>
<td>6</td>
<td>2.78</td>
<td>2-12</td>
<td>21</td>
</tr>
</tbody>
</table>

*Note.* N = 224. Culture shock scores range from 0-24.

Influencing variables. While analyzing the values for culture shock by ethnicity, the investigator started questioning which variables may have influenced culture shock and decided to statistically investigate the issue. A general linear model (GLM) version of analysis of variance (ANOVA) was employed, considering all interactions for core culture shock, interpersonal stress, and culture shock. An ANOVA test determines the
existence or non-existence of significant difference among 3 or more group means. Table 7 below presents the descriptive statistics for core culture shock by gender, English proficiency, and ethnicity.

Table 7

Descriptive Statistics for Core Culture Shock by Gender, English, and Ethnicity

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>Range</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>5.6</td>
<td>5</td>
<td>2.83</td>
<td>1-12</td>
<td>90</td>
</tr>
<tr>
<td>Male</td>
<td>4.9</td>
<td>5</td>
<td>2.57</td>
<td>0-12</td>
<td>134</td>
</tr>
<tr>
<td>English Proficiency</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced</td>
<td>5.0</td>
<td>5</td>
<td>2.64</td>
<td>0-12</td>
<td>181</td>
</tr>
<tr>
<td>Intermediate</td>
<td>6.0</td>
<td>6</td>
<td>2.80</td>
<td>0-12</td>
<td>41</td>
</tr>
<tr>
<td>Beginner</td>
<td>7.5</td>
<td>7.5</td>
<td>2.12</td>
<td>6-09</td>
<td>2</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>5.27</td>
<td>5</td>
<td>2.65</td>
<td>0-20</td>
<td>147</td>
</tr>
<tr>
<td>Black/Caribbean/Af.</td>
<td>6.60</td>
<td>7</td>
<td>2.96</td>
<td>3-11</td>
<td>5</td>
</tr>
<tr>
<td>European</td>
<td>4.81</td>
<td>5</td>
<td>2.83</td>
<td>1-11</td>
<td>32</td>
</tr>
<tr>
<td>Latino (a)</td>
<td>4.95</td>
<td>5</td>
<td>2.10</td>
<td>2-09</td>
<td>21</td>
</tr>
</tbody>
</table>


For the core culture shock variable, the interactions among the independent variables (e.g., ethnicity, gender, and English proficiency) were found not to be significant. Interactions were then removed from the model and a Main Effects ANOVA model was utilized instead. The Main Effects ANOVA model calculates the simple effect
of a factor on a dependent variable (in this case, core culture shock). This model did not seem to be significant ($p = 0.1246$). The independent variables (e.g., ethnicity, gender, and English proficiency) were not significant at a $p$-value of 0.05 either. However, both gender and English proficiency were significant at a $p$-value of 0.09. Table 8 summarizes these findings.

Table 8

| Core Culture Shock Main Effects ANOVA Model |
|---|---|---|
|   | DF | F  | $p$-value |
| Model | 7  | 1.64 | 0.1246 |
| Ethnicity | 4  | 0.72 | 0.5807 |
| Gender | 1  | 2.94 | 0.0879 |
| English Proficiency | 2  | 2.82 | 0.0616 |

The same procedure was executed for interpersonal stress. Since no interaction was found to be significant, they were also removed from the model. The new model, a Main Effects ANOVA Model, was highly significant ($p$-value <.0001). Ethnicity ($p = 0.2038$) did not seem to explain interpersonal stress. However, both gender ($p = 0.0326$) and English proficiency ($p$-value <.0001) were found significantly related to the variable.

The descriptive statistics are presented in Table 9 while Table 10 shows a summary of the ANOVA findings.
Table 9

*Descriptive Statistics for Interpersonal Stress by Gender, English, and Ethnicity*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>Range</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1.87</td>
<td>1</td>
<td>1.73</td>
<td>0-8</td>
<td>90</td>
</tr>
<tr>
<td>Male</td>
<td>2.3</td>
<td>2</td>
<td>1.69</td>
<td>0-8</td>
<td>134</td>
</tr>
<tr>
<td><strong>English Proficiency</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced</td>
<td>1.8</td>
<td>2</td>
<td>1.52</td>
<td>0-8</td>
<td>181</td>
</tr>
<tr>
<td>Intermediate</td>
<td>3.2</td>
<td>3</td>
<td>1.97</td>
<td>0-8</td>
<td>41</td>
</tr>
<tr>
<td>Beginner</td>
<td>4.5</td>
<td>4.5</td>
<td>2.12</td>
<td>3-6</td>
<td>2</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>2.39</td>
<td>5</td>
<td>1.84</td>
<td>0-12</td>
<td>147</td>
</tr>
<tr>
<td>Black/Caribbean/Af.</td>
<td>2.00</td>
<td>2</td>
<td>1.00</td>
<td>1-3</td>
<td>5</td>
</tr>
<tr>
<td>European</td>
<td>1.68</td>
<td>1</td>
<td>1.37</td>
<td>0-6</td>
<td>32</td>
</tr>
<tr>
<td>Latino (a)</td>
<td>1.42</td>
<td>2</td>
<td>1.28</td>
<td>0-4</td>
<td>21</td>
</tr>
</tbody>
</table>


