California State University,

Fullerton

A EXPLORATORY STUDY INTO THE CORRELATIONS BETWEEN THE
CULTURAL COMPOSITION OF SOCIAL SUPPORT NETWORK AND
ACCULTURATIVE STRESS FOR INTERNATIONAL STUDENTS

A DISSERTATION

Submitted in partial fulfillment of the requirements

For the degree of

DOCTOR OF EDUCATION

In

EDUCATIONAL LEADERSHIP

Community College Leadership

By

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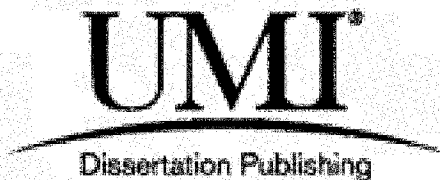Expert Member, Rameen Talesh, University of California, Irvine

2014

UMI Number: 3581381

UMI 3581381

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California State University, Fullerton

2014

ABSTRACT

One of most significant challenges for international students studying in the U.S. is their ability to adjust to a new social setting. The maladjustment of international students in a host country has been associated with negative impacts 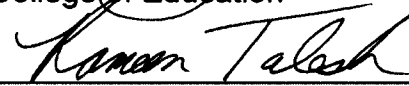to their psychosocial development, educational experience, and perception of the host culture. The increasing demand to recruit and enroll international students in colleges and universities across the U.S. prompts the need to further investigate the various factors that impact the cross-cultural and educational experiences of these sojourning scholars.

This correlational study was conducted using a 65-item online survey instrument. The population under investigation was international undergraduate students who have been studying in the U.S. for at least one academic year. The sample for this population was taken from three public higher education institutions in southern California. The total sample size of the study was 368 participants. One-way ANOVA and hierarchical multiple regressions were conducted to analyze the data and answer the research questions.

Overall, this study found that a relationship exists between the cultural composition of social support networks and the acculturative stress of international students. The results of the analysis indicate that international students who are more likely to seek support from members of their support

network who are from a different culture experienced lower levels of acculturative stress. Furthermore, the findings suggest that the cultural composition of a social support network is positively correlated with feelings of homesickness.

The findings from this study can inform the practice of student affairs personnel responsible for working with international students. It can also inform institutional policies related to the strategic planning of increasing the enrollment of international students on a campus. This study contributes to the existing body of knowledge aimed at understanding the specific needs of international students by investigating the relationship between the cultural composition of social support networks and acculturative stress.

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To my mother and father, who sacrificed so much to raise me,

and

To my wife, whose love, support, and understanding made this possible.

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ACKNOWLEDGEMENTS

I would like the express my sincerest appreciation to the following individuals, whose guidance, support, and encouragement contributed to the completion of this dissertation: Dr. Ding-Jo Currie, Dr. John Hoffman, Dr. Rameen Talesh, Dr. Michael Hwang, Dr. Sunny Liu, Chin Lam, Futoshi Nakagawa, Mike Jenkins, and Angela Cobb.

CHAPTER 1

INTRODUCTION

While the presence of international students brings additional intellectual and economic resources to a college campus, these sojourning scholars also come with specific needs that existing student services are not able to adequately address. As such, international students are at greater risk of being susceptible to the deleterious effects of stress, such as extreme anxiety and depression. Although international students experience much of the same stresses as domestic students, international students experience those stresses more acutely due to unfamiliarity with new cultural norms and symbols, different values associated with stress appraisal, and loss of social support networks. This study will contribute to the existing body of knowledge aimed at understanding the specific needs of international students by discovering if a correlation exists between the cultural composition of a social support network and acculturative stress.

This chapter introduces the current study, beginning with an overview of the topic, a statement of the problem, the purpose of the research, the research questions that will guide the study, and a discussion of the study's significance. Additionally, this chapter includes descriptions of the limitations and delimitations of the study, the assumptions that are made, and the definitions of the key terms

used. The chapter concludes with a summary of the topic and an overview of the remaining chapters in this dissertation.

Background of the Problem

The internationalization of higher education is certainly not a new concept or phenomena in academia. Quite the contrary, educational researchers and scholars have argued that the very purpose of universities as institutions dedicated to the advancement of human knowledge necessitates cross-cultural collaboration and the inclusion of a universal perspective of knowledge (Altbach and Knight, 2007; Knight and Hans de Wit, 1995). The historical roots of international education extend deep into the past of human history. In the literature, reference to cross-cultural endeavors in institutions of higher learning can be traced as far back as 5th century BC in India and to students traveling from Japan to study in China in the 7th and 8th centuries CE. In the western hemisphere, cross-cultural exchanges can be traced back to the Middle Ages, where the mobility of students and scholars enabled the proliferation and advancement of new ideas, opinions, experiences, and political ideologies between European and Arab nations (Knight & Hans de Wit, 1995; Van Damme, 2001; Welikala, 2011). Knight and Hans de Wit (1995) suggested that the creation of the Institute of International Education (IIE) in 1919 was the first major indication of the growing interest in the United States (U.S.) to expand and encourage international education. The long history of cross-cultural exchanges in education in conjunction with the unprecedented surge in the current number

of international students worldwide demonstrates the importance and relevance of international education as an inextricable component of higher education.

In response to the rising economic challenges to higher education that occurred during the recent period of economic recession (2007-2009) in the U.S., colleges and universities across the nation actively sought to increase the enrollment of international students. In 2010-2011, there were 723,277 international students enrolled in institutions of higher education across the U.S., a five percent increase from the previous year, as well as a record high number in the history of the nation. Two major reasons cited by the IIE (2011) for this increase are increased enrollment efforts by colleges and universities across the nation and an increase in the awareness of the reputation of U.S. higher education institutions in other countries.

Historical enrollment trends indicate that the majority of international students in the U.S. enter into four-year baccalaureate or graduate programs. However, over the past decade, there has been a steady and growing interest in the American community college system as well. In the 2003-2004 academic year, approximately 28 percent of international students entering the U.S. enrolled in a community college (Hagedorn & Mi-Chung, 2005). IIE reports that there is an increasing trend for more international students to begin their journey through higher education in the U.S. at the community colleges. Though there is a vast body of research that exists on the study of international students in higher education, it almost exclusively deals with graduate students at the four-year institutions, thus lending to natural limitations in the findings in the literature since

age, length of stay, and language proficiency are mitigating characteristics for acculturative stress. In addition, since graduate and doctoral students are generally older, more mature, and have greater language proficiency, the findings from studies that combine undergraduates and graduate level students into the same sample may not necessarily be applicable to undergraduates.

Comparatively, fewer research studies specifically investigate international students at the undergraduate level and even less is known about international students at community colleges. Given the heightened interest in increasing the internationalization of educational opportunities and experiences in higher education, this study was designed to investigate the experiences of international students at both two-year and four-year institutions. Specifically, this study will examine the experiences of international students enrolled in the public higher education systems in California.

The internationalization of higher education brings many tangible and intangible benefits to a college campus and to the host country at large. Obvious benefits include increased global awareness for students on campus, enhanced diplomatic relationships between nations due to increased interaction and exchange, and boosts to the local and national economy due to the monies that international students bring into a host nation.

However, despite these attractive benefits, there are those who caution against an unfettered drive towards internationalization, particularly at institutions where the impetus for internationalization is grounded primarily on economic gains rather than an impetus that is aligned with institutional policies and the

mission of a campus. Hudzik and Briggs (2012) offered a number of issues and challenges that should be considered in the effort to grow an international presence and curricula on a college campus. For example, colleges need to consider balancing the desire to increase the number of international students with the quality of the students that are admitted. This requires the inclusion of both administrative leadership and academic departments in the strategic planning process so that goals do not exceed the available fiscal and human resources of the institution. Increasing international students on campus without increasing academic resources to support them creates a powerful disincentive for academic departments to support the institution's goal as this imbalance will likely result in increased strain on the departments themselves. Subsequently, if international students require a significant amount of additional institutional resources to ensure their academic and personal progress, the necessary support may end up costing the institution more to support these students than the gains made in their admission.

Another perspective of which colleges need to be aware and to which they must be sensitive, is the perception that the effort to increase international student enrollment displaces qualified domestic students from admissions. If the intent of bolstering the international education of a campus is rooted in curricula for the mutual academic and experiential benefit of all students in the institution, then careful monitoring of student interaction is required. Otherwise, despite increasing enrollment numbers, campuses run the risk of having two segregated groups of students on campus, which could seriously diminish the original intent

of internationalization. A final point, and perhaps the most salient to this study, is the ability for institutions to meet the needs of international students. Colleges that actively seek to increase the international student enrollment on campus must first ensure that the necessary infrastructure is present to support them once they arrive on campus. Considerable empirical evidence indicates international students have specific needs that impact their personal, psychosocial, and academic development while studying in a foreign country.

The literature on international students suggests that one of most significant challenges for international students is their ability to adjust to the new social setting in the U.S. The evidence in the literature indicates the maladjustment of international students in the host country negatively impacts the psychosocial development of international students and puts them at greater risk for mental health issues, such as extreme depression (Andrade, 2006; Chen, 1999; Lee, 2010; Mori, 2000; Rajapaksa & Dundes, 2002; Ramsay, Jones, & Baker, 2007; Rice et al., 2012; Sandhu, 1995; Sandhu & Asrabadi, 1994; Wadsworth, Hecht, & Jung, 2008).

Some cross-cultural researchers (Kaczmarket et al., 1994; Li & Gasser, 2005; Yan & Berliner, 2011, 2013; Zahi, 2002) maintain that contact between international students and members of the host culture is a significant factor in influencing the adjustment experience of international students. Congruent with the contact theory, those researchers suggest that the more frequent and positive contact international students have with host nationals, the better their adjustment to the new environment will be, thereby reducing the level of

acculturative stress that students will experience. Although not all researchers

agree with this position. For example, Al-Sharideh and Goe (1998) found that

forming strong ties with individuals who share the same culture as an

international student can positively influence their adjustment experience.

However, they also found that:

> The number of strong ties with other co-culturals was found to be
>
> positively related to global self-esteem until the size of a student's network
>
> of such ties reached 32 people. Beyond this threshold point, such ties
>
> became negatively associated with a student's self-esteem. (p. 720)

In the 2010-2011 academic year, there were between 61,000 and 97,000

international students in California (IIE, 2011). The multiplicity of cultures,

customs, and perspectives create an environment that is attractive and

welcoming for people from all over the world. Furthermore, California boasts the

largest number of colleges and universities in the nation. The plethora of choices

in programs, institutions, geographic locations, and diversity makes the state one

of the most attractive destinations for international students. However, while the

abundance of ethnic enclaves both on and off campus can be a drawing factor

for international students when selecting a program of study abroad, ethnic

enclaves can also be a barrier to the acculturation process (Baerveldt, Van Duijn,

Vermeij, & Van Hemert, 2004). Sociological research indicates that individuals

have a tendency to seek out those who are culturally similar to themselves and

with whom they have strong ties (Wellman, 1979). For international students,

having ready access to familiar cultural settings and members may serve as a

comfortable haven from where they can seek temporary refuge. However, although this may provide international students with initial relief from the stresses of adjusting to a new environment, over time such reliance on the familiar tends to foster feelings of isolation (Yan & Berliner, 2011, 2013) and may lead to an increased sense of alienation and victimization, intergroup bias, and perceived prejudice and discrimination (Sidanius, Van Laar, Levin, & Sinclair, 2004). An excerpt from an interview of a Chinese international student in Yan and Berliner's (2011) study provides an example of feelings of isolation and loneliness that can result from an overreliance on a culturally homogenized social network:

> Going abroad is supposed to provide an opportunity for broadening a person's perspective; however, it turns out that most Chinese international students here confine their lives to a small circle of friends and activities. Frequently we live in the same place for several years. On campus we meet the same people, say the same things, and buy the same things from the same stores. During holidays the same friends take turns hosting get-togethers. I feel I am becoming increasingly parochial, bored, and passive, when my social life is confined to two or three good friends. I want to escape this besieged fortress and have some real interactions with Americans. (p. 535)

Problem Statement

International students are a distinct and unique population of students in higher education. Not only do they have to contend with the normal

developmental stresses associated with being a student in college setting, but they also tend to experience stress related to adjustment in college more intensely than domestic students (Lee, 2010; Mori, 2000). In an older study that has been cited in several recent studies, Das, Chow, and Rutherford (1986) concluded that, "Although [international] students may not be the only group on campus that feels socially isolated, being away from home and in a different social and cultural environment, they may experience it more acutely than others" (p. 170). This type of stress, associated with the adjustment to a new social and learning environment, is referred to in the literature as acculturative stress.

Literature on the topic of stress and stress coping theories suggest that social support is an effective buffer against stress (Lee, Koeske, & Sales, 2004). Furthermore, empirical studies have shown that various forms of social support can mitigate the acculturative stress levels experienced by international students during the adjustment process (Crockett et al., 2007; Lee, Koeske, & Sales, 2004; Li & Gasser, 2005; Liu, 2009; Poyrazli & Lopez, 2007; Rice, Choi, Zhang, Morero, & Anderson, 2012; Sandhu, 1995; Ye, 2006; Yeh & Inose, 2003; Zhang & Goodson, 2011).

The utilization of social support networks is one of the most salient coping strategies used by international students in the acculturation process (Berry, 1997; Yan & Berliner, 2011). In fact, evidence in the literature suggests the lack of a strong social network can lead international students to suffer from depression, loneliness, and feelings of helplessness (Al-Sharideh & Goe, 1998; Sandhu 1995; Sandhu & Asarabi, 1994). Furthermore, the lack of a stable social

network can have a significant and negative influence on their psychological well-being, thus prohibiting them from adapting to a new cultural and academic environment (Jasinskaja-Lahti, Liebkind, Jaakkola & Reuter, 2006; Lee, Koeske, & Sales, 2004; Mori, 2000; Sadhu, 1995; Sawir, Marginson, Forbes-Mewett, Nyland, & Ramia, 2012; Smart & Smart, 1995; Wadsworth, Hecht, & Jung, 2008; Yeh & Inose, 2003). This is particularly relevant for international students since social support and connectedness is one of the most salient resources they lose as sojourners in a new country.

Empirical evidence indicates that the inclusion of people from the host culture in a support network can mitigate the level of acculturative stress experienced by international students (Poyrazli, Kavanaugh, Baker, & Timimi, 2004). However, contrasting evidence also suggest support networks comprised exclusively of members that share the same culture can provide the same mitigating effects as networks that include members from the host culture (Al-Sharideh & Goe, 1998). As California is one of the most popular and culturally diverse destinations for international students, understanding the possible relationship between the cultural composition of social support networks and acculturative stress is highly relevant for higher education leaders and practitioners who are responsible for developing support programs for international students.

Purpose Statement

The increasing enrollment of international students in U.S. institutions of higher education is a national trend. While increasing the number of international

students on a college campus brings academic and economic advantages, leaders in higher education must recognize that international students are a unique population who experience specific challenges that are not shared by domestic students. As such, international students require different resources and support services than those that are available to domestic students. In the excitement to increase a global presence on their campus, campus leaders must remember their obligation to fostering an environment that is conducive to the learning and well-being being of all students. Identifying the various factors that contribute to the problems experienced by international students will help inform the practice of educational leaders responsible for developing resources to support this growing population of college students in the U.S. The purpose of this study is to discover if there is a relationship between the composition of social networks and the level of acculturative stress experienced by international students.

Research Questions

The following research questions guided this study:

1. Are there differences in acculturative stress levels experienced by international students within the three institutions under investigation?

2. Are there differences in acculturative stress levels experienced by international students who seek support from social networks that are more culturally diverse and those whose network is less culturally diverse?

3.   What is the relationship between the composition of social support networks and the acculturative stress experienced by international students?

Significance of the Study

The findings from this study can be used to inform the practice and design of intervention strategies aimed at supporting international students, particularly those educational leaders that are responsible for ensuring their positive adjustment to life in the U.S. The findings can also help inform institutional policies related to the allocation of campus resources to supporting international students. Additionally, the findings of this study can be used to inform strategic plans to increase the enrollment of international students on college campuses by identifying specific areas that international students may need the most assistance. Finally, due to the rising interest of international students in the community colleges (Bohman, 2010) and the rising interest of community colleges in recruiting international students (Evelyn, 2005), two-year institutions were included in this study.

Scope of the Study

This study makes use of survey data collected from a sample of international students at three public institutions of higher education in the southern California: two four-year universities and one two-year college. The purpose of this study was to discover the potential relationship between acculturative stress levels of international students and the cultural composition of their social support networks. Acculturative stress is measured based on their

feelings related to homesickness, culture shock, and perceived discrimination and to their perceived feelings of hate, fear, and guilt. The cultural composition of social networks is based on the self-perceived likelihood that international students will seek support from members of their social network that are either in their same cultural group or in a different cultural group, specifically for loneliness, academics, recreation, and adjustment to living in the U.S.

Assumptions of the Study

This study was conducted with the following assumptions:

1. Participants voluntarily completed the study.

2. Participants were honest with their response.

3. Participants were sufficiently proficient with the English language to understand the survey.

4. The appraisal of stress was consistent among the participants regardless of their country of origin.

5. This study did not ask participants to indicate the specific cultures of members in their support networks who were from cultural groups outside of participants' own culture. When participants indicated that they were likely to receive support from members of a different social culture other than their own, it was presumed that these members were domestic students.

Study Delimitations

The delimitations of this study are as follows:

1. Only undergraduate international students at three public higher education institutions in southern California were surveyed.

2. In order to participate, students had to meet the following criteria: (a) self identify as an international student on a F1 student visa, (b) be at least 18 years old, and (c) have completed at least one full-year of study prior to the 2013-14 academic year.

Study Limitations

The demographics and selection of the sample for this study impacts the generalizability of the results to the total population of international students at each of the research sites. Participants in the study were self-selected. Over three-quarters of the participants in the study were from Asia, with nearly 40 percent of the participants from a single country, China. Additionally, the design of this study lends itself to nesting in the data collected since there are most likely shared experiences among the participants based on environmental, geographic, and programmatic factors at each research site that would influence their responses. For instance, on June 7, 2013, an incident that involved the fatal shooting of a student at one of the research sites created a shared experience for all the students on that campus that would likely influence the responses on the survey. Finally, because this investigation relies exclusively on survey data that is based on the perceptions of past experiences, the reliability of those

responses is completely dependent on the biases and the recollections of the participants.

