An Exploratory Factor Analysis Examining Experiences and Perceptions of Campus Safety for International Students

Sonia H. Ramrakhiani
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AN EXPLORATORY FACTOR ANALYSIS EXAMINING EXPERIENCES AND
PERCEPTIONS OF CAMPUS SAFETY FOR INTERNATIONAL STUDENTS

by

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OLD DOMINION UNIVERSITY
May 2017

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Christopher Glass (Member)
ABSTRACT

AN EXPLORATORY FACTOR ANALYSIS EXAMINING EXPERIENCES AND PERCEPTIONS OF CAMPUS SAFETY FOR INTERNATIONAL STUDENTS

Sonia H. Ramrakhiani
Old Dominion University, 2017
Chair: Christopher Sink

Although international students make up a significant percentage of the college population and contribute to higher education institutions in multiple ways, a lack of attention is paid to their safety needs. This dissertation examined the experiences and perceptions of campus safety among international college/university students in the United States. The researcher sampled participants from different institutions around the country, who self-identified as international students. A researcher-developed 53-item Likert scale questionnaire, International Students’ Safety Questionnaire (ISSQ), was administered to the sample. Findings from the exploratory factor analysis (EFA) provided evidence for the four-factor solution for the 26-item ISSQ accounting for 48.65% of the shared variance. Additionally, the ISSQ was found to have adequate internal consistency, a Cronbach alpha of .85 for the overall instrument and subscale alphas ranging from .72 to .81. Salient demographic variables, such as nationality, faith belief, college status and perceived proficiency in English, were found to be significantly linked to derived factor scores. Further, significant positive correlations were found between personality variables, such as extraversion, openness, and neuroticism, and the derived factor scores. Implications for counseling, counselor education, and higher education institutions, along with limitations and directions for future research are included.
This dissertation is dedicated to my loving grandparents, who have always cheered me on from heaven.
ACKNOWLEDGMENTS

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CHAPTER 1
INTRODUCTION TO THE STUDY

Chapter 1 provides an introduction to this dissertation study. Specifically, it summarizes (a) the background of the research problem, (b) the purpose of the study and significance for the counseling literature, (c) research design, (d) research questions and null hypotheses, (e) assumptions, and (f) limitations. Definitions of study specific terms are also provided.

Background of the Problem

Every year, three million people cross national borders for at least 12-months of education and many more for shorter periods (Marginson, Nyland, Sawir, & Forbes-Mewett, 2010). The United States (US) is the leading host country in international education (Institute of International Education [IIE], 2014). In the last two decades, as a result of globalization and other factors, international education programs in the US continue to expand, while boosting exponentially the nation’s economy (Hegarty, 2014; Marginson et al., 2010). Apart from the monetary benefits, international students contribute to the prestige of higher education institutions with their diverse perspectives and knowledge (Evans, Carlin, & Potts, 2009; Lee, 2010; Obst & Forster, 2005).

Although international students make for a significant percentage of the college population and contribute to higher education institutions in multiple ways, there is lack of attention being paid to their safety needs. Recent events, both on and off campus, have shaken the idea of personal safety for those living in the US (Lau, Guttenplan, & Farrer, 2013; Rund, 2002). Whether it is a national attack, such as September 11 (2001) or Boston bombing (2013) or a university-based tragedy (e.g., Virginia Tech, 2007 or Northern Illinois University, 2008), international students’ lives are impacted (Lau et al., 2013). In addition to physical safety, there is growing a concern for the sexual safety of international students. Research suggests that both
male and female college aged-students, including international students, are more likely to be victims of rape or sexual assault (US Department of Justice, 2014). Therefore, personal safety and its physical and sexual safety correlates are worrisome issues in American higher education.

However, for international students the issue of personal safety is compounded by other factors that might impact their sense of well-being. For instance, they are required to fairly quickly adjust to the host country and adapt to the new culture(s) (Terrazas-Carrillo, Hong, & Pace, 2014). Further, international students experience acculturation difficulties and language, educational, and sociocultural stressors. They may face discrimination, and practical issues associated with acculturation stress (Smith & Khawaja, 2011). International students also struggle with emotions of loss and loneliness, due to the lack of social support (Patron, 2014; Sawir, Marginson, Deumert, Nyland, & Ramia, 2008).

Finally, the campus climate or learning environment in which students attend higher education institutions could potentially impact their sense of safety. Research highlights the vital role played by the campus environment, specifically the sense of community and faculty-student interactions with international students (Glass, Buus, & Braskamp, 2013). In addition, international students also identify academic support as a crucial factor in persisting through their US higher education experience (Mamiseishvili, 2012).

In summary, both on and off campus events in the US have encouraged researchers to investigate the personal safety of international students. Regrettably, this issue has been largely overlooked in the US, and therefore, the current study attempts to, in part, fill this gap in the literature. The study provides a more holistic definition and understanding of campus safety for international students in the US. The researcher assessed various dimensions associated with safety: (a) physical and sexual, (b) social and emotional, and (c) learning environment and
academic support. In addition, the impact of demographic and personality factors on international students’ perceptions of safety was also examined.

**Purpose of the Study**

The primary purpose of this dissertation was to develop a valid and reliable instrument to understand the construct of safety. Based on the examination of the current research, there is a lack of a valid and reliable instrument that assesses international students’ campus safety perceptions and experiences. Secondarily, the research aimed to (a) examine the experiences and perceptions of campus safety among international students in the US, and (b) identify ways in which higher education institutions can help increase students’ experience of safety on campus. Although personal safety has become an issue of growing concern, there is a dearth of research addressing campus safety needs in general and those of international students in particular. The research that does exist focuses on physical safety, rather than considering the holistic safety needs of international students that is usually merged with issues of cultural differences, adjustment/acculturation difficulties, and lack of familial and social support (Marginson et al., 2010). In addition, research on international student safety is largely based on Australian higher education institutions, particularly due to the brutal attacks against international students there (Babacan et al., 2010; Smith, 2009). Several of these studies are qualitative in nature and, therefore, limited in generalizability (Le, Auckland, Nguyen, & Terry, 2013; McLachlan & Justice, 2009). Clearly then, there was a need for a rigorous quantitative research study examining international student safety in the US.

As alluded to above, this dissertation study attempts to add to the research literature on campus safety. It aims at incorporating the various dimensions of safety (physical and sexual safety, social and emotional safety, and the learning environment and academic support) and in developing a holistic understanding of international safety in the US. In keeping with this goal,
this dissertation study is based on the development and validation of an instrument designed to meet the goal of assessing experiences and perceptions of campus safety among international students. The instrument also consists of demographic and personality variables, to assess for their potential relationship to international students’ experience and perceptions of each of the safety dimensions.

The implicit and practical goal of this dissertation study was to help improve services for international students by creating a safer social and academic environment for them. The current study holds significance for Higher Education institutions and Student Affairs personnel. It is anticipated that these professionals will gain a more refined understanding of the experiences and perceptions of campus safety among international students. In particular, service providers will possess additional information to help ensure international students’ safety needs are adequately met on campus. In short, practical implications for educators, student advisors, and counselors working with international students are provided. These should assist with improving the classroom climate, academic support, and social/emotional needs of international students.

**Research Design**

The research design was both psychometric and survey in nature. Collection of participant data from a purposive sample provides numeric description of trends, attitudes or opinions of the population under study (Creswell, 2014). Considering the purpose of the study (i.e., to develop a valid and reliable instrument to measure international students’ perceptions and experiences of campus safety in the US), a survey study was the most appropriate research method (Creswell, 2014). This approach was consonant with previous international student safety research (Babacan et al., 2010; Zhang & Goodson, 2011). The survey was constructed to develop an understanding of the construct “safety” in its varying dimensions. To determine the factorial validity of the measure, an exploratory factor analysis (EFA) was conducted.
The following research questions and associated null hypotheses were examined:

**Research Question 1**

What are the underlying dimensions of the International Student Safety Questionnaire (ISSQ)?

**Null Hypothesis 1**

Simple structure will fail to emerge following EFA of the International Student Safety Questionnaire (ISSQ).

**Research Question 2**

Does the ISSQ questionnaire possess adequate internal consistency?

**Null Hypothesis 2**

The derived factors of the ISSQ will not demonstrate sufficient internal consistency.

**Research Question 3**

Are there differences between levels of the salient demographic variables (i.e. nationality, ethno-racial identity, age, gender, faith belief, perceived proficiency in English and level of cultural adaptation) on derived factor scores?

**Null Hypotheses 3**

The main effects for salient variables (i.e., nationality, ethno-racial identity, age, gender, faith belief, perceived proficiency in English and level of cultural adaptation) on derived factor scores will be nonsignificant ($p > .05$). Potential interaction effects among demographic variables on derived factor scores will be nonsignificant ($p > .05$).

**Research Question 4**

What is the strength of association between personality variables (i.e., extraversion, openness, and neuroticism) and derived factor scores?
Null Hypothesis 4

There will be nonsignificant relationships \((p > 0.05)\) between derived factor scores and personality dimensions (i.e. extraversion, openness, and neuroticism).

Assumptions of the Study

The current research study was based on certain assumptions. It was believed that various demographic variables might influence participants’ responses to the survey items. For example, international students from non-European countries may report higher levels of discrimination (Lee & Rice, 2007). Female participants are more likely to report higher levels of sexual victimization in comparison to male students (Fox, Nobles, & Piquero, 2009; US Department of Justice, 2014). It was also expected that the survey items might load on at least three dimensions (e.g., physical and sexual safety, social and emotional safety, and learning environment and academic support).

One of the basic assumptions of factor analysis is that there has to be univariate and multivariate normality within the data (Child, 2006). Moreover, the common factor(s) should be substantially correlated with one another and variables that are strongly influenced by the same underlying factor will generate moderate to high levels of internal consistency (Fabrigar & Wegener, 2012). The third assumption related to EFA’s linearity, that is, a linear relationship exists between common factor(s) and measured variables (Fabrigar & Wegener, 2012; Gorsuch, 1983). The researcher ensured that these three assumptions were met by assessing for normality and homogeneity prior to running the EFA and other follow up analyses.

Limitations of the Study

There were certain limitations to the current study. First, respondents who choose to participate in the study were not an adequate representation of the international student population and therefore limited generalizability. Second, non-probability sampling has
potentially negatively affected the statistical outcomes as well as impacted both internal and external validity.

In terms of ecological validity, the study has implications for both student affairs professionals and college counseling centers. The data was collected in college/university environments, and as such, participants might have felt the need to respond in socially desirable ways, bringing about social desirability bias.

Another limitation of the study was the potential for re-traumatizing respondents that have been victimized. The researcher attempted to address this potential issue by providing information about the potentially triggering nature of the questionnaire in the invitation email and providing contact information of the counseling center of the participant’s university.

These limitations are further discussed in Chapter 5. The next section provides definition of key terms used in the study and the following chapter reviews the pertinent literature.

**Definition of Terms**

**Safety**

According to the Merriam-Webster (2016) dictionary, the definition of safety is, “freedom from harm or danger, state of being safe” (n.p.). Simply put, safety is the sense of feeling protected against different types of harms.

**Campus Safety**

Due to the lack of consensus in defining campus safety, the researcher proposes the following definition based on an examination of the current literature and safety domains to be studied in the proposed study: Campus safety is a sense of feeling protected against any form of physical and/or sexual harm, as well as freedom to express oneself and develop social and emotional connections in an environment that is facilitative of academic growth.
Physical and Sexual Safety

Physical and sexual safety is defined as a sense of feeling protected against any form of physical or sexual violence and assault. Each of these is further defined below.

**Physical violence and assault.** Physical assault is defined as the act of an individual or a group provoking and attacking a person physically, with or without the use of a weapon, or threatens to hurt that person (Prevent Violence at Work, 2016).

**Sexual violence and assault.** The Center for Disease Control and Prevention (CDC) defined sexual violence “as a sexual act committed against someone without that person’s freely given consent” (CDC, 2016, n.p.). The “sexual act” can vary from penetration to unwanted sexual contact or non-contact unwanted sexual experience (CDC, 2016). World Health Organization (WHO) provided the following definition for sexual violence that incorporates the varying acts that fall under this term:

Any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person’s sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work (2011, n.p.).

The above definition is concise and addresses issues of stalking, sexual harassment, and intimate partner violence. On the other hand, sexual assault is an umbrella term used to describe a wide range of forced and unwanted sexual activity, including kissing, exhibitionism, groping, and rape. In this proposal, sexual violence and assault will be used to cover the wide array of acts that fall under both terms.

Social and Emotional Safety

Due to a lack of a comprehensive definition of social and emotional safety, the researcher defines social and emotional safety individually below:
Social safety. Social safety is not a term that has been defined in the campus safety literature. Therefore, in the proposed study, the researcher loosely defines social safety as the freedom and comfort of forming meaningful interpersonal relationships with individuals in the host country.

Emotional safety. Emotional safety in the academic context is defined as, “An experience in which one feels safe to express emotions, security, and confidence to take risks and feel challenged and excited to try something new” (Safe Supportive Learning, 2016, n.p.).

Learning Environment and Academic Support

Learning environment. The Glossary of Educational Reform (2014) defines learning environment as, “[T]he diverse physical locations, contexts, and cultures in which students learn.” This definition encompasses the wide variety of settings, such as outside-of-school locations and outdoor environments. They go on to state that:

[T]he term also encompasses the culture of a school or class—its presiding ethos and characteristics, including how individuals interact with and treat one another—as well as the ways in which teachers may organize an educational setting to facilitate learning (The Glossary of Education Reform, 2014, n.p.).

Academic support. Academic support is defined as, “a wide variety of instructional methods, educational services, or school resources provided to students in the effort to help them accelerate their learning progress, catch up with their peers, meet learning standards, or generally succeed in school” (The Glossary of Education Reform, 2014, n.p.).

Personality

Per the Merriam-Webster (2016) dictionary, the definition of personality is, “the set of emotional qualities, ways of behaving, etc., that makes a person different from other people” (n.p.). This definition is consistent those presented in the personality literature.
CHAPTER 2

LITERATURE REVIEW

The United States is the leading host country for international education (Institute of International Education [IIE], 2015). In 2014/15, the number of international students in the US increased by 10% to a record high of 974,926 students (IIE, 2015). Not only is the population of international student enrollment increasing, the number of international students seems to play an important role in enhancing the reputation and prestige of higher education institutions. These students also positively contribute to the local economy, as well as to institutions’ diversity of perspectives and knowledge (Evans, Carlin, & Potts, 2009; Lee, 2010; Obst & Forster, 2005). Interestingly, research on international student retention rates is relatively scarce (Evans et al., 2009).

More specifically, the monetary benefits to the higher education industry in US and other developed countries, like Australia and UK, are substantial (Marginson, Nyland, Sawir, & Forbes-Mewett, 2010). In the US alone, international students injected over 27 billion dollars to the economy (Hegarty, 2014; IIE, 2014). In the UK, income from international student fees for universities and colleges represented a third of the total income in the higher education sector (Ryan & Carroll, 2005), or over 7 billion pounds to the national economy (UK Council for International Student Affairs, 2014).

Although international students contribute to the host nation in many ways, there is a dearth of research addressing the difficulties faced by international students. Advocates for international students continue to speak out on their behalf, drawing attention to the needs and rights of these students (Chau, 2010; Poljski, Quiazon, & Tran, 2014). Regrettably, many of these rights are often violated and the physical and emotional well-being of international students is neglected (Poljski et. al., 2014). In fact, the literature has rarely addressed their safety needs.
Nyland, Forbes-Mewett, and Marginson (2010) highlighted that it is the “fear of being stigmatized as an unsafe study destination” (p. 90) that keeps countries from embracing safety concerns of international students. It took numerous fatal assaults against international students in Australia for educational institutions there to acknowledge these concerns.

Although safety on campuses is a growing concern for all students, the current study focuses on international students’ security as their safety needs are compounded by cultural differences, adjustment/acculturation difficulties, and lack of familial and social support (Marginson et al., 2010). In this chapter, the idea of safety and its theoretical underpinnings are discussed. The different safety concerns that might potentially impact international students are introduced as well. More specifically, the researcher will focus on Physical and Sexual Safety (PSS), Social and Emotional Safety (SES), and Learning Environment and Academic Support (LEAS). The potential impact of personality factors (PF) on the participants’ perceptions and experiences with safety is also explored. Lastly, the researcher highlights pertinent research on mental health risks and help-seeking behavior among international students and the lack thereof.

**Campus Safety**

Research on campus safety has primarily focused on students’ physical and sexual safety issues (Ratti, 2010). As important as they are, these concerns are not the only worrisome aspects of one’s “safety experience” on a college campus. Attending a safe college campus involves feeling safe to develop social and emotional connections/relationships, receiving academic support, and thriving in a facilitative learning environment. However, research on campus safety has largely failed to examine social and emotional aspects of college students’ experiences on campus. Additionally, in examining campus safety, researchers tend to overlook the role of academic and social support as well as the potential barriers to student learning. With adequate support and manageable obstacles to maximize learning, students feel safe to express themselves
and grow as individuals. Rund (2002) argued that college campuses are microcosms of society; however, due to increased globalization, college campuses are more diverse than ever. As such, Rund’s broader perspective is required:

A safe campus is one that provides students the opportunity to pursue their academic potential in an environment free of discrimination, intimidation, or threat to physical or emotional well-being. The safe campus is one that responds to such threats and takes decisive, corrective action to eliminate them. A safe campus is one that is monitored for safety, one where the various dimensions of the environment are routinely evaluated and adjustments are made as appropriate. (Rund, p. 8)

This view encompasses the three dimensions highlighted in this current study, i.e. physical and sexual safety, social and emotional safety, and learning environment and academic support.

Furthermore, McLachlan and Justice (2009) conducted a grounded theory study to explore the experiences of international students in the US and to develop a better understanding of factors that help them thrive and maintain their well-being during their stay in the US. The emergent themes suggest both the difficulties faced and the factors that helped them overcome such difficulties. These themes are in line with the proposed dimensions for the current study. For instance, social and emotional safety can be viewed as, “Homesick, lonely and isolated” and “Emotional consequence.” Learning environment and academic support can be captured in the following themes, “Faculty mentor” and “Using University Services.” However, one of the main limitations of the study was its small \( n = 20 \), non-representative sample and the use of only one interview per participant. The current research addressed these limitations using a large sample and a quantitative research methodology. In the next section, theories that are applicable in understanding campus safety for international students are reviewed.
Theoretical Underpinnings of Safety

There are several theoretical models that address the various characterizations of safety discussed in this study. As elucidated below, safety (or safety needs) is the second most important feature in Maslow’s Hierarchy of Needs (Maslow, 1943, 1954, 1970). The current study focuses on three of the eight needs outlined in Maslow’s hierarchy, integrating them to understand the idea of safety. As this study focuses specifically on safety and wellbeing of international college students, the Integrated Student Development Theory and Bronfenbrenner’s ecological model are also highlighted.

Maslow’s Hierarchy of Needs

Maslow’s (1990) Hierarchy of Needs Theory proposes that all human beings have eight needs that are fundamental optimal functioning: biological and physiological, safety, belongingness and love, self-esteem, cognitive, aesthetic, self-actualization, and transcendence (Cofer & Appley, 1964; Neher, 1991; Wahba & Bridwell, 1976). After individuals meet their basic biological needs, physical safety or survival needs become paramount (Maslow, 1943, 1970). Maslow’s framework of safety needs include physical safety, financial security, protection from harm, and obtaining adequate material to sustain survival. Safety needs drive human beings to seek consistency and predictability, to fear the unknown, and to prefer familiarity over novelty (Reid-Cunningham, 2008). Such needs motivate humans toward self-protection and fearing the unfamiliar environment, which, in part are germane to the current study. In particular, the definition of campus safety used in this study includes the importance of “feeling protected against any form of physical and/or sexual harm” in the unfamiliar context of the host campus.

Next, humans seek out social and emotional safety, which is closely linked to the need for belonging and love or what is referred to as “sense of community” (McMillan & Chavis,
1986). In other words, to avoid feelings of loneliness, depression, and anxiety, it is important for people to feel loved and accepted by others. Social bonding, including the development of friendships, partnerships, and group affiliations are vital components that help satisfy social needs (Maslow, 1943). Furthermore, secure and intimate personal relationships help create social and emotional safety and wellbeing (Baba & Hosoda, 2014; Hendrickson, Rosen, & Aune, 2011; Patron, 2014). Based on the definition of campus safety used in this study, “freedom to express oneself and develop social and emotional connections” is in line with the desire to meet the need for belongingness and affiliation.

To better understand the world around them, humans have a need to increase their intellect and acquire knowledge (Maslow, 1996). In other words, people possess the natural need to learn, explore, discover, and create (Demir, 2015). The latter half of the definition of campus safety used in this study addresses this cognitive need by creating “an environment that is facilitative of academic growth.” As Lutz (2014) stated, “All students have basic needs to be met for learning to occur. The more needs that are met, the more students will learn” (p. 49). This notion also applies to those individuals with special needs, such as international students, for their cognitive needs tend to be more difficult to meet outside their familiar learning environment (Demir, 2015).

In summary, three of eight needs highlighted in Maslow’s Hierarchy of Needs (safety, love and belonging, and cognitive needs) are useful to better understand the notion of campus safety. However, Maslow’s theory fails to fully account for the specific context in which the current study will be conducted. For example, the campuses in the US and the international student respondents may not be fully compatible with the model. Maslow’s theory was developed in the Western context and lacks empirical evidence for its universality (Reid-Cunningham, 2008). In fact, research suggests that in collectivist cultures the basic need is
belonging; whereas self-esteem is often excluded (Gambrel & Cianci, 2003). These concerns are addressed by Integrated Student Development Theory.

**Integrated Student Development Theory (ISDT)**

ISDT is holist perspective of student development, integrating the cognitive, interpersonal, psychosocial (intrapersonal), and ecological domains (Renn & Reason, 2013). Therefore, it provides additional theoretical grounding for the proposed study. Specifically, student development can be defined as, “the ways that a student grows, progresses, or increases his or her developmental capabilities as a result of enrolment in an institution of higher education” (Rodgers, cited in Renn & Reason, 2013, p. 114). There are several student development theories that fall under the ISDT umbrella. These often guide student affairs, policies, and procedures in higher education. They also serve as a knowledge base for academic advisors, as well as career and personal counselors to help promote student learning and growth (Armitage, 2014).

Similar to Maslow’s (1943) hierarchy, ISDT takes into account the cognitive needs and development of students (Armitage, 2014). The interpersonal and intrapersonal development of people can be perceived as the cultural lens with which they make sense of and experience the campus and the world around them. Culture plays a crucial role in understanding the safety needs and concerns of international students on campus. One ISDT approach, the RESPECTFUL model, captures 10 factors that affect an individual’s psychological development and sense of personal well-being in multiple ways: religion/spiritual identity, socioeconomic class, sexual identity, psychological maturity, ethnic/racial identity, chronological/developmental challenges, various forms of trauma and threats to well-being, family background and history, unique physical characteristics, and location of residence and language differences (D’Andrea & Daniels, 1997, 2001). Due to the impact of these ten factors on an individual’s psychological and
personal well-being, it is important to take into consideration the influence of some of these cultural factors in our understanding of international students’ experiences and perceptions of safety concerns and needs.

ISDT is also closely aligned with Bronfenbrenner’s (1979) ecological systems model (Armitage, 2014). This model emphasizes the interaction of individuals within their environmental contexts and it illustrates how “increasingly complex interactions between individuals and environments, supported with adequate buffers, foster development” (Renn & Reason, 2013, p. 123). In other words, human development occurs as an interactive process occurring within a specific person, at a specific time and context (Bronfenbrenner, 1979). The process is the ongoing “dialogue” between human functioning and the environment. The “person” is viewed as possessing certain characteristics, abilities and ways of interacting with the environment that are conducive to growth and learning. The “time” is both the period during which the student lives and the time of life events that occur for the student (Renn & Reason, 2013). Finally, the “context” refers to the different levels or systems in which development occurs between individuals and their environment (Renn & Reason, 2013). In this framework, the environments can vary from Microsystems (direct interactions between the individual and the environment) to Macrosystems, which entails the primary socio-historical context (Renn & Reason, 2013).

In summary, ISDT and Bronfenbrenner’s ecological model support the conceptualization of international students’ safety needs proposed in the current study by merging various aspects of student development (cognitive, interpersonal, intrapersonal, and ecological) into a single, wide-ranging, and coherent perspective. It elucidates how the individual student interacts with and experiences the campus environment.
Dimensions of Campus Safety

In this section the key campus safety concerns that impact domestic and international students are summarized.

Physical and Sexual Safety

Campus safety is a well discussed topic in the media, garnering substantial public scrutiny in years following shooting rampages at Virginia Tech (2007) and Northern Illinois University (2008). While most victims were US citizens, international students are not immune to such crimes. For instance, the Boston Marathon bombing (2013) killed Lu Lingzi, a Chinese graduate student at Boston University (Lau, Guttenplan, & Farrer, 2013). In 2012, two Chinese students attending the University of Southern California were killed during a carjacking. The results from a fairly recent survey on education trends suggested that US campuses need to ensure international student safety (Mitchell, 2013 as cited in Lau et al., 2013).

Furthermore, the acts of sexual violence on campus are estimated to impact 1 in 5 females on college campuses (Black et al., 2011; Krebs & National Institute of Justice, 2007; White House Task Force to Protect Students from Sexual Assault, 2014). This reality has brought attention to the issue of sexual assault on college campuses and on prevention efforts (Armstrong, Hamilton, & Sweeney, 2006; Breitenbecher, 2000; Hill & Silva, 2005; White House Task Force to Protect Students from Sexual Assault, 2014). In fact, President Obama recently established the “White House Task Force to Protect Students from Sexual Assault” to address the issue of sexual violence on college campuses. He stated, “Sexual violence is more than just a crime against individuals. It threatens our families, it threatens our communities; ultimately, it threatens the entire country” (Obama as quoted in Jones, 2014, n.p.).