Table 10

*Interpersonal Stress Main Effects ANOVA Model*

<table>
<thead>
<tr>
<th></th>
<th>DF</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>7</td>
<td>6.09</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>4</td>
<td>1.50</td>
<td>0.2038</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>4.62</td>
<td>0.0326</td>
</tr>
<tr>
<td>English Proficiency</td>
<td>2</td>
<td>14.03</td>
<td>&lt;.0001</td>
</tr>
</tbody>
</table>
Finally, the same procedure was followed for culture shock. The interactions were discarded because they did not show significance. The Main Effects ANOVA Model was significant at a $p$-value of 0.0061. In this model, ethnicity did not show significance ($p = 0.4925$) nor did gender ($p = 0.7612$). English proficiency, however, was significantly related to culture shock ($p = 0.0006$). Table 11 shows the descriptive statistics and Table 12 presents a summary of the ANOVA findings.

Table 11

| Descriptive Statistics for Culture Shock by Gender, English, and Ethnicity |
|------------------|--------|--------|--------|--------|--------|
|                  | Mean   | Median | SD     | Range  | N      |
| **Gender**       |        |        |        |        |        |
| Female           | 7.47   | 6.5    | 4.13   | 1-20   | 90     |
| Male             | 7.3    | 7      | 3.64   | 1-20   | 134    |
| **English Proficiency** |        |        |        |        |        |
| Advanced         | 6.8    | 7      | 3.56   | 1-20   | 181    |
| Intermediate     | 9.29   | 10     | 4.35   | 1-20   | 41     |
| Beginner         | 12.0   | 12     | 0      | 12-12  | 2      |
| **Ethnicity**    |        |        |        |        |        |
| Asian            | 7.66   | 7      | 3.94   | 1-20   | 147    |
| Black/Caribbean/Af. | 8.60   | 8      | 3.71   | 4-14   | 5      |
| European         | 6.50   | 6      | 3.78   | 1-16   | 32     |
| Latino (a)       | 6.38   | 6      | 2.78   | 2-12   | 21     |

<table>
<thead>
<tr>
<th></th>
<th>DF</th>
<th>F</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>7</td>
<td>2.92</td>
<td>0.0061</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>4</td>
<td>0.85</td>
<td>0.4925</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>0.09</td>
<td>0.7612</td>
</tr>
<tr>
<td>English Proficiency</td>
<td>2</td>
<td>7.75</td>
<td>0.0006</td>
</tr>
</tbody>
</table>

In summary, the analysis for research question three, which inquired about the values for culture shock by ethnicity, indicated that Latinos presented the lowest culture shock level amongst the ethnicities here represented. Participants who identified themselves as Black/Caribbean/African, on the other hand, presented the highest level of culture shock of the sample. Further ANOVA analysis of the data indicated that gender and English proficiency were variables that significantly impacted core culture shock levels ($p = 0.09$). English proficiency also appeared as a significant influencing variable to culture shock ($p = 0.05$).

**Research question four.** What are the values of culture shock by English proficiency?

Descriptive statistics were computed for the three levels of English proficiency and culture shock. Table 13 presents the means for culture shock for each one of the three levels of English proficiency—e.g., advanced, intermediate, and beginner. The mean for culture shock levels of international students who rated their English as “beginner” was 12 ($SD = 0$), the highest of the sample. Unfortunately, only two participants reported their
English proficiency as beginners. There were 181 participants who ranked their English abilities as advanced. They showed the lowest mean for culture shock ($6.88$, $SD = 3.56$).

Table 13

*Descriptive Statistics for English Proficiency & Culture Shock*

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Mode</th>
<th>Median</th>
<th>$SD$</th>
<th>Range</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced</td>
<td>6.88</td>
<td>5</td>
<td>7</td>
<td>3.56</td>
<td>1-20</td>
<td>181</td>
</tr>
<tr>
<td>Intermediate</td>
<td>9.29</td>
<td>11</td>
<td>10</td>
<td>4.35</td>
<td>1-20</td>
<td>41</td>
</tr>
<tr>
<td>Beginner</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>0</td>
<td>12-12</td>
<td>2</td>
</tr>
</tbody>
</table>

*Note.* $N = 224$.

The results for research question four, which inquired about the values for culture shock by English proficiency, indicated that participants with beginner English presented the highest culture shock level amongst the international students who were part of the study. On the other hand, participants who rated their English advanced were the ones who experienced the least culture shock level in the sample.

*Research question five.* What are the values of social support by English proficiency?