Definitions of Key Terms

Acculturation. Acculturation is the process of change that is directly related to the psychological adjustment of international students to a new environment.

Acculturative stress. Psychosocial stress experienced by international students that is associated with adjusting to living and studying in the U.S is called acculturative stress.

Cultural Composition. Cultural composition refers to the demographic makeup of international students social support network based on culture, ethnicity, nationality, or the first language of its members.

Domestic students. In the context of this study, this term refers to students on a college campus who are not international students.

Full Time Enrolled (FTE). This term refers to a student at an institution of higher education who is enrolled in the minimum number of academic units so as to be classified as a full time student at that institution.

Host culture. This term refers to both the country and local community where international students have traveled for their educational experience. Within the context of this study, host culture refers specifically to southern California.

International Student. An international student is a student with a F1 visa who is enrolled in postsecondary institutions of higher education.

Members of the host culture. In the literature related to international students studying in the U.S., members of the host culture are sometimes referred to directly as American. However, I find this designation too limiting in the context of the setting for this study. California is diverse and culturally pluralistic state, whose inhabitants may not necessarily identify themselves as culturally American. Thus, it would be more appropriate to refer to them as members of the host culture who because of their membership understand the cultural norms, values, and symbols that can be transmitted to international students through interaction.

Social Support. This term refers to a type of stress-coping strategy that relies on individuals in a person's social network.

Organization of the Dissertation

Chapter 2 is a review of the literature that forms the theoretical and conceptual framework for this dissertation. Chapter 3 describes the methodology that will be used to conduct the study. Chapter 3 consists of a description of the researcher's worldview, the research design, the data collection instrument, the sampling procedures, and the plan for analysis. In Chapter 4, the results of the study are presented within the context of the research questions that were stated in this chapter. Chapter 5 provides an interpretation of the findings and a discussion of the implication for practice.

CHAPTER 2

REVIEW OF THE LITERATURE

This chapter provides a review of the relevant literature of the topic under investigation. The chapter begins with a historic overview of the enrollment trends of international students in the U.S., followed by an examination of the characteristics of international students as a subset of students on a college campus. This is followed by a discussion of the psychosocial factors that affect international students, and a review of the variables that will be used in the study. The chapter closes with a summary of the chapter.

Enrollment Trends of International Students in the U.S.

American colleges and universities have seen increasing enrollments of international students since the end of World War II. As early as the 1950s, intuitions of higher education in the U.S. have attracted students from all over the world. Since then, the number of international student studying in the U.S. increased from 29,813 to 453,787 in 1995 (Mori, 2000). In 1994, of the 1,168,075 students studying in postsecondary programs outside of their home countries, 407,530 (34.89%) attended a program of study in the U.S. It is important to note that the country with the second highest number of international students (France, 136,015) represents only one-third of the total number of international students studying in the U.S. (Sandhu, 1995). In 2010, the number

of international students studying in the U.S. rose to 690,923, with a 30%

increase in the enrollment of students from China (Bista & Foster, 2011). More

recently, according to the IIE's 2011 *Open Doors* report, the 2010-2011

academic year saw a 5% increase in international student enrollment, setting a

record high of 723,277 international students in the U.S. The report also

indicated that the top five countries where international students originate were:

China, India, South Korea, Canada and Taiwan, which make up approximately

54% of all international students in the U.S. China is the largest exporter of

international students in the world, accounting for 23% of all international

students globally between 2009 and 2011. According to Hudzik and Briggs

(2012), campus enrollment of international students in the U.S. is estimated to be

3.5 percent of the total student population, whereas in the United Kingdom and

Australia, they represent about 17% and 22% of the student enrollment,

respectively. These estimates suggest that there is room for growth in the

enrollment of international students in the U.S. without compromising the

availability and accessibility to higher education for domestic students.

According to the literature, interest in increasing international student

enrollment on college campuses stems from a desire to achieve both academic

and financial gains (Andrade, 2008; Byrd, 1991; Hagedorn & Mi-Chung, 2005;

Owens, Srivastava, & Feerasta, 2011). Fiscally, international student enrollment

contributed approximately 13 billion dollars to institutions of higher education in

the U.S., making it "the fifth largest export in the country" (Hagedorn & Mi-Chung,

2005, p. 6). Specifically in the state of California, "international students

accounted for over a billion dollars of revenue" (Hagedorn & Mi-Chung, 2005, p. 6). At an institutional level, the international student enrollment at Los Angeles City College, which represents 5.7 percent of the student population, "generates nearly $4 million dollars a year for the institution" (Hagedorn & Mi-Chung, 2005, p. 6). There is no denying that international students have a significant fiscal impact on hosting institutions as well as to the local and national economy. In fact, far from being a recent practice, during fiscally challenging times, some higher education institutions have relied on their enrollment of international students to keep them in operation (Byrd, 1991).

However, aside from financial gains, there are also equally important academic gains that international students bring to an institution. Interactions with international students allow domestic students the opportunity to actively engage with members of the international community, to broaden their perspectives, and to promote cultural exchange, all of which helps them to gain the global awareness and competencies that employers are now seeking (Andrade, 2008; Hagedorn & Mi-Chung, 2005; Harder, 2011; Mamiseishvili, 2012; National Association of Foreign Student Advisers, 2003). Harder (2011) suggested that the presence of international students may be more valuable at two-year institutions since they represent one of the few opportunities for community college students to gain exposure to international perspectives.

A Unique Student Population

As stated in Chapter 1, international students are a unique group of students in higher education with distinct needs. Not only do they have to

contend with the normal developmental stresses associated with being a student in college setting, but they tend to experience stress related to adjustment in college more intensely than domestic students (Chen, 1999; Mori, 2000). As such, their stress is amplified, which puts them at greater risk for mental health issues.

The ability for international students to adjust to their new environment is inextricably tied to their overall educational experience. Wadsworth, Hecht, and Jung's (2008) examined the effect acculturation, perceived discrimination, and identity gaps had on the educational satisfaction of 218 international students in a large northeastern university. Specifically, Wadsworth, Hecht, and Jung examined international students' satisfaction in attending an American university and the quality of communication they had with faculty and other students in the classroom. Among their major findings were a positive correlation between acculturation and satisfaction with educational experience and a negative correlation between the perceptions of discrimination and satisfaction with educational experience. The research noted that since the primary identities of international students is that of a student, it makes sense that their positive interaction with members of the host culture in the classroom helps to facilitate the acculturation process. Conversely, negative interaction with members of the host culture caused by feelings of discrimination can hinder the acculturation process and create stress for international students.

Despite experiencing greater stress in adjusting to their new environment, evidence indicates that, at least at the two-year institutions, international students

perform better academically than domestic students. Hagedorn and Mi-Chung (2005) sampled 466 international students in the Los Angeles Community College District and compared them with 17,276 domestic students and found that "when looking at cumulative performance of all students at the community college, international students are performing slightly better academically than non-international students" (p. 18). They found that the mean GPA of the international students sampled was 2.93 compared to 2.58 for domestic students. When looking at success rate, which was defined in the study as the ratio of number of courses taken with a passing grade and the total number of enrolled courses, international students again had a higher success ratio (.89) when compared to domestic students (.83). They also found that among all surveyed students who indicated that their goal was to transfer, a higher percentage of international students (41.6%) were prepared to transfer than domestic students (32.3%). Similarly, Mamiseishvili (2012) also found that the first to second year persistence rates for international students at two-year institutions were greater than that of domestic students. However, the findings of both studies are limited because the analysis was based on cross-sectional data. Research based on longitudinal data would provide greater understanding and clarity into the persistence rates and trends of international students. As Mamiseishvili (2012) recommended, "A longitudinal study will be beneficial to determine whether international students who start at the two-year institution will eventually transfer to a four-year college or complete an associate's degree" (p. 26).

Although Hagedorn and Mi-Chung (2005) found significant differences in the academic achievement between international and domestic students in terms of GPA and course completion, their analysis did not control for other factors that may contribute to the differences between the two groups of students. For instance, age, family background, socioeconomic status, and academic preparedness prior to enrollment are factors that have been found to impact student achievement and persistence rates (Kuh, Kinzie, Buckley, Bridge, & Hayek, 2006). Investigating whether significant differences would still exist between the international and domestic students after controlling for these factors would be worthwhile to determine.

Although there is evidence that international students may be performing academically as well as or, in some cases, even better than their domestic counterparts, academic performance and persistence only represent one dimension of the collegiate experience. Numerous studies suggest international students experience greater psychological problems due to the stress associated with adjusting to a new culture and environment (Andrade, 2006; Rajapaksa & Dundes, 2002; Ramsay, Jones, & Baker, 2007; Rice et al., 2012; Sandhu & Asrabadi, 1994). Additional evidence suggests that international students experience different levels of adjustment based on their country of origin. Lee (2010) sampled 491 international students at a large southwest public university and found that international students from predominantly non-White regions experience greater difficulties adjusting socially to life in the U.S. than international students from predominantly White regions of the world. However,

regardless of their country of origin, research indicates that the maladjustment of international students in the host country negatively impacts the psychosocial development of international students and puts them at greater risk for mental health issues such as extreme depression (Chen, 1999; Mori, 2000; Sandhu, 1995; Wadsworth, Hecht, & Jung, 2008). In the literature, the type of stress that is associated with cross-cultural adjustment is often referred to as acculturative stress.

Acculturation and Acculturative Stress

Undoubtedly, the most arduous challenge for any international student is adjustment to their new environment (Chen, 1999; Li & Gasser, 2005; Wadsworth, Hecht, & Jung, 2008). The literature on acculturation is extensive and many studies focus on the cross-cultural experience of the immigrant, sojourner, or refugee whose intent is settlement into a new culture (Berry, 1997; Constantine, Okazaki, & Utsey, 2004; Dao, Lee, & Chang, 2007; Lin & Yi, 1997). One of the earliest studies on the phenomenon of acculturation was conducted by Redfield, Linton, and Herskovits (1936), who described acculturation as "those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original cultural patterns of either or both groups" (p. 149). However, though this definition of acculturation implies a neutral or balanced intergroup change, often a greater change is required for one group than the other, and, in most cases, it is the less dominant group that is required to change (Berry, 1992, 1997).

Berry (1997) indicated that in one of the earliest studies about acculturation a distinction was made between two types of changes that occur in the acculturation process: one occurring on the group or collective level, and the other on the individual level. He explained, "In the former, acculturation is a change in the culture of the group; in the latter, acculturation is a change in the psychology of the individual" (Berry, 1997, p. 7). Therefore, within the context of this study, acculturation will refer to the process of change that is directly related to the psychological adjustment of international students in the U.S.

In an older study that has been cited in numerous older studies as well as in more recent work in the areas of acculturative stress and cross-cultural transitions, Searle and Ward (1990) made a further distinction in the adjustment process of international students. According to their model, there are two distinct dimensions to the adjustment of sojourners: psychological and sociocultural. Whereas psychological adjustment refers to the affective state of an individual, their feelings of well-being and satisfaction, sociocultural adjustment refers to the ability to fit in and interact within of the new culture. The present study focuses on the psychological impact of acculturating to a new environment for international students studying in the U.S.

The benefit to drawing distinctions in the acculturation process is that doing so allows researchers to apply different theoretical frameworks to understanding and testing the impact to the migrating or sojourning experience (Berry, 1997). As indicated earlier, this study investigates the individual level, psychological adjustment of international students. Thus, within this context, it is

possible to understand the adjustment process through the use of stress and coping frameworks.

In cross-cultural studies, the stress associated with the difficulties or problems that occur in the individual is part of the acculturation process (Berry 1997; Williams & Berry, 1991; Yeh & Inose, 2003). Yeh and Inose (2003) defined acculturative stress as "the distinctive type of stress associated with individuals' cross-cultural encounters, which can manifest in physical, social and psychological problems" (p. 16). Though international students share similar acculturative experiences as immigrants, their experience is distinctly different due to the purpose and temporary nature of their travel (Berry, 1997). The literature on international students indicates that acculturative stress is one of the most negative and pervasive factors that affect international students. This form of stress has been associated with feelings of depression, anxiety, and loneliness (Lin & Yi, 1997), which can manifest into physical reactions in the human body that are similar to that of being in threatened state, such as physical tension, increased blood pressure, heart rate, and pulse, which puts those experiencing acculturative stress at greater risk for susceptibility to illnesses. As Mori (2000) stated, "It is not uncommon, therefore, to find international students who are afflicted with persistent lack or loss of appetite and sleep, low stamina and energy levels, headaches, gastrointestinal problems (Thomas & Althen, 1989), and ulcers" (p. 139). Additionally, the constant strain of processing new cultural, social, and academic information leads to a form of cognitive fatigue and mental

exhaustion that can end with international students burnout (Mori, 2000; Winkelman, 1994).

Berry's Acculturation and Stress Coping Framework

Berry (1997) developed a framework that describes the process by which immigrants and sojourners adapt and acculturate into a new cultural environment. He identifies group (macro) and individual (micro) level factors that influence acculturative stress and the strategies used to cope with the stressors that are associated with acculturation.

According to Berry (1997), group level acculturation is impacted by the political context, economic situation, and demographic factors from the society of origin. Yan and Berliner (2011) explained that the social and political context from which a sojourner arrives in a new cultural environment impacts the acculturation process. Additionally, the attitudes towards the sojourning group in the host society also impacts group level acculturation. For instance, McMurtie (2001) reported that after September 11, 2001, hundreds of Middle Eastern international students withdrew from U.S. colleges and universities as a result of the hostility they experienced and for fear of reprisal. Berry's model also identifies individual level factors that impact the acculturation process. These factors are divided into two categories: (a) factors prior to acculturation and (b) factors during acculturation. The factors prior to acculturation are the following: age, gender, and education; motivation and expectation; language proficiency; and personality. The factors during acculturation include length of time in host

culture, the coping strategies used, access to social support, and societal attitudes.

According to Berry's stress coping framework (1997), the specific coping strategies used by an individual can impact the acculturative stress experienced by sojourners at the point of appraisal of the specific stressor. In his model, Berry (1997) described four strategies used by sojourners when adapting to their new environment: (a) assimilation, (b) separation, (c) integration, and (d) marginalization. In the context of the acculturation process, assimilation refers to the shedding or the letting go of one's cultural identity in order to adopt the cultural identity of the host culture. International students who adopt an assimilation strategy may actively seek daily interaction with members of the host society. In contrast, the separation strategy involves the purposeful rejection of the host culture's norms and values. Individuals who adopt this strategy purposefully seek interaction with only those that share their cultural identity. The integration strategy is used when an individual is interested in maintaining one's culture but also seeks to participate in the activities of the host society through daily interactions. Berry (1997) notes that the use of an integration strategy can only occur in "societies that are explicitly multicultural" (p. 11). That is the policies and attitudes of the host nation must be open and interested in having daily interactions with other cultural groups within the dominant cultural. Last, marginalization sets in when there is neither any interest in maintaining one's cultural identity or in interacting with others in the host society "often for reasons of exclusion or discrimination" (p. 9).

According to Berry's (1997) model, the adoption of a specific strategy to cope with the acculturation process is not static. On the contrary, the selection of an acculturative strategy is fluid and can be dependent on location as well as the attitudes and preferences of the individual, the collective ethnographic group, and the host culture at large, the latter of which is impacted by the national policies and attitudes towards the acceptance of certain cultural groups. In fact, there is evidence that suggest over the course of the acculturation process, individuals may explore different strategies in an attempt to find one that is most suited to their personal preferences and attitudes (Ho, 1995). From the psychosocial perspective, when the selected coping strategy is incompatible with either the behaviors that accompany a selected strategy, such as cultural shedding, or if the strategy is incongruent with the attitudes and policies of the host environment, the resulting conflict in the acculturation process is referred to acculturative stress.

In his review of acculturation models, Cabassa (2003) divide the various perspectives and frameworks in the study of the acculturation process of Hispanics into two broad categories: unidimensional and bidimensional models of acculturation. Unidimensional models conceptualize the acculturation process on a single continuum ranging from complete immersion into one's culture of origin to the complete immersion into dominant or host culture. This perspective also implies the changes that take place in the acculturation process only occurs within the acculturating group and has little to no impact on the dominant group. The perspective also often assumes that the nature of the acculturation process

involves the loss of one's original culture as one moves along the continuum to adopt the culture of the dominant or host culture. In contrast, the bi-dimensional model for understanding the acculturation process takes on the perspective that adopting cultural traits and values of a dominant or host culture does not necessitate the shedding or disassociation with one's original culture. Therefore, contemporary models of acculturation take into account the complex nature of the acculturation process on the micro (individual) and macro (societal) levels, as well as the various factors that influence the strategies used for acculturation. In the case of mental health researchers, such as Cabassa (2003) and Rogler, Cortes, and Malgady (1991), there is the concern that measurements and scales developed to assess acculturation must take into account the multifaceted dimensions of acculturation. They argue that those measurements and scales directly impact the reliability and validity of studies based on those instruments.

Acculturative Stress Scale for International Students (ASSIS)

Researchers Sandhu and Asrabadi (1994) developed a scale to measure the acculturative stress level experienced by international students. Through their investigation, they identified six principal factors of acculturative stress. Their method of investigation was grounded in post positivism and was conducted using a mixed methods research design. They began by interviewing international students in an urban university in the southern region of the U.S. The initial sample was comprised of eight men and five women who were international students from China, Egypt, Ethiopia, Germany, India, Iran, Japan, Venezuela, and Nicaragua. The purpose of the initial interviews was to gain an

understanding of the students' personal experiences and perspectives. Next, the researchers conducted a review of the literature related to the counseling of international students and identified 12 reoccurring themes from which Sandhu and Asrabadi constructed the initial 125-item acculturative stress scale.

The initial scale was piloted with 26 undergraduate and graduate international students. After they took the survey, the students were encouraged to make comments and suggestions regarding the wording of the items. Additionally, three university professors from two different universities who taught courses in multicultural counseling and had experience with issues relating to international students were consulted and asked to review the scale. At the conclusion of the process, "in its final refined and polished version, this scale resulted in 78 items, with six to nine items under each theme" (p. 438).