Physical and sexual safety of non-international students. Acts of physical and sexual violence on college campuses has prompted researchers to study campus safety issues. In this
section, the literature review will focus on the physical and sexual safety of the general college population.

In a campus-wide investigation of the topic by Baker and Boland (2011), 150 faculty and staff and 450 students at a liberal arts women’s college in eastern Pennsylvania, completed a survey designed to measure beliefs and attitudes, daily behaviors, personal safety precautions, and cases of victimization. Results showed that both populations reported being victims of violent acts on campus and the most frequent acts reported by both students and faculty/staff were sexist remarks, emotional abuse, and psychological distress. Other reported acts of victimization included swearing or obscenities, racial slurs, inappropriate gestures, catcalls or whistles, stalking, dating violence, undue and unwanted attention, isolation, and exclusion. Few students and faculty/staff reported acts of sexual harassment or coercion and physical assaults. Although majority of the participants in this study believed their college-campus to be safe, one of the research limitations was the parochial nature of the sample (i.e., small liberal arts women’s college with only 1400 students). Furthermore, the composition of the sample was relatively homogenous (98% White, averaging 25-year-old women). Thus, the generalizability of these findings to other larger and more diverse campuses in the country is quite limited.

Other researchers have examined salient factors related to student perceptions of campus safety. For example, firearms (Thompson, Price, Mrdjenovich, & Khubchandani, 2009), school location (e.g., rural vs. urban setting), and type of security/police force (Patton & Gregory, 2014) were explored. Patton and Gregory (2014) conducted a large survey study on students’ (N = 11,161) perceptions of safety on campus. They also conducted a case-study on two community colleges. Exploratory sequential mixed methods design was utilized to examine the students’ perceptions of safety. Results revealed that nearly one quarter of the students (24%) perceived themselves to be at high risk for certain crimes (e.g., robberies). The results showed no
significant differences based on gender and race, but younger students perceived their campuses to be safer than older students. These findings reveal a much higher rate of fear and concerns about safety than reported in Baker and Boland (2011). This discrepancy in results can be attributed, in part, to the difference in the research setting (i.e., small liberal arts college vs. large community colleges and the diversity in the demographic composition of the participants). Additionally, Patton and Gregory (2014) found significant differences between the perceptions of students’ safety on campus based on whether the campus had some type of security or police force.

Earlier, Thompson, Price, Mrdjenovich, and Khubchandani (2009) surveyed university police chiefs’ \( N = 417 \) perceptions and practices related to issues of firearm violence on their campuses. Somewhat surprisingly, 25% of the campuses had firearm incidents in the past year. Additionally, nearly all (97%) of the campuses had policies in place to prohibit firearms on campus. The results from this study highlight the difficulty experienced by police officials in protecting and keeping campuses safe.

**Gender-based experiences of physical and sexual safety.** Administrators and researchers are concerned about the safety of college women, particularly because the number of sexual crimes involving women seems to be on the rise (Gross, Winslett, Roberts, & Gohm, 2006; White House Task Force to Protect Students from Sexual Assault, 2014). The Bureau of Justice statistics suggest that rape is the most underreported violence crime in the US (US Department of Justice, 2014). Furthermore, female college students are less likely (20%) than female non-college students (32%) to report sexual assaults (Sabina, Ho, & Jordan, 2014; US Department of Justice, 2014). Thus, underreporting of sexual crimes is a serious concern, affecting the accuracy of existing survey findings.
Various factors inhibit reporting of rape and sexual harassment, including shame, guilt, embarrassment, lack of confidentiality, possible retaliation by the perpetrator, and the fear of not being believed (Sable et al., 2006). These factors are more likely to be more complex for international students because of the potential communication barrier, differences between host and home country’s values, concerns about loss of face, unfamiliarity with support services and legal systems, fear of loss of visa status, and greater fear of academic consequences compared to those experienced by local students (Marginson et al., 2010). Furthermore, there is a lack of research on the subjective experiences of sexual safety of female international students on college campuses.

The four main types of violence against women on campus are rape, sexual assault, intimate partner violence, and stalking (Jordan, 2014). Repeated research efforts have highlighted the higher rates of victimization of women college students as compared to similarly aged, non-college counterparts (Baum & Klaus, 2005; US Department of Justice, 2014) and in comparison to male college students (Fox, Nobles, & Piquero, 2009). These statistics might not reflect the true differences between groups due to the stigma associated with identifying as a victim of such intimate violence. However, studies also report that college women have a higher fear of victimization compared to men (Fox et al., 2009; Tomsich, Gover, & Jennings, 2011). Gender differences also exist in perceived risk of victimization, constrained behavior, and perceptions of overall safety on campus (Tomsich et al., 2011).

In a telephone survey of 1,010 female undergraduate and graduate students at a southeastern state university, researchers found that 35.6% of the participants experienced stalking, physical and/or sexual assault; however, only 15.5% of the participants perceived the campus to be unsafe (Wilcox, Jordan, & Pritchard, 2007). Additionally, they found lower levels of fear of crime and precautionary behaviors (Wilcox et al., 2007). Another study examined the
fear of victimization and gender differences. Results suggested that fear-provoking cues were not
gendered for fear of crimes such as theft and assault (Fisher & May, 2009). These findings
appear counterintuitive to commonsense, requiring further research efforts.

In addition to the massive problem of sexual violence, studies on violence against women
document physical violence (e.g., Leonard, Quigley, & Collins, 2002; Smith, White, & Holland,
2003) and stalking victimization (e.g., Jordan, Wilcox, & Pritchard, 2007; Buhi, Clayton, &
Surrency, 2009). Investigations also reveal the harmful impact of such forms of violence on
women’s physical and mental health, including posttrauma reactions, eating disorders, anxiety,
depression, and suicidality, all shown as effects of being exposed to intimate forms of violence
(e.g., Ackard & Neumark-Sztainer, 2002; Amar & Gennaro, 2005; Campbell, Dworkin, &
Cabral, 2009; Ullman & Najdowski, 2009). Additionally, research indicates that approximately
half of the women who have been victims of crimes such as stalking, acknowledge not seeking
help and those seeking help reach out to a friends or parents, and only a few (7.3%) seek
assistance from the police (Buhi et al., 2009).

**Physical and sexual safety of international students.** Despite its potential impact on
higher education in the US, few researchers have investigated the experiences and perceptions of
physical and sexual safety among international students. In one a qualitative study, six
international students were group-interviewed about retention and personal safety issues;
respondents identified these issues as important challenges to their college education (Bista &
Foster, 2011). Research also demonstrates that students from predominantly non-White regions
of the world have more negative experiences, which in turn impact their perceptions and
likelihood of recommending international education to other students from their countries (Lee,
2010). This situation can have a detrimental influence on the enrollment rates of international
students in the US universities and colleges, as well as negatively impact the economy (Hegarty,
2014).

Currently, as mentioned above, there is scarce literature on international student safety in
the US. However, following the growing incidences of racial violence in South Australia and
Newcastle that proved to be fatal in some cases (Smith, 2009), research on international student
safety emerged in Australia. The Institute for Community, Ethnicity and Policy Alternatives
(ICEPA) of Victoria University, for example, conducted a large scale study on international
students’ community safety (Babacan et al., 2010). The investigators adopted a four-stage
methodology that included both qualitative and quantitative data collection and analysis.
Babacan et al. conducted 35 interviews with international students, 29 with stakeholders, and
administered online surveys with a total of 1013 respondents. Results revealed that more than
half of the international students surveyed found Australia to be less safe than they had expected;
and of those who reported threats to safety, 50% of them believed these threats had a racial,
religious or cultural dimension. International students reported experiencing verbal abuse (58%),
physical attacks (11%), and robbery (10%) at a much higher rate than domestic students.
Furthermore, there was an evident discrepancy between the views of stakeholders and
international students on the sense of community safety of international students. Many of the
stakeholders believed that majority of the violent acts against international students were
“opportunistic rather than racial” in nature (Babacan et al., 2010, p. 3). Although, there were
several limitations to this study, such as sampling and low response rate, the findings brought
further attention to the safety needs and well-being concerns of international students.

Another crucial study was conducted in regional Australia, as it explored the perceptions
of international students on safety concerns on and off campus (Le, Auckland, Nguyen, & Terry,
2013). The researchers used semi-structured interviews with 25 international students and a
focus group discussion with 5 stakeholders to consider ways in which safety of international students could be improved. The researchers were able to identify four main themes: safety issues, safety risks, preventive strategies, and safety needs (Le et al., 2013). One of the major drawbacks of the study was the location in which it was conducted (i.e., regional Australia), thus reducing its generalizability to other parts of the country. Additionally, the study failed to attend to the possible emotional and psychological impact associated with international students’ feelings of unsafety and discrimination.

**Gender-based experiences of international students.** Contrary to media reports violence against female international students is far more common by known perpetrators (Forbes-Mewett & McCulloch, 2016). Specific to women’s safety there is a dearth of literature examining the incident rate, experiences, and perceptions of international students. In addition, due to the cultural stigma associated with certain crimes, such as rape, sexual abuse, etc., individuals are less likely to report. Bekmuratova (2012) examined the definition and perceptions of domestic violence against women among international students and the results suggested that participants differed in appropriateness of hitting and in perceptions of domestic violence based on their country of origin as well as gender. Intimate partners may occur in dating relationships, cohabitation, and marriage or after separation/divorce. There is no statistical information in the current research literature regarding rates of incidences of domestic violence among the international student/scholar community. In a survey conducted on university officials to gather information on domestic violence among international students/scholars and their spouses on US campuses, Urias (2005) found that majority of the participants (80%) reported uncertainty as to the specific number of domestic violence incidences and 40% did not assume responsibility to act on behalf of their international population, but rather referred any situation to the campus police or counseling center.
In summary, international students are as prone to physical and sexual violence as compared to domestic students, if not more. They may be at greater risk for harm due to various social and emotional factors, which are highlighted in the following section.

**Social and Emotional Safety**

Globalization has forced people to develop relationships with those outside of their own cultural group. The US hosts students from several numerous countries; however, many of these students struggle with forming meaningful social and emotional connections once in the country. These international students struggle with a sense of social and emotional safety, due to adjustment difficulties, lack of social support and difficulties forming cross-cultural relationships, neo-racism, and discrimination. In this section, social and emotional safety and each of the above mentioned factors are further examined.

**Adjustment difficulties.** Most college students relocate to a new town to attend college/university, this involves having to adjust to a new environment and it generally induces feelings of homesickness (Chow & Healy, 2008). For international students, relocation is more noteworthy as they are also faced with the challenge of adapting to the new culture (Terrazas-Carrillo, Hong, & Pace, 2014) and may experience culture shock (Fritz, Chin, & DeMarinis, 2008; Furnham, 1997; Kashima & Loh, 2006). In adjusting to a new environment, international students may experience dissonance between the demands of the unfamiliar environment and their cognitive and emotional repertoire, which often results in prolonged stress (Evans et al., 2009; Terrazas-Carrillo et al., 2014). Terrazas-Carrillo et al. (2014) conducted semi-structured interviews with seven international students and found that although participants experienced a period of confusion and struggles, they were able to adjust once they made meaningful attachments to the local community.
Adjustment difficulties are directly related to acculturation, and research in this area tends to focus on the experiences of refugees and migrants (Schwartz, Unger, Zamboanga, & Szapocznik, 2010). Smith and Khawaja (2011) applied different acculturation models to international students, identifying language, educational and sociocultural stressors, discrimination, and practical stressors as key acculturation issues. Several acculturation models depict social support as a variable that can decrease acculturative stress experienced and aid in adaptation to the local culture (Arends-Toth & van de Vijver, 2006; Berry 1997, 2006; Ward, Bochner, & Furnham, 2001; Safdar, Lay, & Struthers, 2003). Therefore, in the next subsection the current research on social support and cross-cultural relationships will be highlighted.

**Social support and cross-cultural relationships.** International students are faced with experiences of loss and loneliness that impact their emotional well-being, and in turn their social and emotional safety (Patron, 2014). In an extensive qualitative investigation conducted on 200 international students from 30 different countries studying in Australia, researchers found support for such feelings of isolation and loneliness among 65% of their sample (Sawir, Marginson, Deumert, Nyland, & Ramia, 2008). They were able to identify differences in experiences with loneliness based on gender; women students experienced loneliness at a slightly higher percentage (67%) than men (62%). Many participants identified difficulties in adjusting to the new culture and social loneliness as the cause of their isolation. In addition, they identified cultural differences between students in their experiences with feelings of loneliness and isolation (Sawir et al., 2008). However, from a strength-based perspective, Sawir et al.’s study found that 88% of international students who felt lonely turned to social networks to cope, and sources of social support most frequently cited were friends in Australia (54%) and family and relatives back home (34%). Sawir and colleagues argued that friendships with co-nationals may not be sufficient to ward off loneliness, as most (65%) encountered barriers when attempting to
make friends cross-culturally. This implies that cross-cultural friendships with local students are important in reducing loneliness. This point was also highlighted in another study by Zhang and Brunton (2007), who found that 45% of their sample of Chinese international students in New Zealand who had more than two host national friends engaged in more leisure activities with locals; 57% of these respondents reported lower levels of loneliness compared to the 55% of international students who had less than two New Zealand friends.

Additionally, research reveals that social ties with hosts are important to the overall adjustment of international students (Al-Sharideh & Goe, 1998; Kashima & Loh, 2006; Li & Gasser, 2005; Ying & Han, 2006; Ying & Liese, 1994; Zhang & Goodson, 2011). These findings are congruent with Rasmi, Safdar, and Lewis’s (2009) longitudinal examination of the Multidimensional Individual Difference Acculturation (MIDA) model (Safdar et al., 2003) on international students, revealing that those who reported a high level of psychosocial resources (a combination of perceived out-group social support, psychological well-being, and cultural competence) initially exhibited significantly less psychological distress and were more likely to report a greater level of out-group contact 18 months later. In a more recent study, Baba and Hosoda (2014) used a questionnaire method to examine the role of social support at a large state university in the Silicon Valley area of California (n = 197). They found social support to be directly related to cross-cultural adjustment and also served as a partial mediator of the stress factors and cross-cultural adjustment.

Zhang and Goodson (2011) conducted a web-based survey with 508 Chinese international student participants from four universities in Texas. Results showed that social connectedness with local students assisted in reducing acculturation and increasing psychosocial adjustment. In contrast, a study of 74 Korean international students in the US found that social support did not have a direct effect on international students’ mental health symptoms (Lee et al.,
However, in Yeh and Inose’s (2003) study ($N = 359$) of international students in the US, results suggested that international students who felt socially connected and who were content with their social support networks exhibited lower acculturative distress. These findings are consistent with studies demonstrating a negative association between social support and psychological distress (including acculturative stress, depression, and anxiety) (Dao, Lee, & Chang, 2007; Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004; Sumer, Poyrazli, & Grahame, 2008; Zhang & Goodson, 2011); and a positive association with psychological well-being (Atri, Sharma, & Cottrell, 2006). Social support did moderate the relationship between acculturative stress and mental health symptoms. Those participants who reported acculturative stress but had a high level of social support exhibited less mental health symptoms compared to those with low levels of social support.

Friendships with co-nationals or fellow international students may be another important source of social support. Ward et al. (2001, as cited in, Zhang & Brunton, 2007) found that the 23% of Asian international students in their sample who did not have friendships with New Zealand host nationals were most likely to seek out fellow Asian international students for support if they experienced difficulties with their college studies. Kashima and Loh (2006) found that Asian international students in an Australian university who had more ties with fellow international students in their host country were better adjusted psychologically, and also had greater identification with their own culture and their university.

Overall, social support with either locals or co-nationals appears to be an important buffer of acculturative stress and psychosocial adjustment, thus enhancing adaptation (Zhang & Goodson, 2011). This finding is consistent with studies conducted by Berry (1997, 2006), Safdar et al. (2003), and Ward et al. (2001). In addition, Arends-Toth and van de Vijver’s (2006) acculturation models distinguish between social support from members of the host society and
social support from co-nationals, with both potentially positively impacting on psychological and sociocultural adaptation (Smith & Khawaja, 2011).

**Neo-Racism and discrimination.** Host receptivity towards international students is an important ingredient in international student satisfaction. However, there is little literature examining inadequacies within the host countries or institutions that perpetuate the difficulties for international students (Lee, 2015). Understanding their experiences is critical to ensure not only safer environments for international students but to foster positive experiences. Most of the research on this topic comes from other host nations like the UK and Australia. In the UK, for instance, studies of international education have pointed to an unfriendly and indifferent host community, with whom contact is hard to achieve (Brown, 2009). In Australia, loneliness and racism are cited as two factors in international student dissatisfaction (Marginson et al. 2010; Ward et al., 2001). Brown and Jones (2013) surveyed 153 postgraduate international students and 49 respondents reported having experienced some form of abuse. Most of them mentioned verbal abuse, however, nine participants reported experiencing physical manifestation of racism. Participants reported strong emotional reactions, including feelings of sadness, disappointment, homesickness, and anger.

Lee and Rice (2007) examined international students’ perceptions of discrimination and found that students from the Middle East, Africa, East Asia, Latin America, and India endured far greater difficulties in the US institutions than students from Canada and Europe. The researchers attributed these findings to “neo-racism.” They defined neo-racism as racism that goes beyond an individual’s skin color to include their nationality, culture, and the relationship between their country and host country. An overt example of neo-racism was found in the student newspaper at Kansas State University that stated American tax dollars should not be spent towards educating Afghan, Chinese, Iranian, Iraqi or Turkish students “who could, in the
near future, become the enemy” (Redden, 2012, n. p.). Furthermore, Hanassah (2006) found that discrimination also extends to international students’ interactions with professors, university staff, classmates, potential employers, and the larger community. Students’ examples of discriminatory acts included comments like: “Latinos cannot be logical or scientific;” “[The professor] had little regards for different academic trainings, cultures, and ways of thinking;” “A White guy (staff) was laughing at my name and making fun of it in public;” ”I get very frustrated if a professor ignores me because my English is not as good compared to a native speaker…such times, I feel I’m stupid” (Hanassah, 2006). Therefore, neo-racism can be found on campus in the form of social interactions, interactions with faculty and administration, administration, denial of funding or job opportunities, and in off-campus interactions related to housing and shopping (Lee & Rice, 2007).

Poyrazli and Lopez (2007) were interested in comparing the experiences of international students and US students with regards to discrimination and homesickness. Results indicated that international students experienced higher levels of discrimination and homesickness than did US students. Age, English proficiency, and perceived discrimination predicted homesickness among the international students. In addition, years of residence and race or ethnicity predicted international students’ level of perceived discrimination. Being a European international student predicted lower levels of perceived discrimination than did being an international student from other regions of the world. Furthermore, Urban and Orbe (2007) conducted a qualitative study using the co-cultural theory to examine the impact of international students’ positionality as “cultural outsiders” on their communicative practices, and found “assimilating into dreamland” as one of the key themes. This need to assimilate is also known as acculturation and many research studies on international students identify acculturation issues and other factors associated with this acculturation process. For instance, acculturation and language difficulties
have been well researched in terms of their impact on international students’ psychological, social adjustment, and academic performance (Banjong, 2015; Lueck & Wilson, 2010; Sawir, Marginson, Forber-Mewett, Nyland, & Ramia, 2012). These can be perceived as internal factors impacting academic performance; however, there are external factors, such as learning environment and academic support that can also impact academic performance, which are discussed in the next section.

**Learning Environment and Academic Support**

Finally, when addressing the issue of an individual’s safety on campus, attention must be given to the different social and structural systems in place that facilitate a sense of safety among students. Wang et al. (2014) highlighted the significance of creating an international student friendly environment and developed the International Friendly Campus Scale (IFCS) to assess the same. Research has revealed the detrimental effect of hostile campus environment on international students. These include instances of microaggressions, cultural discrimination, verbal discrimination, and direct confrontation in the form of race and language related assaults, as well as physical and sexual assaults (Ee, 2013; Lee & Rice, 2007). Therefore, this section will focus on the learning environment and the role of academic support in creating a sense of safety for international students.

Glass, Buus, and Braskamp (2013) examined the experience of international students from the top five nations that represent the international student population (China, India, South Korea, Saudi Arabia, and Canada). Their report was based on a recent national study on international student experiences using the Global Perspective Inventory (GPI) with a representative sample of 36,973 US and internationals students from 135 countries (Braskamp, Braskamp, & Engberg, 2013). Glass et al. (2013) highlighted the crucial nature of the college environment for international students in terms of the sense of community and faculty-student
interactions. On all six GPI items that measure sense of community, international students rated significantly lower than US students. The former respondent group reported feeling less affiliated with their host university. International students were also less (a) likely to view their campus as honoring diversity and internationalism, (b) clear on the mission of the university, (c) challenged and supported, and (d) likely to believe that their strengths and talents were being adequately developed. Glass and Westmont-Campbell (2013) found that sense of belonging or sense of community was crucial for academic success.

**Role of faculty and staff.** In terms of the faculty-student interactions, findings suggest that even though the frequency of faculty-student interactions is same for both international and domestic students, their experiences vary, as international students perceive their experience in the classroom as less challenging and supportive of their cultural differences (Glass et al., 2013). Furthermore, Mamiseishvili (2012) used data from the Beginning Postsecondary Students Longitudinal Study to examine characteristics of international students that helped them persist during their first-year in college. Results revealed the crucial role of academic support in the form of degree planning and academic integration as factors related to persisting in a US postsecondary institution. Thus, Mamiseishvili (2012) suggested increased collaboration between offices of international student services, academic departments, English language programs, and other support services to assist international students as they work towards their degree in the US.

**Language and communication difficulties.** A recent study focused on understanding international students’ sense of security by looking at English-language proficiency (Sawir et al., 2012). Based on semistructured interviews with 200 international students, results showed that language proficiency was a pervasive factor students’ sense of security both inside and outside the classroom (Sawir et al., 2012). Furthermore, researchers have also seen language and other
cultural and individual factors as impacting students’ academic success and self-efficacy (Banjong, 2015; Lowinger, He, Lin, & Chang, 2014).

Lowinger et al. (2014) conducted a study on 264 Chinese international students at three public universities in the US and found significant correlations between academic procrastination and discrimination ($r = .30, p < .01$); male homesickness ($r = .15, p < .05$) and academic self-efficacy ($r = .41, p < .01$) and English language ability ($r = -.24, p < .01$); and culture shock and stress ($r = .18, p < .05$) for females (Lowinger et al., 2014). This study highlights gender differences in international students’ acculturative difficulties and its impact on their academic performance.

Another study conducted by Banjong (2015) examined ways in which international students cope with challenges such as financial, English proficiency, loneliness, and homesickness. An online questionnaire was completed by 344 international students at a mid-western university in the US. Results from the correctional analyses revealed that English proficiency had a negative correction with academic success ($r = -.46, p < .001$). Additionally, loneliness and homesickness were negatively correlated with academic success ($r = -.33, p < .001$). Thus, students who lived in solitude or had minimal social interactions and felt depressed due to homesickness tended not to focus on academic success (Banjong, 2015, p. 135).

University support. As discussed previously, many international students report feelings of isolation and loneliness, negatively impacting their academics. In a recent study conducted by Owens and Loomes (2010), an Australian university participated in a social integration initiative to enhance international students’ social adjustment through partnerships with local community, staff, and other students. The initiative included nontraditional American sports (e.g., cricket), as well as social (e.g., celebration of cultural festivals like Chinese New Year and Indian Independence Day), community, communication, work-related, and welfare activities. Using a
mixed methods design, they conducted a survey of 446 international students that took part in this unique opportunity. The researchers also conducted focus-group discussions with staff and students. The results provided support for the success of the social integration initiative from both the student perspective and the staff. Such social integration efforts can help in enhancing a sense of security and social safety in the host country. In summary, despite the numerous difficulties faced by international students, there is also research to suggest that institution efforts to address these challenges can be effective. Next, the impact of personality on international students’ college perceptions and experiences is explored.

**Personality Factors**

Research has failed to extensively examine the role of personality in international students’ experiences in the host country. Majority of the research using personality factors is based on the Big Five personality factors and they are:

- **Extraversion** (sometimes called surgency) encompasses traits such as talkativeness, energetic, and assertiveness.
- **Agreeableness** includes traits like sympathy, kindness, and affection.
- **Conscientiousness** includes traits related to organization, thoroughness, and planfulness.
- **Neuroticism** (sometimes reversed and called Emotional Stability) is associated with tenseness, moodiness, and anxiousness.
- **Openness to Experience** (also called Intellect or Intellect/Imagination) involves traits like having wide interests and being imaginative and insightful.

The Big Five personality dimensions have been used to examine differences between European Americans and Asian Americans (Eap et al., 2008). Therefore, the proposed study will also use some of the Big Five personality dimensions in understanding international students’ experiences and perceptions of safety. As highlighted above, the sense of community and social
interactions can impact international students’ experiences in the host country. The researcher aims to account for individual differences between respondents, by examining differences in perceptions based on personality factors. For instance, the factor of extraversion may impact participants’ responses on items assessing social engagement and safety. Similarly, participants who might score high on neuroticism may perceive their campus to be unsafe due to higher levels of anxiety. Using the NEO Big Five Personality Factors and student’s GPA, Hakimi, Hejazi, and Lavasani (2011) examined the relationship between personality traits and academic achievement among 285 students. Results revealed personality traits were significantly related to academic achievement and that conscientiousness explained 39% of the variance in academic achievement.