Descriptive statistics were calculated for research question five as well, as shown in Table 14. Participants who rated their English level as advanced presented a social support mean of $54.60$ ($SD = 14.80$). International students who identified their English as intermediate presented a social support mean of $51.19$ ($SD = 13.93$). Finally, those who indicated that their English abilities were at a beginner’s level presented a mean of $34.5$ ($SD = 2.12$), indicating the lowest social support mean of the sample.
Table 14

Descriptive Statistics for Social Support by English Proficiency

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Mode</th>
<th>Median</th>
<th>SD</th>
<th>Range</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced</td>
<td>54.60</td>
<td>45</td>
<td>54</td>
<td>14.80</td>
<td>21-90</td>
<td>181</td>
</tr>
<tr>
<td>Intermediate</td>
<td>51.19</td>
<td>61</td>
<td>47</td>
<td>13.93</td>
<td>25-76</td>
<td>41</td>
</tr>
<tr>
<td>Beginner</td>
<td>34.5</td>
<td>--</td>
<td>34.5</td>
<td>2.12</td>
<td>33-36</td>
<td>2</td>
</tr>
</tbody>
</table>

*Note.* N = 224.

The results for research question four, which inquired about the values for social support by English proficiency, indicated that participants with beginner English proficiency presented the lowest level of social support. Participants who identified their English proficiency as advanced, on the other hand, were the ones who demonstrated highest levels of social support.

**Summary**

This chapter included the findings for the relationships between social support and culture shock (e.g., core culture shock, interpersonal stress, culture shock, socio-emotional support, instrumental support, and social support) for the sample of 224 participants. It also presented demographic variables and results for statistical analysis of the other four research questions. Next, chapter 5 will present a discussion of the findings from this study, its implications, limitations, and future direction.
This chapter summarizes the research goals, methodology, and results of the study conducted. It also presents a discussion of the findings, provides explanations for the results, and integrates them with existing literature.

The purpose of this study was to examine the ways in which social support influences culture shock. This study addresses the following research questions:

1. Is there a correlation between culture shock and social support?
2. Is there a difference in culture shock level for males and females?
3. What are the values of culture shock by ethnicity?
4. What are the values of culture shock by English proficiency?
5. What are the values of social support by English proficiency?

In order to accomplish the research goal and questions, 287 international students at North Carolina State University volunteered to complete the demographic sheet, the CSQ (Mumford, 1998) and the ISSS (Ong & Ward, 2005). Of the 287, 63 participants did not finish all inventories and had their data discarded. The final data analysis included responses from the remaining 224 participants. The Pearson Product-Moment Correlation Coefficient, descriptive statistics, $t$ tests, and frequency distributions were performed in analyzing the data. A Main Effects ANOVA model was also utilized in order to verify which variables influenced culture shock.
Summary of Results

*Research Question One*

The calculated Pearson Product-Moment Correlation Coefficients indicated significant negative relationships between social support and culture shock variables. Both social support and culture shock measures had two subscales: socio-emotional support, instrumental support, core culture shock, and interpersonal stress (respectively). Correlations were calculated for all six variables: social support, socio-emotional support, instrumental support, culture shock, core culture shock, and interpersonal stress.

Since research had previously shown social support as a significant factor in reducing life-changing stress (Ong & Ward, 2005), the investigator expected the variables of social support and culture shock to be negatively correlated. The results of the study conducted confirm these expectations and suggest that the more social support an international student has, the less culture shock he or she is likely to experience. The findings that all variables of social support and of culture shock were negatively correlated suggest that all types of social support may influence the experience of culture shock.

*Socio-Emotional Support.* Socio-emotional support was found to be negatively correlated to core culture shock, interpersonal stress, and culture shock. The socio-emotional support variable refers to both emotional support and social companionship. These findings suggest that an international student who has people in his or her life to listen and talk to, go places with, share good and bad times, comfort homesickness, spend time chatting, visit, and reassure love and support is less likely to experience culture shock. It is important to note that emotional support does not require physical presence.
and may come from people who are not geographically close, even family or friends who remain in the country of origin. However, the more reluctant an international student is to openly express feelings and thoughts, the more important physical presence may be. Exchange of flowers, eye movements, and facial expressions are different non-verbal ways of providing social support. There are other major stressors in getting support from those who are geographically separated. International students tend to be high-achievers and might fear that the disclosure of distressful feelings and situations may be a sign of weakness, ingratitude, or failure. Also, as many international students are unaware of their experience of culture shock, verbal expression may be limited.

On the other hand, there are many circumstances in which physical presence can be very treasured. Simply being present is a way of providing social support. Besides, the social companionship component of socio-emotional support can only be provided by those who are close by. Having someone to go places with, especially when in a foreign environment, may decrease stress significantly. International students who are socially isolated may be more prone to experience psychological distress, to decreases in self-esteem and in self-confidence, and to depression.

Instrumental Support. Instrumental support was also found to be negatively correlated to all variables of culture shock. Instrumental support refers to tangible assistance and informational support. These results indicate that an international student who has people in his or her life helping with communication problems, clarifying situations, explaining the local culture and rules, assisting with the new surroundings, or telling about choices available may be less likely to experience culture shock. By the same token, those who do not have people providing tangible assistance or information
might experience higher culture shock levels and the sense of loss that comes with it. These findings support the social learning/social-skills approach, which asserts that cultural and social skills training is a very helpful intervention for culture shock. Instrumental support can be understood as an informal delivery of cultural and social skills training.