A sample was obtained by creating a national list of colleges and universities that enrolled at least 300 international students. From that list, the colleges and universities identified were categorized into 10 regions. One international student center in each of the 10 regions was then randomly selected and sampled. Each international student center was asked to randomly select 20 international students at their respective institutions to participate in the study. The return rate of the survey was 68% and resulted in a total sample of 128 participants. Using correlational and factor analysis to analyze the data, Sandhu and Asrabadi (1994) identified six factors that accounted for 70.6% of the total explained variance in their model. The following are the factors and the percent variance values: perceived discrimination (38.30), homesickness (9.00),

perceived hate (7.20), fear (6.10), culture shock (3.70), and guilt (3.20). These

findings are consistent with the literature related to acculturative stress and

maladjustment issues of international students.

Two limitations of the ASSIS need be acknowledged. The first limitation

of the ASSIS is its subjectivity to geopolitics, immigration policies, and general

attitudes of both the sending and hosting countries. In his study, Altbach (2007)

analyzed the motivations and historical trends related to the internationalization

of higher education. In his analysis, he described the inextricable relationship

between internationalization and the political climate of the host and sending

countries. It is not an understatement to say that there has been significant

political movement and shifts across the globe since 1994, which would have

likely impacted the experiences of international students, depending on their

countries of origin and the geopolitical landscape at the time. A salient and

relatively recent example is the impact 9/11 has had on immigration policies in

the U.S. and on the general national attitude towards cross-cultural groups of

people. If the ASSIS study were conducted then, conceivably the results would

have been different due to the geopolitical climate, which in turn would have

impacted development of the scale, particularly with the constructs related to

perceptions of discrimination and hate as well as fear. Therefore, as this scale

was developed nearly 20 years ago, the applicability of the scale to today's

international students needs to be considered. The second limitation of the scale

is that it assumes universality in stress appraisal, that is two international

students, regardless of their country of origin, will appraise stress in exactly the

same way. Even though the label international student broadly extends to any student who travels from their home country to study in another country, the experiences of these students can differ considerably based on their cultural values, belief systems, and personal perspectives of social norms. Although a universal scale that measures the acculturative stress levels of international students is a powerful tool for conducting research, these limitations may influence the generalizability of the scale. However, given the context of the current study, the methodology used in the development of the scale, and the consistency of the constructs with current literature, the ASSIS is an appropriate instrument for this investigation. The following is a literature review of the findings for each factor of the ASSIS.

Homesickness

Homesickness is a prevalent theme in studies related to the adjustment of international students. Homesickness is associated with feelings of loneliness and depression and can have a negative psychological implication for international students (Lee & Rice, 2007; Liu, 2009; Sandhu & Asrabadi, 1994; Sandhu, 1995; Yan & Berliner, 2013; Ying & Liese, 1994; Zhang & Goodson, 2011). Although homesickness is not a feeling experienced exclusively by international students, they experience it to a greater degree than domestic students (Hechanova-Alampay et al., 2002; Poyrazli & Lopez 2007; Rajapaksa & Dundes, 2002) due to the change in their social status and role, loss of social support, limited resources, and the physical distance from their home. In their

study, Yan and Berliner (2011) referenced an interview with an international student who describes her feelings of homesickness:

> I never left home before I came to the U.S., so I felt lonely and homesick from time to time, even though I can get along very well with my American friends. I miss the yummy food in China and dislike the Americanized and expensive Chinese food in America. I miss my parents and friends back home. I hate the weekend, when all Americans hang out at parties, and I still have to stay at home, watching the never-ending Friends or Sex and the City over and over again. (p. 529)

Culture Shock

The term culture shock was initially introduced by anthropological researcher Kalervo Oberg in 1960 and describes the adjustment process for migrants and sojourners in a new culture. According to Oberg (1960) the adjustment process of a person in a new social cultural setting is characterized by a loss of social support, familiar cultural symbols, and normative behavior and is often accompanied by initial feelings of anxiety and feelings of rejection. The literature is replete with empirical studies on the adjustment process of international students and phenomenon of culture shock (Al-Sharide & Goe, 1998; Bankston & Zhou, 1996; Crockett et al., 2007; Dao, Lee, & Chang, 2007; Winkleman, 1994). It should be noted that though the term *culture shock* is old and has been popularized in the field of cross-cultural studies, there is criticism that the term does not accurately describe the process of acculturation. Berry (1997) offered two arguments against the use of the term culture shock. First the

term "shock" implies only negative experiences and outcomes of intercultural contact. The process of adjustment does not exclusively include negative experiences. Second, that the problems associated with adjustment is not cultural, but rather intercultural. Culture shock occurs when there is a conflict between the values of two or more cultures. However, in the context of the present study, culture shock is appropriate since it was used by the original researcher to assess the negative experiences in the adjustment process of international students.

Perceived Discrimination

Perceived discrimination refers to feelings of inequity and of being treated differently from other students. In her study, Lee (2007) interviewed 24 international students from a southwest university in the U.S. and found that feelings of discrimination were among the most prevalent emerging themes. She explained that feelings of discrimination often come as a shock for international students because they experience a dramatic shift from their role as a majority to that of a minority. Participants reported that they felt they were being treated unfairly socially, academically, and even with regard to having access to the same opportunities. For example, in the classroom setting, students reported professors would refuse to answer questions because they claimed they could not understand the students' English. Socially, one participant revealed that her classmates would purposely wait for her to start leaving the room before making plans for social activities, indicating that she was purposely targeted for

exclusion. Another participant reported that she felt mistreated at her on-campus job because of her international status. She stated:

> [The faculty] know that as foreign students we have limited resources . . . and we cannot go into the department or visit the university [offices] and stuff like that. So they hold the funding . . . and I managed to buck them very easily because I am very outspoken. . . . But as soon as I managed to cut them off (by speaking out) . . . they immediately cut off my funding and they forced me to look for something else. . . . They do that for all foreign students. (p. 402)

Poyrazli and Lopez (2007) compared the perceived discrimination and homesickness levels between American and international students and found that though international students are not the only group of students to perceive discrimination, they do perceive it to a greater extent. As such, Poyrazli and Lopez noted that, " a higher level of perceived discrimination could impede students' acculturation or adjustment into their new environment and negatively affect students' mental health (e.g., lower their self-esteem)" (p. 272). Finally, as noted earlier, Wadsworth, Hecht, and Jung's (2008) found that there was a negative correlation between the perceptions of discrimination and satisfaction with the educational experience that could hinder the acculturation process and create stress for international students.

Perceived Hate

Perceived hate refers to the feelings of rejection and hostility that international students experience while living in the U.S. This general sense of

feeling unwelcomed in the host culture can result from either verbal or nonverbal actions of the dominant group. Investigations into the adjustment of international students reveals that the perception of hate and hostility is an emergent theme in their experiences (Lee, 2007; Yan & Berliner, 2011). Research indicates that for groups undergoing the acculturation process, feelings of rejection from the host culture is a predictive factor in the overall adjustment experience (Berry, 1997; Fernando, 1993), and unexpected feelings of hostility are associated with higher levels of depression and stress (Yan & Berliner, 2011).

Fear

The heightened sense of anxiety and stress that is associated with the perception of discrimination and hatred also contributes to a fear for personal safety. Though studies on the fear for personal safety are scarce in the literature, fear did contribute to 6.10% of the total variance in the ASSIS. Sandhu and Asrabadi (1994) explained:

> This fear seems to be related to the sense of insecurity in unfamiliar surroundings, high rates of crime and violence in American society, racial discrimination, and socio-political realities of off and on hostile relations between some foreign students' native countries (Iran, Iraq, etc.) and the United States. (p. 445)

Guilt

Similar to the fear factor in the ASSIS, there has been little to no empirical research done on the topic of guilt as it relates to the adjustment process of international students. However, in the development of the ASSIS, guilt

accounted for 3.2%of the total variance explained for acculturative stress. One possible explanation can be found in the adjustment strategies in cross-cultural research. Berry (1997) described four strategies that are used by migrants in the adjustment process to a new environment: integration, marginalization, assimilation and separation. Integration and assimilation are two strategies that have been positively associated with adaptation. However, since assimilation involves the shedding of one's cultural identity to varying degrees, it is reasonable to speculate there would be an element of guilt associated with the adoption of a new cultural values over that of their original values, particularly when there is a conflict between the two. In contrast, in a qualitative study, Andrade (2007) found that international students who adopted an integration strategy "did not view their integration as assimilation and felt that they had preserved their cultural integrity." (p. 57).

Stress, Social Support, and Contact Theory

Stress

Cognitive stress and coping strategies for stress have been studied extensively. Many studies related to stress and international students, both past and recent, borrow heavily from older studies about stress. This literature review follows suit and will reference many past seminal works on this topic. Stress has been broadly defined as anything that is perceived as a threat or challenges an individual's physical or mental well being beyond the adaptive ability to cope (Chen, 1999; Monat & Lazarus, 1991; Lazarus, 1993). Although a single or isolated stressful event is rarely enough to pose a significant health risks, "it is

when multiple problems accumulate, persisting and straining the problem solving capacity of the individual, that the potential for serious disorder occurs" (Cohen & Wills, 1985, p. 312). Cohen & Wills noted that in extreme cases, stress has been linked to serious psychological disorders such as depression and anxiety, which has also been linked to disruptions of the neuroendocrine and immune system. International students, who face daily challenges adapting to new social and educational demands, constitute a population of students that are more susceptible to such risks.

Individuals experience stress when they encounter a situation that is perceived as threatening or demanding that exceeds their ability to cope with it (Cohen & Wills, 1985; Lazarus, 1993; Monat & Lazarus, 1991). A situation can also induce stress when individuals feel it is important to respond but are unable to do so. In the case of international students, upon departure from their home country, they immediately lose access to any social support they had that can help them to deal with the demands and challenges of living and functioning in a new environment. With limited cultural knowledge and a social network that needs to be reconstructed, their ability to cope with the stress of adjusting to their situation is compromised.

Social Support

A postulate of social support theory is that social support can act as a buffer against the deleterious effects of stress. In the literature, this is known as the buffering hypothesis. In an older study, which continues to be cited in more recent works related to stress and social support, Cohen and Wills (1985) noted

that the buffering effects of social support can occur at two points in the process that links stress to illness. The first point is in the appraisal of the stressful event, and the second is during the onset of any symptoms of stress. At the appraisal point, support can help to alleviate or reduce the level of stress by helping to reframe the stressful event. At the point of symptomatology, support can also help to alleviate or reduce the symptoms caused by a stressful event by providing solutions that alter the severity of an event.

In their review of the literature on social support, Cohen and Wills (1985) proposed that there are four functional categories of social resources that serve as buffers to stress: esteem support, informational support, social companionship, and instrumental support. The first category, esteem support, refers to an individual's feelings of acceptance and personal worth. In the literature, this type of support is also referred to as emotional and self-esteem. The second category is information support, which refers to the guidance received that helps an individual define and understand a stressful event. Lazarus (1993) referred to this as appraisal support. The third category of support is social companionship, or belongingness, which ameliorates a stressful event through distraction from a stressful event, satisfying the need for social contact or affiliation. The final category is instrumental support, which is also referred to in the literature as tangible or material support, is the direct assistance given to resolve a stressful event. For example, if the stressor was related to financial matters, a monetary loan would be considered a form of instrumental support. The buffering hypothesis states that in order for a support to have a

buffering effect, there must be a reasonable match between a stressor and the support available. Cohen and Wills (1985) stated that in order for the effects of buffering to be observed, the specific support function being measured must be relevant to the stress experienced. Lee, Koeske, and Sales (2004) found evidence that revealed the buffering effects of social support on the acculturative stress of Korean international students.

In their study, Lee et al. (2004) surveyed 74 Korean international students who held either an F or J visa. The participants of this study were mostly men enrolled in graduate programs. The average length of time the participants lived in the U.S. was 31 months. The researchers administered a 102-item questionnaire that captured the acculturative stress, psychological distress and symptomatology, social support, and level of acculturation of the participants. Using hierarchical regression to analyze their observations, they found a statistically significant negative correlation ($\beta=1.47$, $p=.02$) between acculturative stress and social support. In their article, they concluded, "Korean international students with acculturative stress but with a high level of social support would express lower mental health symptoms than the students with low level of social support. (p. 410)." This finding lends empirical support to the postulate of the buffering hypothesis. The significance of this study is that it specifically assessed the effect of support related to social interactions as opposed to structural support, such as the quality of the instruction, facilities, or curriculum.

While many studies have produced empirical evidence that support the mitigating, or buffering, effects of social support on stress, Thoits's (1995) review

of social support research noted the limitations on the validity of the buffering effects of support and stress as well as identified the gaps related to research in this area. Among those limitations is the necessity to account for the different types and characteristics of social support; for instance, researchers should take into account the originating source of support, the form of support (structural versus emotional), the quality and frequency of the support received, the size of social network, the proximity of social networks, and the difference between perceived and the actual received support. Another factor that may confound the effects of social support is the personality trait of the individual seeking support. For instance, those who have high self self-esteem and self-efficacy are more likely to seek support from social networks, and they, therefore, may be inherently less susceptible to the negative effects of stress.

Contact Theory

Contact theory posits that the positive interactions between different groups of people will lead to reduced prejudice in intergroup contact (Allport, 1954; Dovidio, Gaertner, & Kawakami, 2003; Pettigrew & Tropp, 2006). Similar to the research related to stress, contact theory has also been studied extensively and extends as far back as the 1930s. As such, there is a wealth of information related to the study of intergroup contact and its relationship to conflict and prejudice. In their meta-analysis of intergroup contact theory, Pettigrew and Tropp (2006) reviewed the an extensive body of past research utilizing 515 individual studies with 713 independent samples and 1,383 non- independent tests. Combined, 250,089 individuals from 38 nations

participated in the research. Along with including more than 300

additional studies . . . (p. 753).

Their research was based on the seminal works of Allport (1954) on the

nature of prejudice, which influenced subsequent research in the field of contact

theory. Through their meta-analysis, Pettigrew and Tropp concluded that there is

clear association between intergroup contact and intergroup prejudice.

Specifically, their post hoc correlational analysis revealed a positive association

of significant effect size between intergroup contact and intergroup prejudice.

Extending this finding to the acculturation process of sojourners indicates

that positive interactions international students have with members from the host

culture will directly contribute to their positive adjustment to the new culture and

environment. The positive exchange of ideas and sharing of perspectives also

benefits the members in the host culture by increasing understanding and

awareness of other cultures which may reduce feelings of prejudice and

discrimination against immigrant / sojourning groups (Amir, 1969; Church, 1982).

Contact with host members also provides opportunities for international students

to learn about culturally specific skills and enhances their ability to cope with their

new environment (Ward & Kennedy, 1992). However, there are conflicting

findings in the literature about the quality of contact with host members versus

the quantity of contact and its impact on psychological adjustment and

sociocultural adaptation (Ward & Kennedy, 1992).

Qualitative studies on the experience of international students have

revealed a desire on the part of international students to have more contact with

the host culture as they believed increased contact would help them with the satisfaction of their adjustment (Yan & Berliner, 2011,

2013; Zahi, 2002). Findings from quantitative studies that support these findings suggest that contact with the host culture has a mediating effect on the satisfaction of sociocultural adjustment of international students (Kaczmarket et al, 1994; Li & Gasser, 2005). Perhaps more importantly, Li and Gasser (2005) suggested that reduced contact with host members could negatively impact the sociocultural adjustment of international students.

In their study, Li and Gasser (2005) who analyzed the responses of 117 Asian international students studying in two U.S. universities hypothesized that there was a relationship between international students' contact with members of the host culture and their sociocultural adjustment and that those contacts would have a mediating effect on adjustment. Through their analysis, they verified that hypothesis and found a positive correlation between the frequency and quality of contacts with host members and sociocultural adjustment among the participants $(r = .61, p = .01)$. Furthermore, their analysis revealed contact with the host members was a significant predictor of sociocultural adjustment.

Despite empirical evidence that supports the postulate of contact theory, in their review of the literature, Pettigrew and Tropp (2006) noted some criticisms against its validity and the limitations of its impact on intergroup perceptions. One major criticism that directly targets the validity of Allport's (1954) initial findings that positive intergroup contact can lead to reduced feelings of prejudice is attributed to selection bias in the study. Pettigrew (1998) argued that

participants for intergroup contact studies may already be tolerant of having contact with those outside of their group, whereas those who are prejudiced would not be likely to elect to be in situations where they would have contact with out-group members, thereby skewing the results of those studies. This critique is further supported by the results of Herek and Capitanio's (1996) study, which revealed individuals who are prejudiced actively avoid intergroup contact situations. However, in a later study, Pettigrew (2006) argued that this limitation could be accounted for by limiting the choice participants have for selecting contact through random assignment in an experimental setting. Another criticism on the validity of contact theory is in the generalizability of its effect on the improvement of intergroup perceptions and on reducing prejudice beyond a specific situation or alternate situations. There have also been questions regarding if changes in attitudes and perceptions extend to the entire group or are limited to those who had the direct contact. Finally, researchers Pettigrew and Tropp (2006) argued that future studies into contact theory need to take into account the characteristics of participants as well as the research setting as possible moderators for the effects that contact has on intergroup relations. Despite these criticism and limitations, contact theory remains a viable and frequently cited conceptual framework to study the impact and effects of intergroup interaction between out-groups and the dominant group. With regards to the acculturation process of international students, positive interactions with members of the host culture remains one of the most often cited coping strategies.

Chapter Summary

This chapter provided an overview of the literature that forms the conceptual and theoretical framework for this study. The first part of the chapter provided an overview of the historical and current enrollment trends of international students to the U.S. and a discussion about the specific challenges faced by international students that makes them a unique population on college campuses. The remaining part of the chapter provided an overview of the theoretical framework for understanding the experience of international students. The literature reviewed included: the acculturation process that international students go through as sojourners to the U.S., the factors that contribute to acculturative stress, the impact of stress on their educational experience, the use of social support as a coping strategy, and the use of contact theory to explain the possible relationships between the cultural composition of support networks and acculturative stress.