Specific to international students, Poyrazli, Thukral, and Duru (2010), investigated how personality, gender, age, and race-ethnicity related to acculturative stress. A sample of 613 international students enrolled in a US university completed an online survey that included, Acculturative Stress Scale for International Students, the Big Five Inventory and a demographic questionnaire. Results suggested that only one personality type, neuroticism, significantly correlated with acculturative stress and other stress factors, such as, perceived discrimination, homesickness, fear, and perceived hate/rejection. In addition, openness was found to be positively correlated with homesickness and negatively correlated with age. In relation to these findings, the current study examines the potential impact of personality traits on the safety experiences and perceptions of international students.

**Help-Seeking Behaviors**

Despite the numerous challenges identified in terms of adjustment issues, safety concerns, and discrimination experiences, international students are far less likely to use counseling services than domestic students, and when they do they are more likely to terminate
before lasting change has occurred (Hyun, Quinn, Madon, & Lustig, 2007). Additionally, international students’ familiarity with counseling in their home countries and their perceptions towards the service seem to play a significant role in determining whether or not they might seek out this support during their time in the US (Nina, 2009).

Sample (2013) stated, “Intercultural competence is an increasingly desired and necessary skill in a globalized world.” (p. 554). The revised Multicultural and Social Justice Counseling Competencies (Ratts, Singh, Nassar-McMillan, Butler, & McCullough, 2015) has incorporated “International and Global Affairs Interventions” to keep up with the globalized world. However, research reveals the underutilization of campus-based counseling services by international students and identified culture as one of the key factors in help-seeking behavior (Willis-O’Connor, 2014). Mesidor and Sly (2014) reported that 17.7% of variance in help-seeking intentions for international and African American students was accounted for by social-cognitive factors, such as attitudes, subjective norms, perceived behavioral control, and psychological distress.

The role of values was investigated by Shea and Yeh (2008). Their study assessed the impact of adherence to Asian values and the stigma often associated with receiving psychological help by Asian American college and graduate students. This research showed that in general students from Asian countries were unlikely to continue counseling due to the “lack of culturally competent personnel, contradictions between values held by the Asian clients and the Western model of counseling … and lack of culturally responsive services” (Shea & Yeh, 2008, p. 158). Similar findings were reported in a qualitative study conducted with six international students from East Asian countries (Chen & Lewis, 2011). The researchers explored the notion of “reluctance” within East Asian international student population towards the use of therapy. Semi-structured interviews and participant observation helped in providing support for
researchers’ assumptions and three main themes were identified. These themes highlighted the negative views of therapy held participants before and after coming to the US. They also uncovered some of the disparities in cultural understanding and concluded that counselors treated clients and their families “either very differently (based on stereotype), or exactly the same as they treat members of the majority culture without regard for beliefs and behaviors associated with the family’s unique ethno-cultural milieu” (Chen & Lewis, p. 311). Despite the beneficial implications of such studies, their research limitations negatively affect internal and external validity.

Research further discusses the important role of cultural understanding in working with international students in on campus counseling settings. Onabule and Boes (2013), for instance, examined international students’ participation in counseling from a strength-based perspective. They conducted an action research to identify factors that increase international students’ utilization of help-seeking behaviors and engagement in counseling services. Using a mixed methods design, they conducted a focus group interview to identify variables impacting international students’ decision to either seek or avoid counseling services, and they later developed a survey based using the factors highlighted in the focus group. Even though the survey sample size was small (18 participants), thus limiting its generalizability, the study provided important implications for college counseling centers. One of the important implications of the study was outreach efforts, since most international students may not to be aware of or understand what services are offered on campus. Additionally, the use of creative techniques was another implication, especially working with a population that may have limited English proficiency.

In short, research indicates that international students might be more likely to seek counseling services at universities if they understand the services and feel that these services are
developed with their particular needs, cultural background, and challenges in mind. Hence, in examining safety experiences and perceptions of international students, it is important for the current research to be able to understand the unique safety needs and challenges of this population.

**Conclusion**

There are only a handful of studies examining the safety experiences of international students in the US. Additionally, these studies fail to capture the different dimensions of safety (i.e., physical and sexual, social and emotion, learning environment and academic support). This dissertation study was conducted to holistically examine safety and its potential dimensions. The primary goals were to (a) better understand the safety-related experiences of international students in the US and (b) to more adequately serve their needs. In the next chapter, the research questions and hypotheses are presented, and the study’s method is summarized.
CHAPTER 3

METHODOLOGY

In this chapter, the research methodology is outlined. It provides an overview of the research design, research questions and hypotheses, targeted participants and sampling procedures, participant demographic characteristic statistics, experiential item statistics, description of instrumentation, and statistical procedures used. Specifically, it is focused on the steps utilized for the validation of a new instrument called the International Students’ Safety Questionnaire (ISSQ).

Research Statement

The study aimed at developing an instrument that was both valid and reliable in measuring the construct of campus safety for international students in the US. It attempts to extend previous research by also surveying students on the prevalence of different types of violence (i.e., physical, verbal, and sexual assaults). The instrument assesses perceptions of campus discrimination and its impact on social and psychological safety and wellbeing of international students. As indicated previously, the majority of campus safety studies conducted in the US and abroad focused on campus crimes (Ratti, 2010; Rund, 2002). The study serves a unique purpose of capturing a holistic understanding of safety experiences and perceptions of international students, an underserved population on campuses in the US (Chau, 2010; Poljski, Quiazon, & Tran, 2014). A secondary purpose of the study was to identify ways in which those working in higher education and student affairs can increase international students’ experience of safety on campus. The implications from the study can be used to better serve the needs of international college students in the US. An implication for the field of college counseling is to have the awareness of the safety needs and challenges faced by this population, as well as to identify appropriate ways in which to address them in a culturally sensitive manner.
Research Design

The researcher conducted a quantitative research study using survey method. This design assists in data collection and provides numeric description of trends, attitudes or opinions of the population under study (Creswell, 2014). Considering the purpose of the study, a survey study was identified as the most appropriate research method (Creswell, 2014). This approach was consonant with previous international student safety research (Babacan et al., 2010; Zhang & Goodson, 2011). At the time of this study, there was no existing measure that captured the holistic definition of campus safety, therefore, the current study was based on the instrument development and analysis of the construct “safety.” As discussed below, this instrument was administered both in-person and online to capture a representative sample.

With the goal of developing a holistic understanding of the construct “safety,” the current research used exploratory factor analysis (EFA) “to discover the underlying structure of observed variables” (Mvududu & Sink, 2013, p. 79). In other words, EFA was a useful way to summarize and interpret underlying relationships and patterns in the data (Yong & Pearce, 2013). EFA was the most appropriate since “the researcher has no expectations about the number of common factors or which measured variables will be influenced by the same common factors” (Fabrigar & Wegener, 2012, p. 28). In short, EFA should reveal the underlying dimensions related to international students’ perceptions and experiences of safety. Prior to focusing on the instrument development and the statistical procedures involved in EFA, the research questions and related hypotheses as well as the sample population are summarized in the next section.

Research Question and Hypotheses

To reiterate, the study set out to answer these four research questions and related hypotheses:
Research Question 1

What are the underlying dimensions of the International Student Safety Questionnaire (ISSQ)?

Null Hypothesis 1

Simple structure will fail to emerge following exploratory factor analysis of the International Student Safety Questionnaire (ISSQ).

Research Question 2

Does the ISSQ questionnaire possess adequate internal consistency?

Null Hypothesis 2

The derived factors of the ISSQ will not demonstrate sufficient internal consistency.

Research Question 3

Are there differences between levels of the salient demographic variables (i.e. nationality, ethno-racial identity, age, gender, faith belief, perceived proficiency in English, and cultural adaptation) on derived factor scores?

Null Hypotheses 3

The main effects for salient variables (i.e., nationality, ethno-racial identity, age, gender, faith belief, perceived proficiency in English and level of cultural adaptation) on derived factor scores will be nonsignificant ($p > .05$). Potential interaction effects among demographic variables on derived factor scores will be nonsignificant ($p > .05$).

Research Question 4

What is the strength of association between personality variables (i.e. extraversion, openness, and neuroticism) and derived factor scores?
Null Hypothesis 4

There will be nonsignificant relationships ($p > .05$) between derived factor scores and personality dimensions (i.e. extraversion, openness, and neuroticism).

Data Collection

The researcher used both electronic and paper copies to collect data. The former method included distributing the survey link through international student university listserv, CESNET listserv (Listserv for Counselor Educators and Supervisors), international student Facebook groups, and through snowball sampling. Participants electronically consented to participation in this research. Data was also gathered in-person, as the researcher attended various international student events, such as an international student weekly luncheon, an international student Thanksgiving celebration, and an Indian cultural celebration (Navratri/Garba night). In addition, the researcher also visited the English Language Center and the nearest mosque to collect data from international students that were English Language Learners and Muslim students respectively.

Risks were actively minimized through confidentiality and anonymity, and there was foreseeable harm in participants indicating through self-report. Participation in this study was voluntary and participants could withdraw at any time. Data were stored in a password-protected computer that was accessible by the researcher. This study was subjected to Human Subjects Review at Old Dominion University before data collection began and was approved as an exempt study.

Participants

In this section, information regarding the targeted population, sampling frame and descriptive statistics are discussed.
Targeted Population

Potential participants were international students who held F-1 or J-1 visa status and were enrolled part- or full-time in an on-campus academic program in a US college or university. The study aimed at collecting participant data that vary in geographical location, type of institution, length of stay in the US, level of perceived English proficiency, age, gender, race/ethnicity, faith belief, and country of citizenship.

Sampling Procedures

Convenience and snowball sampling were used. Specifically, participants were recruited through the International Student Services Offices at different universities across the US. The researcher solicited the assistance of the staff to disperse the survey using their listserv. Specifically, an email invitation was sent through the international student listserv maintained by different institutions, asking international students to participate in the study. The researcher also used social media, that is, international student Facebook groups to recruit participants for the study.

These actions contributed, to some degree, to the diversity of the sample and external generalizability of the findings. The sample as summarized below were drawn from multiple academic institutions in several geographical areas and from different cultural groups. It was hoped that a representative sample of the entire international student population in the US will be achieved. Using a statistical power analysis for EFA, a minimum of 280 participants was the target sample size.

Participant Demographic Characteristics

An international student sample of 323 was collected with participants attending institutions from across the US, and representing 75 countries around the world on six continents. The participants also spanned 30 states, plus Washington, D.C. Tables 1 through 12
provide descriptive statistics for reported nationality, racial/ethnic identity, gender identity, age, college status, faith belief, length of stay, perceived proficiency in English, level of cultural adaptation, type and location of institution.

Table 1

*Participant Country, Continent, or Region of Origin*

<table>
<thead>
<tr>
<th>Region of Origin</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>110</td>
<td>34.1</td>
</tr>
<tr>
<td>Asia</td>
<td>48</td>
<td>14.9</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>44</td>
<td>13.6</td>
</tr>
<tr>
<td>Africa</td>
<td>22</td>
<td>6.8</td>
</tr>
<tr>
<td>Western Europe</td>
<td>13</td>
<td>4.0</td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>9</td>
<td>2.8</td>
</tr>
<tr>
<td>Middle East</td>
<td>44</td>
<td>13.6</td>
</tr>
<tr>
<td>South America</td>
<td>14</td>
<td>4.3</td>
</tr>
<tr>
<td>Caribbean</td>
<td>8</td>
<td>2.5</td>
</tr>
<tr>
<td>North America</td>
<td>8</td>
<td>2.5</td>
</tr>
<tr>
<td>Australia</td>
<td>2</td>
<td>.6</td>
</tr>
<tr>
<td>Missing</td>
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<td>.3</td>
</tr>
<tr>
<td>Total</td>
<td>323</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 2

*Participant Race/Ethnicity*

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asian</td>
<td>195</td>
<td>60.4</td>
</tr>
<tr>
<td>African</td>
<td>21</td>
<td>6.5</td>
</tr>
<tr>
<td>Middle Eastern</td>
<td>28</td>
<td>8.7</td>
</tr>
<tr>
<td>White</td>
<td>50</td>
<td>15.5</td>
</tr>
<tr>
<td>Latina/o</td>
<td>15</td>
<td>4.6</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>1.2</td>
</tr>
<tr>
<td>Missing</td>
<td>10</td>
<td>3.1</td>
</tr>
<tr>
<td>Total</td>
<td>323</td>
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</tr>
</tbody>
</table>
Table 3

**Participant Gender**

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>149</td>
<td>46.1</td>
</tr>
<tr>
<td>Male</td>
<td>172</td>
<td>53.3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>.3</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.3</td>
</tr>
<tr>
<td>Total</td>
<td>323</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4

**Participant Age Range**

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-21</td>
<td>50</td>
<td>15.5</td>
</tr>
<tr>
<td>21-25</td>
<td>111</td>
<td>34.4</td>
</tr>
<tr>
<td>26-30</td>
<td>87</td>
<td>26.9</td>
</tr>
<tr>
<td>31-35</td>
<td>44</td>
<td>13.6</td>
</tr>
<tr>
<td>36-40</td>
<td>16</td>
<td>5.0</td>
</tr>
<tr>
<td>41 and over</td>
<td>13</td>
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</tr>
<tr>
<td>Missing</td>
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<td>.6</td>
</tr>
<tr>
<td>Total</td>
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</tbody>
</table>

Table 5

**Participant College Status**

<table>
<thead>
<tr>
<th>College Status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>14</td>
<td>4.3</td>
</tr>
<tr>
<td>Sophomore</td>
<td>7</td>
<td>2.2</td>
</tr>
<tr>
<td>Junior</td>
<td>22</td>
<td>6.8</td>
</tr>
<tr>
<td>Senior</td>
<td>31</td>
<td>9.6</td>
</tr>
<tr>
<td>Masters</td>
<td>120</td>
<td>37.2</td>
</tr>
<tr>
<td>Doctoral</td>
<td>106</td>
<td>32.8</td>
</tr>
<tr>
<td>Other</td>
<td>21</td>
<td>6.5</td>
</tr>
<tr>
<td>Missing</td>
<td>2</td>
<td>.6</td>
</tr>
<tr>
<td>Total</td>
<td>323</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 6

**Participant Faith Belief**

<table>
<thead>
<tr>
<th>Faith Belief</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christianity</td>
<td>68</td>
<td>21.1</td>
</tr>
<tr>
<td>Hinduism</td>
<td>83</td>
<td>25.7</td>
</tr>
<tr>
<td>Islam</td>
<td>68</td>
<td>21.1</td>
</tr>
<tr>
<td>Buddhist</td>
<td>18</td>
<td>5.6</td>
</tr>
<tr>
<td>Other Religions</td>
<td>8</td>
<td>2.5</td>
</tr>
<tr>
<td>Spiritual</td>
<td>5</td>
<td>1.5</td>
</tr>
<tr>
<td>Atheist/Agnostic/None</td>
<td>66</td>
<td>20.4</td>
</tr>
<tr>
<td>Missing</td>
<td>7</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>323</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 7

**Participant Length of Stay**

<table>
<thead>
<tr>
<th>Length of Stay</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6 months</td>
<td>91</td>
<td>28.2</td>
</tr>
<tr>
<td>7 months to 1 year</td>
<td>27</td>
<td>8.4</td>
</tr>
<tr>
<td>1 year + to 2 years</td>
<td>58</td>
<td>18.0</td>
</tr>
<tr>
<td>2 years + to 3 years</td>
<td>38</td>
<td>11.8</td>
</tr>
<tr>
<td>3 years + to 5 years</td>
<td>53</td>
<td>16.4</td>
</tr>
<tr>
<td>5 years + 10 years</td>
<td>39</td>
<td>12.1</td>
</tr>
<tr>
<td>10 years +</td>
<td>15</td>
<td>4.6</td>
</tr>
<tr>
<td>Missing</td>
<td>2</td>
<td>.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>323</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 8

**Participant Perceived Current Level of Adaptation to US Culture**

<table>
<thead>
<tr>
<th>Level of Adaptation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have not yet adapted</td>
<td>9</td>
<td>2.8</td>
</tr>
<tr>
<td>I am beginning to adapt</td>
<td>58</td>
<td>18.0</td>
</tr>
<tr>
<td>I have adapted fairly well</td>
<td>178</td>
<td>55.1</td>
</tr>
<tr>
<td>I have adapted extremely well</td>
<td>77</td>
<td>23.8</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>323</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
Table 9

*Participant Perceived Proficiency in English*

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>10</td>
<td>3.1</td>
</tr>
<tr>
<td>Moderate</td>
<td>112</td>
<td>34.7</td>
</tr>
<tr>
<td>High</td>
<td>200</td>
<td>61.9</td>
</tr>
<tr>
<td>Missing</td>
<td>1</td>
<td>.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>323</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 10

*Type of Institution*

<table>
<thead>
<tr>
<th>Type</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-year university/college (Private)</td>
<td>71</td>
<td>22.0</td>
</tr>
<tr>
<td>4-year university/college (Public)</td>
<td>215</td>
<td>66.6</td>
</tr>
<tr>
<td>Community College</td>
<td>3</td>
<td>.9</td>
</tr>
<tr>
<td>Other</td>
<td>31</td>
<td>9.6</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td>100.0</td>
</tr>
</tbody>
</table>

Table 11

*Location of Institution*

<table>
<thead>
<tr>
<th>Location</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban/city</td>
<td>256</td>
<td>79.3</td>
</tr>
<tr>
<td>Suburban/Outskirts</td>
<td>37</td>
<td>11.5</td>
</tr>
<tr>
<td>Rural</td>
<td>14</td>
<td>4.3</td>
</tr>
<tr>
<td>Other</td>
<td>13</td>
<td>4.0</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td>100.0</td>
</tr>
</tbody>
</table>

Table 12

*Geographic Region of Institution*

<table>
<thead>
<tr>
<th>Region</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>35</td>
<td>10.8</td>
</tr>
<tr>
<td>Midwest</td>
<td>22</td>
<td>6.8</td>
</tr>
</tbody>
</table>
South 245 75.9
West 12 3.7
D.C. 4 1.2
Missing 5 1.5
Total 323 100.0

Participant Experiential Item Results

Participants varied in their responses to the 12 experiential items to which participants had to respond with “yes,” “no” or “not sure.” Of the 284 participant responses used in this study, 281 participants responded to the 12 experiential items, that is, a missing response rate of 1.1%. Tables 13 to 24 provide descriptive statistics for reported responses on the 12 experiential items that capture international students’ experiences with different unsafe events on/around campus, and their utilization of campus support services/resources.

Table 13

Experiential Item 1: Spoken to a Staff or a Professor About Academic Needs

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>233</td>
</tr>
<tr>
<td>No</td>
<td>33</td>
</tr>
<tr>
<td>Not Sure</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
</tr>
</tbody>
</table>

Table 14

Experiential Item 2: Experienced Theft/Robbery On/Around Campus

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>29</td>
</tr>
<tr>
<td>No</td>
<td>246</td>
</tr>
<tr>
<td>Not Sure</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
</tr>
</tbody>
</table>
Table 15

**Experiential Item 3: Experienced Unwanted Sexual Attention On/Around Campus**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>21</td>
</tr>
<tr>
<td>No</td>
<td>243</td>
</tr>
<tr>
<td>Not Sure</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
</tr>
</tbody>
</table>

Table 16

**Experiential Item 4: Used Student Support Services for Assistance**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>115</td>
</tr>
<tr>
<td>No</td>
<td>148</td>
</tr>
<tr>
<td>Not Sure</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
</tr>
</tbody>
</table>

Table 17

**Experiential Item 5: Experienced Physical Harm On/Around Campus**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>7</td>
</tr>
<tr>
<td>No</td>
<td>267</td>
</tr>
<tr>
<td>Not Sure</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
</tr>
</tbody>
</table>

Table 18

**Experiential Item 6: Experienced Verbal Threat/Attack On/Around Campus**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>34</td>
</tr>
<tr>
<td>No</td>
<td>241</td>
</tr>
<tr>
<td>Not Sure</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
</tr>
</tbody>
</table>
Table 19

**Experiential Item 7: Spoken to a Staff or a Professor About Safety Concerns**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>45</td>
<td>15.8</td>
</tr>
<tr>
<td>No</td>
<td>223</td>
<td>78.5</td>
</tr>
<tr>
<td>Not Sure</td>
<td>13</td>
<td>4.2</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 20

**Experiential Item 8: Experienced Unwanted Attention or Harassment On/Around Campus**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>22</td>
<td>7.7</td>
</tr>
<tr>
<td>No</td>
<td>245</td>
<td>86.3</td>
</tr>
<tr>
<td>Not Sure</td>
<td>14</td>
<td>4.9</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 21

**Experiential Item 9: Forced Into Sexual Contact On/Around Campus**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>12</td>
<td>4.2</td>
</tr>
<tr>
<td>No</td>
<td>262</td>
<td>92.3</td>
</tr>
<tr>
<td>Not Sure</td>
<td>7</td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 22

**Experiential Item 10: Unwanted Attention/Harassment on the Internet By Someone On-Campus**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>13</td>
<td>4.6</td>
</tr>
<tr>
<td>No</td>
<td>258</td>
<td>90.8</td>
</tr>
<tr>
<td>Not Sure</td>
<td>10</td>
<td>3.5</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 23

Experiential Item 11: Experienced Emotional and/or Physical Abuse in Romantic Relationships

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>17</td>
<td>6.0</td>
</tr>
<tr>
<td>No</td>
<td>259</td>
<td>91.2</td>
</tr>
<tr>
<td>Not Sure</td>
<td>5</td>
<td>1.8</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 24

Experiential Item 12: Spoken to a Staff or a Professor About My Social-Emotional Needs

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>40</td>
<td>14.1</td>
</tr>
<tr>
<td>No</td>
<td>228</td>
<td>80.3</td>
</tr>
<tr>
<td>Not Sure</td>
<td>13</td>
<td>4.6</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Instrumentation

Item Development Process

Item creation. The item development process began with the creation of statements to assess the construct (“campus safety”) under examination (Hinkin, Tracey, & Enz, 1997). Questionnaire items can be generated inductively (i.e., developing items prior to deriving scales) or deductively (i.e., using theory to generate items; Hinkin et al., 1997). In this study, the initial items were developed inductively, as campus safety is an under-investigated phenomenon, lacking holistic definitions and theories to support it. After examining the existing literature on campus safety and international student experiences, three key dimensions were identified: physical and sexual safety (PSS), social and emotional safety (SES), and learning environment and academic support (LEAS). These dimensions were used in the initial item development
phase. Additional items were drawn from other published surveys addressing similar campus safety issues. As overviewed below, the preliminary instrument consisted of 42 items, with 21 items reflecting personal social/emotional safety and 21 items representing physical/sexual safety and financial security. Based on the feedback from the expert review and on further examination of the literature, items associated with financial security were eliminated from the survey.

Furthermore, to identify the impact of personality variables on respondents’ experiences and perceptions of safety, items from the Big Five Personality inventory were revised and added to the survey. In addition, 12 demographic items were added. In short, the researcher revised the instrument by adding and eliminating items based on the feedback from the expert reviewers and subsequently expanded the inventory to 65 items.

**Expert review of items.** To establish face and content validity, the instrument was first sent to five expert reviewers. These scholars had varying expertise. Three of the five were university-level counselor educators. Another was an international higher education scholar and one was a Russian international student with close ties with the international student community at Old Dominion University, VA.

One of the reviewers helped examine each of the items and assisted in the development of the three dimensions. The researcher added several new items based on the three dimensions. Two of the reviewers suggested reviewing the literature on “financial security.” The researcher reviewed the literature on “financial security” and eliminated the four financial concerns items from the questionnaire. Reviewers provided feedback on the language used and encouraged the use of more descriptive words; for example, the international student reviewer encouraged providing a definition for the term “assault.”
Instrument

The International Student Safety Questionnaire (ISSQ) consists of two sections: demographic items and safety items. Below each of these sections is discussed further.

**Demographic items.** The ISSQ consists of 12 demographic items examining basic demographic qualities related to the respondent’s race/ethnicity, gender, faith belief, and age. In addition, the demographic questions also gather specific information on the participant’s nationality, length of stay in the US, current year in college/university, perceived proficiency in English, and current level of adaptation to the US culture. The items also assist in gathering information on the participant’s university (e.g., location: state, rural vs. urban vs. suburban and the type of institution: public vs private, university vs. community college). These demographic items are provided in Appendix A.

**Overall safety items.** The English language ISSQ also consists of 53 total items/statements. Of these statements, 41 require participants to respond on a 7-point Likert Scale from 1- *Strongly Disagree* to 7- *Strongly Agree* to capture safety perceptions. A 7-point Likert scale was used to create adequate variance necessary for examining relationships among items and to establish internal consistency using alpha coefficient reliability estimates (Lissitz & Green, 1975). The remaining 12 items were “Yes/No/Not sure” items examining actual safety experiences of participants. These safety items are provided in Appendix B. The following are brief summaries of the proposed ISSQ scales.

**Physical and sexual safety (PSS) items.** The existing literature on campus safety was reviewed and several surveys were found. These asked basic questions such as, “Do you feel safe on campus?” “Do you feel safe in the parking lot?” and so on. These were surveys used by the campus police to assess for campus safety. The researcher developed items that focused specifically on physical and sexual safety rather than asking where and when students felt safe.
Examples of items from the ISSQ include: “I fear that I might get physically attacked on/around campus,” and “I fear that I might be sexually assaulted on/around campus” (see Appendix B).

**Social and emotional safety (SES) items.** In creating items for this scale, the researcher reviewed the literature and found Wang et al.’s (2014) International Friendly Campus Scale (IFCS) as especially useful. The 18-item IFCS was developed with a sample of 501 international students and consists of five sub-scales: International Center Services, Social Engagement, Academic Support, Identification with Institution, and Campus Discrimination. Items on the social engagement and campus discrimination sub-scales of IFCS served as beneficial examples in the development of items for the ISSQ. Examples of items from the ISSQ (see Appendix B) include: “I experience periods of loneliness during my time as a student,” “When I am struggling with feelings of homesickness and loneliness, I can usually approach others who will support me,” and “I struggle with forming friendships with people outside of my cultural/national group due to language difficulties.”