Social Support. Social support was found to be negatively correlated to core culture shock, interpersonal stress, and culture shock. Of these negative correlations, the strongest relationship was between social support and culture shock, followed by social support and core culture shock, and finally, by social support and interpersonal stress. Still, all negative correlations were found. Most likely, international students will experience some form of culture shock. However, these findings suggest that having a strong social support network may be a good preventive measure against culture shock.

Culture Shock. The culture shock variable was found to be negatively correlated to social support, socio-emotional support, and instrumental support. Of the three correlations, culture shock was found to have the strongest negative relationship with social support. These findings suggest that those international students who experience high levels of culture shock are likely to lack a good social support system.

Research Question Two

Considering that most research studies previously done have not investigated if there is a gender differences in the experience of culture shock or in the development of social support, research question two appeared to be an important one. The results presented here should be regarded as an initial investigation and will need to be further validated with future research studies on the subject.
Gender Difference in Core Culture Shock. Females presented a higher level of core culture shock in comparison to males: feeling more strain to adapt, more homesickness, more shock, more helplessness, more identity confusion, and having more wishes of escaping. However, the difference in culture shock level was not found significant at a $p$-value of .05. On the other hand, the difference between male and female core culture shock scores may be seen as significant if a $p$-value of .09 is considered. Even though the $p$-value of 10 percent is seen as a liberal interpretation of the $t$ test, such values are utilized in counselor education research at times. These borderline scores indicate the need for more research in the subject.

Gender Difference in Interpersonal Stress. Interestingly enough, the difference in interpersonal stress showed to be in the reverse direction of the difference in core culture shock: males presented a higher interpersonal stress level when compared to females. The difference showed to be significant at a $p$-value of 0.0545—being very close to being significant at a $p$-value of .05. In the sample studied, when compared to female international students, male participants tended to feel more anxious, to feel uneasy and awkward when relating to others, to feel uncomfortable when people stared, to have a harder time making sense of gestures, to feel taken advantage of, and to make a stronger effort to be polite to members of the host culture (e.g., U.S. Americans).

Gender Difference in Culture Shock. There was no significant gender difference in culture shock values. This lack of gender difference in culture shock value, however, can be explained by the fact that the difference in the two culture shock subscales (e.g., core culture shock and interpersonal stress) occurred in reverse directions. The culture shock value was calculated by the sum of both subscales.
Gender Difference in Socio-Emotional Support. There was a significant gender difference found in the socio-emotional support level at a $p$-value of 0.0008. Female participants showed to have higher socio-emotional support than their male counterparts. When compared to male international students, females who participated in the study indicated having more emotional support and social companionship.

Gender Difference in Instrumental Support. The men and women reported similar level of instrumental support. Since instrumental support consists in tangible assistance and informational support, it seems to be a crucial survival mechanism for anyone in a new area. Both males and females found people to provide necessary information to help them get oriented to the new surroundings and clarify academic-related doubts. International students who do not find such instrumental support available may be the ones who subsequently return to their home country prior to finishing their studies abroad. Both social isolation and consequent return to a home country are possible outcomes of the culture shock stage of adaptation.

It is also important to consider that this study was done in a university setting. The university, which is motivated to have a high retention rate among its students, normally provides plenty of informational support via orientation to the university, fellow international students, administrators, and professors. The U.S. culture also emphasizes informational resources. It would be interesting to verify if the lack of significant gender differences in instrumental support is sustained with other international people who are not students and with international students in a different culture.

Gender Difference in Social Support. The social support scores were found to be significantly different for males and females, with females presenting a higher level of
social support than males. Considering that female scores were higher in both social support subscales, the difference in social support was not surprising. One possible explanation for the study’s finding relates to socially desirable gender roles. Social desirability emphasizes gender stereotypical characteristics. Stereotypically, women are expected to be kind, nurturing, and focused on relationships. Men, on the other hand, are supposed to be independent, assertive, and active. Social roles are in alignment with the findings that women who participated in the study were indeed more socially connected than men.

Research Question Three

Culture Shock by Ethnicity. Black/Caribbean/African international students were the ethnic group with the highest mean for culture shock scores. They were followed by Asian, European, and Latino. These results seem to be very limiting because of the number of participants in each category. There were only 5 international students reported to be of Black/Caribbean/African ethnicity. Further research with a larger sample of each ethnicity is necessary in order to provide more accurate comparison among ethnicities.

Variables that influenced Core Culture Shock, Interpersonal Stress, and Culture Shock. No variable was found significant in explaining core culture shock levels at an alpha 0.05. Nonetheless, both gender and English proficiency were significant variables when considered at a \( p \)-value of 0.09. Gender and English proficiency appeared also as major variables that influenced interpersonal stress \( (p = 0.05) \). Further research is indicated to investigate if English proficiency and gender are indeed major variables that influence core culture shock levels. For culture shock, however, only English proficiency
was found to be significant related. These findings are consistent with the qualitative preliminary study data, in which all participants indicated that English proficiency was indeed a major influential factor in their culture shock experience and their adaptability to the new culture. These findings are also in correspondence with Berry’s (1980) suggestion that language was the domain in which adaptation was most evident.