CHAPTER 3

RESEARCH METHODOLOGY

Given the increasing demand of foreign students to study in the U.S., American colleges and universities need to consider whether there are adequate support services on campus to support this growing population of sojourning scholars. In order to design effective support services for international students, higher education leaders and student support service providers need to understand the various factors that can contribute to their positive adjustment to life in the U.S. The purpose of this study was to discover if there is a relationship between the composition of social networks and the level of acculturative stress experienced by international students.

This chapter describes the methodology that was used to conduct this study and provides a rationale for the research design. This quantitative study employed a correlational research design and utilized an online survey instrument to collect data. The chapter begins with a description of the setting where the study was conducted and the population under investigation. Next is an overview and justification for the research design and the research instrument that was used to conduct the investigation. Finally, the chapter concludes by providing the rationale for the statistical analysis that was used in the analysis and interpretation of the data.

Quantitative Research

This study was conducted from a post-positivist perspective and grounded in an objective epistemological view of knowledge and discovery. Unlike positivists, who believe in an absolute truth and utilize empirical evidence in the discovery of that truth, post-positivists believe that knowledge is conjectural and therefore can never be proven (Creswell, 2009). Rather than amassing evidence to discover the truth, post-positivists use empirical evidence to either support or refute a theory that is presented until new evidence is discovered (Phillips & Burbules, 2000). Researchers with an objective epistemological perspective view knowledge and discovery as being independent of the researcher. Since the data collected are not subject to the bias of the researcher, the process of discovery can occur dispassionately and objectively, based solely on what was revealed through the statistical analysis. The findings in this study are not meant to provide definitive answers to the proposed research questions. Rather, its aim is to contribute to the existing body of knowledge related to understanding and supporting international students in the U.S.

Quantitative research is a method of inquiry that allows the researcher to investigate a phenomenon by reducing it into principal elements, or variables, that can be measured and tested against an identified theory (Creswell, 2009; Gray, 2009; Privitera, 2013). The epistemological lens from which quantitative researchers obtain knowledge is objective and based on empirical evidence. Philosophically, quantitative researchers believe that knowledge is obtained through observation, testing, and discovery.

Quantitative research involves the taking of measurements from smaller observations and putting them together to form a composite view of a problem being investigated, with the goal of understanding a phenomenon. The observations that are collected are quantified into numerical expression so that the observations can be measured and analyzed. After the analysis, the researcher interprets the findings based on a proposed theory to either validate its premise or refute it. This type of inquiry is deductive in nature, utilizing a general understanding of a phenomenon, as in a theory, to test specific observation in order to make inferences about the characteristics of a population under investigation (Gray, 2009; Harwell, 2011).

A correlational research design allows researchers to be able to compare two or more ideas and identify the relationships between them. Predictions can also be made based on quantitative analysis of the data collected (Creswell, 2009; Gray, 2009; Privitera, 2013). For instance, if the relationship between A and B can be determined by knowing the characteristics or properties of A, it would be possible to make some predictions about the characteristics or properties of B. Quantitative research is also considered reliable because it allows observations, instances, or relationships to be tested and retested across multiple populations or subpopulations (Creswell, 2009; Gray, 2009, Privitera, 2013).

The strength of quantitative research is that the data collected can be validated and tested for reliability. It also makes it possible to collect and analyze large quantities of observations about large populations, which adds to the

generalizability of the findings (Creswell, 2009, Gray, 2009). However, there are

also limitations to this form of inquiry in social science research or, more

pointedly, to the understanding of human behavior. Though quantitative

research enables observations to be recorded as numerical values, the coding of

behavior into a numeric expression may not capture the full breadth and

complexities of human behavior. Therefore, quantitative data lacks the

contextual details of a given observation. Another limitation is that the

instruments used to collect data are susceptible to the bias of the researcher,

which can lead to false representation of the findings (Harwell, 2011, Privitera,

2013). Also, the rigid and inflexible nature of quantitative methods creates an

artificial environment from which data is collected, thus quantitative methods may

not capture what is actually happening in the real world (Gray, 2009). Finally, in

the case of survey instruments, the limited choices that are presented to subjects

cannot preciously or fully capture their thoughts, feelings, and intentions (Babbie,

2001; Gray 2009).

A quantitative research design also makes it possible to test the reliability

of the measurement instruments, which contributes to the reliability of the

findings, and to the ability to generalize findings to a larger population (Babbie,

2001; Creswell, 2009). Although there are strengths to quantitative research

methods, there are also weaknesses, both of which will be described later in this

chapter. As such, the results should be accepted judiciously. However, given

the purpose of the study and the philosophical worldview of the researcher, a

quantitative approach to conducting this investigation is appropriate and warranted. The following describes, in detail, the research design for this study.

Research Design

This study was conducted utilizing a causal-correlational design, since its purpose was to determine the possible relationship or influence between two sets of variables (Gray, 2009; Privitera, 2013). According to Creswell (2009), "Correlational research designs are quantitative designs in which investigators use a correlation statistical technique to describe and measure the degree of association or relationship between two or more variables or sets of scores" (p. 638). In this study, the independent variable was the cultural composition of social support networks and the dependent variable was acculturative stress.

A survey design was used to collect data for this study. Data was collected on the variables through the administration of an online survey, which was designed to capture the past experiences and perceptions of the population under investigation. Therefore, statistical analysis was based on cross-sectional data, that is, a recount of experiences that have already past. There was no intervention, manipulation, or random assignment of the variables in this study.

Strength of Survey Design

There are numerous strengths and advantages to using a survey design for data collection, and specifically the use of an online survey instrument. First, surveys make it possible for observations to be quantified so that the data can be statistically analyzed (Gray, 2009; Privitera, 2013). Furthermore, data gathered through survey instruments tend to be reliable as survey questions are

standardized (Babbie, 2001; Gray, 2009; Privitera, 2013). Second, a major

benefit to using online surveys is that they can be widely distributed to a

population, thereby increasing the possible number of participants for the study

(Gray, 2009). Additionally, online surveys are highly efficient as all the data

recorded are automatically stored electronically and can be immediately

downloaded for analysis. Finally, given that the topic of the study deals with

possible negative experiences of the participant, which can cause feelings of

distress and discomfort, participants may be more inclined to provide information

in online format where anonymity is assured rather than in a face-to-face

interview format. Therefore, it is reasonable to anticipate that the responses

gathered in a survey may be more accurate.

Limitations of Survey Design

Despite the benefits, there are also limitations to using a survey method

for research. First, surveys are inflexible. That is, because survey questions are

standardized and fixed, there is no room for varied interpretations to each

question. The responses in a survey may differ when those same participants

are interviewed and offered the opportunity to elaborate on their responses. This

leads to issues of data validity, meaning how accurately the survey is measuring

what it intended to measure (Babbie, 2001; Gray, 2009). Furthermore, since

surveys rely on self-reported data of a past occurrence, there is an inherent

reporting bias in the responses given, which also adds to the issue of validity in

the data collected. Gray (2009) referred to these issues as variance and bias

errors in survey instruments. Second, online surveys are subject to technical

errors (Granello & Wheaton, 2004). Two examples of technical errors are: (a) server timeouts or (b) loss of Internet connectivity during a surveying session. Additionally, online surveys also rely on a user's knowledge and comfort level in using computers and the Internet. There may be loss of data due to user not properly submitting their responses after completing the survey. It may also be difficult to achieve random sampling since surveys will likely be completed by participants with similar characteristics, such as those that feel proficient with English, are comfortable with using technology, and are willing to participate in a survey study, which could contribute to the effects of sampling error during analysis (Gray, 2009). Another common error in social science research is the influence of confounding variables Gray (2009), which are defined as variables outside of the parameters of a study's design that contribute, in part or in full, to the association between the independent and dependent variable. To reduce the effect of confounding variables on the results of this study, questions were integrated into the survey instrument that captured factors known to mitigate effects of acculturative stress for international students. Identifying and capturing those variables allowed for them to be statistically controlled during the data analysis phase of the study, thus ensuring any significant effects found can be attributed to the independent variable. Finally, given that the population under investigation consists of second language learners, their understanding of the questions being asked in the survey will be subject to their own interpretation, which may be influenced by their ability to translate the English language and cultural values.

Limitations of Findings

Though the strength of quantitative research is in the generalizability of results, it should be noted that this generalizability is also considered a weakness. For example, critical race researchers Solórzano and Yosso (2002) criticized that the generalization of quantitative methodologies effectively silences the voice of the marginalized in society. Another limitation of quantitative research is the reduction of participant experiences and the meaning of their responses to unidimensional numerical values (Van Peer, 1989), which inherently limits the validity of the findings in quantitative research. Also, there are researchers, such as Carr (1994) and Gray (2009), who challenge the validity of quantitative results when compared to what is happening in real life. These researchers claim that the need to control variables that is inherent to quantitative studies makes it antithetical to the randomness and variability of real life.

There are also limitations in a correlational design that must be acknowledged. Though a correlational design can determine if a relationship exists between variables, correlations do not infer causation. Since correlational studies do not involve the manipulation of independent variables to influence the outcome of a dependent variable, the discovery of a relationship between variables cannot be taken as causal in nature. At best, the results can be used as a precursor for future experimental designs (Creswell, 2009; Gray, 2009)

Research Methods

The following section describes the methods that were used to conduct this study, beginning with a description of the research sites and the rationale for their selection, followed by a description of the population under investigation, and the sampling procedure. This section will also describe, in detail, the procedures for data collection as well as the management plan for the data, the process for developing the instrumentation, and the plan to ensure the protection and rights of the participants as human subjects in the study. The data analysis will be outlined and explained, including the procedure used to ensure validity. Finally, the role of the researcher will be described.

Setting

This study surveyed international students at three public higher education institutions in southern California; one from each of the three higher education systems: California Community College, California State University, and the University of California. To ensure a large enough sample for the statistical analysis, selected institutions had to have a student population that consisted of no fewer than 500 undergraduate international students. The three research sites that were selected for this study were among the top 20 higher education institutions with the largest international student population (Douglass, Edelstein, & Hoareau, 2011): California State University, Fullerton (CSUF), Santa Monica College (SMC), and the University of California, Irvine (UCI). Geographically, the

three research sites span approximately 50 miles from northwest to southeast in southern California. All three instituthens are approximately the same size in terms of undergraduate student enrollment and are actively increasing their enrollment of international students.

Located approximately three miles from the Pacific Ocean and 15 miles from downtown Los Angeles, SMC has the third largest student population in the California Community College system, with approximately 31,993 reported in the fall of 2013 (California Community College Chancellor's Office Management Information Systems Data Mart). With approximately 3,100 international students enrolled (9.7% of the student population), SMC has the largest number of international students of any community college in California (http://www.smc.edu/EnrollmentDevelopment/IEC/Pages/default.aspx).

UCI is one of nine campuses in the University of California system with undergraduate programs. UCI is a member of the Association of American Universities (AAU) and as such is recognized as one of the major research universities in the U.S. Located approximately 12 miles from the Pacific Ocean in central Orange County, UCI reported 22,004 undergraduates in the fall of 2011 of which 669 (3% of the undergraduate population) were international students (http://data.universityofcalifornia.edu/student/admissions/data-tables/UG-Fall-Headcount-Enrollment-by-Campus-and-Residency-2000-2010.pdf).

CSUF is one of 23 campuses in the California State University system. CSUF is one of the most impacted campuses in terms of number of enrolled students. Located in north Orange County, CSUF enrolled 26,656

undergraduates in fall 2013 (http://www.calstate.edu/as/stat_reports/2013-

2014/f13_03.htm). The number of undergraduate international students enrolled

at CSUF in the same term was 869, which was 3.3% of the total undergraduate

population.

(http://webcert.fullerton.edu/international/assessments/demographics/fa13.aspx).

The ethno-demographics of the three institutions are also similar in that

the diversity of the student population on campus is enough to support ethnic

enclaves. The presence and accessibility of ethnic enclaves is relevant to this

study since one of the primary variables is the cultural composition of an

international student's social support network. The diversity of ethnic groups at

each of the institutions implies that the population under investigation would have

the opportunity to choose the cultural composition of social networks they want to

access. The reported ethnic demographics at each institution are presented in

Appendix A.

Population and Sample

A population in a research study refers to the aggregate characteristics of

all cases within specified parameters (Gray, 2009; Pedhazur & Schelkin, 1991).

Because it is impractical and virtually impossible to survey every single member

of a population, statistical sampling was used to gather data in order to answer

the research questions posed in this study. Results generated from studying a

sample can then be generalized back to the population. A sample is a subset of

the population under investigation that contains specific characteristics and

elements to be an assessed and statistically analyzed (Pedhazur & Schelkin, 1991).

The population under investigation is the undergraduate international students in southern California. Each campus sent an email from the institution to all undergraduate international students who met the criteria of this study and invited them to participate. Participants self-selected into the study by completing and submitting a survey. The surveyed population consisted of Full Time Enrolled, international students on an F-1 visa who at the time of the survey had been enrolled in an institution of higher education for at least one full academic year prior to August 2013.

Data Collection and Management

Permission to administer the survey to the undergraduate international student population was obtained from the participating institutions. During the fall semester or quarter of the 2013 - 2014 academic year, the department that monitors international enrollment on each of the participating institution sent an email to the international students on campus and invited them to participate in this study.

The email introduced the study and provided students with the instructions for completing the survey. A copy of the message is presented in Appendix B. Participants were informed that completion of the survey automatically entered them into a drawing for a chance to win a $5 Starbucks electronic gift card. This token incentive was offered to encourage participation. The survey remained open for 30 days after the initial invitation to participate in the study had been

emailed. A reminder email to complete the survey was sent out at the end of each week.

The data collected from the online survey were stored, maintained, and protected by the online service provider Qualtrics. Data analysis was conducted solely on the researcher's computer, which was password protected and only accessible to the researcher. At the conclusion of the study, the data on the researcher's computer was transferred to an online storage service that is only accessible to the researcher. The original survey data that was stored on the Qualtrics server was deleted.

Instrumentation. An online survey was developed to capture the experiences of being an international student attending one of three public higher education institutions in southern California. Several steps were taken to ensure that survey was appropriate and understandable to the target population. For example, special attention was given to avoid culturally specific terms that may be unfamiliar to international students. The first draft of the survey was sent to two English as a second language (ESL) faculty at two different community colleges who work with international students for review and comments. The purpose of the review was to ensure that the language used in the survey was at a level that was appropriate for international students.

The survey consisted of three sections that collected data for the independent variables, dependent variables, and the control variables. The full list of survey questions is presented in Appendix C. The independent variable in the study was the cultural composition of social support networks. To determine

the composition, participants were asked to identify the likelihood that they would

seek support from members that were either the same or different from

themselves based on culture, nationality/ethnic group, and first language spoken

in four areas of need: (a) loneliness, (b) academic assistance, (c) recreational

activities, and (d) adjustment to the new environment. Participants were asked to

rate 24 questions, six per area of need, on a Likert scale ranging from one to five.

The means for each area of need were calculated and summed resulting in a

maximum score of 20 for cultural compositions of social support networks that

were identified as either the same or different; the higher the cumulative score,

the greater the likelihood that they would seek support from those particular

members of their network.

The dependent variables in this study were the six principal factors of

acculturative stress: (a) homesickness, (b) culture shock, (c) perceived

discrimination, (d) perceived hate, (e) fear, and (f) guilt. Participants were asked

to rate the acculturative stress survey items on a Likert scale ranging from one to

five. The sum of the means from each domain contributed to a maximum score

of 30; the higher the score, the greater level of acculturative stress that was

experienced by the participants.

Human subjects. The survey instructions directed participants to recall

life events that may have been stressful related to their adjustment to life in the

U.S. There was minimal risk that the survey would produce feelings of stress

and anxiety for the participants. To minimize the risk of emotional distress, the

participants were informed of this possible risk in the instructions prior to starting

the survey. Additionally, the instructions clearly indicated that participants were able to exit the survey at any point and withdraw from the study without negative consequences or loss of benefits. Confidentiality of the participants in this study was assured because the survey did not ask for or collect any personally identifying information such as name or identification numbers.

Data Analysis and Interpretation

Data analysis for the study was conducted using IBM SPSS Statistics version 20. To answer the first research question a one-way ANOVA analysis was conducted. Five scales were created for each acculturative stress domains (homesickness, culture shock, perceived discrimination, perceived hate, and fear) by taking the mean of the survey items from each domain. The five scales were selected as the dependent variables in the analysis. The factor was the institution type, which was coded either two-year or four-year institution.

One-Way ANOVA analysis was also used to answer the second research question. The dependent variable for the cultural composition of social support networks was created by dividing the data set into three groups based on the means of the social network composition variables. Cut points for the range of the means was selected based on the top and bottom 20%, which determined if the cultural composition of the social network consisted mostly of members who were from a different culture, from the same culture, or a culturally mixed group. Five sets of ANOVA analysis were conducted for each of the acculturative stress domains.

Prior to conducting the ANOVA analysis, assumptions were checked and confirmed to ensure statistical validity of the study. First, the design of the study ensured that the value of one observation was independent and not related to the value of another observation. Second, Levene's test was conducted on the dependent variables to ensure that variances were equal. In cases when the assumption of equal variance was violated, the Games-Howell post hoc test was used in the analysis. Finally, the skewness was checked to ensure that the dependent variables were normally distributed.

Hierarchical multiple regression analysis was used to answer the third research question. Five sets of regressions were conducted for each domain of acculturative stress as the dependent variable. The following variables were entered into the first block to control for their influence on the model: (a) English language proficiency, (b) prior visits to the U.S., (c) length of stay in the U.S., (d) gender, (e) age group, and (f) presence of a support contact prior to arrival in the U.S. The cultural composition of social support network variables were entered into the second block.

Similar to the ANOVA analysis, prior to the conducting the hierarchal regression, assumptions was checked and verified to ensure the statistical validity of the study. A scatterplot was used to ensure a linear relationship existed between the variables under investigation. Additionally, the skewness of each dependent variable was checked to ensure normal distribution of the data.

Procedure to ensure validity. According to Creswell (2009), there are four general types of threats to validity: internal, external, statistical and

construct. The following is a description of each type of threat and the safeguards used in this study to eliminate or minimize those risks.