**Learning environment and academic support (LEAS) items.** The researcher found items on the identification with institution and academic support sub-scales of the IFCS (Wang et al., 2014) as crucial in the development of ISSQ items for. Examples of items from the ISSQ (see Appendix B) include: “Faculty are helpful in providing me academic support when needed,” and “I am comfortable using student support services when experiencing difficulties.”

**Personality items.** To assess various personality traits of participants that might impact their item responses, these Big Five Personality Factors (John & Srivastava, 1999) were used: introversion vs. extraversion, affect/neuroticism, and openness. The researcher modified items associated with the three personality factors for the purpose of the inventory. Examples of items from the ISSQ (see Appendix B) include: “I tend to make friends easily,” “I am mostly a happy person,” and “I am generally someone who gets stressed easily.”
**Experiential items.** In developing items assessing participants’ experiences with different types of unsafe events, the researcher drew from existing surveys used by the college campus police to assess campus safety. If needed, items were reworded so they would be non-threatening to international students. In addition, the researcher found items on the International Center Services sub-scale of the IFCS (Wang et al., 2014) as beneficial in the development of ISSQ items. Examples of items from the ISSQ (see Appendix B) include: “I have experienced unwanted sexual attention on/around campus,” “I have used student support services for assistance with my challenges as an international student,” and “I have spoken to a staff or faculty member about my social-emotional needs.”

**Pilot Testing**

On receiving approval from the Old Dominion University’s Institutional Review Board, the survey was piloted with 5 to 10 international students at one university prior to data collection. This is done to assure content adequacy and to provide preliminary support for construct validity as it allows the deletion of items that may be conceptually inconsistent (Hinkin et al., 1997). In addition, qualitative feedback from participants via brief individual interviews was sought. Changes in the questionnaire were made based on their feedback. Specifically, the researcher received input from participants their understanding of the items. Some modifications in the language used to describe certain terms were required. For example, the word, “faculty” was replaced with “professors/instructor.”

**Sampling Adequacy**

For an interpretable factor structure to emerge, research suggests using at least 5 to 10 participants per survey variable/item (Everitt, 1975; Gorsuch, 1983; Mvududu & Sink, 2013; Nunnally, 1978). Given there are 53 items on the ISSQ, about 265 participants were required. Using a statistical power analysis for EFA, a minimum of 280 participants was the target sample
size. With an actual sample size of 323, it was sufficient for exploratory factor analysis (Comrey & Lee, 1992; Mvududu & Sink, 2013).

**Data Analyses**

The following data analysis procedures were computed, with specific results summarized in the next chapter.

**Screening and Data Cleaning**

Initially, all “negatively worded” items were recoded into the positive direction (i.e., a score of 1 became a 7, a score of 2 was recoded as a 6, and so on). Participant responses were checked to ensure they all were within the range on the Likert scale (minimum of 1 and a maximum of 7). All the data inputting errors were corrected. Additionally, the recoded items were relabeled for clarification purposes. The data were scanned for missing responses and certain cases were deleted that have about 5% missing data (Field, 2013). Descriptive statistics were computed to check the normality of the item distributions. Based on the descriptive statistics, valid responses were identified.

**Inspection of Parametric Properties of Questionnaire Items**

The parametric nature of each item was also inspected. Histograms, box plots, and QQ plots were viewed to identify outliers and any other irregularities in the data distribution. Items with a skewness and kurtosis values of less than an absolute value of 1 can be considered normally distributed for statistical analyses (Field, 2013).

**Exploratory Factor Analysis (EFA)**

**Prerotation item and factor analyses.** In this section, the steps that were taken prior to rotating the factor matrix are summarized. These included an analysis of the initial reliability, intercorrelations, and assumptions underlying principal axis factoring (PAF or principal factor analysis) and oblique rotations.
**Initial reliability analysis.** To determine whether the 53 items represented an internally consistent measure, the researcher computed an overall Cronbach alpha (\(\alpha\)) coefficient.

**Correlational analysis.** An analysis of the inter-item Pearson Product correlations was conducted. Items with consistently low (approximately < .20) or high (> .80) inter-item correlations were deleted.

**Verifying assumptions.** In verifying assumptions prior to rotation, the researcher computed the Bartlett’s Test of Sphericity and a Kaiser-Meyer-Olkin Measure of Sampling Adequacy (Field, 2013). A significant sphericity (\(p < .05\)) suggests that the data set, and thus, the correlation matrix is factorable (Mvududu & Sink, 2013). In addition, the researcher is looking for a KMO ranging between .60 and .90 (Mvududu & Sink). These results will indicate whether it is an identity matrix. The Bartlett’s Test compares the correlation matrix to the identity matrix (i.e., it checks whether there is a certain redundancy between the variables that we can summarize with a fewer number of factors). Therefore, if the items are highly correlated, only one factor is most likely sufficient.

**Extraction methods.** Initially, both principal component analysis (PCA) and principal (factor) axis analysis (PAF or PFA) were computed on the data set. The items were examined for high and low factor loadings. The minimum acceptable factor loading was set at .35 (Comrey & Lee, 1992; Mvududu & Sink, 2013).

**Factor rotation.** To determine the number of factors to rotate, the following criteria were used: the amount of the explained variance for each derived factor (over 10%), factor eigenvalues greater than 1 (Kaiser, 1960), and from the results of the scree test. In addition, a parallel analysis was computed, as it is a more rigorous method for determining number of factors to rotate (Field, 2013). Orthogonal and oblique rotations were compared.
More specifically, varimax rotations (i.e., a form of orthogonal rotation that rotates in 90˚ angles) for both PCA and PAF was examined for simple structure. The similarity between the PCA and PAF results suggested that both approaches represent a coherent and interpretable factor structure. However, PAF is especially well-suited for determining potential latent constructs in the data set and provides a more accurate estimate of the item correlations. Therefore, the researcher was mainly interested in analyzing the data using PAF.

In addition, according to Field (2013), oblimin rotation (i.e., a form of oblique rotation that rotates the eigenvectors in less than 90˚angles) should be used when there is an expected correlation between factors. Since the items were developed based on the three dimensions (i.e., physical and sexual safety, social and emotional safety, and learning environment and academic support), the researcher expected some correlation between factors. Furthermore, oblimin rotation was conducted as it is appropriate for the current data set, because it is logical to assume that factors are correlated given the subjective nature participants’ perceptions and experiences.

**Post-rotation.** Post-rotation initial factors were extracted from the matrix, that is, the common or shared variance of each variable is partitioned from its unique variance and error variance to identify the underlying factor structure (Brown, 2010; Mvududu & Sink, 2013) and to determine simple structure. The communalities ($h^2$) and explained variance for each item were examined. The percentage of total variance explained is crucial in determining factors and 60% serves as the acceptable minimum (Hinkin et al., 1997). Items that have crossloadings (i.e., items that load substantially on two or more factors) were deleted if the loadings were weak (< .30). The researcher redid the analysis without those items to establish a simple structure. Lastly, the factors were named based on the content of the factor items.
Reliability of factors. Once simple structure was determined, alpha coefficients were computed on the specific items comprising each derived factor. It was hoped that each factor as well as the overall scale would yield alpha values of at least .70.

Multivariate Analysis of Variance (MANOVA)

In answering research question 3, the researcher computed analysis of variance (ANOVA) or multivariate analysis of variance (MANOVA) depending on the number of factors that emerge from the EFA. MANOVA is an ANOVA that has been mathematically extended for use with two or more dependent variables (DV s). In addition, to identifying group difference, MANOVA also takes into account the relationship between dependent variables (Field, 2013). Furthermore, conducting multiple ANOVAs can increase the risk for committing Type I error and cannot determine whether independent variable(s) are related to combination of dependent variables (Field, 2013).

In the current study, the derived factor scores (summed raw score across factor loadings) served as dependent variables. The demographic and personality variables with multiple levels served as the independent variables. As discussed in Huberty and Olejnik (2006), discriminant function analysis (DFA) was conducted as a post hoc procedure. This form of analysis is used to identify underlying constructs or variable themes that might represent super-ordinate univariate constructs that the dependent variables in a MANOVA might be conceived as aspects or components thereof. It is a statistical procedure which creates a set of perfectly uncorrelated linear equations that model the group differences among the groups in the MANOVA (Field, 2013).

Correlation Analysis

In answering research question 4, the researcher computed correlations between personality variables and the derived factor scores. Pearson’s correlation coefficient was
analyzed to assess for a relationship between personality variables (i.e., extraversion, openness, and neuroticism) and derived factors. The direction of the relationship (positively or negatively correlated) and the size of effect (± 0.1 represents a small effect, ± 0.3 is a medium effect and ± 0.5 is a large effect; Field, 2013).

**Summary**

In this chapter, the researcher explained the methodology used to understand the construct of “campus safety” among international students in the US. After explaining the purpose and research questions guiding the study, the researcher detailed information on data collection, sampling, participant demographic characteristics, instrumentation, and statistical procedures. Appendices are provided to review the instruments used in the study.
CHAPTER 4

RESULTS

Chapter 4 describes the data analysis results gathered from participants who completed the ISSQ and demographic questionnaire. The research questions and hypotheses, data cleaning, and description of findings for each of the four research questions are included in this chapter.

Data Analysis

Participant data from the paper-copy and the online-version were entered into SPSS 22 for statistical analysis.

Data Cleaning

The first step of data analysis process was to screen the data to ensure it was usable, reliable, and valid to proceed with statistical analyses. A total of 323 respondents initiated the survey. Surveys with incomplete entries were screened from analysis, yielding 284 surveys (less than 5% missing data). Items that had missing values were replaced with item mean scores.

A total of 41 Likert-scale items on the initial ISSQ were examined. As mentioned earlier negatively worded items on the ISSQ were reverse-coded, so that the scale would be consistently scored in a positive direction. The following items were reverse-coded: 3, 5, 6, 7, 13, 14, 15, 17, 19, 20, 23, 24, 25, 28, 33, 34, 35, and 38. Additionally, the recoded items were relabeled for clarification purposes. Descriptive statistics were computed to check the normality of the item distributions and to verify whether the items met the parametric assumptions underlying factor analysis. In addition to reviewing means, standard deviations, and minimum/maximum values, as well as skewness and kurtosis indices, item histograms, box plots, and QQ plots were examined (Fabrigar & Wegener, 2012; Field, 2013). Based on the parametric properties of each item, as seen in Table 25, items 1, 2, 10, 12, 21, 29, and 30 were removed from further statistical analyses. These did not meet the assumption of normal distribution required for factor analysis.
Table 25

Pre-factor Analysis Descriptive Statistics for All Survey Items ($n = 284$)

<table>
<thead>
<tr>
<th>Item No.</th>
<th>$M$</th>
<th>$Mdn$</th>
<th>$SD$</th>
<th>Kurtosis</th>
<th>Skew</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6.03</td>
<td>6</td>
<td>1.15</td>
<td>3.50</td>
<td>-1.76</td>
</tr>
<tr>
<td>2</td>
<td>6.04</td>
<td>6</td>
<td>1.05</td>
<td>3.54</td>
<td>-1.66</td>
</tr>
<tr>
<td>3 RC</td>
<td>3.87</td>
<td>4</td>
<td>1.77</td>
<td>-1.11</td>
<td>.08</td>
</tr>
<tr>
<td>4</td>
<td>5.30</td>
<td>6</td>
<td>1.39</td>
<td>.65</td>
<td>-.99</td>
</tr>
<tr>
<td>5 RC</td>
<td>4.29</td>
<td>4</td>
<td>1.92</td>
<td>-1.26</td>
<td>-.15</td>
</tr>
<tr>
<td>6 RC</td>
<td>4.80</td>
<td>5</td>
<td>1.79</td>
<td>-.89</td>
<td>-.52</td>
</tr>
<tr>
<td>7 RC</td>
<td>5.08</td>
<td>6</td>
<td>1.61</td>
<td>- .24</td>
<td>-.74</td>
</tr>
<tr>
<td>8</td>
<td>5.19</td>
<td>6</td>
<td>1.79</td>
<td>-.27</td>
<td>-.92</td>
</tr>
<tr>
<td>9</td>
<td>5.70</td>
<td>6</td>
<td>1.23</td>
<td>.95</td>
<td>-1.11</td>
</tr>
<tr>
<td>10</td>
<td>5.89</td>
<td>6</td>
<td>1.15</td>
<td>3.31</td>
<td>-1.57</td>
</tr>
<tr>
<td>11</td>
<td>5.194</td>
<td>6</td>
<td>1.50</td>
<td>.43</td>
<td>-.99</td>
</tr>
<tr>
<td>12</td>
<td>5.69</td>
<td>6</td>
<td>1.37</td>
<td>2.14</td>
<td>-1.50</td>
</tr>
<tr>
<td>13 RC</td>
<td>5.27</td>
<td>6</td>
<td>1.85</td>
<td>-.38</td>
<td>-.93</td>
</tr>
<tr>
<td>14 RC</td>
<td>5.04</td>
<td>6</td>
<td>1.81</td>
<td>-.82</td>
<td>-.64</td>
</tr>
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<td>15 RC</td>
<td>4.95</td>
<td>6</td>
<td>1.75</td>
<td>-.68</td>
<td>-.62</td>
</tr>
<tr>
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<td>5.07</td>
<td>5</td>
<td>1.41</td>
<td>.13</td>
<td>-.69</td>
</tr>
<tr>
<td>17 RC</td>
<td>3.67</td>
<td>3</td>
<td>1.82</td>
<td>-.99</td>
<td>.32</td>
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<tr>
<td>18</td>
<td>4.83</td>
<td>5</td>
<td>1.60</td>
<td>-.41</td>
<td>-.67</td>
</tr>
<tr>
<td>19 RC</td>
<td>5.41</td>
<td>6</td>
<td>1.57</td>
<td>.14</td>
<td>-1.03</td>
</tr>
<tr>
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<td>1.73</td>
<td>-.80</td>
<td>-.66</td>
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<td>1.26</td>
<td>2.70</td>
<td>-1.57</td>
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<td>5.21</td>
<td>6</td>
<td>1.33</td>
<td>.73</td>
<td>-.97</td>
</tr>
<tr>
<td>23 RC</td>
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<td>1.98</td>
<td>-1.22</td>
<td>-.38</td>
</tr>
<tr>
<td>24 RC</td>
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<td>.07</td>
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</tr>
<tr>
<td>25 RC</td>
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<td>-0.51</td>
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<td>1.82</td>
<td>-1.35</td>
</tr>
<tr>
<td>27</td>
<td>5.43</td>
<td>6</td>
<td>1.36</td>
<td>0.88</td>
<td>-1.09</td>
</tr>
<tr>
<td>28 RC</td>
<td>3.47</td>
<td>3</td>
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<td>-0.76</td>
<td>0.40</td>
</tr>
<tr>
<td>29</td>
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<td>1.13</td>
<td>2.05</td>
<td>-1.12</td>
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<td>30</td>
<td>5.83</td>
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<td>1.16</td>
<td>3.46</td>
<td>-1.58</td>
</tr>
<tr>
<td>31</td>
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<td>1.37</td>
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<td>-0.91</td>
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<tr>
<td>32</td>
<td>4.70</td>
<td>5</td>
<td>1.68</td>
<td>-0.44</td>
<td>-0.65</td>
</tr>
<tr>
<td>33 RC</td>
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<td>-0.96</td>
<td>-0.56</td>
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<tr>
<td>34 RC</td>
<td>5.78</td>
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<td>1.52</td>
<td>1.85</td>
<td>-1.58</td>
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<tr>
<td>35 RC</td>
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<td>6</td>
<td>1.51</td>
<td>0.53</td>
<td>-1.14</td>
</tr>
<tr>
<td>36</td>
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<td>1.45</td>
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<tr>
<td>37</td>
<td>5.22</td>
<td>6</td>
<td>1.47</td>
<td>0.09</td>
<td>-0.80</td>
</tr>
<tr>
<td>38 RC</td>
<td>5.07</td>
<td>6</td>
<td>1.85</td>
<td>-0.76</td>
<td>-0.65</td>
</tr>
<tr>
<td>39</td>
<td>5.38</td>
<td>6</td>
<td>1.33</td>
<td>0.78</td>
<td>-0.94</td>
</tr>
<tr>
<td>40</td>
<td>4.42</td>
<td>5</td>
<td>1.85</td>
<td>-1.10</td>
<td>-0.30</td>
</tr>
<tr>
<td>41</td>
<td>5.42</td>
<td>6</td>
<td>1.47</td>
<td>1.42</td>
<td>-1.30</td>
</tr>
</tbody>
</table>

*Note.* The SE of kurtosis = 0.29; SE of skew = 0.14.

**Research Question 1**

In this section, the results for RQ1 are provided (What are the underlying dimensions of the International Student Safety Questionnaire?).

**Preliminary Analyses**

In this section, the steps taken prior to rotating the factor matrix are summarized. These included an analysis of the initial reliability, intercorrelations, and assumptions underlying SPSS’s principal axis factoring (i.e., principal factor analysis).
**Initial reliability analysis.** To determine whether the 41 items represented an internally consistent measure, the researcher computed reliability statistic for the overall scale, generating a Cronbach’s alpha of 0.88. In the item-overall scale correlations, there was no item that would significantly improve the Cronbach’s alpha, if deleted. However, based on an examination of kurtosis and visual inspection of the QQ plot, seven items (items 1, 2, 10, 12, 21, 29, 30) were deleted due to excessive skewness, lowering the overall alpha to 0.86. Therefore, the researcher decided to compute the factor analysis without those 7 items, that is, on only 34 items.

**Correlational analyses.** An analysis of the inter-item Pearson Product correlations demonstrated low-to-high associations between almost all items, ranging from 0.30 to 0.63. Items 17 RC (Experienced period of loneliness) and 28 RC (Comfortable being by myself than in large groups) did not correlate with any of the other items within this acceptable range 0.30-0.80. However, the researcher decided to include them in the initial rotation to assess their suitability for the factor analysis. In summary, the magnitude of the correlations among the items was sufficient to warrant factor analysis.

**Verifying assumptions.** In verifying assumptions prior to rotated solution, the results of the Bartlett’s Test of Sphericity, $B(561) = 3,310.76, p < 0.000$ and a Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO = .807) were computed. This latter finding indicated that the correlation matrix was favorable and not an identity matrix (determinant = $9.599E-8$). The Bartlett’s Test compares the correlation matrix to the identity matrix to determine whether there was a certain redundancy between the variables. If the items are highly correlated, only one factor is most likely sufficient. Based on the Bartlett’s Test, the null hypothesis that there were non-significant differences between items was rejected. This finding suggests that there is potential in the model to measure multiple constructs. A KMO value of .81 indicates meritorious value of common variance (Field, 2013)
**Unrotated solution.** The Kaiser (Kaiser, 1960) criterion and identified factors that are greater than 1 were examined. A total of 58.14% of the variance was explained by 8 factors with eigenvalues that were greater than one. To further identify potential meaningful factors the scree plot was examined. However, a total of four factors had eigenvalues that accounted for more than 5% of the variance. In addition, four factors explained total of 42.25% of the variance. Inspection of Cattell’s scree test (see Figure 1) supported the appropriateness of rotating these four factors, i.e. the bend in the elbow occurred after four factors.

![Scree Plot](image)

*Figure 1. Scree Plot based on Principal Component Analysis (PCA) with 34 items.*

Researcher also conducted parallel analysis (see Figure 2), a more rigorous method, in which each eigenvalue (which represents the size of the factor) was compared against an eigenvalue for the corresponding factor in many randomly generated data sets that have the same characteristics as the data being analyzed (Field, 2013). In doing so, each eigenvalue is being
compared to an eigenvalue from a data set that has no underlying factors. Thus, eigenvalues from
the factor analysis are compared with the eigenvalues from the parallel analysis, and eigenvalues
for the 5th and subsequent components (factors) were nearly equal, indicating eigenvalues of this
magnitude could have been derived from a random sample of data. Therefore, only four factors
were retained for further analysis. Cattell’s scree test matched the above results, while Kaiser’s
rule would have retained eight. Thus, researcher decided to rotate these four factors based on the
results of visual inspection of Cattell’s scree test, the accounted percentage of variance and the
results from the parallel analysis.

Figure 2. Eigenvalue Comparison between Factor Analysis (FA) and Parallel Analysis (PA)

Initially, both principal component analysis (PCA) and principal (factor) axis analysis
(PAF or PFA) were conducted on the data set with the 34 items that met the normal distribution
standard for EFA. The items examined for high and low factor loadings, and .35 was set as the
minimum acceptable factor loading (Comrey & Lee, 1992; Mvududu & Sink, 2013).
Rotation results. Researcher compared varimax rotations (i.e., a form of orthogonal rotation that rotates in 90˚ angles) for both PCA and PFA, and found similar variance in the models. This similarity between the PCA and PFA results suggests that both approaches represent a coherent and interpretable factor structure. However, PFA is especially well-suited for determining potential latent constructs in the data set and provides a more accurate estimate of the item correlations.

According to Field (2013) oblimin rotation (i.e., a form of oblique rotation that rotates the eigenvectors in less than 90˚ angles) should be used when there is an expected correlation between factors. Since the items were developed based on the three dimensions (i.e., physical and sexual safety, social and emotional safety, and learning environment and academic support), the researcher expected some correlation between factors. Furthermore, oblimin rotation was conducted as it is appropriate for the current data set, because it is logical to assume that factors are correlated given the subjective nature participants’ perceptions and experiences.

Based on a visual inspection of the oblimin rotation matrices using a PFA four-factor structure, the researcher selected the pattern rotation matrix for it provided the best interpretation of the factor structure with the least evidence of cross-loadings. Communalities were reasonably strong, ranging from about 0.3 to 0.8, except for five items: Item 3 RC (generally stressed easily), Item 17 RC (experienced period of loneliness), Item 18 (approach others when feeling homesickness and loneliness), Item 26 (fluent in English), and Item 28 RC (Comfortable being by myself than in large groups). These items failed to load sufficiently on any factor at the minimum level of 0.35. These items were deleted from the data set, leaving 29 items. After deleting the above mentioned five items, the resulting factor structure accounted for 45.69% of the total variance.
Table 26

Oblimin-rotated Component Structure (Pattern Matrix) based on Principal Axis Factor Analysis (34 items)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS19RC: Not treated fairly by American classmates</td>
<td>.70</td>
<td>-.10</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>IS7RC: American classmates judged negatively</td>
<td>.66</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS35RC: Viewed as less intelligent in the classroom</td>
<td>.64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS13RC: Not treated fairly by university staff</td>
<td>.51</td>
<td>-.10</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>IS15RC: Viewed differently due to my appearance, dressing style, etc.</td>
<td>.48</td>
<td>-.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS38RC: Fear that reporting a crime on/around campus might impact visa</td>
<td>.47</td>
<td>-.14</td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td>IS20RC: Struggle forming friendships with people outside of my culture due to language difficulty</td>
<td>.46</td>
<td>.34</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS6RC: Heard people on campus make unkind remarks about IS</td>
<td>.43</td>
<td>-.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS33RC: Experience academic challenges because of English</td>
<td>.43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS34RC: Sad person</td>
<td>.42</td>
<td>.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS23RC: General hostility on campus towards IS</td>
<td>.35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS17RC: Experience periods of loneliness as a student</td>
<td>.27</td>
<td>.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS16: Make friends easily</td>
<td></td>
<td></td>
<td>.77</td>
<td></td>
</tr>
<tr>
<td>IS22: Social person</td>
<td>.64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS31: Make friends with American students</td>
<td>.59</td>
<td>.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS32: Participate in social activities (clubs and/or groups)</td>
<td>-.12</td>
<td>.51</td>
<td>.22</td>
<td></td>
</tr>
<tr>
<td>IS11: Generally a relaxed person.</td>
<td></td>
<td>.41</td>
<td>-.21</td>
<td></td>
</tr>
<tr>
<td>IS25RC: Viewed as more intelligent in the classroom because IS</td>
<td>.26</td>
<td>-.37</td>
<td>-.13</td>
<td></td>
</tr>
<tr>
<td>IS26: Fluent in English</td>
<td>.20</td>
<td>.31</td>
<td>.11</td>
<td>.28</td>
</tr>
<tr>
<td>IS3RC: Generally someone who gets stressed easily</td>
<td>.19</td>
<td>.29</td>
<td>-.29</td>
<td>-.26</td>
</tr>
<tr>
<td>IS28RC: Comfortable being by myself than in large groups</td>
<td>.23</td>
<td>.24</td>
<td>-.12</td>
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<tr>
<td>IS9: Campus is a safe place</td>
<td></td>
<td>-.74</td>
<td>.24</td>
<td></td>
</tr>
<tr>
<td>IS8: Comfortable walking around campus any time of day</td>
<td>-.14</td>
<td>-.70</td>
<td>.27</td>
<td></td>
</tr>
<tr>
<td>IS14RC: Fear of being physically attacked on/around campus</td>
<td>.26</td>
<td>-.69</td>
<td></td>
<td></td>
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<tr>
<td>IS5RC: Fear of being robbed</td>
<td>.15</td>
<td>.12</td>
<td>-.57</td>
<td>-.20</td>
</tr>
<tr>
<td>IS24RC: Fear of being sexually assaulted on/around campus</td>
<td>.43</td>
<td>-.10</td>
<td>-.49</td>
<td></td>
</tr>
<tr>
<td>IS40: Don't fear walking in the areas outside of campus</td>
<td></td>
<td>-.48</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>IS36: Aware of who to contact for help if a crime on/around campus</td>
<td>.12</td>
<td>.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IS39: Comfortable using student support services when experiencing difficulty</td>
<td></td>
<td></td>
<td>.56</td>
<td></td>
</tr>
</tbody>
</table>
IS41: Aware of the student support services on campus       .53
IS27: Speak with profs about my challenges as an international .11       .52
IS37: Aware of what to do to protect myself if a crime on/around campus       -.21       .49
IS4: Belong in my classes       .17       .39
IS18: Approach others when feeling homesickness and loneliness       .28       .30

Note. Missing information indicates that the factor loading was < .10; RC = reverse code.