Research Question Four

*English Proficiency and Culture Shock.* The results for this fourth research question were in accordance with the results discussed above—in which English proficiency was indicated as major factor in the culture shock level. International students who rated their English level as “Advanced: fluent with minor language difficulties” had the lowest mean for culture shock in the sample studied. Those who rated themselves as “Intermediate: difficulties in one of the following areas: speaking, listening, reading, or writing,” on the other hand, presented an intermediate mean of culture shock. Finally, those who rated themselves as “Beginner: great difficulties in some of the following areas: speaking, listening, reading, or writing” had the highest possible score (and mean) for their culture shock. These findings corroborate with current literature, which indicates difficulty in communication (e.g., language shock; Mumford, 1998) as a major area of culture shock. It also reaffirms the qualitative findings that English proficiency influences culture shock level.

A limitation of this investigation of the level of culture shock according to English ability is the number of participants of each one of the three English proficiency groups. More than 80 percent of the participants of this study identified their English proficiency as advanced and 18.3 percent rated their English level as intermediate. Only
two students (0.89%) thought their English abilities were at the beginner level. Further research is needed to confirm these findings, preferably with the same amount of participants in each one of the three English level categories.

Research Question Five

English Proficiency and Social Support. The findings for this fifth research question suggest that participants who identified their English levels as advanced had more social support than those who indicated that their English was intermediate or beginner. The later presented the lowest score for social support. These results can be explained by the fact that those who do not consider having good English proficiency will have more difficulty communicating with others and will be prone to social isolation. These findings also confirm the preliminary qualitative study conclusions, according to which international students with fluent English skills have better overall social interactions and support.

Integration of Findings with Existing Literature

Some of the findings of this study are similar to what the existing literature suggests. Pedersen (1995), for example, proposed the development of a support system as an important skill in the international student adaptation process and reduction of cultural conflict. Social support has also previously emerged as a protective factor to mental distress and life stress and as a buffering mechanism against depression (Kessler, Price, & Wortman, 1985). Social support has been positively associated with psychological well being (Turner, 1981), and negatively associated with illnesses (Boyce, 1981). Previous studies also have found social support as positively impacting emotional adjustments following specific life changing events, such as widowhood and unemployment. Gore
(1978), for example, discovered that, while unemployed, socially unsupported men presented significantly higher elevation of cholesterol, illness symptoms, and affective responses. Gore (1978) suggested that low sense of social support exacerbates life stress.

The question remains about whether social support acts as a buffer to stressful events or if the lack of support exacerbates stressful tension. Nonetheless, these understandings of social support do not have to be excluding; social support may indeed act in both directions: as a buffering agent when present and as an aggravating agent when lacking.

As previously pointed out, no previous research was found investigating the relationship between social support and culture shock. Also, the specific literature on culture shock is mostly of an anecdotal nature, with a lack of previous scientific exploration of the subject. These reasons make the current research findings ever more valuable—and they emphasize the need for further investigation.

Limitations

There are several important limitations to this study that must be taken into consideration. First, the sample of international students was drawn from a southeastern university and may not be representative of other international students across the U.S. and the world. The unique characteristics of both the international students and of North Carolina State University may limit the generalizability of the results.

Another potential limitation of this study was the small sample size, which became more evident when the sample was divided into specific groups, such as the ones for English levels or ethnicities. The sample size utilized may not be large enough to make generalizations.
In addition, all data were collected using self-administered written response inventories. It is advisable to use prudence in interpreting the results because of the potential for biased response sample.

Finally, even though there is no consensus of what an appropriate return rate for surveys is, it is conservative to expect a 50 percent return rate of paper-pencil inventories in order to interpret the research findings as reflective of the population in question (Heppner et al., 1999). When considered that potentially 1884 students received the e-mail invitation to participate in the study, the final 224 participants represent less than a 12 percent response rate. Even though there is no standard for response rate of Internet-based data collection, the percentage acquired is a limit to the representability of the results.

**Implications for Future Research**

Overall, a gap continues between the descriptive literature and the scientific investigations of culture shock. Also, inconsistency of results still point for the need of continued research on the social support role in sojourners’ cross-cultural adaptations. Many future research implications can be derived from this dissertation. Further studies are needed, for example, to validate findings of gender differences in culture shock as well as in the development of social support. A qualitative investigative study may be indicated to explore gender differences of various social support components and to investigate reasons for the reverse direction of scores in the social support subscales. Why do males present higher interpersonal stress while females have higher levels of core culture shock? How do gender stereotypes influence the development of social support network? It would also be interesting to examine, for example, if the
geographical location of the social network influences the level of culture shock. How important is physical presence for social support benefits and cultural adaptation?

Another topic that would be indicated for future research is the role of social support in the sojourner’s self-efficacy and, consequently, in their experience of culture shock. After all, people are more likely to behave in a certain way when they believe they are capable of doing so successfully. Social support may act as an encourager and increase persistence in dealing with culture shock frustrations.