Internal validity refers to the design, procedures, interventions, and the experiences of the participants that could alter or hinder the researcher's ability to draw inferences and make conclusions about the population under investigation (Creswell, 2009; Gray, 2009; Martin & Bridgmon, 2012). This study compared two sets of experiences about participants in the study: the acculturative stress experienced at the time the survey was completed and the self perceived likelihood of which member of their social support network participants would access for support. As such, the findings could be influenced by the emotional and mental state of the participant at the time they completed the survey. To reduce the risk of this, the directions on the survey explicitly ask the participants to base their response on actual interactions and experiences during a specified time period.

Another threat to the internal validity of the study was the process used to select participants. Invitations to participate in the study were sent to international students based on pre-established criteria by the international centers at each of the research sites. However, since the participants self-selected into the study, there was no way to ensure that only students who met the criteria would submit a survey. If the experiences of students who did not meet the criteria were captured and included in the analysis, the results could be skewed and hinder the generalizability of the findings. To reduce this risk,

questions were embedded into the survey so that participants who did not meet the characteristics of the populations under investigation could be filtered out.

Threats to external validity refers to the risks in the generalizability of the results of an experiment due to the interaction between the control and treatment groups, the specific setting of the experiments, and the temporal nature of the experiments (Creswell, 2009). Furthermore, a general criticism for the generalizability of findings in a study is that it is limited to a particular setting (Gray, 2009). However, as this was an exploratory study that examined cross-sectional data, not an experimental study that involved a treatment, the risk of threats to external validity were not present. The generalizability of the findings in this study has already been described in Chapter 1.

A third threat to validity is to the statistical conclusion of the study. If the sample size was not large enough to power the statistical analysis or if the statistical assumptions of the data were violated, then the conclusions drawn from the analysis could compromise the validity of the findings (Creswell, 2009; Gray, 2009). To address to this threat, research sites were selected where there were a large number of potential participants in the population in order to draw an adequate sample size to power the statistical analysis for this study. Finally, as described in the previous section, prior to conducting the analysis, the data was reviewed to ensure that all statistical assumptions were satisfied for the analysis to be conducted.

Finally, threats to construct validity refer to the accurate measurement of abstract concepts or traits, such as attitudes, perceptions, knowledge, and stress

(Creswell, 2009; Gray, 2009). To address the threats to construct validity, the variables used in the research design have been adequately explored and described in the literature review in the previous chapter. The two major constructs under investigation are social support and acculturative stress. The review of the literature presented in chapter two integrates multiple perspectives from various sources about each construct. Furthermore, each variable was previously defined so that interpretations of the findings could be traced back to the constructs that were explored in the study.

Role of the researcher. As the principal investigator in this study, it is appropriate that I provide some background content regarding my experience so as to address any bias that may surface in the interpretation of the findings. I have worked in the field of equity and access for underrepresented students in higher education since 1999. In this context, underrepresented students refer to the low-income and first-generation college students that are disproportionately underrepresented in higher education. In 2011, I was recruited to participate in my university's effort to increase the enrollment of international students from China. Since then, I have been involved intermittently with those international recruitment activities. That was my introduction to international education and to the working with international students. Over time, through my studies and through my experience of working directly with international students, I came to recognize that international students are also an underrepresented student population on college campuses. Not only are they a minority on campus numerically, but they are also not necessarily provided with the level of resources

at their institutions that they need to assure their academic and personal development in college. International students are as disadvantaged as domestic students who come from low-income communities, with the exception those students who are supplied with the additional resources needed to support their development. For the most part, international students, with their unique needs, are provided disproportionately fewer resources for support or are required to utilize existing services that do not specifically address their needs.

My interest in investigating this population stems from my desire to help students be successful in college, regardless of whether they are underrepresented or otherwise at a disadvantage. However, given the rising interest in increasing the enrollment of international students in colleges and universities across the nation, I saw this study as an opportunity to contribute to the general body of knowledge that can be accessed to support this growing yet underrepresented group of students in higher education.

I am affiliated with both of the four-year institutions that were selected to be the research site. I am currently employed at the UCI and am enrolled at in the doctoral program at CSUF. Being affiliated with these institutions did help with gaining initial access. However, the steps for establishing contact and enlisting cooperation was still necessary and was not automatically assumed. At SMC, though I was not directly affiliated with the institution, a member of my dissertation committee was able to connect me with the campus through her association with the institution's executive leadership. As with the other two

institutions, although initial access was facilitated, the enlisting of the research site's cooperation was neither automatic nor assumed.

Initial contact with the research sites was established through the institutional research office at each institution. An application was submitted to each institution's Institutional Review Board (IRB) that described the purpose of the study and the population under investigation. The application also asked the researcher to describe the methodology including data collection procedures and assurances to protect and the rights of the participants. After receiving written approval from each institution's IRB, contact was made with the directors of the international student center at each campus.

I chose to work through the international student centers at each site to administer the survey, because the centers' primary purpose is to serve the international student community on campus. As such, the administrators and staff of those facilities had first hand knowledge and experience working with the international students on campus and were familiar with the best means of contacting them. Additionally, each center hosted a database of all international students on the institution's campus making it possible to query the selection of participants to be surveyed. A distribution schedule was established with the directors of the centers. At UCI and CSUF, emails were sent to the identified international students weekly for four consecutive weeks. At SMC, emails were delivered for two consecutive weeks.

In addition to working with the international student centers, contact was also made with various international student organizations and with organizations

that worked with international students. The organizations were mostly identified through the web pages of each research site. However, various members of the campus community directly referred a few organizations to me. I met with the leaders of those organizations to solicit their cooperation in asking their members to participate in the study. Emails were sent through the organizations' listserv, and physical fliers were distributed at meetings and events. Since this method of soliciting participation in the study could not ensure that only participants in the targeted population would complete a survey, this posed a potential threat to the internal validity of the results. However, as mentioned in the previous section, to minimize this threat to internal validity, questions were embedded into the survey that filtered out participants who are not part of the target population under investigation.

Although I, as the researcher, was either directly or indirectly affiliated with the research sites for this study, the objectivity of the study was maintained. At no point did I have direct contact with the participants while they were taking the survey. Also, as the survey did not collect any personal identifying information, the anonymity of the participants was ensured. Furthermore, the objective nature of a quantitative research design enables the analysis of the data to be protected from researcher bias. It is worth noting that the interpretation of the results may be subject to bias based on the background of the researcher. However, as this study was conducted under the guidance of three independent researchers, there was adequate protection against such bias.

Chapter Summary

Chapter 3 described the research methods that were used to conduct the investigation for this study. It began with an introduction of the research design for this study and the rationale for its selection, which included an overview of the researcher's worldview and epistemological perspective. Then, a description of the research design was provided that included its strengths and weaknesses, limitations, descriptions of the study's setting and population, the construction of the survey instrument, and the treatment of human subjects. The chapter also outlined the procedures for data collection as well as the plan for its management. This chapter concluded with a description of how the data was analyzed and interpreted, a description of the procedures used to ensure validity of the findings, and a description of the role of the researcher. In Chapter 4, the results of the data analysis will be presented.

CHAPTER 4

RESULTS

This chapter presents the key findings of the study. As described in previous chapter, data was collected using an online survey instrument that was administered at three public institutions of higher education in southern California. The participants self-selected into the study and the responses provided were based on their own perceptions and experiences as international students. ANOVA and hierarchical regression analysis were conducted to answer the following research questions:

1. Are there differences in acculturative stress levels experienced by international students at two-year and four-year institutions?

2. Are there differences in acculturative stress levels experienced by international students who seek support from social networks that are more culturally diverse and those whose network is less culturally diverse?

3. What is the relationship between the composition of social support networks and the acculturative stress experienced by international students?

This chapter begins by describing the sample population under investigation. The means, standard deviations, and internal consistencies of the predictor and

dependent variables will then be reported. Once the study's sample and variables have been established, the chapter will present the data analysis conducted for each research question and report the key findings, which will then be interpreted and discussed in Chapter 5.

Demographics of the Participants

Invitations were sent to approximately 4,790 international students that met the participant criteria for the study at the three research sites. The return rate of the survey was approximately 10%. Of the 478 surveys that were submitted, 365 met the criteria for the study yielding a final response rate of 7.6%. The participants were mostly female (70.9%) and nearly 60% (58.7%) attend a four-year institution. Over three-quarters (84%) of the participants are between 18 and 24 years old, with the remainder being 25 and older. More than half (59.2%) of the participants have lived in the U.S. for more than two years. Approximately half (50.8%) of the participants had visited the U.S. before beginning their undergraduate programs of study, and just over half (53.3%) reported they already had some form of support in the U.S. prior to coming. Over three-quarters (77.1%) of the participants are from Asia; the largest cluster of participants is from China (39.3%). The second largest cluster of participants by region is from Europe (11.7%). Table 1 presents the complete demographic profile of the participants.

Table 1

Participant Demographics

Variables	*n*	%
Gender		
Male	104	28.3
Female	261	70.9
Institution Type		
Two-Year	152	41.3
Four-Year	216	58.7
Age Group		
18 – 24	310	84.2
25 and older	57	15.5
Length of Stay in U.S.		
24 months or less	146	39.7
More than 24 months	218	59.2
Prior Visit to the U.S.		
Yes	187	50.8
No	18	48.4
Existing Support in the U.S.		
Yes	196	53.3
No	170	46.4

Independent Variables and Scales

The independent variables for this study were the participant demographic information, as indicated in Table 1, and the compositions of social support networks. Eight scales were created to measure the compositions of social networks across four categories of support: (a) loneliness, (b) academics, (c) recreational, and (d) cultural adjustment. The compositions of the networks are based on culture, nationality and/or ethnicity, and first language. The means and

standard deviations for each survey item and the composite scales are presented in Appendix D. Cronbach's Alpha for the scales (> .80) indicated strong internal consistency for the items in each scale and the skewness for all items and scales were also acceptable for this type of exploratory study (<1.60). Although Morgan, Leech, Gloeckner, and Barrett (2011), maintain that the skewness of a curve is acceptable for parametric statistical analysis when it is greater than +1 or less than -1, they also stated that this range is an arbitrary guideline. They noted that, "some parametric statistics, such as the two-tailed t test and ANOVA, are quite robust, so even a skewness of more than +/- 1 may not change the results much." (Location 2269).

Dependent Variables and Scales

The dependent variables in the study were the six domains of acculturative stress as defined by Sandhu and Asrabadi (1994): (a) homesickness; (b) culture shock; (c) perceived discrimination; (d) perceived hate; (e) fear; and (f) guilt. The means and standard deviations for each survey item and the composite scales are reported in Appendix E. The skewness for each scale were all < .50 indicating the distribution of the sample is approximately normal. Cronbach's Alpha for the homesickness, perceived discrimination, perceived hate, and fear were > .70 indicating strong internal consistency for the items in each scale. Conversely, the culture shock and guilt scales had low internal consistency < .70. Although the internal consistency of a scale should typically not fall below .70 (Morgan, Leech, Gloeckner, & Barrett, 2011), Kline (2000) made a case that a lower (< .70) reliability value may be acceptable and

can be corrected for depending on the purpose of the study. Furthermore, Bacon (2004) found that lower reliability of measures in a study could be compensated for with a larger sample size. Given the exploratory nature of this study and its sample size, the culture shock scale (α = .65) was included in the analysis. However, because the alpha value for guilt was < .60, it was omitted from further analysis.

First Research Question

The first research question asked if there were any differences in acculturative stress levels between institutions. A comparison of the means between the two groups of participants shows that the acculturative stress levels for homesickness, culture shock, perceived discrimination, perceived hate, and fear, are higher for international students at four-year institutions than for those at the two-year. The means and standard deviations of the acculturative stress levels between participants from two-year and four-year institutions are presented in Table 2.

Table 2

Means and Standard Deviations Comparing the Types of Institutions

	Two-Year $n = 149$		Four-Year $n = 213$	
	M	SD	M	SD
Homesickness	3.36	.89	3.40	.81
Culture Shock	2.50	.99	2.71	.96
Perceived Discrimination	3.01	.82	3.16	.80
Perceived Hate	2.80	.89	3.06	.83
Fear	2.53	1.00	2.63	.99

Using a one-way ANOVA to analyze the differences in acculturative stress levels revealed that international students at the four-year institutions had significantly higher scores in culture shock, $F(1, 360) = 4.25$, $p = .04$, and perceived hate, $F(1, 360) = 7.76$, $p = .01$, at the two-year and four-year higher institutions. The results of the analysis are reported in Table 3.

Table 3

One-Way ANOVA Comparing Institution Type on Homesickness, Culture Shock, Perceived Discrimination, Perceived Hate, and Fear

	df	SS	MS	F	*p*
Homesickness					
Between groups	1	.17	.17	.23	.63
Within groups	360	258.21	.72		
Total	361	258.38			
Culture Shock					
Between groups	1	4.05	4.05	4.25	.04*
Within groups	360	342.85	.95		
Total	361	346.90			
Perceived Discrimination					
Between groups	1	2.01	2.01	3.07	.08
Within groups	360	236.27	.66		
Total	361	238.28			
Perceived Hate					
Between groups	1	5.67	5.67	7.76	.01*
Within groups	360	263.15	.73		
Total	361	268.83			
Fear					
Between groups	1	1.00	1.00	1.02	.31
Within groups	360	355.16	.99		
Total	361	356.17			

*$p < .05$

Second Research Question

The second research question asked if there were differences in acculturative stress levels experienced by international students based on the composition of their social network. To answer this question participants were divided into three groups based on the compositions of the social network they accessed for support: (a) Participants who sought support mostly from those that share their same culture; (b) participants who sought support mostly from those that come from a different culture; and (c) participants who sought support from a mixed group of people, both within and outside of their culture. Two social support composition scales, (a) social support same and (b) social support different, were created by combining the means of the survey items that measured network composition. The skewness and alpha values for the scales are presented in Table 4.

Table 4

Social Support Network Composition Scales

Variable	M	SD	Skewness	α
Social Support SAME	4.09	.72	-1.05	.93
Social Support DIFFERENT	3.68	.69	-.43	.91

The skewness (< 1.10) and alpha values (> .90) for both scales are appropriate for this exploratory study. After visually reviewing the range of both scales, cut points were identified for the top and bottom 20% to create the three groups. The *n* for the mixed group was 224, compared to approximately 60 in either the mostly same and mostly different groups. Table 5 shows the means

and standard deviations for each social composition group and the five

acculturative stress domains.

Table 5

*Means and Standard Deviations of the Different Compositions of Social Support
Networks*

	Mostly Different $n = 61$		Mixed $n = 224$		Mostly Same $n = 63$	
	M	SD	M	SD	M	SD
Homesickness	3.05	.95	3.44	.83	3.46	.79
Culture Shock	2.37	1.10	2.74	.99	2.58	.83
Perceived Discrimination	2.99	.91	3.14	.82	3.06	.67
Perceived Hate	2.64	.92	3.05	.88	2.92	.72
Fear	2.35	1.03	2.69	1.00	2.47	.94

One-way ANOVA analysis revealed that there were significant differences

in acculturative stress levels for homesickness, $F(2, 345) = 5.50$, $p < .01$, culture

shock, $F(2, 345) = 3.65$, $p = .03$; perceived hate, $F(2, 345) = 5.44$, $p = .01$; and

fear, $F(2, 345) = 3.38$, $p = .04$, between the three groups of social networks. The

results of the analysis are reported in Table 6.

After determining that there were significant differences between the

groups, post hoc tests were conducted to discover if the groups were significantly

different from each other. Levene's test indicated that the variances were

approximately equal ($p > .05$) for homesickness, hate, and fear; therefore,

Tukey's HSD post hoc test was used for the comparative analysis. Levene's test

indicated unequal variances for culture shock (p = .02), so the Games-Howell

post hoc test was used.

The Tukey HSD post hoc test indicated the acculturative stress levels for

homesickness was significantly lower for networks that were mostly different

compared to those networks that were mostly the same or mixed (p < .05).

There was no significant difference between networks that were mostly the same

and mixed. However, significant differences were found between the three

groups for perceived hate and fear. Games-Howell post hoc test also revealed

the acculturative stress levels for culture shock was significantly lower for

networks that were mostly different compared to the other two groups of network

compositions.

Table 6

One-Way ANOVA Comparing Composition of Social Support Network Groups on Homesickness, Culture Shock, Perceived Discrimination, Perceived Hate, and Fear

	df	SS	MS	F	p
Homesickness					
Between groups	2	7.82	3.91	5.50	.00*
Within groups	345	245.15	.71		
Total	347	252.98			
Culture Shock					
Between groups	2	7.09	3.54	3.65	.03*
Within groups	345	334.54	.97		
Total	347	341.63			
Perceived Discrimination					
Between groups	2	1.26	.63	.95	.39
Within groups	345	228.79	.66		
Total	347	230.05			
Perceived Hate					
Between groups	2	8.07	4.04	5.44	.01*
Within groups	345	256.11	.74		
Total	347	264.18			
Fear					
Between groups	2	6.72	3.36	3.38	.04*
Within groups	345	342.96	.99		
Total	347	349.68			

*$p < .05$

Third Research Question

The third research question asked about the relationship between the composition of social support networks and acculturative stress. To answer the this research question, a series of hierarchical regressions were conducted to see how well the composition of social support networks could predict acculturative stress levels for homesickness, culture shock, perceived discrimination, perceived hate, and fear, after controlling for gender, type of institution, age, length of stay in the U.S., prior visit, existing support, and English proficiency. However, before conducting the hierarchical regressions, inter-item correlations for the eight cultural composition scales were reviewed to check for discriminant validity, as well as any potential problems with collinearity.

The results of the item correlations are presented in Appendix F. All inter-item correlations were < .65 indicating that there was unlikely to be a problem with discriminant validity. However, initial regression analysis using the network composition scales indicated there is potential for collinearity due to the low tolerance values related to R^2. Therefore, the scales were combined to create two aggregated scales: (a) one composite scale that measured the likeliness that participants would seek support from those who are from the same culture and (b) another scale that measured the likeliness that participants would seek support from those of a different culture.