In an effort to further refine the factor structure, another PFA was computed on 29 items. Again, communalities were reasonably strong, ranging from about 0.3 to 0.8, except for three items: Item 4 (belong in class), Item 23 RC (hostility on campus), and Item 25 RC (viewed as more intelligent). These items did not load sufficiently on any factor (i.e., their loadings did not meet the minimum acceptable factor loading of 0.35). In addition, Item 20 RC (struggle forming friendships with people outside culture due to language difficulties) cross-loaded on two factors with relatively moderate loadings (i.e., 0.49 and 0.39); however, Item 20 RC was retained, as it captured language and communication difficulties experienced by international students.

Finally, the researcher computed the PFA without the above mentioned three items. With 26 items, a reasonably clear factor pattern and the loadings were interpretable. Each of the 26 items representing the four factors and their factor loadings are presented in Table 27. Factor 1 was represented by 10 items, labeled as, campus environment, with loadings ranging from .39 to .71. Factor 2 was represented by 5 items, labeled as, social and emotional safety, with loadings ranging from .35 to .85. Factor 3 was represented by 6 items, labeled as, physical and sexual safety, with loadings ranging from .48 to .72. Factor 4 was represented by 5 items, labeled as, campus support, with loadings ranging from .48 to .62.
Table 27

Summary of PFA Pattern Matrix (Direct Oblimin Rotation) for 26-Item Inventory

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Campus Environment (10 items)</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>19RC: Not treated fairly by American classmates</td>
<td>.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7RC: American classmates judged negatively</td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35RC: Viewed as less intelligent in the classroom</td>
<td>.65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13RC: Not treated fairly by university staff</td>
<td>.53</td>
<td>.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15RC: Viewed differently due to my appearance, dressing, etc.</td>
<td>.52</td>
<td>-.16</td>
<td>-.11</td>
<td></td>
</tr>
<tr>
<td>20RC: Struggle forming friendships with people outside of my culture due to language difficulty</td>
<td>.47</td>
<td>.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6RC: Heard people on campus make unkind remarks about IS</td>
<td>.46</td>
<td>-.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38RC: Fear that reporting a crime on/around campus might impact visa</td>
<td>.46</td>
<td>.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34RC: Sad person</td>
<td>.42</td>
<td>.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33RC: Experience academic challenges because of English</td>
<td>.39</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social and Emotional Safety (5 items)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16: Make friends easily</td>
<td>.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22: Social person</td>
<td>.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31: Make friends with American students</td>
<td>.63</td>
<td>.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32: Participate in social activities (clubs and/or groups)</td>
<td>-.10</td>
<td>.52</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>11: Generally a relaxed person.</td>
<td>.35</td>
<td>-.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physical and Sexual Safety (6 items)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9: Campus is a safe place</td>
<td></td>
<td>-.72</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>8Comfortable walking around campus any time of day</td>
<td>-.14</td>
<td>-.72</td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td>14RC: Fear of being physically attacked on/around campus</td>
<td>.28</td>
<td>-.71</td>
<td>-.17</td>
<td></td>
</tr>
<tr>
<td>5RC: Fear of being robbed</td>
<td>.16</td>
<td>.13</td>
<td>-.58</td>
<td>-.22</td>
</tr>
<tr>
<td>40: Don't fear walking in the areas outside of campus</td>
<td></td>
<td>-.48</td>
<td>.13</td>
<td></td>
</tr>
<tr>
<td>24RC: Fear of being sexually assaulted on/around campus</td>
<td>.42</td>
<td>-.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Campus Support (5 items)</strong></td>
<td></td>
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<td></td>
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<tr>
<td>36: Aware of who to contact for help if a crime on/around campus</td>
<td>.11</td>
<td></td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>39: Comfortable using student support services when experiencing difficulty</td>
<td>.12</td>
<td></td>
<td>.56</td>
<td></td>
</tr>
<tr>
<td>41: Aware of the student support services on campus</td>
<td></td>
<td></td>
<td>.55</td>
<td></td>
</tr>
<tr>
<td>37: Aware of what to do to protect myself if a crime on/around campus</td>
<td>-1.8</td>
<td>.54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27: Speak with pros about my challenges</td>
<td>.12</td>
<td></td>
<td>.48</td>
<td></td>
</tr>
</tbody>
</table>

*Note. Bolded items are mark the factor; blank matrix cells indicate a factor loading less than .10.*
The correlation matrix was reproduced to verify the factor solution. The content of the items in the four factors resembled those outlined in the literature review, and were labeled as: campus environment, social and emotional safety, physical and sexual safety, and campus support. These four factors initially accounted for 42.25% of the total variance. However after deleting the above mentioned eight items [Item 3 RC (generally stressed easily), Item 17 RC (experienced period of loneliness), Item 18 (approach others when feeling homesickness and loneliness), Item 26 (fluent in English), and Item 28 RC (Comfortable being by myself than in large groups), Item 4 (belong in class), Item 23 RC (hostility on campus), and Item 25 RC (viewed as more intelligent)], it accounted for 48.65% of the total variance in the correlation matrix. The range of correlations between derived factors for the oblique rotation was between .10 and .32 (see Table 28). In summary, an exploratory factor analysis of the questionnaire’s items produced an interpretable 4-factor simple structure.

Table 28

<table>
<thead>
<tr>
<th>Final Factor Inter-Correlation Matrix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
</tbody>
</table>

Research Question 2

The results for RQ2 (Does the ISSQ questionnaire possess adequate internal consistency are summarized here.

Reliability of Factors

Overall, the 26-item inventory generated a Cronbach alpha was 0.85. Alpha coefficients were computed on the specific items comprising each derived factor. Factor 1 (campus environment) produced a Cronbach’s alpha of .80. The reliability of factor 2 (social and
emotional safety) was adequate (alpha = .75). The reliability coefficient for factor 3 (physical and sexual safety) was Cronbach’s alpha of .81. Factor 4 (campus support) yielded a reliability coefficient of .72. Across each factor, deleting specific items would not substantially improve the dimension’s reliability. Therefore, the internal consistency of each derived factor was adequate, ranging from .72 to .81. In summary, the resulting factor structure demonstrated both acceptable internal consistency and factorial validity.

**Research Question 3**

In this section, results for RQ3 (Are there differences between levels of the salient demographic variables on derived factor scores?) are provided. Multivariate analysis of variance (MANOVA) was utilized. The selected demographic factors of gender, nationality, faith belief, college status, and perceived proficiency in English with multiple levels were the independent variables. The variable age was replaced with college status, as it was found to be more indicative of participants’ experiences with campus safety. In addition, the researcher removed ethno-racial identity due to redundancy with nationality and level of cultural adaptation due to substantial negative skew (i.e., about 80% of the sample reported feeling fairly or extremely well adapted). The ISSQ factor scores were entered as dependent variables. A Bonferroni correction was used to limit family-wise error in the multiple comparisons to .01 (as five MANOVAs were conducted). Mean differences and standard deviations of demographic variables of interest are reported below.

**ISSQ factor scores and nationality/region.** To obtain relatively equal sample sizes for levels of nationality/region, this variable was collapsed into three categories: India (n = 96), Asia (all countries in Asia, except for India; n = 78), and other non-European regions of the world (n = 80), including the Middle East, Africa, South America, and the Caribbean islands. Homogeneity of variance cannot be assumed in the present sample, as indicated by the
significant Box’s $M$ statistic ($\text{Box’s } M = 82.06, p < .006$). The MANOVA found a statistically significant difference in ISSQ factor scores and nationality ($\text{Wilks’ } \lambda = .91, F [8, 490] = 2.90, p < .004, \eta^2 = .05$). Gender ($\text{Wilks’ } \lambda = .96, F [4, 285] = 2.44, p > .01$) and the interaction effects (between nationality/religion and gender) were nonsignificant ($\text{Wilks’ } \lambda = .95, F [8, 490] = 1.63, p > .01$). After Bonferroni correction was made, factor 1 ($p < .00$) and factor 4 ($p < .01$) were the most important variables of the four scales in distinguishing nationality. Specifically, Indian participants scored the highest on all four scales of the ISSQ.

The MANOVA was followed up with discriminant function analysis (DFA), which revealed two discriminant functions. The first explained 88.7% of the variance, canonical $R^2 = .31$, whereas the second explained only 11.3%, canonical $R^2 = .12$. In combination these discriminant functions significantly differentiated the nationality/region groups, Wilks’ $\lambda = 0.89, \chi^2(8) = 29.68, p < .00$. After removing the first function, the second function did not significantly differentiate the nationality/region groups, Wilks’ $\lambda = 0.99, \chi^2 (3) = 3.50, p > .05$.

The correlations between outcomes and the discriminant functions revealed that factor 1 ($r = .86$) and factor 3 ($r = .72$) loaded highly on the first function; whereas factor 4 loaded more highly on the second function ($r = .71$) than the first function ($r = .60$). However, factor 2 did not load highly on either the first function ($r = .38$) nor the second function ($r = .25$). The mean discriminant scores on the first function revealed that Indian participants ($r = .41$) scored higher in the positive direction, in comparison to participants that identified as non-Indian Asian ($r = - .35$) and other non-White participants ($r = -.14$).
Table 29

*Eigenvalues and Wilks’ λ for Canonical Discriminant Function Analysis (Nationality/Region)*

<table>
<thead>
<tr>
<th>Function</th>
<th>Eigenvalue</th>
<th>% of Variance</th>
<th>Cumulative %</th>
<th>Canonical Correlation</th>
<th>Wilks' Lambda</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.11(^a)</td>
<td>88.7</td>
<td>88.7</td>
<td>.31</td>
<td>.89</td>
<td>8</td>
<td>.00</td>
</tr>
<tr>
<td>2</td>
<td>.01(^a)</td>
<td>11.3</td>
<td>100.0</td>
<td>.12</td>
<td>.99</td>
<td>3</td>
<td>.32</td>
</tr>
</tbody>
</table>

*Note.* \(^a\)First 2 canonical discriminant functions were used in the analysis.

Table 30

*Structure Matrix for Canonical Discriminant Function Analysis (Nationality/Region)*

<table>
<thead>
<tr>
<th>Factor 1</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>.86(^*)</td>
<td>-.45</td>
</tr>
<tr>
<td>Factor 3</td>
<td>.72(^*)</td>
<td>.09</td>
</tr>
<tr>
<td>Factor 2</td>
<td>.38(^*)</td>
<td>.25</td>
</tr>
<tr>
<td>Factor 4</td>
<td>.60</td>
<td>.71(^*)</td>
</tr>
</tbody>
</table>

*Note.* \(^*\)Largest absolute correlation between each variable and any discriminant function

**ISSQ factor scores and faith belief.** To obtain relatively equal sample sizes for the levels of faith belief, this variable was collapsed into four categories: Christianity (\(n = 52\)), Hinduism (\(n = 69\)), Islam (\(n = 64\)), and Atheist/Agnostic (\(n = 62\)). Homogeneity of variance cannot be assumed in the present sample, as indicated by the significant Box’s \(M\) statistic (Box’s \(M = 95.52, p < .05\)). The MANOVA found a statistically significant difference in ISSQ factor scores and faith belief (Wilks’ λ = .90, \(F[12, 624] = 2.12, p < .01\), \(ηp^2 = .03\)). Gender (Wilks’ λ = .95, \(F[4, 236] = 2.94, p > .01\)) and interaction effects (between faith belief and gender) were nonsignificant (Wilks’ λ = .95, \(F[12, 624] = .97, p > .01\)). After the Bonferroni correction was made, factor 4 (campus support; \(p < .05\)) was the most important variable of the four scales in distinguishing faith belief. Specifically, participants who identified as Hindu scored the highest
on factor 1 (campus environment) and factor 4 (campus support), whereas participants who identified as Christians scored the highest on factor 2 (social and emotional safety) and factor 3 (physical and sexual safety).

The MANOVA was followed up with a DFA, which revealed three discriminant functions. The first explained 62.6% of the variance, canonical $R^2 = .25$, the second explained 36.2% of the variance, canonical $R^2 = .20$, whereas the third explained only 1.2%, canonical $R^2 = .04$. In combination these discriminant functions significantly differentiated the faith belief groups, Wilks’ $\lambda = 0.90$, $\chi^2 (12) = 25.85, p < .01$. Following the removal of the first function, the second function did not significantly differentiate the faith belief groups, Wilks’ $\lambda = 0.96$, $\chi^2 (6) = 9.75, p > .05$, and removing the first and second function, the third function did not significantly differentiate the faith belief groups, Wilks’ $\lambda = 1.00$, $\chi^2 (2) = .32, p > .05$. The correlations between outcomes and the discriminant functions revealed that factor 4 ($r = .72$) loaded highly on the first function; whereas factor 3 ($r = .73$), factor 2 ($r = .72$), and factor 1 ($r = .64$), loaded more highly on the second function than the first function. The mean discriminant scores on the first function revealed that Hindu participants ($r = .41$) scored higher in the positive direction, in comparison to participants that identified with Christianity ($r = -.40$), Islam ($r = - .10$), and others who identified as Atheist/Agnostic ($r = .09$).

Table 31

*Eigenvalues and Wilks’ $\lambda$ for Canonical Discriminant Function Analysis (Faith Belief)*

<table>
<thead>
<tr>
<th>Function</th>
<th>Eigenvalue</th>
<th>% of Variance</th>
<th>Cumulative %</th>
<th>Canonical Correlation</th>
<th>Wilks’ Lambda</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.07$^a$</td>
<td>62.60</td>
<td>62.60</td>
<td>.25</td>
<td>.90</td>
<td>12</td>
<td>.01</td>
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<tr>
<td>2</td>
<td>.04$^a$</td>
<td>36.19</td>
<td>98.79</td>
<td>.20</td>
<td>.96</td>
<td>6</td>
<td>.14</td>
</tr>
<tr>
<td>3</td>
<td>.00$^a$</td>
<td>1.21</td>
<td>100.0</td>
<td>.04</td>
<td>1.00</td>
<td>2</td>
<td>.85</td>
</tr>
</tbody>
</table>

Note. $^a$First 3 canonical discriminant functions were used in the analysis.
Table 32

Structure Matrix for Canonical Discriminant Function Analysis (Faith Belief)

<table>
<thead>
<tr>
<th>Function</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 4</td>
<td>.72*</td>
<td>.38</td>
<td>-.02</td>
</tr>
<tr>
<td>Factor 3</td>
<td>.00</td>
<td>.73*</td>
<td>-.68</td>
</tr>
<tr>
<td>Factor 2</td>
<td>-.23</td>
<td>.72*</td>
<td>.46</td>
</tr>
<tr>
<td>Factor 1</td>
<td>.48</td>
<td>.64*</td>
<td>.03</td>
</tr>
</tbody>
</table>

Note. *Largest absolute correlation between each variable and any discriminant function

**ISSQ factor scores and college status.** To obtain relatively equal sample sizes for the levels of college status, this variable was collapsed into three categories: Undergraduate students ($n = 62$), Master’s level students ($n = 102$), and Doctoral level students ($n = 99$). Homogeneity of variance cannot be assumed in the present sample, as indicated by the significant Box’s $M$ statistic (Box’s $M = 72.54$, $p < .03$). The MANOVA found a statistically significant difference in ISSQ factor scores and college status (Wilks’ $\lambda = .86$, $F [8, 508] = 5.08$, $p < .00$, $\eta^2 = .07$). Gender (Wilks’ $\lambda = .96$, $F [4, 254] = 2.81$, $p > .01$) and interaction effects (between college status and gender) were nonsignificant (Wilks’ $\lambda = .93$, $F [8, 508] = 2.38$, $p > .01$). After Bonferroni correction was made, factor 1 (campus environment; $p < .00$) and factor 3 (physical and sexual safety; $p < .00$) were the most important variables of the four scales in distinguishing college status. Specifically, participants who identified as Master’s level students scored the highest on all scales, except for one. Participants who identified as undergraduate students, scored slightly higher on factor 2 (social and emotional safety), in comparison to Master’s level students.

The MANOVA was followed up with a DFA, which revealed two discriminant functions. The first explained 59% of the variance, canonical $R^2 = .28$, whereas the second explained 41%, canonical $R^2 = .24$. In combination these discriminant functions significantly differentiated the
college status groups, Wilks’ $\lambda = 0.87$, $\chi^2 (8) = 37.06$, $p < .00$. After removing the first function, second function also significantly differentiate the college status groups, Wilks’ $\lambda = 0.94$, $\chi^2 (3) = 15.31$, $p < .00$. The correlations between outcomes and the discriminant functions revealed that Factor 1 loaded highly on the first function ($r = .97$); whereas Factor 3 ($r = .79$), Factor 2 ($r = .40$), and Factor 4 ($r = .33$), loaded more highly on the second function than the first function. The mean discriminant scores on the first function revealed that Master’s level participants ($r = .34$) scored higher in the positive direction, in comparison to undergraduate student ($r = -.40$) and doctoral student ($r = -.10$).

Table 33

*Eigenvalues and Wilks’ $\lambda$ for Canonical Discriminant Function Analysis (College Status)*

<table>
<thead>
<tr>
<th>Function</th>
<th>Eigenvalue</th>
<th>% of Variance</th>
<th>Cumulative %</th>
<th>Canonical Correlation</th>
<th>Wilks’ Lambda</th>
<th>df</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.09</td>
<td>59.0</td>
<td>59.0</td>
<td>.28</td>
<td>.87</td>
<td>8</td>
<td>.00</td>
</tr>
<tr>
<td>2</td>
<td>.06</td>
<td>41.0</td>
<td>100.0</td>
<td>.24</td>
<td>.94</td>
<td>3</td>
<td>.00</td>
</tr>
</tbody>
</table>

*Note.* First 2 canonical discriminant functions were used in the analysis.

Table 34

*Structure Matrix for Canonical Discriminant Function Analysis (College Status)*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Function</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1</td>
<td>.97</td>
<td>-.13</td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>.58</td>
<td>.79*</td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>.11</td>
<td>.40*</td>
<td></td>
</tr>
<tr>
<td>Factor 4</td>
<td>.15</td>
<td>.33*</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *Largest absolute correlation between each variable and any discriminant function
**ISSQ factor scores and perceived proficiency in English.** To obtain relatively equal sample sizes for the levels of perceived proficiency in English, this variable was collapsed into two categories: Low to Moderate \((n = 106)\), and High \((n = 175)\). Homogeneity of variance cannot be assumed in the present sample, as indicated by the significant Box’s \(M\) statistic (Box’s \(M = 70.70, p < .00\)). The MANOVA found a statistically significant difference in ISSQ factor scores and perceived proficiency in English \((\text{Wilks’ } \lambda = .91, F [4, 274] = 6.40, p < .00, \eta^2 = .09)\). Gender \((\text{Wilks’ } \lambda = .96, F [4, 274] = 3.03, p > .01)\) and interaction effects (between perceived proficiency in English and gender) were nonsignificant \((\text{Wilks’ } \lambda = .97, F [4, 274] = 2.25, p > .01)\). After Bonferroni correction was made and factor 1 (campus environment; \(p < .00\)) and factor 2 (social and emotional safety; \(p < .01\)) were the most important variables of the four scales in distinguishing perceived proficiency in English. Specifically, participants who perceived their proficiency in English as “High” scored the highest on all four scales of the ISSQ.

In summary, the null hypothesis was rejected (i.e., the main effects for salient demographic variables on derived factor scores will be nonsignificant). Nonsignificant interaction effects between salient demographic variables and gender on derived factor scores were consistently found.

**Research Question 4**

The findings related to research question 4 (What is the strength of association between personality variables [extraversion, openness, and neuroticism] and derived factor scores?) are reported next.

**Extraversion**

Pearson’s correlation coefficients were computed between item 22 (“I am usually a social person”), as the predictor of extraversion in the survey, and the four factor scores. As expected
there was a significant positive relationship between item 22 ("I am usually a social person") and factor 2 (social and emotional safety), as it was one of the items in this scale, $r = .73, p < .01$.

Item 22 ("I am usually a social person") was found to have a significant weak relationship with factor 4 (campus support), $r = .15, p < .05$.

**Openness**

Pearson’s correlations were computed between item 11 ("I am mostly a sad person generally a relaxed person"), as the predictor of openness in the survey, and the four factor scores. As anticipated, there was a significant positive relationship between item 11 ("I am generally a relaxed person") and factor 2 (social and emotional safety), as it was one of the items in this subscale, $r = .57, p < .01$. Item 11 ("I am generally a relaxed person") was found to have a significant positive relationship with factor 3 (physical and sexual safety), $r = .16, p < .01$, and factor 4 (campus support), $r = .16, p < .01$.

**Neuroticism**

Pearson’s correlations were computed between item 34 ("I am mostly a sad person"), as the predictor of neuroticism in the survey, and the four factor scores. As expected there was a significant positive relationship between item 34 ("I am mostly a sad person") and factor 1 (campus environment), as it was one of the items in this scale, $r = .50, p < .01$. Additionally, item 34 ("I am mostly a sad person") was found to have a significant positive relationship with factor 2 (social and emotional safety), $r = .17, p < .01$, and factor 3 (physical and sexual safety), $r = .18, p < .01$.

In summary, significant positive correlations were found between personality dimensions and the four scales of the ISSQ, indicating that the null hypothesis could not be confirmed (i.e., nonsignificant relationships between derived factor scores and personality dimensions will be found).
Overall Summary

In this chapter, the results from the data analyses were reported. Exploratory factor analysis (PFA) yielded the 4-factor solution for the 26-item ISSQ, accounting for 48.65% of the shared variance. Additionally, the ISSQ was found to have adequate scale reliability scores, ranging from .72 to .81. There were significant main effects of the salient demographic variables (nationality, gender, faith belief, college status and perceived proficiency in English) on the derived factor scores of the ISSQ. However, the interaction effects were found to be nonsignificant. Lastly, significant correlations were found between personality variables and the derived factor scores/dimensions of the ISSQ. In the following chapter, the results, limitations of the study, implications for practice, and suggestions for future research are discussed.
CHAPTER 5
DISCUSSION

To restate, the primary purpose of this study was to develop an instrument that is valid and reliable in measuring the construct of campus safety for international students in the US. In addition, the study aimed at examining the possible relationships between the demographic and personality variables and the subscales of the instrument. In this chapter, the researcher discusses the major findings related to (a) population demographics, (b) the incidence rates based on the 12 experiential items, and (c) the four research questions. The results are contextualized within the campus safety literature associated with international students. Implications for educators, student advisors, and college counselors working with international students are provided. The findings should help create a safer social and academic environment for international students. In closing, the study’s limitations and suggestions for future research are summarized.

Population Demographics

Data collection produced a sample of 323 participants, representing 75 countries around the world on six continents. The participants also spanned 30 states, plus Washington, D.C. Overall, these demographic statistics were fairly representative of the international student population in the US, as majority come from Asian countries, are equally represented by males and females, are between 18-30 years of age, and attend institutions in urban areas of the US (IIE, 2015).

About one-third of the international students who took the inventory indicated that they were Indian. This percentage is twice as much as compared to what was reported in Institute of International Education (IIE, 2015) document, where about 16% of the total US international student population were Indian. Perhaps the larger representation of Indian international students is due to the researcher’s personal identity as an Indian international student. She held close ties
to the Indian international student community at prior and current colleges. A little less than a third of the sample was from other Asian countries, which is an accurate representation of the international student population in the United States (IIE, 2015).

In regards to gender, there was almost an equal representation of males (53%) and females (46%), only one participant identified as “Other.” This is consistent with national statistics, as there were 45.7% female international undergraduate students as compared to 54.3% male international undergraduate students (IIE, 2015). Additionally, there are fewer female international graduate students (43.3%), as compared to male international graduate students (56.7%) in the US (Statista, 2013).

About half of the participants were between 18-25 years of age and about 78% were 30 years of age or under, which is representative of the traditional college student population in the United States. The majority of the sample consisted of international students pursuing graduate education (master’s 36%, doctoral 35%). However, in 2014-2015 undergraduate international students outnumbered graduate students (IIE, 2015). Additionally, in another study on international students’ confidence and academic success, undergraduate participants formed 38% of the sample, whereas, masters and doctoral students formed 33% and 24%, respectively (Telbis, Helgeson, & Kingsbury, 2014). In short, the current sample did deviate from the national sample of international students, however, the researcher’s personal identity as a graduate (doctoral) student, could have attracted a larger graduate student population.

Participants varied in their faith belief as well, with the majority falling under the three major religions of the world (Christianity, Hinduism, and Islam; Pew Research Center, 2012). Although the current sample (see Table 6) represented a larger Hindu population (about 26%) compared to the world statistics of 15% (Pew Research Center, 2012), this can be explained by the larger Indian population sampled in the current study. India is a country where Hinduism is
the dominant religion (about 80% of the population identifies as Hindu; Census of India, 2011). See Table 6 for the distribution of participant faith belief.

Participants also varied in their length of stay in the US. About a third (30%) of the participants reported that they had been in the US for less than 6 months, thus suggesting that they had only been in the US for one semester or less. Majority of the participants that responded to the ISSQ reported that they had been in the US for less than 5 years (see Table 7). This is similar to the sample examined by Lowinger et al. (2014), as 23% the participants in their study reported that they had been in the US for less than a year, and 43.9% between one to three years. In addition, when comparing the length of stay with the level of adaption and level of perceived proficiency in English, it is interesting to notice that majority of the participants reported that they had adapted fairly or extremely well to the US culture. Only 2.8% reported that they had “not yet adapted” to the US culture (see Table 8). In congruence with participants’ perceived level of cultural adaption, majority of the participants also reported “high” (61.6%) level of proficiency in English (see Table 9).