Studies with larger and comparable groups of sojourners of different English levels and ethnicities are recommended and would assist in understanding further the impact of English proficiency and ethnicity in both culture shock and social support. What is the impact of ethnicity on culture shock levels? Is English proficiency indeed the major variable influencing culture shock?

Recommendations for Practice

There are aspects of cultural shock adaptation that depend on personal characteristics, on the sojourner’s purposes and needs, and on both the cultural and social contexts of adaptation (Taft, 1977). However, as this research confirms, there are many other variables of culture shock that are universal. In particular, the impact of social support, English proficiency level, and gender on the experience of culture shock can help professionals tailor appropriate interventions to the international student population.

The positive role of social support in the experience of culture shock confirms that a social-learning-theory approach is indicated to facilitate sojourners’ adjustment. A social-learning-theory approach would combine cognitive and behavioral strategies that
highlight the learning that occurs within a social context, such as observational learning, modeling, imitation, performance, awareness development, and expectations.

According to Winkelman (1994), decrease of cultural shock involves adjustments based on awareness of the cultural shock experience, on development of conflict-resolution skills, and on acceptance of some personal change and behavioral adjustment. A social-learning-theory based cross-cultural training should be developed following these guidelines and incorporating the findings of the present study.

The social-learning-theory based cross-cultural training should encompass: (a) cognitive information about culture shock and cultural differences, (b) skits of subjective cultural shock experiences, (c) informational activities with tips on how to live in the U.S., how to get around and save money, (d) field trips to local stores, (e) social skills development, with discussion of cultural differences in social rules of engagement, (f) role-play and modeling activities, (g) emphasis in mentoring, leadership, and the development of a social network.

Professionals working with international students or sojourners should keep the following issues in mind:

- The sojourner’s language proficiency will influence their self-esteem as well as self-efficacy. It is important that they have easy access to English as a Second Language support.

- Social support is crucial for their acculturation and comfort. Emphasis should be given in the development of a co-national social support system by helping international students find other people from their own country, and maintaining an
on-going resource list of ethnic grocery stores, associations, events, religious communities, and festivals.

- Diverse social support is also essential for sojourners’ adaptation and success. Opportunities for exchanges between the sojourners, other international people, and American people should be organized. International festivals and parties in which international student present a bit about their culture can be very helpful, but may be easier once the group is familiar with each other.

- As many international students are unaware that they are experiencing culture shock, it is important to enhance its awareness. Having presentations about what culture shock is, its symptoms, and specific tips can be very helpful. It is important to cognitively explain the phenomenon and also illustrate it with multiple real-life situations and examples. It is key that international students understand that they are not alone in their feelings, get some tips on how to deal with the stress, and learn where to go for help.

- Conflict resolution skills are vital in every life situation. Students are encouraged after hearing tips on how to resolve conflict better. One may teach, for example, the win-win approach, creative responses, assertiveness, and negotiating.

- Remember that culture shock is a cumulative pervasive disorientation. Help the international student become aware of what is expected of them and what to expect from others, understand the local culture, recognize the local social interaction unspoken rules, and become more tolerant of the local culture and of themselves.
• Remember to always show emotional support, to be interested in the sojourners’
lives, to refrain from making assumptions or judgment, to try to speak in simple
words, and even to give a couple of different versions of the spoken language.

Concluding Remarks

The study presented here adds systematic data to the phenomena of culture shock
and social support individually and to the relationship between them. It represents an
initial exploration of this relationship and confirms its relevance for further investigation.
It also substantiates the findings of the preliminary qualitative study according to which
social support appeared as an important factor of international students’
adaptation to their new environment. Culture shock and social support were found to be
negatively correlated, indicating that international students who have more social support
tend to experience less culture shock.
References


*Counseling for diversity: A guide for school counselors and related professionals* (pp. 41-60). Boston: Allyn & Bacon.


APPENDIX A

First E-mail/Informed Consent Form

Dear International Student,

I would like to request your assistance with my dissertation study, titled “The Relationship Between Culture Shock and Social Support of International Students,” a online study that examines social support and culture shock in international students’ lives.

The study is being conducted by Heloisa H. Portela Myers at North Carolina State University as partial requirement for the obtainment of her Ph.D. in Counselor Education.

It is hoped that this study will investigate the relationship between culture shock and social support, and contribute to a better understanding international student's lives, their adjustment process.

All information that you provide is anonymous; there will be no way of identifying you after you submit your answers. The survey will take approximately 15 minutes to complete.

If you are willing to assist me with this important project, please click the following link to connect to the survey:

http://www.surveymonkey.com/s.asp?u=103722086481

Completion and electronic submission of the survey will indicate your consent for participation in this study.

Please note that if you are not connected automatically to the link, you can paste the link into the address box on your Web browser.

Participation in this study is entirely voluntary and you may withdraw consent and terminate participation at any time without consequence. The risks associated with this
study are minimal. Some individuals may tire while answering the questions. If you would like additional information about this study or if you would like to discuss any discomforts you may experience, please send your request to Heloisa Portela-Myers, at (919) 368-5207, or via e-mail helohelena@earthlink.net.