Hierarchical regressions revealed that only the cultural composition of social support networks significantly improves the predictive power of the acculturative stress model related to homesickness ($p < .05$). As presented in

Table 7, the R^2 for the entire model increases from .04 to .07, indicating that the

inclusion of cultural compositions of social support networks accounts for 7% of

the total variance explained for homesickness. Specifically, the regression

analysis revealed that there is a significant and positive correlation between the

likeliness of participants to seek support from those who are from the same

culture and acculturative stress related to homesickness (β = .17).

Table 7

Hierarchical Multiple Regression Analysis Summary Predicting Homesickness from Same and Different Compositions of Social Support Networks, When Controlling for Gender, Institution Type, Age, Length of Stay in U.S., Prior Visit, Existing Support, and English Proficiency (N=350)

Variable	B	SEB	β	R^2	ΔR^2
Step 1				.04	.04
Gender	.20	.10	.11		
Institution Type	.09	.10	.05		
Age	-.23	.13	-.10		
Length of Stay in US	-.16	.10	-.10		
Prior Visit	.03	.09	.02		
Existing Support	-.05	.00	-.03		
English Proficiency	-.04	.04	-.044		
Step 2				.07	.03*
Gender	.18	.10	.10		
Institution Type	.06	.10	.04		
Age	-.19	.13	-.08		
Length of Stay in US	-.18	.10	-.10		
Prior Visit	.08	.09	.05		
Existing Support	-.06	.09	-.04		
English Proficiency	.00	.05	-.01		
Social Support SAME	.20	.06	.17*		
Social Support DIFF	-.08	.07	-.06		

*$p < .05$

Hierarchical regressions for the remaining acculturative stress domains did not reveal any statistically significant findings. The results of those regressions are presented in Appendix G.

Chapter Summary

This chapter presented the results of the data analysis and reported the findings. ANOVA and hierarchical regressions were conducted to analyze the data in order answer the research questions posed in the study. The key findings revealed that there are significant differences in level of acculturative stress experienced between international students from two-year and four-year institutions, specifically with stress related to culture shock and perceived hate. Additionally, significant differences were discovered in the acculturative stress levels experienced by international students related to homesickness, culture shock, perceived hate, and fear, based on the composition of their social support network. Finally, hierarchical regression analysis revealed that there is a positive correlation between the social networks that are composed mostly of members of the same culture and homesickness. However, the analysis also revealed that there were no other significant correlations between social network composition and any other acculturative stress domains. In the next chapter, interpretations of the key findings will be discussed, as well as their implications for practitioners and institutional leaders who actively work to improve the educational experience of international students on their campus.

CHAPTER 5

DISCUSSION

The demand to increase international student enrollment at both two-year and four-year higher education institutions in the U.S. has prompted a variety of responses from various stakeholders. Institutional leaders in higher education are enthused because the presence of international students adds a layer of internationalization and global perspectives to the curricula. Additionally, international students also make significant economic contributions to their institutions through increased tuition fees and to the community they inhabit.

However, this trend has also generated public concerns that institutions of higher education, particularly public institutions, are selling seats to international students and reducing opportunities for domestic students. Furthermore, there are also concerns from the faculty and department leaders that the unfettered increase to international students enrollment on campus, without increasing resources to the departments to support the specific needs of those students, cause strains on limited resources of the departments themselves, that often do not benefit from the increased tuition paid by international students.

Current trends indicate that the global mobility of foreign students who seek educational opportunities in other countries will likely increase, with the U.S. remaining a popular destination. Given the rising demand of international

students for educational opportunities in the U.S. and the domestic interest in increasing international student enrollment, institutions that seek to capitalize on this demand must initiate plans to increase institutional resources to support the specific needs of this growing population of sojourning scholars. The goal of this study was to contribute to the growing body of knowledge about international students so as to better inform the practice of student service providers, as well as to influence policies that involve the integration of international students on a college campus. Specifically, this study focuses on the experiences of international students related to acculturation.

The purpose of this study was to discover if there is a relationship between the composition of social networks and the level of acculturative stress experienced by international students. Utilizing a quantitative design methodology, a survey was developed and administered to second year international students at three public institutions of higher education in southern California. The outcomes of this study produced the following findings: (a) International students at four-year institutions experienced higher levels of acculturative stress related to culture shock and perceived hate than those at two-year institutions; (b) international students who were more likely to seek support from members of a different cultural group experienced less acculturative stress related to homesickness, culture shock, perceived hate, and fear; and (c) a positive correlation was discovered between the social networks that are composed of mostly members of the same culture and homesickness. In this chapter, all three major findings will be outlined and summarized, including

interpretations and implications and followed by recommendations and the conclusion.

Interpretations and Implications

In this section, the three major findings of this study will be reviewed and discussed. Interpretations for each finding will be discussed in light of the literature reviewed in Chapter 2. Following the interpretations, implications of each finding for policy, practice, theory, and future research will be discussed.

Finding 1

The results from the study revealed that the international students at the two four-year institutions experienced significantly higher levels of acculturative stress than those at the two-year institution. The higher levels of acculturative stress at the four-year institutions were found specifically in the acculturative stress related to culture shock and perceived hate.

Interpretation. In terms of student engagement on college campuses, the seminal works of Astin (1999) suggest that there are more positive behavioral and attitudinal benefits for students who live on campus than for those that commute. As Astin (1999) stated,

> Residents are more likely than commuters to achieve in such
> extracurricular areas as leadership and athletics and to express
> satisfaction with their undergraduate experience, particularly in the areas
> of student friendships, faculty-student relations, institutional reputation,
> and social life. (p. 525)

Since on-campus residence is more commonly associated with four-year institutions the finding that international students at the two four-year institutions experienced greater acculturative stress than those that attended the two-year institution was contrary to the expectations based on available evidence in the literature. In the context of this study, the two-year institution that served as a research site does not offer on-campus lodging, as opposed to the other research sites that do have on-campus residence halls. However, because the design of this study did not capture the living arrangements of the participants, the assumption that international students at four-year institutions reside on campus is purely speculative. It is recommended that future research into the acculturative stress of international students capture their living arrangements.

Using the assumption that international students live in the residence halls or in on-campus housing, and applying contact theory (Allport, 1954; Pettigrew, 1998; Pettigrew & Tropp, 2006), would lead one to expect that international students attending four-year colleges would experience less acculturative stress than those at the two-year colleges. However, based on the results of the study, this was not the case. On the contrary, the first major finding revealed the opposite, that the international students at the four-year institutions experienced significantly higher levels of acculturative stress compared to those at the two-year institution.

More importantly, the finding revealed there were significant differences in acculturative stress related to culture shock and perceived hate. Again, this finding was surprising given there are greater opportunities for intergroup

interaction at the four-year institutions. One obvious explanation is that unfortunately, not all interactions are necessarily positive. Perhaps international students experienced more acculturative stress because of the negative interactions they experienced with domestic students at the four-year institutions. If there were any negative perceptions of international students or prejudices against a specific culture, it is conceivable that negative interactions between the sojourning and domestic students could hinder their acculturation process and contribute to the stress they experienced during the acculturation process. Negative interactions could certainly give the impression to international students that they are not welcomed on campus or in the host culture.

Conversely, there are fewer opportunities for social interaction between international students and domestic members of the campus community at the two-year institutions. As Karp, Hughes, and O'Gara (2011) observed,

> By nature of their attendance patterns—they attend class on campus but live elsewhere, often work full-time, and have strong familial obligations off-campus—community college students are assumed to lack the time to participate in activities, such as clubs, that would facilitate social integration. (p. 70)

Though international students at two-year institutions may not benefit from having as many reported opportunities for positive interaction as their counterparts at the four-year institutions, because of the limited opportunities for interaction, international students at community colleges could be somewhat shielded from the hostile and negative exchanges with students from the host

country due to prejudice or discrimination. However, since perceived hate is subject to the interpretation of the individual, it is also conceivable that the perceptions of international students may not reflect the reality of the situation. For instance, Yan and Berliner (2013) reported that international students sometimes misinterpret the actions of domestic students due to unfamiliarity with cultural norms and social cues.

More urgent than the finding of differences between the experience of international students at two-year and four-year institutions is that the mean for perceived hate at the four-year institutions was > 3.0 on the five point scale. This finding could indicate that the campus environments at the research sites were not hospitable, or at least perceived as not hospitable, for international students. Institutional leaders should integrate this finding into any strategic planning process used for increasing enrollment of international students on campus. A relevant question that institutional leaders should consider before pressing forward with a plan to increase the enrollment of international students is whether the present campus climate is conducive to fostering a positive learning environment for all students on campus. If not, the question then becomes whether increasing international presence on campus is a responsible course of action for the institution when that increased presence could potentially lead to hostility and the alienation of sojourning students once they arrive.

Implication for policy. This finding has implications beyond the experience of international students. More broadly, the discovery that international students perceive some level of hostility should trigger institutions to

assess the quality of the interactions between diverse student bodies on campus. Conceivably, if conflicts and hostilities currently exist on campus between different groups of domestic students, the sudden influx of internationals students could exacerbate the situation or even create a greater divide among the different groups of students. Without direct intervention from the institution, the situation may go from bad to worse.

Implication for practice. The evaluation of the campus climate with regard to diversity should be included in any annual or biannual campus-wide student/staff surveys, with specific questions that assess attitudes and perceptions about any institutional efforts to increase the presence of international students on campus. The information gathered in this survey can inform institutional leaders of the campus climate and provide a direction for courses of action to either maintain or improve the current environment.

Environments that support positive interactions between diverse groups of students will help facilitate positive interactions between international and domestic students, thereby, reducing the acculturative stress related to perceived hate and culture shock.

Implication for theory. Given the general consensus in the literature that there are more opportunities for intergroup interaction at four-year institutions compared to two-year institutions, the first major finding would appear to contradict the application of contact theory's general postulate that interactions with members of the host culture may lead to positive adjustment of international students. However, as contact theorists Pettigrew and Tropp (2006) noted, the

exploration of contact theory tended to focus on the positive outcomes of an intergroup contact. They suggested that investigations into the impact of negative contact is warranted and would "allow a more comprehensible understanding of conditions that both enhance and inhibit the potentially positive effects of contact (p. 767). The finding from the study may support their recommendation since higher acculturative stress levels were discovered in an environment where there was greater potential for positive interactions.

Implication for future research. Additional research into the impact of negative interactions between international and domestic students will help contribute to the understanding of the ways intergroup contacts affect the acculturation process. Future studies into acculturative stress of international students should include variables that measure the quality and frequencies of interactions between international and domestic students, as well as their living arrangements.

Finding 2

The results from the study indicated that international students who were more likely to seek support from members of a different cultural group experienced lower levels of acculturative stress related to homesickness, culture shock, perceived hate, and fear. No significant differences were found between a culturally mixed and homogeneous support networks.

Interpretation. Competing evidence in the literature suggests that there are both advantages and disadvantages in relying on social networks that are either comprised of members of the same culture or that are comprised of

members of the host culture. For instance, some cross-cultural researchers (Kaczmarket et al, 1994; Li & Gasser, 2005; Yan & Berliner, 2011, 2013; Zahi, 2002) maintain that the contact between international students and members of the host culture is a significant factor in influencing the adjustment experience of international students. In contrast, other researchers, such as Al-Sharideh and Goe (1998), contend that international students who form strong ties with individuals who share the same culture can positively influence their adjustment experience.

The second major finding of this study suggests that international students whose social support network is composed mostly of members from outside of their culture experienced lower levels of acculturative stress. It is plausible that one of the reasons international students may rely on members of a different culture for support is because of the positive experiences they have had with those members. If this is true, it would support existing research that indicates that contact with host members is associated with the positive adjustment process of international students (Kaczmarket et al, 1994; Li & Gasser, 2005; Ward & Kennedy, 1992; Zahi, 2002). However, another explanation for how international students choose which members of their social support to access for support may be tied into the acculturation strategies they adopt. Examining this finding through the lens of the four acculturation strategies (assimilation, integration, separation, and marginalization) described by Berry (1997) offers an additional perspective from which to draw an explanation for the differences that appear to be based on the different compositions of social support networks.

According to Berry (1992), "integration strategies are the least stressful, while marginalization is associated with the most stress; assimilation and separation are known to fall in between." (p. 77). Though the specific strategies that were used by the participants in this study cannot be determined, it is probable that since international students who would rely mostly on members of a different culture for support experienced lower levels of acculturative stress, they likely adopted either an assimilation or integration strategy. Both assimilation and integration strategies involve a willingness to participate in the daily interaction with members of the host society and the understanding of the norms and traditions of the host culture. This lends further support to literature that suggests the positive interaction with members of the host culture facilitates the acculturation process of international students through the transmission of cultural specific skills necessary to navigate in their new environment (Al-Sharideh & Goe, 1998; Yan & Berliner, 2011).

Additionally, and consistent with the first major finding, significant differences were found in acculturative stress related to culture shock, perceived hate, and fear. Although fear was absent in the first finding, the fact that it is present here is not entirely unexpected since all three variables are conceptually related. For instance, if one experiences feelings of rejection and hostility from members of the host culture, either verbal or nonverbal, it is conceivable that those experiences can lead to feelings of fear for one's safety, which in turn can lead to heightened feelings of anxiety and hinder the acculturation process.

Although significant differences were found for homesickness, culture shock, perceived hate, and fear, only feelings of homesickness had a mean score that was > 3.0 on a five point scale regardless of the support network composition. This suggests that homesickness is one of the most challenging issues that international students experience even after studying in the U.S. for a year, which is consistent with evidence in the literature (Lazarus, 1993; Lee & Rice, 2007; Liu, 2009; Sandhu, 1995; Sandhu & Asrabadi, 1994; Yan & Berliner, 2013; Ying & Liese, 1994; Zhang & Goodson, 2011). However, the second major finding does indicate that international students who were likely to seek support from those of the same culture experienced greater levels of homesickness. Al-Sharideh and Goe (1998) offer a possible explanation for this phenomenon. Although the general conclusion they reached was that reliance on co-culturals for support was positively associated with the self-esteem of international students, they also stipulated that there was a threshold for the number of co-culturals in the network before those benefits to self-esteem diminishes. As Al-Sharideh and Goe (1998) explained,

> By participating in ethnic communities . . . international students have more extensively reproduced their native cultural environment where they are better able to conform and subscribe to their own norms, beliefs, attitudes, and lifestyles. Under these conditions, assimilation of American culture becomes negatively reinforced to the point where it serves to alienate the student from his or her peers in the network. (p. 721)

An excerpt from a participant from Yan and Berliner's (2011) qualitative study on the experience of Chinese international students articulates this assertion:

Going abroad is supposed to provide an opportunity for broadening a person's perspective; however, it turns out that most Chinese international students here confine their lives to a small circle of friends and activities. Frequently we live in the same place for several years. On campus we meet the same people, say the same things, and buy the same things from the same stores. During holidays the same friends take turns hosting get-togethers. I feel I am becoming increasingly parochial, bored, and passive, when my social life is confined to two or three good friends. I want to escape this besieged fortress and have some real interactions with Americans. (p. 525)

Finally, the findings revealed that perceived hate for both international students whose network was either culturally mixed or mostly of the same culture hovered around 3.0 indicating that these international students may feel a sense a rejection and hostility from other domestic students on campus. However, what is not known is the source of this perceived hostility. Though investigation into the source of the hostility is certainly worthwhile, the significance of this finding is that it lends further support and credence to the previous recommendation that institutions conduct an evaluation of the campus climate on diversity and attitudes related to increasing the enrollment of international students on campus.

Implication for policy. The second major finding of the study seems to suggest that relying more on members of a different culture is associated with reduced levels of acculturative stress. However, since this finding was discovered using ANOVA, the causal relationship between the composition of support networks and acculturative stress cannot be determined or inferred. That is, based on the analysis conducted, it is unclear whether having a support network that is comprised mostly of members that are different from one's culture causes reduced feelings of homesickness, culture shock, perceived hate, and fear or whether having lower levels of stress associated with homesickness, culture shock, perceived hate, and fear causes one to interact more with members outside of one's culture and include them into one's support network. Though the causal relationship between these two variables cannot be determined statically, there is sufficient evidence in the literature to suggest it is likely these differences were caused by interactions with and the support received from members of the host culture. In light of this finding, it is recommended that campus leaders re-evaluate whether current institutional policies provide support and encouragement for intergroup contact and exchange in campus activities both inside and outside of the classroom.

Implication for practice. The perception of hate experienced by international students should be of primary concern for the campus community, particularly the faculty and staff, as this undoubtedly adversely affects the overall educational experience of international students both inside and outside of the classroom. Faculty can contribute significantly to reducing the perceptions of

hate for international students. As most of the exchanges and interactions in the education setting are likely to be in the classroom, faculty can actively and purposefully facilitate discussions and interactions between different groups of students and can help to create the optimal conditions for positive interaction to take place.

Additionally, those that work with, or provide direct support services to, international students (i.e., academic counselors and psychological counseling staff), should receive information about the specific factors that hinder the acculturation process of international students. Dissemination of this type of information can help to facilitate a better understanding of the experiences of international students and what they are going through as staff and faculty interact with them on campus. For example, institutional leaders can organize campus forums during the academic year designed to share information about the international student experience. Student panels made up current international students can be part of these campus forums so that the campus community can have the opportunity to learn about the experiences of international students first hand. Evidence in the literature suggests that this method of creating opportunities for positive interaction between international and domestic campus community members can help to reduce intergroup conflict and prejudice (Allport, 1954; Pettigrew & Tropp, 2006).

Campus leaders can also consider proactively delivering information to the greater campus community through the publication of a newsletter, either in print or digital, dedicated to providing information about the campus international

student community. For example, information such as the national customs of the various cultures that are represented within the international student population could help faculty to effective engage the international students in the classroom and to help faculty understand international student behaviors in the classroom setting. As Wadsworth, Hecht, and Jung (2008) noted, international students often come into the classroom with different learning frameworks, including classroom expectations and behaviors, from that of the host culture. Those differences can be a source of discomfort and negatively affect international students' performance in the classroom and even impact the way they are perceived by their instructors and classmates. Expanding the general cultural knowledge of the campus community can help to improve the interactions international and domestic campus community have with one another both inside and outside of the classroom.