As to type and location of the institutions attended by participants, about two-thirds of the participants reported attending a 4-year public university. Only 3 participants reported attending community college, which is in line with national statistics (IIE, 2015). Furthermore, the majority of the participants indicated attending institutions in “urban” settings (81%). This percentage is representative as a recent report stating that 85% of international students pursuing a bachelor’s degree or higher, attended college and universities in 118 metro areas in the US (Ruiz, 2014).

Finally, there was a large proportion of international students from the southern region of the US (n = 245, 75.9%). This finding is probably due to the researcher living in Virginia and having more access to Southern universities and colleges.
Experiential Items

The 12 experiential items on the questionnaire yielded prevalence data on campus safety experience of international students, which was lacking in the current US literature. In this study, 10% of the respondents reported experience with theft/robbery on/around campus. This proportion is identical to the one found in Babacan et al. study (2010). However, 10% is much higher than the 0.9% found for full-time equivalent domestic students, as part of the National Center for Education Statistics (U.S. Department of Education, 2016). In addition, 2.5% of the respondents reported experiencing physical harm, which is also higher than the 1.4% found for domestic students (US Department of Education, 2016). Also, about 12% of the respondents reported experiencing verbal threat/attack, which is similar to the prevalence rate in Babacan et al. study (2010) in Australia.

In terms of sexual harassment and assaults, 7.5% of the respondents reported experience with unwanted sexual attention on/around campus, and 7.7% reported experiencing unwanted attention or harassment in the form of stalking. This statistic is much higher than the 4.2% reported for domestic students by the Campus Climate Survey on Sexual Assault and Misconduct (Cantor et. al., 2015). In addition, 6% of the respondents reported experience with emotion and/or physical abuse in a romantic relationship, and 4.6% reported unwanted attention or harassment on the internet by someone on campus. However, in another study with 1,010 female undergraduate and graduate students at a southeastern state university, researchers found that 35.6% of the participants experienced stalking, physical and/or sexual assault (Wilcox, Jordan, & Pritchard, 2007). Participants in the current study could have under-reported experiences with sexual harassment and assault due to cultural factors. In contrast, 4.2% of the respondents reported being forced into sexual contact. This is slightly higher than the 3.3% of
forcible sex offenses reported among full-time equivalent domestic students (U.S. Department of Education, 2016).

Despite the relatively high rates of experiences with physical, verbal and sexual crimes in this study, less than half (40%) of the respondents reported utilizing support services on campus to assist with their challenges. Interestingly, majority of the participants (82%) reported having spoken to someone regarding their academic needs. However, when it came to social-emotional needs and safety, only 14% and 16% of the respondents respectively, reported having spoken to a staff or professor about their concerns. Research supports these results, as international students are more likely to accept medical issues, however find it much harder to accept emotional issues (Forber-Mewett & Sawyer, 2011; Kleinman, 1986).

**International Student Safety Questionnaire**

Although a number of studies have identified personal and environmental factors contributing to international students experiences on college campuses (Baba & Hosoda, 2014; Hendrickson, Rosen, and Aune, 2011; McLachlan & Justice, 2009; Poyrazli & Grahame, 2007; Zhang & Goodson, 2011), at the time of writing, the ISSQ represents the first scale that assesses international students’ experiences of campus safety on US campuses. It included factors other than physical and sexual safety, which have received extensive attention in the literature on campus safety, in understanding the construct of campus safety. The exploratory factor analyses (EFA) conducted on the ISSQ resulted in a four-factor structure. In this section, support is provided for each of the factors based on the current literature on international students.

**Campus Environment**

The first ISSQ scale, campus environment has 10 items, including statements such as, “I am not treated fairly by my American classmates because of my status as an international student” and “I feel that I am viewed differently by those on campus due to my appearance,
dressing style, etc.” Campus environment is an important factor that emerged from the ISSQ. It is broadly defined as the current attitudes, behaviors, standards, and practices that employees and students have in an institution, which are usually linked to specific social groups (Rankin & Reason, 2008). In the literature it is used synonymously with campus climate. Despite it being an important social environmental factor impacting students’ university experiences, there is a lack of research that examines its impact on international students’ experiences.

The literature indicates that international students’ ability to adjust does not simply depend on the individual, but also the environment students are in (Poyrazli & Grahame, 2007). Furthermore, research on acculturation and cross-cultural adjustment also highlights the importance of environmental factors (Berry, 1997; Heppner, Wang, Heppner, & Wang, 2012). Berry’s (1997) model conceptualizes acculturation as a two-way process between international students and their host society. Heppner et al. (2012) highlighted the importance of the level of support or hostility of the environment and relationships within the host culture as factors influencing one’s development of cross-national cultural competency. Despite the diverse range of studies on international students on acculturative stress and adjustment difficulties, there is lack of empirical studies that examine the role of campus environment on international students’ experiences on campuses in the US and its influence on these difficulties.

**Social and Emotional Safety**

The next scale, social and emotional safety, is comprised of 5 items, which include statements such as, “I tend to make friends easily” and “I regularly participate in social activities (clubs and/or groups) on campus.” Social and emotional safety is a crucial factor in international students’ sense of safety on campuses and is strongly supported by research for its impact on student success and psychosocial adjustment in host country (Baba & Hosoda, 2014; Hendrickson, Rosen, and Aune, 2011; Kashima & Loh, 2006; McLachlan & Justice, 2009;
Patron, 2014; Terrazas-Carrillo, Hong, & Pace, 2014; Zhang & Goodson, 2011). For instance, Baba and Hosoda (2014) surveyed 209 international students from a large state university in the Silicon Valley, finding that social support was directly related to cross-cultural adjustment and served as a partial mediator for stress factors (i.e., academic pressure, financial stress, homesickness, perceived discrimination, social disconnectedness, and culture shock) and cross-cultural adjustment. Furthermore, Terrazas-Carrillo et al. (2014) conducted semi-structured interviews to examine international students’ attachment to the new location in their host country, and found that participants renegotiation process with the new place involved fulfillment of specific needs, such as a desire for social interaction, an opportunity for self-expression, and the expression of their emotional experiences. A systematic review of the literature on psychosocial adjustment of international students between 1990 and 2009 suggested that the most frequently reported predictors of psychosocial adjustment included social support and social interaction with Americans (Zhang & Goodson, 2011). Thus, these and other similar studies highlight the central role of social and emotional support for international students, and in turn support factor 2, social and emotional safety.

**Physical and Sexual Safety**

Physical and sexual safety scale with 6 items addresses topics with statements like “I feel comfortable walking around campus any time of day” and “I fear that I might be sexually assaulted on/around campus.” Physical and sexual safety is widely discussed in the literature on campus safety (Baker & Boland, 2011; Fox, Nobles, & Piquero, 2009; Jordan, 2014; Patton & Gregory, 2014; Ratti, 2010; Tomsich, Gover, & Jennings, 2011). However, there is a dearth of literature on international students’ experiences and perceptions of physical and sexual safety in the US, and the ISSQ, and in particular, this subscale, can be used to tentatively assess for physical and sexual safety experiences and concerns among international students.
Campus Support

Campus support is comprised of 5 items, including statements such as, “I am comfortable using student support services when I experience difficulties” and “I am aware of who to contact for help if I experience a crime on/around campus.” McLachlan and Justice (2009) supported the importance of this scale in their research. They conducted a qualitative study on international students’ well-being and found that most participants used academic services (e.g., library) and recreational services (e.g., recreation center). International students also indicated that they accessed the health services for minor concerns (e.g., cough, headache); however, many students reported being unaware of counseling services, which is also consistent with previous research findings (Ang & Liamputtong, 2008; Poyrazli & Grahame, 2007). Thus, the existing literature provides support for this fourth scale, that is, the role of campus support in understanding international students’ safety on campus.

Instrument Reliability

The overall reliability of ISSQ was adequate for an attitudinal measure (Cronbach’s alpha = .85). Similarly, the four derived scales generated satisfactory internal consistency coefficients: campus environment (α = .80), social and emotional safety (α = .75), physical and sexual safety (α = .81), and campus support (α = .72). The reliability estimates for the ISSQ are congruent to those reported for a similar measure, namely, the IFCS. Whereas the IFCS had a composite internal consistency reliability of .89, the subscale scores had Cronbach alphas ranging from .70 to .86.

In the current study, internal consistency reliability was used to determine whether individual items used to measure the subscales: ‘Campus environment’, ‘Social and Emotional Safety’, ‘Physical and Sexual Safety’ and ‘Campus support’ as essentially measuring the same underlying construct of international student safety. The internal consistency reliabilities in the
present study were moderate to high, indicating an acceptable level on internal consistency reliability.

**ISSQ and Demographic Factors**

MANOVAs were conducted to answer the third research question. The results suggested that participants who identified India as their country of origin, scored higher in comparison to participants from other non-White regions of the world. Existing research suggests that international students from predominantly non-White regions of the world report more negative experiences, in the form of neoracism (Lee, 2010). Negative perceptions tend to decrease the likelihood of recommending international education to other students from their home countries. The results of the present study are consistent with the existing literature, in that international students from non-White regions of the world reported lower levels of campus safety on all four scales, with the exception of international students from India. This anomaly could be explained due to the larger Indian student representation in this current sample and due to social desirability bias, which is further explained in the limitations section.

Whereas participants who identified Hindu scored higher on the ISSQ campus environment and campus support scales, those who identified as Christians scored higher on social and emotional safety and physical and sexual safety scales. Although previous research provides support for differences in international students’ experiences of loneliness and social support based on gender differences (Sawir et al., 2008), age (Green et al., 2001), and other cultural factors, there appears to be few, if any, studies examining differences based on participants’ faith tradition. It should be noted, however, that Potkar (2013) interviewed 13 Indian international students in the US to explore their adaptation experiences. The findings suggested that religion/spirituality was important part of their adaptation in the US. However,
the current study is one of the first to examine the role of faith in understanding international students experiences on college campuses.

Related to college status, participants who were master’s level students scored higher on all scales except for the social and emotional safety scale. In contrast, undergraduate respondents indicated a greater sense of social and emotional safety than graduate students. Although Mallinckrodt and Leong (1992) surveyed 272 international graduate students to examine their level of stress and social support, current research does not differentiate between the social and emotional experiences of international students at different educational levels.

Lastly, majority of the participants self-identified their perceived level of proficiency in English as “high” and scored higher on all four scales of the ISSQ. Baba and Hosoda (2014) surveyed 197 international students and found that none of the demographic variables except for comfort levels of communicating in English, related to cross-cultural adjustment. This variable was positively related to comfort levels of communicating in English, and negatively related to stress factors, including academic pressure, financial stress, homesickness, perceived discrimination, social disconnectedness, and culture shock. The ISSQ captured many of the stress factors identified in Baba and Hosoda’s study (2014). Therefore, the findings from Baba and Hosoda’s study are consistent with those found in the current study, as participants who self-identify as “high” in perceived proficiency in English scored higher on the instrument.

**ISSQ and Personality Factors**

The fourth research question explored the relationship between personality variables and the derived factor scores. The results suggested multiple significant correlations between the ISSQ factors and personality items. Poyrazli, Thukral, and Duru (2010) conducted a study with 613 international students using the Big Five Inventory and found that neuroticism was significantly correlated with the overall acculturative stress of international students.
Neuroticism was also significantly related to perceived discrimination, homesickness, fear, and perceived hate/rejection sub factors of acculturative stress. This result is consistent with the findings from the present study, as neuroticism was positively correlated with campus environment. Additionally, neuroticism was also found to have a significant positive correlation with social and emotional safety and physical and sexual safety.

Openness was found positively related with homesickness in Poyrazli et al.’s (2010) study. This finding is consistent with the present study, as openness was positively correlated with social and emotional safety. Additionally, openness was also found to have a significant positive relationship with physical and sexual safety, and campus support. Again, the magnitude of these latter correlations was weak.

Lastly, extraversion was positively correlated with social and emotional safety, as it was one of the items in this scale. However, it was found to have a significant weak relationship with campus support. This result is also consistent with the findings from Poyrazli et al. (2010), as they found no significant correlations between extraversion and perceived discrimination, homesickness, culture shock, fear, guilt, and perceived hate/rejection.

**Implications for Counseling and Counselor Education**

Firstly, the ISSQ can be used with some caution by college counseling centers in working with international students to identify which factors are impacting that individual student’s experience on campus. Results from this type of assessment can assist counselors in determining the direction of counseling. This can be especially beneficial since the current study and existing literature suggests that there is a lack of willingness among international students in sharing social-emotional needs (Ang & Liamputtong, 2008; McLachlan & Justice, 2009). The assessment could potentially guide the counselor in working with an individual international student based on their scores on the various scales. Furthermore, because international students
prefer to obtain advice about personal issues from family, partners, and friends (Ang & Liamputtong, 2008), they rarely use university services, especially personal counseling. Thus, such tools can be beneficial in initiating conversations regarding their struggles as an international student in the US.

In Australia, for example, researchers interviewed 16 professionals who had experience dealing with international student concerns on a day-to-day basis. These included international student support staff, counselors, general medical practitioners and academic staff. They reported that international students tended to delay seeking professional help for mental health problems (Forber-Mewett & Sawyer, 2011). Another factor influencing whether international students pursue personal counseling originates from their country of origin and culture. International students from some cultures, particularly non-Western cultures, may be unfamiliar with counseling as an option because counseling may not have been available to them or practiced in their culture (McLachlan & Justice, 2009). Furthermore, mental health counseling may be stigmatized in certain eastern cultures. As such, students may not seek assistance when they are in need (Chen & Lewis, 2011; Shea & Yeh, 2008; Willis-O'Connor, 2014).

In terms of practice, counselors assisting international students need to engage in outreach to create awareness regarding on campus mental health and counseling services. McLachlan and Justice (2009) found that international students valued the orientation held at the beginning of their academic year for information on adjustment. College counselors could use this opportunity to educate international students about their services and engage in a stronger relationship with the international student service office. Due to the stigma attached with seeking mental health support, many international students often seek assistance from the staff at the international student service office. Thus, establishing a stronger relationship with the
international student service office could prove to be beneficial for both parties involved, as it could allow their staff to refer international students to the counseling center, and vice versa.

Further research is needed to explore nontraditional approaches to offering university services, particularly mental health services to international students. Some researchers suggest that universities develop approaches to provide counseling services to international students in informal settings and in non-traditional ways, such as presentations and group settings (Yeh & Inose, 2003). Offering assistance in nontraditional ways in group settings could also benefit students. For example, informal workshops that provide ways for students to obtain skills and learn strategies to adjust within the new culture, manage feelings of loneliness and homesickness, overcome cultural barriers to form friendships within the campus community, and so on, may assist international students in their transition to the US.

The current study highlights certain individuals at-risk of struggling with one or more aspects of campus safety. However, counselors should use caution in generalizing the results from the current study in working with international students. For instance, although Indian international students scored higher on all aspects of campus safety, counselors must not assume that all Indian international student clients are immune to interpersonal and environmental concerns on campus. As correctly put by a participant in Chen and Lewis’s study (2011) counselors must not treat clients as, “either very differently (based on stereotype), or exactly the same as they treat members of the majority culture without regard for beliefs and behaviors associated with the family’s unique ethno-cultural milieu” (p. 311).

**Implications for Higher Education**

There are several ways the ISSQ can be used for enhancing international students’ experiences on college campuses in the US. First and foremost, the ISSQ serves as an instrument to measure what safety concerns impact international students on a particular campus. This may
help facilitate a more comprehensive understanding of international students’ experiences and help identify which factor(s) have the strongest impact on students’ safety experience.

Assessment results may be used to inform strategic planning on which factors of campus safety warrants the most attention for improvement. For example, if a case study was conducted at a large public institution using the ISSQ and campus environment safety concerns emerged as the most alarming deficiency, the university could create programs to educate their students, staff and faculty regarding diversity. Counselors could conduct workshops with faculty and staff regarding multicultural competence. However, if social and emotional safety concerns emerged as the most significant issue on campus, international student service center/office can work on creating programs to bridge the gap between domestic and international students.

University sponsored organizations and activities that facilitate social connections with US students are critical to international student adjustment. For example, Owens and Loomes (2010) conducted a social integration initiative at an Australian university to enhance international students’ social adjustment through partnerships with local community, staff, and other students. The initiative included nontraditional American sports (e.g., cricket), as well as social (e.g., celebration of cultural festivals like Chinese New Year and Indian Independence Day), community, communication, work-related, and welfare activities. Using a mixed methods design, they conducted a survey of 446 international students that took part in this unique opportunity. The researchers also conducted focus-group discussions with staff and students. The findings indicated that successful social integration initiative were beneficial from both the student perspective and the campus staff.

Universities could pair new international students with other international students from their home countries already established at the university to mentor the newly arrived students (McLachlan & Justice, 2009). To take this a step further, international students could also be
paired with their domestic counterparts, to assist in creating a stronger social support for them in the US. Furthermore, Bista and Foster (2011) recommended that universities and colleges support relationships with local community members to offer international students home stays and other activities to allow students to feel at home when they first arrive in the US. The researcher recommends continuing such efforts months after arrival, such as invitation to international students for home cooked meals in American homes and celebration of international festivals within the local community. Thus, such social integration efforts can help in enhancing a sense of security and social safety in the host country.

Lastly, the scale can also serve to quantitatively measure campus safety. Information from the scale, for instance, can be used to identify areas of strength for campuses, such as, campuses that score highly on factor 1 (campus environment) and factor 4 (campus support), can utilize such information to recruit prospective international students.

**Limitations**

Despite the many advantages of the ISSQ, there are several limitations that should be noted. Internal validity, which is the ability for a study to make true inferences about the studied relationships (Tabachnick & Fiddell, 2013), is an issue especially important to this study, as it attempted to establish the ISSQ’s psychometric properties with international students. Threats to internal validity in this study most likely included several types of bias, including selection, self-report, social desirability responding, central tendency, and ordering. These issues are further discussed below.

Selection bias often occurs in survey studies. For example, in the current research, international students may have completed the inventory because of a special interest in campus safety or they might have experienced an unsafe event and used the ISSQ as a way to anonymously “report” it. Self-report and social desirability responding biases likely occurred in
the study as well. Participants most likely responded to items in the way they believed were more acceptable or appropriate. Despite conveying confidentiality, participants could have also feared that their responses might negatively impact their education or visa status.

Moreover, ordering, central tendency, and extreme response biases may have impacted how participants answer the survey questions. The order of the ISSQ items was same for all participants, with the demographic items first, followed by the 41-Likert scale safety items, and then the 12 experiential items. The order of these items influenced what participants were included in final data analysis, as some participants only completed the first half of the survey. Central tendency bias and extreme responding often impacts studies which use Likert-type items such as the ISSQ. Participants may have chosen the middle most response or the most extreme response on the opposite ends of the scale, which may have influenced the findings.

External validity is the extent to which this study can be generalized to the population. Given convenience sampling and composition of the respondents, the present study’s findings are not generalizable to a broader audience. Specifically, a large portion of the sample consisted of Indian international students ($n = 110, 34.1\%$) and majority of them were from urban campuses ($n = 256, 79.3\%$). Over 75% of the respondents were attending higher education institutions in southern region of the country ($n = 245, 75.9\%$). Finally, although this sample size was robust for statistical analyses ($N = 284$), the results of the present study represent a static measure of the participants’ perceptions and beliefs at the time the participants completed the survey.

In addition to internal and external validity, there were limitations to the data collection procedure. This study was completed using electronic survey methods and in-person paper copies. Although electronic surveys are a common practice (Granello & Wheaton, 2011), they have certain weaknesses. First, electronic surveys only allow for data collection over a short
period (8 weeks). This time frame may not have been sufficient to reach the targeted sample. Additionally, it is impossible to truly know the response rate to this survey as listservs and social media were used to gain access to the sample. Many pertinent listservs and social media groups were restricted to members only, and therefore, the researcher was unable to sample from these groups.

Lastly, the item development was mainly based on literature review and input from a few professionals with expertise in counseling and working with international students. Each of these limitations are addressed in the next section on recommendations for future research.

**Recommendations for Future Research**

A number of recommendations for future research are proffered. For example, subsequence investigations of international students’ perceptions of campus safety should include other US campuses from various geographical regions (e.g., Northeast, Midwest, and West). Researchers should encourage participation from different types of institutions (e.g., private, community colleges) and from more diverse settings (e.g. college towns, rural communities). Additionally, it should be noted that most international students in the US come from five countries: China (31.2%), India (13.6%), South Korea (6.5%), Saudi Arabia (6.1%), and Canada (2.8%; IIE, 2015). Interestingly, California and New York are the two states that host the largest number of international students (approximately 242,000; IIE, 2015). New York University (NY), University of Southern California (CA), and Columbia (NY) are the top three institutions that educate international students in the US (IIE, 2015). Therefore, future research studies can attempt to gather data specifically from these three universities to capture a larger proportion and more representative sample of the population.

Additionally, since majority of the participants reported moderate to high level of proficiency in English, a recommendation for future researchers, who might be interested in
replicating the study could adapt the ISSQ in other major languages of the world, such as, Mandarin, Arabic, Hindi, etc. Such an effort could ensure gathering a more representative and diverse sample. The scale could be adapted for and validated for use in other host countries, such as, Britain, Australia, Singapore, etc. to examine international students’ experiences of campus safety in those host nations. Another area for future studies is to examine US study abroad students’ experiences of oversea campuses and how that relates to their adjustment process.

Another key recommendation for future research involves the ISSQ’s validity. A confirmatory factor analysis should be conducted with new sample to support the measure’s dimensionality or construct validity. The ISSQ should be assessed for concurrent validity using other similar instruments. ISSQ scales can also be correlated with other important student variables (e.g., acculturative stress, help-seeking intentions, psychological distress and wellbeing).

In addition, future studies could utilize qualitative methods, such as grounded theory, to develop a model or focus groups to generate ideas on more factors related to the international students’ experiences of campus safety. In addition, it should be noted that only one item was used to assess each of the personality dimensions. For example, neuroticism was examined by asking participants to respond to this statement, “I am mostly a sad person.” Future studies of this kind should use a more extensive and psychometrically sound personality inventory (e.g., the Big Five inventory).

Due to the limited sample size, researcher was only able to test for influence of a few demographic characteristics on the ISSQ factor structure. In the future, a larger and more equally representative diverse sample would also be useful to further examine invariance between
different types of institutions (public vs. private vs. community college), native and non-native English speakers, level of cultural adoption, and so on.

Longitudinal studies of how perceived campus safety or scales relates to academic retention and completion rates can also provide more information on how campus safety perceptions and experiences impacts student success. Finally, future research can focus on understanding the construct campus safety for other minorities on college campuses, such as LGBTQ students, Muslim students, and first-generation college students.

**Conclusion**

There is a major gap in the literature on international students’ experiences of campus safety in the US. Previous research in this area has emphasized the sociocultural challenges that these students experience during their time in Western countries like Australia and US. Much discussion has contributed to identifying those internal attributes (e.g., psychological trait, cultural background) of international students that are related to such experiences. In an attempt to extend the literature, this study addressed international students’ experiences that are embedded in the overall external campus environment, through an EFA focused on understanding the construct of campus safety. The current study also examines the relationships between demographic characteristics and personality differences in understanding international students’ experiences of safety on campus. From an administrative perspective, both academic professionals, as well as higher education professionals/student affairs personnel, can help facilitate a supportive environment to enhance international students’ experiences on campuses in the US. The ISSQ can be applied to varied academic institutions, allowing pertinent staff to obtain a more comprehensive understanding of the campus experiences of international students.
An Exploratory Factor Analysis Examining Experiences and Perceptions of Campus Safety for International Students

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Abstract

Although international students make for a significant percentage of the college population and contribute to higher education institutions in multiple ways, there has been a lack of attention being paid to their safety needs. This study examined the experiences and perceptions of campus safety among international college/university students in the United States. The researcher sampled participants from different institutions around the country, who self-identified as international students. A researcher-developed 53-item Likert scale questionnaire, International Students’ Safety Questionnaire (ISSQ) was administered to the sample. Findings from the exploratory factor analysis (EFA) provided evidence for the four-factor solution for the 26-item ISSQ accounting for 48.65% of the shared variance. Additionally, the ISSQ was found to have adequate internal consistency. Salient demographic variables, such as nationality, faith belief, college status and perceived proficiency in English, were found to be significantly linked to derived factor scores. Further, significant positive correlations were found between personality variables, such as extraversion, openness, and neuroticism, and the derived factor scores. Implications for counseling, counselor education, and higher education institutions, along with limitations and directions for future research are included.

Keywords: campus safety, international students, counseling, higher education
An Exploratory Factor Analysis Examining Experiences and Perceptions of Campus Safety for International Students

The United States (US) is the leading host country for international education (Institute of International Education [IIE], 2015). In 2014/15, the number of international students in the US increased by 10% to a record high of 974,926 students (IIE, 2015). Not only is the population of international student enrollment increasing, the number of international students seems to play an important role in enhancing the reputation and prestige of higher education institutions. These students also positively contribute to the local economy, as well as to institutions’ diversity of perspectives and knowledge (Lee, 2010). More recently, international students injected over 27 billion dollars to the economy (Hegarty, 2014; IIE, 2015). Despite the substantial contributions made by international students to the host nation, there is a dearth of research addressing the experiences of international students on American college campuses, specifically, their safety needs. Nyland, Forbes-Mewett, and Marginson (2010) highlighted that it is the “fear of being stigmatized as an unsafe study destination” (p. 90) that keeps countries from embracing safety concerns of international students. It took numerous fatal assaults against international students in Australia for educational institutions there to acknowledge these concerns. Although safety on campuses is a growing concern for all students, the current study focuses on international students’ security as their safety needs are compounded by cultural differences, adjustment/acculturation difficulties, and lack of familial and social support (Marginson et al., 2010).