If you have any questions about your rights as a participant in this research project, please contact the Institutional Review Board for the Protection of Human Subjects in Research (IRB): IRB Administrator, Ms. Debra Paxton, Mail Stop 7514, Raleigh, NC 27695, or via phone at (919) 515-4514, and via e-mail at debra_paxton@ncsu.edu.

You must be 18 years of age or older in order to continue.

Thank you for your assistance,

Heloisa Portela Myers
APPENDIX B

Second E-mail/Informed Consent Form

Dear International Students,

To those of you who have already participated in this dissertation study by completing the *Culture Shock and Social Support Questionnaires*, I extend to you my most sincere appreciation and gratitude. Your perceptions, beliefs, and experiences are extremely important to this topic. Thank you for sharing your experience regarding social support and culture shock with me!

If you have not had the opportunity to participate, please take approximately 15 minutes to read the following information and follow the hyperlink to complete the questionnaires. The questionnaires will be available for only one more week.

I would like to request your assistance with my dissertation study, titled “The Relationship Between Culture Shock and Social Support of International Students,” a online study that examines social support and culture shock in international students’ lives. More specifically, it examines how well you are adapting to life in America. It also explores the issues of homesickness and loneliness.

The study is being conducted by Heloisa H Portela Myers at North Carolina State University as partial requirement for the obtainment of her Ph.D. in Counselor Education.

It is hoped that this study will investigate the relationship between culture shock and social support, and contribute to a better understanding international student's lives, their adjustment process.

All information that you provide is anonymous; there will be no way of identifying you after you submit your answers. The survey will take approximately 15
minutes to complete. Some of the questions might make you feel lonely or homesick.

You are free to skip any questions that you wish.

If you are willing to assist me with this important project, please click the following link to connect to the survey:

https://www.surveymonkey.com/s.asp?u=103722086481

Completion and electronic submission of the survey will indicate your consent for participation in this study.

Please note that if you are not connected automatically to the link, you can paste the link into the address box on your Web browser.

Participation in this study is entirely voluntary and you may withdraw consent and terminate participation at any time without consequence. The risks associated with this study are minimal. Some individuals may tire while answering the questions. If you would like additional information about this study or if you would like to discuss any discomforts you may experience, please send your request to Heloisa Portela-Myers, at (919) 368-5207, or via e-mail helohelena@earthlink.net.

If you have any questions about your rights as a participant in this research project, please contact you may contact the Institutional Review Board for the Protection of Human Subjects in Research (IRB): IRB Administrator, Ms. Debra Paxton, Mail Stop 7514, Raleigh, NC 27695, or via phone at (919) 515-4514, and via e-mail at debra_paxton@ncsu.edu.

You must be 18 years of age or older in order to continue.

Thank you for your assistance,

Heloisa Portela Myers
APPENDIX C

Demographic Form

Please select your gender:  Female  Male

What is your age?

Studying at NCSU:  Undergraduate  Master’s  Doctorate

Other: ___________ (please, specify)

What is your major at NCSU?

What is your native language?

What is your country of origin?

What is your ethnicity?  
  ____ Asian
  ____ Black/Caribbean/African
  ____ European
  ____ Latino (a)
  ____ Pacific Islander
  ____ Other: _____________ (please, specify)

What is your comfort level with the English language?

  ____ Advanced: fluent with minor language difficulties.
  ____ Intermediate: difficulties in one of the following areas: speaking,
                   listening, reading, or writing.
  ____ Beginner: great difficulties in some of the following areas: speaking,
                 listening, reading, or writing.
Who do you get your social support from? Please, check all that apply:

Note: Social support refers to people you have in your life who: listen and talk with you, help you with any difficulties, provide information, keep you company, etc.

- Family in the US
- Family abroad
- Co-nationals
- Other international students from different cultures than mine.
- Americans
- Other. Please specify: ______________

Is this your first time in the United States? If not, please tell us what other times you have been here and for how long (approximately).

__________________________________________________________________

When did you arrive in the United States? ________________________________

Approximately, how long do you plan to stay in the U.S.?

____________________________

What are your plans for after you finish studying at NCSU?

- Go back to my country of origin/residence
- Stay in the U.S. to study further
- Stay in the U.S. to work
- Other. Please specify: ______________
APPENDIX D

Culture Shock Questionnaire (Mumford, 1998)

Part A:

1. Do you feel strain from the effort to adapt to a new culture?
   2. Most of the time
   1. Occasionally
   0. Not at all

2. Have you been missing your family and friends back home?
   2. Most of the time
   1. Occasionally
   0. Not at all

3. Do you feel generally accepted by the local people in the new culture?
   2. No
   1. Not sure
   0. Yes

4. Do you ever wish to escape from your new environment altogether?
   2. Most of the time
   1. Occasionally
   0. Not at all

5. Do you ever feel confused about your role or identity in the new culture?
   2. Most of the time
   1. Occasionally
   0. Not at all
6. Have you found things in your new environment shocking or disgusting?
   