Implication for theory. Homesickness and perceived hate are prominent themes that emerge in studies that examine the acculturation experience of international students. The results of this study are consistent with those findings in the literature. In their investigation into the validity of contact theory, Pettigrew and Tropp (2006) conducted a meta-analysis of prior research that included 696 samples within 515 studies that span across three decades. They found a clear and positive correlation between intergroup contact and intergroup prejudice and confirmed the postulate of contact theory that positive intergroup contact can cause reduced feelings of prejudice. More importantly, they also found that the effects of the positive contact extended beyond the parameters of the

experimental setting. As they reported, "Indeed, the generalization of contact's effects appears to be far broader than what many past commentators have thought" (p. 766). However, it is important to note that the positive effect of having contact with members of the host culture is not exclusively linked to the quality of the contact. There is evidence that suggests that the frequency of contact also has a significant impact on the positive effects of intergroup contact. Although the scope of the this study did not investigate quality or frequency of interactions between international and domestic students, contact theory can provide the context for education practitioners to explain the lower levels of acculturative stress related to perceived hate for those whose support network is comprised of mostly members of a different culture from themselves.

Implication for future research. Although the causal relationship between compositions of social networks and acculturative stress was not determined in this study, it is important to note that the positive or negative interactions international students may have with domestic students is likely influenced by the disposition of the international student themselves. For instance, it is plausible that those who purposefully seek support from those who are from a different culture than themselves are inherently less susceptible to the effects of acculturative stress since they actively want to learn more about their new environment and are quick to adapt. They are more likely to have a positive attitude about encountering new and unfamiliar situations. Conversely, individuals that have cautious, reserved, or hesitant dispositions may be more likely to interpret the intergroup interactions they have with a guarded

perspective, which may lead to perceptions of hate. Future research should capture the predisposition of international students and include it as a variable for analysis.

Finding 3

The purpose of this study was to investigate the relationship between the cultural composition of social networks and acculturative stress. A third important finding of this study is that the composition of support networks can predict acculturative stress levels related to homesickness. ANOVA and hierarchical regressions were used to analyze the data to determine if a relationship exists between the cultural composition of social networks and acculturative stress. The results of the ANOVA revealed there are significant differences in homesickness, culture shock, perceived hate, and fear domains of acculturative stress that are associated with the composition of an international student's social network. To investigate how well the composition of social networks predict each of the five domains of acculturative stress after controlling for gender, institution age, length of stay, prior visit, and existing support prior to arrival, a hierarchical linear regression was computed. When the control variables were entered into the regression model it only explained 4% of the variance in acculturative stress. When the composition of social network variables were added to the model, it improved the prediction to 7% of the variance explained, R^2 change = .03, $F(2,344)$, $p < .05$. Furthermore, the beta weights and significance values indicate the composition of social networks that were culturally the same contributed most to predicting homesickness ($\beta = .17$).

Interpretation. The findings from the study suggest that there is an association between the cultural composition of social support networks and acculturative stress. When the sample was divided into three groups based on the cultural composition of support networks, international students who sought mostly support from those of a different culture as themselves experienced significantly lower acculturative stress levels related to homesickness, culture shock, perceived discrimination, perceived hate, and fear compared to those who sought support from either culturally diverse networks or networks that were comprised mostly of members of their same culture. This finding would seem to support literature that suggest contact with members of the host culture improves the psychosocial adjustment of international students (Al-Sharideh & Goe, 1998; Kaczmarket et al, 1994; Li & Gasser, 2005; Ward & Kennedy, 1992; Yan & Berliner, 2011; Yang & Berliner, 2013; Zahi, 2002). However, the predictive ability of the compositions of social networks on acculturative stress was less pronounced.

Of the five domains of acculturative stress that were analyzed, the predictive ability of the composition of social networks on acculturative stress was only found for homesickness. This finding suggests that international students who are more likely to rely on members of their own culture for support in dealing with homesickness will experience higher levels of acculturative stress. In fact, the mean for the acculturative stress levels for homesickness was > 3.0 across all groups of social support networks regardless of its composition, which also supports the literature that indicates that homesickness is one of the major

challenges that international students contend with during the adjustment process. It is important to note, however, that this finding does not clearly indicate the direction of the relationship between composition of social networks and homesickness. That is, it is not clear whether international students feel more homesick because they rely mostly on members of their culture for support, or because they feel homesick it leads them to want to rely mostly on members of their culture for support. Indeed, it is plausible that these two variables share a reciprocal or mutually reinforcing relationship.

Although it may seem counter intuitive that relying on members of one's own culture for support could increase feelings of homesickness, the relief experienced by being around what is culturally familiar could serve to reinforce the original feelings homesickness, which in turn could lead to feelings of loneliness and isolation. Moreover, receiving mutual support from others who are also experiencing the same feelings of homesickness may serve to amplify those feelings. On the other hand, it is also conceivable that feelings of homesickness can motivate international students to increase their social networks that are comprised of members from their own culture as a coping strategy.

Implication for policy. As referenced earlier, among the five domains of acculturative stress that were analyzed in this study, homesickness is the most prominent (see Table 2 in Chapter 4). Regardless of the cultural composition of an international student's social support network, homesickness was the only domain that measured > 3.0 on the five point acculturative stress scale. This

finding is consistent with evidence in the literature that indicates homesickness as one of the most prominent stressors that international students contend with during the acculturation process. Given its thematic prominence, campus leaders responsible for working directly with international students need to include measures to address homesickness into the design of any support programs.

Implication for practice. Student support providers can proactively address the issues of homesickness with international students prior to their arrival on campus by making them aware that homesickness is something they will likely experience and to provide them with different strategies they can use to help them counter the negative effects of homesickness. International students should be made aware of that one of the factors that can contribute to homesickness is the over reliance on members of their own culture. This information has particular relevance to higher education institutions in southern California where it is relatively easier for international students to seek support from ethnic enclaves on and off campus. Two points in time that would be ideal to present this information would be during the application period at yield events and at freshmen orientation for international students. Additionally, it would be advisable for student service providers to integrate components into support programs that provide opportunities for interaction between international and domestic students, particularly during the first year when feelings of homesickness are the most intense. One example if an interaction opportunity is to create a peer mentor program that pairs first year international students with a

second or third year domestic student. In addition to being responsible for mentoring new international student, peer mentors can also be responsible for teaching their international mentees how to communicate with domestic students and to expand their social support networks to include those that are from a different culture. Another example is regular monthly or quarterly institutionally sponsored social mixer designed to promote intergroup exchanges.

With the exception of homesickness, the absence of any significant correlations found between compositions of social support networks and acculturative stress indicate that simply increasing the diversity of an international student's social network will not reduce stress related to the acculturation process. Though there is added value in diversity, encouraging diversity for the sake of having a diverse network will not reduce the level of acculturative stress experienced by international students.

Implication for theory. Overall, this study did not find any major correlations between the cultural composition of social support networks and acculturative stress. Although hierarchical linear regression revealed the composition of social support networks significantly increases the predictability of acculturative stress levels, it only explains 7% of the total variance. Additionally, both the low adjusted R^2 value (.05), which according to Cohen (1988) is a small effect size, and the low beta value (.17) for the composition of social support networks suggest there are other factors that are contributing to the differences found in acculturative stress levels beyond just the compositional make of an international student's social support network. Additional research in other areas

of social support theory to discover possible explanations for those differences is recommended.

Implication for future research. According to the buffering hypothesis (Cohen & Wills, 1985), social support can act as a buffer to mitigate the deleterious effects of stress. Prominent social support researchers Cohen and Wills posited that there are four functional categories of social resources that serve as buffers to stress: esteem support, informational support, social companionship, and instrumental support. Future investigations into the discovery of possible correlations between these types of support and acculturative stress could help to explain the differences between the different cultural compositions of social support that were found in this study which could inform the design of targeted interventions and prevention support programs for international students.

Recommendations

This study set out to discover if correlations exist between the cultural composition of social support networks of international students and the acculturative stress they experience. The findings show that there were differences in the level of acculturative stress experienced by international students based on the culture from which they were likely to seek support. However, since no clear correlations were established between cultural compositions of social support networks and acculturative stress levels, those differences cannot be explained by cultural composition. That is to say, though evidence in this study showed that international students who sought support

from mostly of members of a different culture experienced less acculturative stress, this finding cannot attributed to the cultural composition itself since no correlations were found. However, examination into the specific factors of acculturative stress revealed a slight, but significant, correlation between social networks that were comprised of members from the same culture and homesickness. Based on these findings, the following are recommendations for institutional policies and practices related to the support of international students.

Evaluate the Quality of the Interactions between International and Domestic Students

International students contribute to the diversity of a campus by bringing global perspectives that can be shared with students on campus. However, this benefit can only be derived through the positive interactions and exchanges between international students and domestic students through campus social and academic activities. Contact theory posits that positive interaction between groups of people will reduce conflicts and prejudices between them (Allport, 1954; Dovidio et al., 2003, Pettigrew & Tropp, 2006). Within the context of this study, the findings revealed international students at the two four-year institutions experienced higher levels of acculturative stress related to culture shock and perceived hate than those at the two-year institution. This finding was contrary to the expectation since there is evidence in the literature that indicates there are more opportunities for student involvement and interaction at the four-year institutions (Astin, 1999), than at two-year institutions where the nature of the students are commuters, thus offering less opportunities for student involvement

(Karp et al., 2011). Though positive benefits have associated with increase student involvement and interaction (Astin, 1999; Pascarella & Terenzini; 2005), the findings from this study suggest that those interactions may not necessarily be positive for international students at the four-year institutions. Therefore, the first recommendation is for institutions to investigate and evaluate the quality of the interactions between international and domestic students, rather than relying on the assumption that diversity will automatically lead to positive outcomes.

Similarly, an assessment of the campus climate regarding the attitudes and perceptions of diversity should be conducted. Assessing the diversity of an institution should not simply be a count of the different cultural groups that are represented on campus, but rather institutions should also evaluate the type, frequency, and quality of the interactions between those groups. Any strategic plans to increase the enrollment of international students at an institution should include an evaluation of the current campus climate on diversity and the perception of how increasing international presence will benefit the campus and members of its community.

Create Opportunities for Intergroup Contact between International and Domestic Students

The findings from the study indicated international students who sought mostly support from members from a different culture than themselves experienced lower levels of acculturative stress. Student service programs that aim to improve the psychosocial adjustment of international students should include strategies that create and promote opportunities for intergroup contact.

However, the scope of providing these intergroup contact opportunities should not be limited to simply bringing the two groups together. The contact opportunities should include facilitated activities designed to encourage positive interactions between international and domestic students to take place. For example, during welcome week at the beginning of each school year, student affairs can host a series of welcome sessions designed to introduce international students to the campus community. To ensure that international students can maximize this opportunity to create and to expand their social support network, it is advisable to offer workshops that teach international students how to communicate with others in the U.S. As Yan and Berliner (2011) observed, it is not that international students do not want to meet and to develop friendships with domestic students, but there are times that they do not know how to add domestic students into their networks. It is not simply a matter of international students wanting to expand their networks to include domestic students. It is also a matter of how can international students get invited to participate in the social activities of domestic students.

Another example of how institutions can create opportunities for intergroup contact and exchange is to hold regular forums or colloquiums on campus to educate the campus community about how internationalization fits into the institutional priorities and mission of the college. These opportunities for open dialogues and discussions help to make international students more visible on campus. Finally, these forums provide opportunities for the institution to educate the campus community about issues confronting international students and to

provide members of the campus community with the additional information and resources needed to assist with the development of student support programs that are designed to meet the specific needs of international students. The importance of institutional support for this endeavor cannot be overstated, as it contributes to the optimal conditions for positive intergroup interactions (Allport, 1954; Pettigrew & Tropp, 2006).

It is important to note that the recommendation to provide more opportunities for intergroup group is rooted in the findings that suggest that a greater reliance of support from members of a different culture is associated with less acculturative stress. Therefore, having more opportunities for intergroup contact can help international students expand and diversify their social support networks. However, the caveat to this recommendation is that international students should not be pushed into intergroup contact situations beyond their level of comfort or willingness to participate. There is evidence in the literature that for some international students forming social relationships with students in the U.S. is considered one of the most difficult things that they have to contend with during their adjustment process (Yan & Berliner, 2013). Pushing international students to interacting with others beyond their willingness or openness to doing so would likely increase their level of acculturative stress rather than reduce it. As such, the key point in this recommendation is the *creation* of opportunities for intergroup contact.

Include Faculty in the Strategic Planning Process to Increase International Student Enrollment on Campus

Another significant contributor to the positive social and academic experience of international students is the faculty on campus (Andrade, 2007; Deil-Amen, 2011; Mamiseishvili, 2012; Wadsworth, Hecht, & Jung, 2008). In light of these findings, faculty should be made aware that having a social support network that is comprised of mostly members from a different culture than themselves is associated with reduced levels of acculturative stress for international students. As with many students, social relationships are often times develop from the academic relationships that occur in the classroom (Karp et al., 2011). Therefore, it is prudent for faculty to actively encourage the interaction of international and domestic students. For instance, faculty can encourage intergroup interaction during group discussions, in the assignment of projects, and through the integration of multiple perspectives during lectures.

Beyond this example, however, is the recommendation that faculty be offered the opportunity to receive professional development to learn about the unique needs of international students. Additionally, professional development opportunities should also include ideas on how faculty can integrate the international student perspective into their curriculum. However, in order to encourage faculty participation into additional professional develop activities, faculty need to buy into the institution's plans for increasing the enrollment of international students.

To encourage buy-in, faculty should be included in the institution's strategic planning process for increasing the enrollment of international students. Faculty need to be made aware of the overall purpose and goals of the institution

so that academic departments can adequately prepare for the increase of international students in the classroom. Likewise, the institution must be willing to provide additional resources to academic departments so that they can develop necessary support programs for international students.

Apply Stated Recommendations to Supporting Immigrant Student Populations

Although the subjects of this study were international students, some of the process and experiences of acculturation for sojourners and immigrants are similar (Berry, 1997; Constantine, Okazaki, & Utsey, 2004; Dao, Lee, & Chang, 2007; Lin & Yi, 1997). Arguably, the only major difference between an immigrant and a sojourner is in their intent and motivation for arriving in a new environment. Immigrants typically arrive in a new environment with the intention of settlement, where as a sojourner's stay is temporary. For the sojourner, there is typically a timeline for their stay, and the intention is to return to their country of origin. However, this is not always the case. For example, some international students decide to permanently settle in the U.S. after completion of the program of study. Aside from this difference, both groups experience nearly the same types of adjustment issues and challenges. Both experience the same type of loss of social capital and the need to relearn new cultural symbols and norms. As such, the findings of this study can also be used to inform the practice of student support programs that target immigrant students who may also be experiencing acculturative stress.

Summary of the Dissertation

With the internationalization of higher education becoming campus priorities across the U.S., coupled with the increasing demand from international students for a postsecondary degree programs from the U.S., colleges and universities across the country have embarked on plans to increase the enrollment rate of international students. However, increasing student enrollment without providing sufficient or appropriate support for international students can negatively impact the educational experience of international students. More so than their domestic counterparts, international students face unique and specific challenges that make them more susceptible to the negative effects of stress, the most common of which is related to their adjustment to life in the U.S. In the literature the stress related to adjustment to another culture is referred to as acculturative stress.

Previous studies that have identified the use of social networks as one of the primary coping strategies used to deal with stress. As California is one of the most popular destinations for international students and is one of the most culturally diverse states in the nation, this study investigated if the cultural composition of social support networks is correlated with acculturative stress for internationals students attending the public higher education system in California. A study on the relationship the cultural composition of social networks and acculturative stress is particularly relevant for international students in California since it is relatively easy, due to the ethnic enclaves that are likely to be present on and off campus, for international students to seek out comfort and support

from those of their same culture. The question is whether this would benefit international students by helping them adjust to life in the U.S.

A review of the literature related to acculturative stress and the use of social support as a coping strategy provided the background for this study. It also identified the variables that needed to be measured, as well as provided the framework from which to analyze and interpret the study. This study was conducted by using an online survey to collect data from a sample of 368 second-year undergraduate international students at both two-year and four-year institutions. ANOVA and hierarchical regressions were used to analyze the data and to answer the research question that guided this study. The findings of the study showed that international students at the four-year institutions experienced higher levels of acculturative stress. In addition, those that relied mostly on support from members of their social network that were from a different cultural group felt less stress than those who had either received support from a culturally mixed network or those that relied on networks that were composed of mostly members of the same culture. However, this study did not find a correlation between the composition of social support networks and acculturative stress specifically related to culture shock, perceived discrimination, perceived hate, fear, and guilt. This indicates that even though international students who relied on a more culturally different social network experience less stress related to their adjustment to life in the U.S., the difference cannot be explained solely by the cultural makeup of their social network. Future research should include the

type, quality, and satisfaction of support received as additional variables into how social support effects acculturative stress.

The body of knowledge pertaining to international students is extensive. A wealth of literature can be found on the subject across a comprehensive array of topics including academic performance, mental health, sociocultural adjustment, and cross institutional benefits. However, the constantly changing international landscape, politics between nations, and economic fluctuations make this a constantly evolving area of study. As the world's politics and economic situation becomes increasingly intertwined, the need to integrate a global perspective into the learning outcomes of students in higher education seems obvious and unavoidable.

The adjustment of international students is a pressing issue of concern for the higher education intuitions that host them. Regardless of their origin, domestic or international, all students are susceptible to the same psychosocial development challenges that take place during college. It is the responsibility of higher education institutions to create an environment that is conducive to the academic and social development for all of its community members—an environment that nurtures intellectual curiosity, celebrates diversity of ideas, integrates multiple and complex perspectives, and is reflective of the society at large and the global community.

As the global community navigates through the 21st century, the distance between nations and people will continue to shrink. In no other time in human history has the term "the global citizen" been more salient or appropriate than it is

today. The importance of fostering international education cannot be overstated and certainly should not be underestimated. Now, more than ever, it is important to understand the pivotal role international students plays in the higher education landscape.