**International Students’ Experiences of Safety**

Currently, as mentioned above, there is scarce literature on international student safety in the US. However, following the growing incidences of racial violence in South Australia and Newcastle that proved to be fatal in some cases, research on international student safety emerged
in Australia. The Institute for Community, Ethnicity and Policy Alternatives (ICEPA) of Victoria University, for example, conducted a large scale study on international students’ community safety (Babacan et al., 2010). The investigators adopted a four-stage methodology that included both qualitative and quantitative data collection and analysis. Babacan et al. conducted 35 interviews with international students, 29 with stakeholders, and administered online surveys with a total of 1013 respondents. Results revealed that more than half of the international students surveyed found Australia to be less safe than they had expected; and of those who reported threats to safety, 50% of them believed these threats had a racial, religious or cultural dimension. International students reported experiencing verbal abuse (58%), physical attacks (11%), and robbery (10%) at a much higher rate than domestic students. Furthermore, there was an evident discrepancy between the views of stakeholders and international students on the sense of community safety of international students. Many of the stakeholders believed that majority of the violent acts against international students were “opportunistic rather than racial” in nature (Babacan et al., 2010, p. 3). Although, there were several limitations to this study, such as sampling and low response rate, the findings brought further attention to the safety needs and well-being concerns of international students.

Another crucial study was conducted in regional Australia, as it explored the perceptions of international students on safety concerns on and off campus (Le, Auckland, Nguyen, & Terry, 2013). The researchers used semi-structured interviews with 25 international students and a focus group discussion with 5 stakeholders to consider ways in which safety of international students could be improved. The researchers were able to identify four main themes: safety issues, safety risks, preventive strategies, and safety needs (Le et al., 2013). One of the major drawbacks of the study was the location in which it was conducted (i.e., regional Australia), thus reducing its generalizability to other parts of the country. Additionally, the study failed to attend
to the possible emotional and psychological impact associated with international students’ feelings of unsafety and discrimination. Similar research is needed in the US; however, there is lack of literature on understanding the lived experiences of international students’ safety.

**Physical and Sexual Safety**

It has been estimated that 1 in 5 women on college campuses experience attempted or completed sexual assault since entering college (Krebs & National Institute of Justice, 2007). Although there is some controversy associated with this statistic, growing attention is being paid to the issue of sexual assault on college campuses and on prevention efforts (Hill & Silva, 2005). Ee (2013) provided anecdotal data of such experiences in which female international students shared feeling scared and unsafe. However, other than Ee, there was a lack of literature on the sexual harassment and assault experiences of female international students.

Contrary to media reports violence against female international students is far more common by known perpetrators (Forbes-Mewett & McCulloch, 2016). Specific to sexual safety there is a dearth of literature examining the incident rate, experiences, and perceptions of international students. In addition, due to the cultural stigma associated with certain crimes, such as rape, sexual abuse, etc., individuals are less likely to report. Bekmuratova (2012) examined the definition and perceptions of domestic violence against women among international students and the results suggested that participants differed in appropriateness of hitting and in perceptions of domestic violence based on their country of origin as well as gender. Intimate partners may occur in dating relationships, cohabitation, and marriage or after separation/divorce. There is no statistical information in the current research literature regarding rates of incidences of domestic violence among the international student/scholar community. In a survey conducted on university officials as a way to gather information on domestic violence among international students/scholars and their spouses on US campuses, Urias (2005) found
that majority of the participants (80%) reported uncertainty as to the specific number of domestic violence incidences and 40% did not assume responsibility to act on behalf of their international population, but rather referred any situation to the campus police or counseling center.

Social and Emotional Risk Factors

A systematic review of 18 quantitative studies, published in peer reviewed journals from 2000 to 2011 on the psychological well-being of East Asian international students, revealed the key variables of these studies as length of stay in the US, English proficiency, attitudes towards seeking help, depression, and acculturation (Li, Wang, & Xiao, 2014). Acculturation difficulties and language difficulties have been shown to impact their academic performance (Lowinger, He, Lin, & Chang, 2014). Research has also looked at adaptation difficulties and its impact on the emotional well-being in the form of feelings of loss and loneliness (Patron, 2014).

Lee and Rice (2007) explored the experiences of 24 international students from 15 countries and reported instances of cultural discrimination, feelings of discomfort, verbal discrimination, and direct confrontation in the form of physical or sexual assault. Ee (2013) gave voice to the experiences of international students, sharing instances of microaggressions, physical and sexual assaults, race and language related assaults. In a recent qualitative study using group interviews of six international students that looked at issues of international student retention, personal safety was identified as an important concern for international students (Bista & Foster, 2011). Research also demonstrates that students from predominantly non-White regions of the world have more negative experiences, which in turn impact their perceptions and likelihood of recommending international education to other students from their countries (Lee, 2010). Despite the recognition of the different challenges of international students, there is a paucity of empirical studies on the impact of such experiences on their sense of safety.
Learning Environment and Academic Support

Recent events, both on and off campus, have shaken the idea of personal safety for those living in the US (Lau, Guttenplan, & Farrer, 2013; Rund, 2002). In addition to physical, sexual, social, and emotional factors, the campus climate or learning environment in which students attend higher education institutions could potentially impact their sense of safety. Research highlights the vital role played by the campus environment, specifically the sense of community and faculty-student interactions with international students (Glass, Buus, & Braskamp, 2013). In addition, international students also identify academic support as a crucial factor in persisting through their US higher education experience (Mamiseishvili, 2012).

Help-Seeking Behaviors

Research has also shown that international students are less likely to seek help and use university resources such as the Counseling Center. Willis-O’Connor (2014) identified factors that contribute to the underutilization of campus-based counseling services by international students, with culture highlighted as one of the key factors in help-seeking behavior. Mesidor and Sly (2014) reported that 17.7% of variance in help-seeking intentions for international and African American students was accounted for by social-cognitive factors, such as attitudes, subjective norms, perceived behavioral control, and psychological distress. Shea and Yeh (2008) investigated the impact of adherence to Asian values and the stigma often associated with receiving psychological help by Asian American college and graduate students. This research showed, that although female students possessed more positive help seeking attitudes; in general students from Asian countries were unlikely to continue counseling due to the, “lack of culturally competent personnel, contradictions between values held by the Asian clients and the Western model of counseling … and lack of culturally responsive services” (Shea & Yeh, 2008, p. 158).
Chen and Lewis (2011) conducted a qualitative study on six international students from East Asian countries. The researchers explored the notion of “reluctance” within East Asian international student population towards the use of therapy. Semi-structured interviews and participant observation helped in providing support for researchers’ assumptions and three main themes were identified. These themes highlighted the negative views of therapy held participants before and after coming to the US. They also uncovered some of the disparities in cultural understanding, and concluded that counselors treated clients and their families, “either very differently (based on stereotype), or exactly the same as they treat members of the majority culture without regard for beliefs and behaviors associated with the family’s unique ethnocultural milieu” (Chen & Lewis, p. 311). Despite the beneficial implications such studies have on our profession, the limitation that undermines the benefits was the limited sample size and the risk of over-generalization.

In summary, both on and off campus events in the US have encouraged researchers to investigate the personal safety of international students. Regrettably, this issue has been largely overlooked in the US, and therefore, the current study attempts to, in part, fill this gap in the literature. The study provides a more holistic definition and understanding of campus safety for international students in the US. The researcher assessed various dimensions associated with safety and examined the impact of demographic and personality factors on international students’ perceptions of safety.

The primary purpose of this study was to develop a valid and reliable instrument to understand the construct of safety. Secondarily, the research aimed to (a) examine the experiences and perceptions of campus safety among international students in the US, and (b) identify ways in which higher education institutions can help increase students’ experience of safety on campus.
Research Design

The research design was both psychometric and survey in nature. The survey was constructed to develop an understanding of the construct “safety” in its varying dimensions. This study was subjected to Human Subjects Review at the researcher’s institute before data collection began. The survey underwent expert review and a pilot testing prior to administration with an international student sample collected both, electronically and in-person. To determine the factorial validity of the measure, an exploratory factor analysis (EFA) was conducted. The following research questions (RQ) and associated null hypotheses (NH) were examined:

RQ1: What are the underlying dimensions of the International Student Safety Questionnaire (ISSQ)?

RQ2: Does the ISSQ questionnaire possess adequate internal consistency?

RQ3: Are there differences between levels of the salient demographic variables (i.e. nationality, ethno-racial identity, age, gender, faith belief, perceived proficiency in English and level of cultural adaptation) on derived factor scores?

RQ4: What is the strength of association between personality variables (i.e. extraversion, openness, and neuroticism) and derived factor scores?

Participants

Convenience and snowball sampling were used. Participants were recruited through the International Student Services Offices at different universities across the US. The researcher solicited the assistance of the staff to disperse the survey using their listserv. Specifically, an email invitation was sent through the international student listserv maintained by different institutions, asking international students to participate in the study. The researcher also used social media, that is, international student Facebook groups to recruit participants for the study.
The study aimed at collecting participant data that vary in geographical location, type of institution, length of stay in the US, level of perceived English proficiency, age, gender, race/ethnicity, faith belief, and country of citizenship. It was hoped that a representative sample of the entire international student population in the US will be achieved. Using a statistical power analysis for EFA, a minimum of 280 participants was the target sample size.

**Participant Demographic Characteristics**

An international student sample of 323 was collected with participants attending institutions from across the US, and representing 75 countries around the world on six continents. The participants also spanned 30 states, plus Washington, D.C. About one-third of the international students indicated they were from India. In addition, little less than a third of the sample was from other Asian countries. The geographic locations of other international student participants were as follows: Middle East approximately 14%, Europe 7%, Africa approximately 7%, South America 4%, and countries like Mexico, Canada and Australia less than 3% of the sample. In regards to gender, there was almost an equal representation of males (53%) and females (46%), only one participant identified as “Other.”

About half of the participants were between 18-25 years of age, and 77.7% were 30 years of age or under, which is representative of the traditional college student population in the US. In addition, majority of the sample consisted of international students pursuing graduate education (master’s 36%, doctoral 35%). Participants varied in their faith belief as well, however, majority falling under the three major religions of the world, that is, Christianity, Hinduism and Islam.

In terms of the length of stay, about a third (30%) reported having been in the US for less than 6 months, less than two-third reported less than 2 years, and 85% reported having been in the US for less than 5 years. This is interesting in comparison to the level of adaption, as only 2.8% reported that they had “not yet adapted” to the US culture. In addition, only 3.5% reported
“low” level of proficiency in English; whereas one-third reported “moderate” (34.5%), and about two-third reported “high” (61.6%) level of proficiency in English.

In terms of type and location of the institutions attended by participants, about two-thirds of the participants reported attending a 4-year Public University. Only 3 participants reported attending community college. Furthermore, majority of the participants reported attending institutions in “Urban” settings (81%). In addition, there was a large representation of international students from the “South” or the southern region of the US (n=245, 75.9%), due to the researcher’s geographical location in the south, that is, state of Virginia, and due to the use of paper-copies to collect data from institutions in Virginia.

**Instrumentation**

**Item Development Process**

The item development process began with the creation of items to assess the construct under examination (Hinkin, Tracey, & Enz, 1997). These items can be generated inductively, by generating items prior to deriving scales, or deductively, using theory to generate items (Hinkin et al., 1997). In this study, the initial items were developed inductively, as campus safety is a fairly unexamined phenomenon, lacking holistic definitions and theories to support it. After examining the existing literature on campus safety and international student experiences, three key dimensions were identified: Physical and Sexual Safety (PSS), Social and Emotional Safety (SES), and Learning Environment and Academic Support (LEAS). These dimensions were used in the initial item development phase. Additional items were drawn from other published surveys addressing similar campus safety issues.

Items were revised based on the feedback from an expert review conducted with a panel of five professionals that are experts in the field of counseling and conduct research on international students. Furthermore, to identify the impact of personality variables on
respondents’ experiences and perceptions of safety, items from the Big Five Personality inventory were revised and added to the survey.

The final instrument consisted of 65 total items and was labelled as “International Student Safety Questionnaire” (ISSQ). The English language ISSQ consisted of 53 total items/statements. Of these statements, 41 require participants to respond on a 7-point Likert Scale from 1- Strongly Disagree to 7- Strongly Agree to capture safety perceptions. The remaining 12 items were “Yes/No/Not sure” items examining actual safety experiences of participants. In addition, 12 demographic items were added that examined the respondent’s nationality, gender, faith belief, college status, length of stay in the US, perceived proficiency in English, current level of adaptation to the US culture, location and type of institution.

Data Analysis and Results

The first step of data analysis process was to screen the data to ensure it was usable, reliable, and valid to proceed with statistical analyses. A total of 323 respondents initiated the survey. Surveys with incomplete entries were screened from analysis, yielding 284 surveys with less than 5% missing data. Items that had missing values were replaced with item mean scores. The researcher reverse coded negatively worded items on the ISSQ, so that the scale would be consistently scored in a positive direction. Descriptive statistics were computed to check the normality of the item distributions and to verify whether the items met the parametric assumptions underlying factor analysis. In addition to reviewing means, standard deviations, and minimum/maximum values, as well as skewness and kurtosis indices. Item histograms, box plots, and QQ plots were examined (Fabrigar & Wegener, 2012; Field, 2013). Based on the parametric properties of each item, as seen in Table 1, 7 items (items 1, 2, 10, 12, 21, 29, and 30) were removed from further statistical analyses. These did not meet the assumption of normal distribution required for factor analysis.
Research Question 1

Correlational analyses. An analysis of the inter-item Pearson Product correlations demonstrated low-to-high associations between almost all items, ranging from 0.30 to 0.63. Items 17 RC (Experienced period of loneliness) and 28 RC (Comfortable being by myself than in large groups) did not correlate with any of the other items within this acceptable range 0.30-0.80. However, the researcher decided to include them in the initial rotation to assess its suitability for the factor analysis.

Verifying assumptions. In verifying assumptions prior to rotation, the results of the Bartlett’s Test of Sphericity, $B(561) = 3,310.76, p < 0.000$ and a Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO = .807) were computed. This latter finding indicated that the correlation matrix was favorable and not an identity matrix (determinant = 9.599E-8). Based on the Bartlett’s Test, the null hypothesis that there were non significant differences between items was rejected. This finding suggests that there is potential in the model to measure multiple constructs. A KMO value of .81 indicates meritorious value of common variance (Field, 2013).

Unrotated results. The Kaiser (Kaiser, 1960) criterion and identified factors that are greater than one were examined. A total of 58.14% of the variance was explained by 8 factors with eigenvalues that were greater than one. To further identify potential meaningful factors the scree plot was examined. However, a total of four factors had eigenvalues that accounted for more than 5% of the variance. In addition, four factors explained total of 42.25% of the variance. Inspection of Cattell’s scree test (see Figure 1) supported the appropriateness of rotating these four factors, i.e. the bend in the elbow occurred after four factors.

Researcher also conducted parallel analysis, a more rigorous method (see Figure 2), in which each eigenvalue (which represents the size of the factor) was compared against an eigenvalue for the corresponding factor in many randomly generated data sets that have the same
characteristics as the data being analyzed (Field, 2013). Thus, eigenvalues from the factor analysis are compared with the eigenvalues from the parallel analysis, and eigenvalues for the 5th and subsequent components (factors) were nearly equal, indicating eigenvalues of this magnitude could have been derived from a random sample of data. Therefore, only four factors were retained for further analysis. Thus, researcher decided to rotate these four factors based on the results of visual inspection of Cattell’s scree test, the accounted percentage of variance and the results from the parallel analysis.

![Scree Plot](image)

*Figure 1. Scree Plot based on Principal Component Analysis (PCA) with 34 items.*
Figure 2. Eigenvalue Comparison between Factor Analysis (FA) and Parallel Analysis (PA)

**Rotation results.** Based on a visual inspection of the oblimin rotation matrices using a PFA four factor structure, the pattern rotation matrix was selected for it provided the best interpretation of the factor structure with the least evidence of cross-loadings. Communalities were reasonably strong, ranging from about 0.3 to 0.8, except for eight items, that failed to load sufficiently on any factor at the minimum level of 0.35 (Comrey & Lee, 1992; Mvududu & Sink, 2013). In addition, Item 20 RC (struggle forming friendships with people outside culture due to language difficulties) cross-loaded on two factors with relatively moderate loadings (i.e., 0.49 and 0.39); however, Item 20 RC was retained, as it captured language and communication difficulties experienced by international students.

Finally, after the removal of the above mentioned items, a reasonably clear factor pattern and the loadings were interpretable. Each of the 26 items representing the four factors and their factor loadings are presented in Table 1. Factor 1 consisted of 10 items, factor 2 of 5 items, factor 3 of 6 items, and factor 4 of 5 items, and they ranged in loadings from .35 to .85.
Table 1

*Summary of PFA Pattern Matrix (Direct Oblimin Rotation) for 26-Item Inventory*

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Campus Environment (10 items)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19RC: Not treated fairly by American classmates</td>
<td>.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7RC: American classmates judged negatively</td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35RC: Viewed as less intelligent in the classroom</td>
<td>.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13RC: Not treated fairly by university staff</td>
<td>.53</td>
<td>.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15RC: Viewed differently due to my appearance, dressing, etc.</td>
<td>.52</td>
<td>-.16</td>
<td>-.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20RC: Struggle forming friendships with people outside of my culture due to language difficulty</td>
<td>.47</td>
<td>.38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6RC: Heard people on campus make unkind remarks about IS</td>
<td>.46</td>
<td>-.22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38RC: Fear that reporting a crime on/around campus might impact visa</td>
<td>.46</td>
<td>.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34RC: Sad person</td>
<td>.42</td>
<td>.17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33RC: Experience academic challenges because of English</td>
<td>.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social and Emotional Safety (5 items)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16: Make friends easily</td>
<td>.85</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22: Social person</td>
<td>.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31: Make friends with American students</td>
<td>.63</td>
<td>.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32: Participate in social activities (clubs and/or groups)</td>
<td>-.10</td>
<td>.52</td>
<td>.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11: Generally a relaxed person.</td>
<td>.35</td>
<td>-.13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Physical and Sexual Safety (6 items)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9: Campus is a safe place</td>
<td>-.72</td>
<td>.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8: Comfortable walking around campus any time of day</td>
<td>-.14</td>
<td>-.72</td>
<td>.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14RC: Fear of being physically attacked on/around campus</td>
<td>.28</td>
<td>-.71</td>
<td>-.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5RC: Fear of being robbed</td>
<td>.16</td>
<td>.13</td>
<td>-.58</td>
<td>-.22</td>
<td></td>
</tr>
<tr>
<td>40: Don't fear walking in the areas outside of campus</td>
<td>-.48</td>
<td>.13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24RC: Fear of being sexually assaulted on/around campus</td>
<td>.42</td>
<td>-.48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Campus Support (5 items)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36: Aware of who to contact for help if a crime on/around campus</td>
<td>.11</td>
<td>.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39: Comfortable using student support services when experiencing difficulty</td>
<td>.12</td>
<td>.56</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41: Aware of the student support services on campus</td>
<td>.55</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37: Aware of what to do to protect myself if a crime on/around campus</td>
<td>-.18</td>
<td>.54</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27: Speak with pros about my challenges</td>
<td>.12</td>
<td>.48</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Bolded items are mark the factor; blank matrix cells indicate a factor loading less than .10.
The content of the items in the four factors resembled those outlined in the literature review, and were labeled as: campus environment, social and emotional safety, physical and sexual safety, and campus support. These four factors initially accounted for 48.65% of the total variance in the correlation matrix. The range of correlations between derived factors for the oblique rotation was between .10 and .32. In summary, an exploratory factor analysis of the questionnaire’s items produced an interpretable 4-factor simple structure.

**Research Question 2**

Overall, the 26-item inventory generated a Cronbach alpha was 0.85. Alpha coefficients were computed on the specific items comprising each derived factor. Factor 1 (campus environment) produced a Cronbach’s alpha of .80. The reliability of factor 2 (social and emotional safety) was adequate (alpha = .75). The reliability coefficient for factor 3 (physical and sexual safety) was Cronbach’s alpha of .81. Factor 4 (campus support) yielded a reliability coefficient of .72. Across each factor, deleting specific items would not substantially improve the dimension’s reliability. Therefore, the internal consistency of each derived factor was adequate, ranging from .72 to .81.

**Research Question 3**

Multivariate analysis of variance (MANOVA) was utilized. The selected demographic factors of gender, nationality, faith belief, college status, and perceived proficiency in English with multiple levels were the independent variables. The ISSQ factor scores were entered as dependent variables. A Bonferroni correction was used to limit family-wise error in the multiple comparisons to .01 (as five MANOVAs were conducted).

**ISSQ factor scores and nationality/region.** To obtain relatively equal sample sizes for levels of nationality/region, this variable was collapsed into three categories: India \((n = 96)\), Asia (all countries in Asia, except for India; \(n = 78\)), and other non-European regions of the world \((n\)
including the Middle East, Africa, South America, and the Caribbean islands. Homogeneity of variance cannot be assumed in the present sample, as indicated by the significant Box’s $M$ statistic (Box’s $M = 82.06, p < .006$). The MANOVA found a statistically significant difference in ISSQ factor scores and nationality (Wilks’ $\lambda = .91, F[8, 490] = 2.90, p < .004, \eta^2 = .05$). Gender (Wilks’ $\lambda = .96, F[4, 285] = 2.44, p > .01$) and the interaction effects were nonsignificant (Wilks’ $\lambda = .95, F[8, 490] = 1.63, p > .01$). After Bonferroni correction was made, factor 1 ($p < .00$) and factor 4 ($p < .01$) were the most important variables of the four scales in distinguishing nationality. Specifically, Indian participants scored the highest on all four scales of the ISSQ.

The MANOVA was followed up with discriminant analysis (DFA), which revealed two discriminant functions. The first explained 88.7% of the variance, canonical $R^2 = .31$, whereas the second explained only 11.3%, canonical $R^2 = .12$. In combination these discriminant functions significantly differentiated the nationality/region groups, Wilks’ $\lambda = 0.89, \chi^2(8) = 29.68, p < .00$. After removing the first function, the second function did not significantly differentiate the nationality/region groups, Wilks’ $\lambda = 0.99, \chi^2 (3) = 3.50, p > .05$. The correlations between outcomes and the discriminant functions revealed that factor 1 ($r = .86$) and factor 3 ($r = .72$) loaded highly on the first function; whereas factor 4 loaded more highly on the second function ($r = .71$) than the first function ($r = .60$). However, factor 2 did not load highly on either the first function ($r = .38$) nor the second function ($r = .25$). The mean discriminant scores on the first function revealed that Indian participants ($r = .41$) scored higher in the positive direction, in comparison to participants that identified as non-Indian Asian ($r = -.35$) and other non-White participants ($r = -.14$).
ISSQ factor scores and faith belief. To obtain relatively equal sample sizes for the levels of faith belief, this variable was collapsed into four categories: Christianity ($n = 52$), Hinduism ($n = 69$), Islam ($n = 64$), and Atheist/Agnostic ($n = 62$). Homogeneity of variance cannot be assumed in the present sample, as indicated by the significant Box’s $M$ statistic (Box’s $M = 95.52$, $p < .05$). The MANOVA found a statistically significant difference in ISSQ factor scores and faith belief (Wilks’ $\lambda = .90$, $F_{[12, 624]} = 2.12$, $p < .01$, $\eta^2 = .03$). Gender (Wilks’ $\lambda = .95$, $F_{[4, 236]} = 2.94$, $p > .01$) and interaction effects were nonsignificant (Wilks’ $\lambda = .95$, $F_{[12, 624]} = .97$, $p > .01$). After the Bonferroni correction was made, factor 4 (campus support; $p < .05$) was the most important variable of the four scales in distinguishing faith belief. Specifically, participants who identified as Hindu scored the highest on factor 1 (campus environment) and factor 4 (campus support), whereas participants who identified as Christians scored the highest on factor 2 (social and emotional safety) and factor 3 (physical and sexual safety).

The MANOVA was followed up with a DFA, which revealed three discriminant functions. The first explained 62.6% of the variance, canonical $R^2 = .25$, the second explained 36.2% of the variance, canonical $R^2 = .20$, whereas the third explained only 1.2%, canonical $R^2 = .04$. In combination these discriminant functions significantly differentiated the faith belief groups, Wilks’ $\lambda = 0.90$, $\chi^2 (12) = 25.85$, $p < .01$. Following the removal of the first function, the second function did not significantly differentiate the faith belief groups, Wilks’ $\lambda = 0.96$, $\chi^2 (6) = 9.75$, $p > .05$, and removing the first and second function, the third function did not significantly differentiate the faith belief groups, Wilks’ $\lambda = 1.00$, $\chi^2 (2) = .32$, $p > .05$. The correlations between outcomes and the discriminant functions revealed that factor 4 ($r = .72$) loaded highly on the first function; whereas factor 3 ($r = .73$), factor 2 ($r = .72$), and factor 1 ($r =
.64), loaded more highly on the second function than the first function. The mean discriminant scores on the first function revealed that Hindu participants ($r = .41$) scored higher in the positive direction, in comparison to participants that identified with Christianity ($r = -.40$), Islam ($r = -.10$), and others who identified as Atheist/Agnostic ($r = .09$).

**ISSQ factor scores and college status.** To obtain relatively equal sample sizes for the levels of college status, this variable was collapsed into three categories: Undergraduate students ($n = 62$), Master’s level students ($n = 102$), and Doctoral level students ($n = 99$). Homogeneity of variance cannot be assumed in the present sample, as indicated by the significant Box’s $M$ statistic (Box’s $M = 72.54, p < .03$). The MANOVA found a statistically significant difference in ISSQ factor scores and college status ($\text{Wilks’ } \lambda = .86, F[8, 508] = 5.08, p < .00, \eta^2 = .07$). Gender ($\text{Wilks’ } \lambda = .96, F[4, 254] = 2.81, p > .01$) and interaction effects were nonsignificant (Wilks’ $\lambda = .93, F[8, 508] = 2.38, p > .01$). After Bonferroni correction was made, factor 1 (campus environment; $p < .00$) and factor 3 (physical and sexual safety; $p < .00$) were the most important variables of the four scales in distinguishing college status. Specifically, participants who identified as Master’s level students scored the highest on all scales, except for one. Participants who identified as undergraduate students, scored slightly higher on factor 2 (social and emotional safety), in comparison to Master’s level students.