   2. Many things
     
   1. A few things
     
   0. None

7. Do you ever feel helpless or powerless when trying to cope with the new culture?
   
   2. Most of the time
     
   1. Occasionally
     
   0. Not at all

Part B:

1. Do you feel anxious or awkward when meeting local people?
   
   2. Most of the time
     
   1. Occasionally
     
   0. Not at all

2. When talking to people, can you make sense of their gestures or facial expressions?
   
   2. Not at all
     
   1. Occasionally
     
   0. Most of the time

3. Do you feel uncomfortable if people stare at you when you go out?
   
   2. Very uncomfortable
     
   1. Slightly uncomfortable
     
   0. Not at all

4. When you go out shopping, do you feel as though people may be trying to cheat you?
   
   2. Most of the time
1. Occasionally

0. Not at all

5. Are you finding it an effort to be polite to Americans?

2. Most of the time

1. Occasionally

0. Not at all
APPENDIX E

The Index of Sojourner Social Support (ISSS; Ong & Ward, 2005)

The statements that follow related to certain helpful behaviors that might make your stay in the United States easier or more pleasant. Read each description carefully and consider if you know persons (both overseas and in the U.S.) who would perform the behaviors described.

1. Do you know people (both overseas and in the U.S.) who...

   Listen and talk with you whenever you feel lonely or depressed.
   
   (   ) No one would do this
   (   ) Someone would do this
   (   ) A few would do this
   (   ) Several would do this
   (   ) Many would do this

2. Do you know people (both overseas and in the U.S.) who...

   Give you tangible assistance in dealing with any communication or language problems that you might face.
   
   (   ) No one would do this
   (   ) Someone would do this
   (   ) A few would do this
   (   ) Several would do this
   (   ) Many would do this

3. Do you know people (both overseas and in the U.S.) who...

   Explain things to make your situation clearer and easier to understand.
4. Do you know people (both overseas and in the U.S.) who...
Spend some quiet time with you whenever you do not feel like going out.

( ) No one would do this
( ) Someone would do this
( ) A few would do this
( ) Several would do this
( ) Many would do this

5. Do you know people (both overseas and in the U.S.) who...
Explain and help you understand the local culture and language.

( ) No one would do this
( ) Someone would do this
( ) A few would do this
( ) Several would do this
( ) Many would do this

6. Do you know people (both overseas and in the U.S.) who...
Accompany you somewhere even if he/she doesn’t have to.

( ) No one would do this
( ) Someone would do this
7. Do you know people (both overseas and in the U.S.) who...

Share your good times and bad times.

( ) No one would do this
( ) Someone would do this
( ) A few would do this
( ) Several would do this
( ) Many would do this

8. Do you know people (both overseas and in the U.S.) who...

Help you deal with some local institutions’ official rules and regulations.

( ) No one would do this
( ) Someone would do this
( ) A few would do this
( ) Several would do this
( ) Many would do this

9. Do you know people (both overseas and in the U.S.) who...

Accompany you to do things whenever you need someone for company.

( ) No one would do this
( ) Someone would do this
( ) A few would do this
( ) Several would do this
10. Do you know people (both overseas and in the U.S.) who...

   Provide necessary information to help orient you to your new surroundings.

   ( ) No one would do this
   ( ) Someone would do this
   ( ) A few would do this
   ( ) Several would do this
   ( ) Many would do this

11. Do you know people (both overseas and in the U.S.) who...

   Comfort you when you feel homesick.

   ( ) No one would do this
   ( ) Someone would do this
   ( ) A few would do this
   ( ) Several would do this
   ( ) Many would do this

12. Do you know people (both overseas and in the U.S.) who...

   Help you interpret things that you don’t really understand.

   ( ) No one would do this
   ( ) Someone would do this
   ( ) A few would do this
   ( ) Several would do this
   ( ) Many would do this

13. Do you know people (both overseas and in the U.S.) who...
Tell you what can and cannot be done in the U.S.

(   ) No one would do this
(   ) Someone would do this
(   ) A few would do this
(   ) Several would do this
(   ) Many would do this

14. Do you know people (both overseas and in the U.S.) who...
Visit you to see how you are doing.

(   ) No one would do this
(   ) Someone would do this
(   ) A few would do this
(   ) Several would do this
(   ) Many would do this

15. Do you know people (both overseas and in the U.S.) who...
Tell you about available choices and options.

(   ) No one would do this
(   ) Someone would do this
(   ) A few would do this
(   ) Several would do this
(   ) Many would do this

16. Do you know people (both overseas and in the U.S.) who...
Spend time chatting with you whenever you are bored.

(   ) No one would do this
17. Do you know people (both overseas and in the U.S.) who...

Reassure you that you are loved, supported and cared for.

( ) No one would do this

( ) Someone would do this

( ) A few would do this

( ) Several would do this

( ) Many would do this

18. Do you know people (both overseas and in the U.S.) who...

Show you how to do something that you didn’t know how to do.

( ) No one would do this

( ) Someone would do this

( ) A few would do this

( ) Several would do this

( ) Many would do this