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APPENDIX A

ETHNIC DEMOGRAPHICS AT RESEARCH SITES

	SMC Fall 2013 (%)	CSUF Fall 2013 (%)	UCI Fall 2011 (%)
Black / African American	9.2	2	3
Asian / Asian American	13.8	22	52
Hispanic	37.4	37	18
Native American	< 1	--	< 1
White	26.6	25	20

SMC Source:

http://www.smc.edu/EnrollmentDevelopment/InstitutionalResearch/Documents/FastFactsFa2013.pdf

CSUF Source:

http://www.fullerton.edu/reachhigher/enrollment/student-profiles.aspx

UCI Source:

http://www.assessment.uci.edu/undergraduate/profile.asp

APPENDIX B

COVER LETTER

Dear International Student,

You have been selected to participate in a study about international students studying and living in the United States. I am Tony Hwang and this is part of my doctoral dissertation study at the California State University, Fullerton.

The purpose of the study is to understand the experiences of international students so that colleges and universities can better support you and other international students. I believe that international students are important members of college community and hope that this study will help to contribute to the positive experience of international students studying in the U.S.

Your participation in this study is completely voluntary. To participate you must:

- Be an international student on an F1 Visa
- Be at least 18 years old
- Have completed at least one year of coursework at your campus
- Since this study deals with challenges and obstacles you may have experienced studying in the U.S., the questions may bring up feelings of stress. Please know that you may choose not to answer any question that makes you feel uncomfortable. You are also free to exit this survey and withdraw from this study at any time without any negative consequence.

I am the only person who will see the completed surveys. The results of this study may be published, but no identifying information will be connected with your responses. Confidentiality will be provided to the extent allowed by law. Finally, be assured that there are no personal or financial conflicts of interest with the researcher that is related to the conduct or design this study.

I appreciate you taking the time to respond to the survey with your openness and honesty. If you have any questions, please contact me, Tony Hwang, at 714-725-8806 or tony.hwang@csu.fullerton.edu.

Tony Hwang
Doctoral Candidate
Ed.D. Higher Education Leadership
California State University, Fullerton

APPENDIX C

SURVEY QUESTIONS

Item	Survey Question
Q2_1	Someone who is from the SAME culture as you?
Q2_2	Someone who is from a DIFFERENT culture than you?
Q2_3	Someone who is of the SAME nationality/ethnic group as you?
Q2_4	Someone who is of a DIFFERENT nationality/ethnic group as you?
Q2_5	Someone who speaks the SAME first language as you?
Q2_6	Someone who speaks a DIFFERENT first language as you?
Q3_1	Someone who is from the SAME culture as you?
Q3_2	Someone who is from a DIFFERENT culture than you?
Q3_3	Someone who is of the SAME nationality/ethnic group as you?
Q3_4	Someone who is of a DIFFERENT nationality/ethnic group as you?
Q3_5	Someone who speaks the SAME first language as you?
Q3_6	Someone who speaks a DIFFERENT first language as you?
Q4_1	Someone who is from the SAME culture as you?
Q4_2	Someone who is from a DIFFERENT culture than you?
Q4_3	Someone who is of the SAME nationality/ethnic group as you?
Q4_4	Someone who is of a DIFFERENT nationality/ethnic group as you?
Q4_5	Someone who speaks the SAME first language as you?
Q4_6	Someone who speaks a DIFFERENT first language as you?
Q5_1	Someone who is from the SAME culture as you?
Q5_2	Someone who is from a DIFFERENT culture than you?
Q5_3	Someone who is of the SAME nationality/ethnic group as you?
Q5_4	Someone who is of a DIFFERENT nationality/ethnic group as you?
Q5_5	Someone who speaks the SAME first language as you?
Q5_6	Someone who speaks a DIFFERENT first language as you?
Q6_1	I feel homesick for my country sometimes
Q6_2	I feel uncomfortable adjusting to new foods and new eating habits in the U.S.
Q6_3	Sometimes I feel that I am discriminated against in social situations.
Q6_4	I feel bad when people make negative comments about my culture.
Q6_5	I feel sad living here sometimes, because I am not used to life in the U.S.
Q6_6	I fear for my safety because of my different cultural background.
Q6_7	I feel that others are biased against me.
Q6_8	I feel guilty leaving my family and friends back in my home country.

Item	Survey Question
Q6_9	I feel that I do not have the same opportunities here because I am a student from another country.
Q6_10	I feel stressed from the pressures that are placed on me living and studying in the U.S.
Q6_11	I feel that I receive unequal treatment.
Q6_12	I feel that people from other cultures hate me sometimes.
Q6_13	I feel that I am denied what I deserved because I am an international student.
Q6_14	I avoid going to some places because I feel unsafe with people who look different than me.
Q6_15	I feel rejected when others disapprove of my culture.
Q7_1	I miss my country and the people there.
Q7_2	I feel uncomfortable adjusting to the new culture here.
Q7_3	I feel that people from my culture are discriminated against.
Q7_4	People from other cultures show hatred towards me through their actions.
Q7_5	I feel that I am treated differently because I am an international student.
Q7_6	I feel comfortable communicating in English when I interact with other people who do not speak my native language.
Q7_7	I feel that I am treated differently because I speak English with an accent.
Q7_8	I feel unsafe here.
Q7_9	I feel guilty that I am living a different lifestyle here.
Q7_10	I feel sad leaving my friends and family from my home country.
Q7_11	I feel confident in my ability to communicate my thoughts and feelings to other people in English.
Q7_12	I feel that the faculty and staff on campus care about my success in school
Q7_13	Overall, I am satisfied with my college experience in the U.S.
Q7_14	Overall, I feel there are enough services on campus to support my success.
Q9	Which college/university do you attend?
Q10	Are you here on a F-1 student visa?
Q11	Please Indicate the type of student you are.
Q12	Were you a full-time student during the last academic year (2012-2013)?
Q13	Which gender do you identify with?
Q14	Which age group do you belong to
Q15	How many months Have you lived in the U.S.?
Q16	What is your major or area of study?
Q17	What country do you come from?
Q18	Have you ever visited the U.S. before you started your program of study?
Q19	Approximately, how many months did you stay?
Q20	Did you already know someone in the U.S. who could provide you with help and support before you began your program of study?

APPENDIX D

SOCIAL SUPPORT COMPOSITION SCALES

Table 8

Social Support Composition Scales

Variable	M	SD	Skewness	α
Loneliness Support SAME	4.19	.84	-1.45	.85
Culture	4.22	.93	-1.39	
Nationality / Ethnicity	4.10	.90	-1.08	
First Language	4.25	.98	-1.56	
Academic Support SAME	3.98	.91	-1.05	.90
Culture	3.96	.99	-1.01	
Nationality / Ethnicity	3.93	.98	-.89	
First Language	4.06	1.04	-1.15	
Recreational Support SAME	4.14	.88	-1.28	.91
Culture	4.17	.95	-1.29	
Nationality / Ethnicity	4.11	.93	-1.14	
First Language	4.14	1.01	-1.31	
Adjustment Support SAME	4.05	.88	-1.21	.90
Culture	4.04	.99	-1.17	
Nationality / Ethnicity	4.05	.94	-1.14	
First Language	4.08	.97	-1.26	
Loneliness Support DIFFERENT	3.32	.94	-.08	.89
Culture	3.30	1.03	-.05	
Nationality / Ethnicity	3.30	1.00	-.07	
First Language	3.36	1.08	-.34	
Academic Support DIFFERENT	3.73	.82	-.63	.91
Culture	3.73	.87	-.64	
Nationality / Ethnicity	3.71	.89	-.58	
First Language	3.75	.92	-.78	

Table 8 (continued)

Variable	M	SD	Skewness	α
Recreational Support DIFFERENT	3.80	.86	-.78	.92
Culture	3.79	.92	-.74	
Nationality / Ethnicity	3.76	.92	-.68	
First Language	3.85	.92	-.77	
Adjustment Support DIFFERENT	3.85	.88	-.76	.90
Culture	3.83	.98	-.76	
Nationality / Ethnicity	3.83	.95	-.70	
First Language	3.87	.95	-.83	

APPENDIX E

ACCULTURATIVE STRESS VARIABLES

Table 9

Acculturative Stress Variables

Variable	M	SD	Skewness	α
Homesickness	3.38	.85	-.31	.75
I feel homesick for my country sometimes.	3.62	1.12	-.57	
I feel sad living here sometimes, because I am not used to life in the U.S.	2.77	1.18	.16	
I miss my country and the people there.	3.91	.97	-1.03	
I feel sad leaving my friends and family from my home country.	3.21	1.20	-.31	
Culture Shock	2.63	.98	.42	.65
I feel uncomfortable adjusting to new foods and new eating habits in the U.S.	2.73	1.21	.41	
I feel uncomfortable adjusting to the new culture here.	2.52	1.05	.55	
Perceived Discrimination	3.10	.81	-.14	.87
Sometimes I feel that I am discriminated against in social situations.	3.09	1.19	-.05	
I feel that others are biased against me.	2.73	1.12	.16	
I feel that I do not have the same opportunities here because I am a student from another country.	3.75	1.15	-.76	
I feel that I receive unequal treatment.	3.05	1.12	-.02	
I feel that I am denied what I deserve because I am an international student.	3.27	1.16	-.27	
I feel that people from my culture are discriminated against.	2.70	1.07	.26	
I feel I am treated differently because I am an international student.	3.15	1.09	-.12	
I feel I am treated differently because I speak English with an accent.	3.04	1.13	-.05	

Table 9 (continued)

Variable	M	SD	Skewness	α
Perceived Hate	2.95	.86	-.10	.76
I feel bad when people make negative comments about my culture.	3.76	1.11	-.85	
I feel that people from other cultures hate me sometimes.	2.56	1.15	.37	
I feel rejected when others disapprove of my culture.	3.09	1.18	-.26	
People from other cultures show hatred towards me through their actions.	2.41	1.05	.59	
Fear	2.59	.99	.30	.78
I fear for my safety because of my different cultural background.	2.64	1.20	.34	
I avoid going to some places because I feel unsafe with people who look different than me.	2.61	1.24	.28	
I feel unsafe here.	2.50	1.12	.47	
Guilt	2.54	1.02	.36	.58
I feel guilty leaving my family and friends back in my home country.	2.77	1.26	.23	
I feel guilty that I am living a different lifestyle here.	2.33	1.15	.65	

APPENDIX F

VARIBLE CORRELATIONS

Table 10

Correlations for all Variables

Variable	1	2	3	4	5	6	7	8	9
1. Gender	--	-.03	-.02	-.11*	.06	.03	.02	.06	.03
2. Inst. Type		--	.20*	.26*	-.04*	.00	.04	.09	.05
3. Age			--	.19*	.11*	-.04	.05	-.07	-.11*
4. Length Stay				--	.03	-.01	.14*	-.03	-.01
5. Prior Visit					--	.14*	.08	-.14*	-.11*
6. Exist. Support						--	-.02	.06	.01
7. English Prof.							--	-.14*	-.11*
8. Lonely Same								--	.60*
9. Acad. Same									--
10. Rec. Same									
11. Adjust. Same									
12. Lonely Diff.									
13. Acad. Diff.									
14. Rec. Diff.									
15. Adjust. Diff.									
16. Homesick									
17. Culture Shock									
18. Discrimination									
19. Hate									
20. Fear									
21. Guilt									

*$p < .05$

Table10 (continued)

Variable	10	11	12	13	114	15	16	17	18
1. Gender	.04	.02	-.07	-.01	.05	.09	.12	-.01	.02
2. Inst. Type	.12*	.11*	.00	.02	-.06	-.04	.05	.13	.12
3. Age	-.15*	-.05	.02	.08	.10	.05	-.12	-.09	-.07
4. Length Stay	-.02	.08	-.03	.05	-.01	-.05	-.11	-.06	.00
5. Prior Visit	-.17*	-.08	.06	.00	.11	.03	.01	-.03	.05
6. Exist. Support	.07	.04	.01	.02	.07	.01	-.03	-.04	-.02
7. English Prof.	-.06	-.09	.29*	.26*	.28*	.22*	-.05	-.07	-.02
8. Lonely Same	.56*	.52*	-.14*	.07	-.01	.09	.23*	.09	.01
9. Acad. Same	.59*	.57*	-.10	.10	-.06	.09	.10	.09	.06
10. Rec. Same	--	.60*	-.14*	.07	-.02	.15*	.13*	-.01	-.01
11. Adjust. Same		--	-.09	.00	-.04	.08	.17*	.02	.02
12. Lonely Diff.			--	.51*	.47*	.42*	-.05	.11*	-.02
13. Acad. Diff.				--	.48*	.48*	-.07	.00	-.02
14. Rec. Diff.					--	.57*	-.06	-.04	-.01
15. Adjust. Diff.						--	-.06	-.12*	-.11*
16. Homesick							--	.45*	.39*
17. Culture Shock								--	.49*
18. Discrimination									--
19. Hate									
20. Fear									
21. Guilt									

$*p < .05$

Table 10 (continued)

Variable	19	20	21
1. Gender	-.07	-.03	.03
2. Inst. Type	.16	.08	.06
3. Age	-.14	-.13	-.04
4. Length Stay	.05	-.09	-.04
5. Prior Visit	-.05	-.07	.08
6. Exist. Support	-.01	-.08	-.07
7. English Prof.	-.02	-.12	.09
8. Lonely Same	.13*	.06	-.02
9. Acad. Same	.14*	.10	-.01
10. Rec. Same	.10	.00	-.03
11. Adjust. Same	.12*	.01	-.03
12. Lonely Diff.	.00	.05	.16*
13. Acad. Diff.	.00	-.02	.06
14. Rec. Diff.	-.02	.00	.06
15. Adjust. Diff.	-.05	-.06	.02
16. Homesick	.42*	.44*	.51*
17. Culture Shock	.56*	.57*	.52*
18. Discrimination	.71*	.64*	.55*
19. Hate	--	.70*	.57*
20. Fear		--	.59*
21. Guilt			--

*$p < .05$

APPENDIX G

HIERARCHICAL REGRESSIONS

Table 11

Hierarchical Multiple Regression Analysis Summary Predicting Culture Shock from Same and Different Compositions of Social Support Networks, When Controlling for Gender, Institution Type, Age, Length of Stay in U.S., Prior Visit, Existing Support, and English Proficiency (N=350)

Variable	B	SEB	β	R^2	ΔR^2
Step 1				.03	.03
Gender	-.04	.12	-.02		
Institution Type	.27	.11	.14*		
Age	-.14	.15	-.05		
Length of Stay in US	-.16	.12	-.08		
Prior Visit	-.02	.11	-.01		
Existing Support	-.07	.10	-.04		
English Proficiency	-.06	.05	-.07		
Step 2				.04	.00
Gender	-.04	.12	-.02		
Institution Type	.27	.11	.14*		
Age	-.14	.15	-.05		
Length of Stay in US	-.15	.11	-.08		
Prior Visit	-.01	.11	-.01		
Existing Support	-.08	.10	-.04		
English Proficiency	-.07	.05	-.07		
Social Support SAME	.04	.07	.03		
Social Support DIFF	.03	.08	.02		

*$p < .05$

Table 12

Hierarchical Multiple Regression Analysis Summary Predicting Perceived Discrimination from Same and Different Compositions of Social Support Networks, When Controlling for Gender, Institution Type, Age, Length of Stay in U.S., Prior Visit, Existing Support, and English Proficiency (N=350)

Variable	*B*	*SEB*	β	R^2	ΔR^2
Step 1				.02	.02
Gender	.04	.10	.02		
Institution Type	.18	.09	.11		
Age	-.13	.13	-.06		
Length of Stay in US	-.01	.10	-.01		
Prior Visit	.11	.09	.07		
Existing Support	-.04	.09	-.03		
English Proficiency	-.02	.04	-.02		
Step 2				.02	.00
Gender	.04	.10	.02		
Institution Type	.18	.09	.11		
Age	-.13	.13	-.06		
Length of Stay in US	-.02	.10	-.01		
Prior Visit	.11	.09	.07		
Existing Support	-.04	.09	-.02		
English Proficiency	-.01	.04	-.01		
Social Support SAME	.01	.06	.01		
Social Support DIFF	-.03	.07	-.03		

*$p < .05$

Table 13

Hierarchical Multiple Regression Analysis Summary Predicting Perceived Hate from Same and Different Compositions of Social Support Networks, When Controlling for Gender, Institution Type, Age, Length of Stay in U.S., Prior Visit, Existing Support, and English Proficiency (N=350)

Variable	*B*	*SEB*	*β*	R^2	ΔR^2
Step 1				.05	.05*
Gender	-.11	.10	-.06		
Institution Type	.22	.10	.13*		
Age	-.29	.13	-.12*		
Length of Stay in US	.06	.10	.03		
Prior Visit	-.05	.09	-.03		
Existing Support	-.01	.09	-.01		
English Proficiency	-.02	.04	-.02		
Step 2				.06	.01
Gender	-.13	.10	-.07		
Institution Type	.20	.10	.12*		
Age	-.27	.13	-.11*		
Length of Stay in US	.05	.10	.03		
Prior Visit	-.02	.09	-.01		
Existing Support	-.02	.09	-.01		
English Proficiency	-.01	.05	-.01		
Social Support SAME	.14	.06	.12*		
Social Support DIFF	.00	.07	.00		

*$p < .05$

Table 14

Hierarchical Multiple Regression Analysis Summary Predicting Fear from Same and Different Compositions of Social Support Networks, When Controlling for Gender, Institution Type, Age, Length of Stay in U.S., Prior Visit, Existing Support, and English Proficiency (N=350)

Variable	B	SEB	β	R^2	ΔR^2
Step 1				.05	.05*
Gender	-.08	.12	-.04		
Institution Type	.15	.11	.08		
Age	-.29	.15	-.11		
Length of Stay in US	-.15	.11	-.08		
Prior Visit	-.06	.11	-.03		
Existing Support	-.16	.10	-.08		
English Proficiency	-.10	.05	-.11*		
Step 2				.05	.00
Gender	-.08	.12	-.04		
Institution Type	.15	.11	.08		
Age	-.29	.15	-.11		
Length of Stay in US	-.15	.12	-.07		
Prior Visit	-.06	.11	-.03		
Existing Support	-.16	.11	-.08		
English Proficiency	-.12	.05	-.12*		
Social Support SAME	.02	.07	.01		
Social Support DIFF	.08	.08	.06		

*$p < .05$