The MANOVA was followed up with a DFA, which revealed two discriminant functions. The first explained 59% of the variance, canonical $R^2 = .28$, whereas the second explained 41%, canonical $R^2 = .24$. In combination these discriminant functions significantly differentiated the college status groups, Wilks’ $\lambda = 0.87, \chi^2 (8) = 37.06, p < .00$. After removing the first function, second function also significantly differentiate the college status groups, Wilks’ $\lambda = 0.94, \chi^2 (3) = 15.31, p < .00$. The correlations between outcomes and the discriminant functions revealed that
Factor 1 loaded highly on the first function \( (r = .97) \); whereas Factor 3 \( (r = .79) \), Factor 2 \( (r = .40) \), and Factor 4 \( (r = .33) \), loaded more highly on the second function than the first function. The mean discriminant scores on the first function revealed that Master’s level participants \( (r = .34) \) scored higher in the positive direction, in comparison to undergraduate student \( (r = -.40) \) and doctoral student \( (r = -.10) \).

**ISSQ factor scores and perceived proficiency in English.** To obtain relatively equal sample sizes for the levels of perceived proficiency in English, this variable was collapsed into two categories: Low to Moderate \( (n = 106) \), and High \( (n = 175) \). Homogeneity of variance cannot be assumed in the present sample, as indicated by the significant Box’s \( M \) statistic \( (\text{Box’s } M = 70.70, p < .00) \). The MANOVA found a statistically significant difference in ISSQ factor scores and perceived proficiency in English \( (\text{Wilks’ } \lambda = .91, F [4, 274] = 6.40, p < .00, \eta^2 = .09) \). Gender \( (\text{Wilks’ } \lambda = .96, F [4, 274] = 3.03, p > .01) \) and interaction effects were nonsignificant \( (\text{Wilks’ } \lambda = .97, F [4, 274] = 2.25, p > .01) \). After Bonferroni correction was made and factor 1 (campus environment; \( p < .00 \)) and factor 2 (social and emotional safety; \( p < .01 \)) were the most important variables of the four scales in distinguishing perceived proficiency in English. Specifically, participants who perceived their proficiency in English as “High” scored the highest on all four scales of the ISSQ.

Thus, the null hypothesis was rejected, as significant main effects between salient demographic variables and derived factor scores were consistently found.

**Research Question 4**

**Extraversion.** Pearson’s correlation coefficients were computed between item 22 (“I am usually a social person”), as the predictor of extraversion in the survey, and the four factor scores. As expected there was a significant positive relationship between item 22 (“I am usually
a social person”) and factor 2 (social and emotional safety), as it was one of the items in this scale, $r = .73, p < .01$. Item 22 (“I am usually a social person”) was found to have a significant weak relationship with factor 4 (campus support), $r = .15, p < .05$.

**Openness.** Pearson’s correlations were computed between item 11 (“I am mostly a sad person generally a relaxed person”), as the predictor of openness in the survey, and the four factor scores. As anticipated, there was a significant positive relationship between item 11 (“I am generally a relaxed person”) and factor 2 (social and emotional safety), as it was one of the items in this subscale, $r = .57, p < .01$. Item 11 (“I am generally a relaxed person”) was found to have a significant positive relationship with factor 3 (physical and sexual safety), $r = .16, p < .01$, and factor 4 (campus support), $r = .16, p < .01$.

**Neuroticism.** Pearson’s correlations were computed between item 34 (“I am mostly a sad person”), as the predictor of neuroticism in the survey, and the four factor scores. As expected there was a significant positive relationship between item 34 (“I am mostly a sad person”) and factor 1 (campus environment), as it was one of the items in this scale, $r = .50, p < .01$. Additionally, item 34 (“I am mostly a sad person”) was found to have a significant positive relationship with factor 2 (social and emotional safety), $r = .17, p < .01$, and factor 3 (physical and sexual safety), $r = .18, p < .01$.

Thus, significant positive correlations were found between personality dimensions and the four scales of the ISSQ, indicating that the null hypothesis could not be confirmed.

**Discussion**

**Participant Demographics**

About one-third of the international students who took the inventory indicated that they were Indian. This percentage is somewhat higher than what was reported in Institute of International Education (IIE, 2015) document, where about 16% of the total US international
student population were Indian. Perhaps the larger representation of Indian international students is due to the researcher’s personal identity as an Indian international student. She held close ties to the Indian international student community at prior and current colleges. A little less than a third of the sample was from other Asian countries, which is an accurate representation of the international student population in the United States (IIE, 2015).

In regards to gender, the sample was consistent with national statistics, as there were 45.7% female international undergraduate students as compared to 54.3% male international undergraduate students. Additionally, there are fewer female international graduate students (43.3%), as compared to male international graduate students (56.7%) in the US (Statista, 2013).

Majority of the participants (78%) were 30 years of age or under, which is representative of the traditional college student population in the United States. The majority of the sample consisted of international students pursuing graduate education (master’s 36%, doctoral 35%). However, in 2014-2015 undergraduate international students outnumbered graduate students (IIE, 2015). Therefore, the current sample did deviate from the national sample of international students, however, the researcher’s personal identity as a graduate (doctoral) student, could have attracted a larger graduate student population.

Although the current sample represented a larger Hindu population (about 26%) compared to the world statistics of 15% (Pew Research Center, 2012), this can be explained by the larger Indian population sampled in the current study. India is a country where Hinduism is the dominant religion (about 80% of the population identifies as Hindu; Census of India, 2011).

As to type and location of the institutions attended by participants, majority of the participants indicated attending institutions in “urban” settings (81%). This percentage is representative as a recent report stating that 85% of international students pursuing a bachelor’s degree or higher, attended college and universities in 118 metro areas in the US (Ruiz, 2014).
**Experiential Items**

The 12 experiential items on the questionnaire yielded prevalence data on campus safety experience of international students, which was lacking in the current US literature. In this study, 10% of the respondents reported experience with theft/robbery on/around campus. This proportion is identical to the one found in Babacan et al. study (2010). However, 10% is much higher than the 0.9% found for full-time equivalent domestic students, as part of the National Center for Education Statistics (U.S. Department of Education, 2016). In addition, 2.5% of the respondents reported experiencing physical harm, which is also higher than the 1.4% found for domestic students (US Department of Education, 2016). Also, about 12% of the respondents reported experiencing verbal threat/attack, which is similar to the prevalence rate in Babacan et al. study (2010) in Australia.

In terms of sexual harassment and assaults, 7.5% of the respondents reported experience with unwanted sexual attention on/around campus, and 7.7% reported experiencing unwanted attention or harassment in the form of stalking. This statistic is much higher than the 4.2% reported for domestic students by the Campus Climate Survey on Sexual Assault and Misconduct (Cantor et. al., 2015). In addition, 6% of the respondents reported experience with emotion and/or physical abuse in a romantic relationship, and 4.6% reported unwanted attention or harassment on the internet by someone on campus. However, in another study with 1,010 female undergraduate and graduate students at a southeastern state university, researchers found that 35.6% of the participants experienced stalking, physical and/or sexual assault (Wilcox, Jordan, & Pritchard, 2007). Participants in the current study could have under-reported experiences with sexual harassment and assault due to cultural factors. In contrast, 4.2% of the respondents reported being forced into sexual contact. This is slightly higher than the 3.3% of
forcible sex offenses reported among full-time equivalent domestic students (U.S. Department of Education, 2016).

Despite the relatively high rates of experiences with physical, verbal and sexual crimes, less than half (40%) of the respondents reported utilizing support services on campus to assist with their challenges. Interestingly, majority of the participants (82%) reported having spoken to someone regarding their academic needs. However, when it came to social-emotional needs and safety, only 14% and 16% of the respondents respectively, reported having spoken to a staff or professor about their concerns. Research supports these results, as international students are more likely to accept medical issues, however find it much harder to accept emotional issues (Forber-Mewett & Sawyer, 2011; Kleinman, 1986).

**International Student Safety Questionnaire**

Although a number of studies have identified personal and environmental factors contributing to international students experiences on college campuses (Baba & Hosoda, 2014; Hendrickson, Rosen, and Aune, 2011; McLachlan & Justice, 2009; Poyrazli & Grahame, 2007; Zhang & Goodson, 2011), at the time of writing, the ISSQ represents the first scale that assesses international students’ experiences of campus safety on US campuses. It included factors other than physical and sexual safety, which have received extensive attention in the literature on campus safety, in understanding the construct of campus safety. The exploratory factor analyses (EFA) conducted on the ISSQ resulted in a four-factor structure, each of these are discussed below in relation to current literature.

**Campus Environment.** Campus environment is an important factor that emerged from the ISSQ. It is broadly defined as the current attitudes, behaviors, standards, and practices that employees and students have in an institution, which are usually linked to specific social groups (Rankin & Reason, 2008). In the literature it is used synonymously with campus climate. Despite
it being an important social environmental factor impacting students’ university experiences, there is a lack of research that examines its impact on international students’ experiences.

The literature indicates that international students’ ability to adjust does not simply depend on the individual, but also the environment students are in (Poyrazli & Grahame, 2007). Furthermore, research on acculturation and cross-cultural adjustment also highlights the importance of environmental factors (Berry, 1997; Heppner, Wang, & Heppner, 2012). Berry’s (1997) model conceptualizes acculturation as a two-way process between international students and their host society. Heppner et al. (2012) highlighted the importance of the level of support or hostility of the environment and relationships within the host culture as factors influencing one’s development of cross-national cultural competency. Despite the diverse range of studies on international students on acculturative stress and adjustment difficulties, there is lack of empirical data that examines the role of campus environment on international students’ experiences on campuses in the US and its influence on these difficulties.

**Social and Emotional Safety.** Social and emotional safety is a crucial factor in international students’ sense of safety on campuses and is strongly supported by research for its impact on student success and psychosocial adjustment in host country (Baba & Hosoda, 2014; Hendrickson, Rosen, and Aune, 2011; Kashima & Loh, 2006; McLachlan & Justice, 2009; Patron, 2014; Terrazas-Carrillo, Hong, & Pace, 2014; Zhang & Goodson, 2011). For instance, Baba and Hosoda (2014) surveyed 209 international students from a large state university in the Silicon Valley, finding that social support was directly related to cross-cultural adjustment and served as a partial mediator for stress factors (i.e., academic pressure, financial stress, homesickness, perceived discrimination, social disconnectedness, and culture shock) and cross-cultural adjustment. Furthermore, Terrazas-Carrillo et al. (2014) conducted semi-structured interviews to examine international students’ attachment to the new location in their host
country, and found that participants renegotiation process with the new place involved fulfillment of specific needs, such as, a desire for social interaction, an opportunity for self-expression, and the expression of their emotional experiences. A systematic review of the literature on psychosocial adjustment of international students between 1990 and 2009 suggested that the most frequently reported predictors of psychosocial adjustment included social support and social interaction with Americans (Zhang & Goodson, 2011).

**Physical and Sexual Safety.** Physical and sexual safety is widely discussed in the literature on campus safety (Baker & Boland, 2011; Fox, Nobles, & Piquero, 2009; Jordan, 2014; Patton & Gregory, 2014; Ratti, 2010; Tomsich, Gover, & Jennings, 2011). However, there is a dearth of literature on international students’ experiences and perceptions of physical and sexual safety in the US, and the ISSQ, and in particular, this subscale, can be used to tentatively assess for physical and sexual safety experiences and concerns among international students.

**Campus Support.** McLachlan and Justice (2009) supported the importance of this scale in their research. They conducted a qualitative study on international students’ well-being and found that most participants used academic services (e.g., library) and recreational services (e.g., recreation center). International students also indicated that they accessed the health services for minor concerns (e.g., cough, headache); however, many students reported being unaware of counseling services, which is also consistent with previous research findings (Ang & Liamputtong, 2008; Poyrazli & Grahame, 2007).

**Reliability**

The overall reliability of ISSQ was adequate for an attitudinal measure (Cronbach’s alpha = .85). Similarly, the four derived scales generated satisfactory internal consistency coefficients: campus environment (α = .80), social and emotional safety (α = .75), physical and sexual safety (α = .81), and campus support (α = .72). The reliability estimates for the ISSQ are congruent to
those reported for a similar measure, namely, the IFCS. Whereas the IFCS had a composite internal consistency reliability of .89, the subscale scores had alphas ranging from .70 to .86.

**ISSQ and Demographic Factors**

The results suggested that participants who identified India as their country of origin, scored higher in comparison to participants from other non-White regions of the world. Existing research suggests that international students from predominantly non-White regions of the world report more negative experiences (Lee, 2010). Negative perceptions tend to decrease the likelihood of recommending international education to other students from their home countries. The results of the present study are consistent with the existing literature, in that international students from non-White regions of the world reported lower levels of campus safety on all four scales, with the exception of international students from India. This anomaly could be explained due to the larger Indian student representation in this current sample and due to social desirability bias, which is further explained in the limitations section.

Whereas participants who identified Hindu scored higher on the ISSQ campus environment and campus support scales, those who identified as Christians scored higher on social and emotional safety and physical and sexual safety scales. Although previous research provides support for differences in international students’ experiences of loneliness and social support based on gender differences (Sawir et al., 2008), age (Green et al., 2001), and other cultural factors, there appears to be few, if any, work examining differences based on participants’ faith tradition. It should be noted, however, that Potkar (2013) interviewed 13 Indian international students in the US to explore their adaptation experiences. The findings suggested that religion/spirituality was important part of their adaptation in the US.

Related to college status, participants who were master’s level students scored higher on all scales except for the social and emotional safety scale. In contrast, undergraduate respondents
only scored higher on this scale. Although Mallinckrodt and Leong (1992) surveyed 272 international graduate students to examine their level of stress and social support, currently no existing research exists that differentiates the social and emotional experiences of international students at different educational levels.

Lastly, majority of the participants self-identified their perceived level of proficiency in English as “high” and scored higher on all four scales of the ISSQ. Baba and Hosoda (2014) surveyed 197 international students and found that none of the demographic variables except for comfort levels of communicating in English, we related to cross-cultural adjustment. This variable was positively related to comfort levels of communicating in English ($r = .40, p < .01$), and negatively related to stress factors, including academic pressure ($r = -.34, p < .01$), financial stress ($r = -.27, p < .01$), homesickness ($r = -.44, p < .01$), perceived discrimination ($r = -.45, p < .01$), social disconnectedness ($r = -.43, p < .01$), and culture shock ($r = -.67, p < .01$). The ISSQ captured many of the stress factors identified in Baba and Hosoda’s study (2014). Therefore, the findings from Baba and Hosoda’s study are consistent with those found in the current study, as participants who self-identify as “high” in perceived proficiency in English scored higher on the instrument.

**ISSQ and Personality Factors**

The results suggested multiple significant correlations between the ISSQ factors and personality variables of extraversion, openness and neuroticism. Poyrazli, Thukral, and Duru (2010) conducted a study with 613 international students using the Big Five Inventory and found that neuroticism was significantly correlated with the overall acculturative stress of international students. Neuroticism was also significantly related to perceived discrimination, homesickness, fear, and perceived hate/rejection sub factors of acculturative stress. This result is consistent with the findings from the present study, as neuroticism was positively correlated with campus
environment ($r = .50, p < .01$). Additionally, neuroticism was also found to have a significant positive correlation with social and emotional safety ($r = .17, p < .01$) and physical and sexual safety ($r = .18, p < .01$).

Openness was positively related with homesickness in Poyrazli et al.’s (2010) study. This finding is consistent with the present study, as openness was positively correlated with social and emotional safety ($r = .57, p < .01$). Additionally, openness was also found to have a significant positive relationship with physical and sexual safety ($r = .16, p < .01$), and campus support ($r = .16, p < .01$). Again, the magnitude of these latter correlations was weak.

Lastly, extraversion was positively correlated with social and emotional safety ($r = .73, p < .01$), as it was one of the items in this scale. However, it was found to have a significant weak relationship with campus support ($r = .15, p < .05$). This result is also consistent with the findings from Poyrazli et al. (2010), as they found no significant correlations between extraversion and perceived discrimination, homesickness, culture shock, fear, guilt, and perceived hate/rejection.

**Implications for Counseling and Counselor Education**

Firstly, the ISSQ can be used with some caution by college counseling centers in working with international students to identify which factors are impacting that individual student’s experience on campus. Results from this type of assessment can assist counselors in determining the direction of counseling. This can be especially beneficial since the current study and existing literature suggests that there is a lack of willingness among international students in sharing social-emotional needs (Ang & Liamputtong, 2008; McLachlan & Justice, 2009). The assessment could potentially guide the counselor in working with an individual international student based on their scores on the various scales. Furthermore, because international students prefer to obtain advice about personal issues from family, partners, and friends (Ang &
Liamputtong, 2008), they rarely use university services, especially personal counseling. Thus, such tools can be beneficial in initiating conversations regarding their struggles as an international student in the US.

In Australia, for example, researchers interviewed 16 professionals who had experience dealing with international student concerns on a day-to-day basis. These included international student support staff, counselors, general medical practitioners and academic staff. They reported that international students tended to delay seeking professional help for mental health problems (Forber-Mewett & Sawyer, 2011). Another factor influencing whether international students pursue personal counseling originates from their country of origin and culture. International students from some cultures, particularly non-Western cultures, may be unfamiliar with counseling as an option because counseling may not have been available to them or practiced in their culture (McLachlan & Justice, 2009). Furthermore, mental health counseling may be stigmatized in certain eastern cultures. As such, students may not seek assistance when they are in need (Chen & Lewis, 2011; Shea & Yeh, 2008; Willis-O'Connor, 2014).

In terms of practice, counselors assisting international students need to engage in outreach to create awareness regarding on campus mental health and counseling services. McLachlan and Justice (2009) found that international students valued the orientation held at the beginning of their academic year for information on adjustment. College counselors could use this opportunity to educate international students about their services and engage in a stronger relationship with the international student service office. Due to the stigma attached with seeking mental health support, many international students often seek assistance from the staff at the international student service office. Thus, establishing a stronger relationship with the international student service office could prove to be beneficial for both parties involved, as it could allow their staff to refer international students to the counseling center, and vice versa.
Further research is needed to explore nontraditional approaches to offering university services, particularly mental health services to international students. Some researchers suggest that universities develop approaches to provide counseling services to international students in informal settings and in non-traditional ways, such as presentations and group settings (Yeh & Inose, 2003). Offering assistance in nontraditional ways in group settings could also benefit students. For example, informal workshops that provide ways for students to obtain skills and learn strategies to adjust within the new culture, manage feelings of loneliness and homesickness, overcome cultural barriers to form friendships within the campus community, and so on, may assist international students in their transition to the US.

The current study highlights certain individuals at-risk of struggling with one or more aspects of campus safety. However, counselors should use caution in generalizing the results from the current study in working with international students. For instance, although Indian international students scored higher on all aspects of campus safety, counselors must not assume that all Indian international student clients are immune to interpersonal and environmental concerns on campus. As correctly put by a participant in Chen and Lewis’s study (2011) counselors must not treat clients as, “either very differently (based on stereotype), or exactly the same as they treat members of the majority culture without regard for beliefs and behaviors associated with the family’s unique ethno-cultural milieu” (p. 311).

**Implications for Higher Education**

There are several ways the ISSQ can be used for enhancing international students’ experiences on college campuses in the US. First and foremost, the ISSQ serves as an instrument to measure what safety concerns impact international students on a particular campus. This may help facilitate a more comprehensive understanding of international students’ experiences and help identify which factor(s) have the strongest impact on students’ safety experience.
Assessment results may be used to inform strategic planning on which factors of campus safety warrants the most attention for improvement. For example, if a case study was conducted at a large public institution using the ISSQ and campus environment safety concerns emerged as the most alarming deficiency, the university could create programs to educate their students, staff and faculty regarding diversity. Counselors could conduct workshops with faculty and staff regarding multicultural competence. However, if social and emotional safety concerns emerged as the most significant issue on campus, international student service center/office can work on creating programs to bridge the gap between domestic and international students.

University sponsored organizations and activities that facilitate social connections with US students are critical to international student adjustment. For example, Owens and Loomes (2010) conducted a social integration initiative at an Australian university to enhance international students’ social adjustment through partnerships with local community, staff, and other students. The initiative included nontraditional American sports (e.g., cricket), as well as social (e.g., celebration of cultural festivals like Chinese New Year and Indian Independence Day), community, communication, work-related, and welfare activities. Using a mixed methods design, they conducted a survey of 446 international students that took part in this unique opportunity. The researchers also conducted focus-group discussions with staff and students. The findings indicated that successful social integration initiative were beneficial from both the student perspective and the campus staff.

Universities could pair new international students with other international students from their home countries already established at the university to mentor the newly arrived students (McLachlan & Justice, 2009). To take this a step further, international students could also be paired with their domestic counter parts, to assist in create a stronger social support for them in the US. Furthermore, Bista and Foster (2011) recommended that universities and colleges
support relationships with local community members to offer international students home stays and other activities to allow students to feel at home when they first arrive in the US. The researcher recommends continuing such efforts months after arrival, such as invitation to international students for home cooked meals in American homes and celebration of international festivals within the local community. Thus, such social integration efforts can help in enhancing a sense of security and social safety in the host country.

Lastly, the scale can also serve to quantitatively measure campus safety. Information from the scale, for instance, can be used to identify areas of strength for campuses, such as, campuses that score highly on factor 1 (campus environment) and factor 4 (campus support), can utilize such information to recruit prospective international students.

**Limitations**

Despite the many advantages of the ISSQ, there are a several limitations that should be noted. Internal validity, which is the ability for a study to make true inferences about the studied relationships (Tabachnick & Fiddell, 2013), is an issue especially important to this study, as it attempted to establish the ISSQ’s psychometric properties with international students. Threats to internal validity in this study most likely included several types of bias, including selection, self-report, social desirability responding, central tendency, and ordering. External validity is the extent to which this study can be generalized to the population. Given convenience sampling and composition of the respondents, the present study’s findings are not generalizable to a broader audience. Specifically, a large portion of the sample consisted of Indian international students ($n = 110, 34.1\%$) and majority of them were from urban campuses ($n = 256, 79.3\%$). Over 75% of the respondents were attending higher education institutions in southern region of the country ($n = 245, 75.9\%$). Finally, although this sample size was robust for statistical analyses ($N = 284$),
the results of the present study represent a static measure of the participants’ perceptions and beliefs at the time the participants completed the survey.

In addition to internal and external validity, there were limitations to the data collection procedure. This study was completed using electronic survey methods and in-person paper copies. Although electronic surveys are a common practice (Granello & Wheaton, 2011), they only allow for data collection over a short period (8 weeks). This time frame may not have been sufficient to reach the targeted sample. Additionally, it is impossible to truly know the response rate to this survey as listservs and social media were used to gain access to the sample. Many pertinent listservs and social media groups were restricted to members only, and therefore, the researcher was unable to sample from these groups.

Lastly, the item development was mainly based on literature review and input from a few professionals with expertise in counseling and working with international students. Each of these limitations are addressed in the next section on recommendations for future research.

**Recommendations for Future Research**

A number of recommendations for future research are proffered. For example, subsequence investigations of international students’ perceptions of campus safety should include other US campuses from various geographical regions (e.g., Northeast, Midwest, and West). Researchers should encourage participation from different types of institutions (e.g., private, community colleges) and from more diverse settings (e.g. college towns, rural communities). Additionally, it should be noted that most international students in the US come from five countries: China (31.2%), India (13.6%), South Korea (6.5%), Saudi Arabia (6.1%), and Canada (2.8%; IIE, 2015). Interestingly, California and New York are the two states that host the largest number of international students (approximately 242,000; IIE, 2015). New York University (NY), University of Southern California (CA), and Columbia (NY) are the top three
institutions that educate international students in the US (IIE, 2015). Therefore, future research studies can attempt to gather data specifically from these three universities to capture a larger proportion and more representative sample of the population.

Additionally, since majority of the participants reported moderate to high level of proficiency in English, a recommendation for future researchers, who might be interested in replicating the study could adapt the ISSQ in other major languages of the world, such as, Hindi, Mandarin, Arabic, etc. Such an effort could ensure gathering a more representative and diverse sample. The scale could be adapted for and validated for use in other host countries, such as, Britain, Australia, Singapore, etc. to examine international students’ experiences of campus safety in those host nations. Another area for future studies is to examine US study abroad students’ experiences of oversea campuses and how that relates to their adjustment process.

Another key recommendation for future research involves the ISSQ’s validity. A confirmatory factor analysis should be conducted with new sample to support the measure’s dimensionality or construct validity. The ISSQ should be assessed for concurrent validity using other similar instruments. ISSQ scales can also be correlated with other important variables (e.g., acculturative stress, help-seeking intentions, psychological distress and wellbeing).

In addition, future studies could utilize qualitative methods, such as grounded theory, to develop a model or focus groups to generate ideas on more factors related to the international students’ experiences of campus safety. It should also be noted that only one item was used to assess each of the personality dimensions. For example, neuroticism was examined by asking participants to respond to this statement, “I am mostly a sad person.” Future studies of this kind should use a more psychometrically sound personality inventory (e.g., the Big Five inventory).

Due to the limited sample size, researcher was only able to test for influence of a few demographic characteristics on the ISSQ factor structure. In the future, a larger and more equally
A representative diverse sample would also be useful to further examine invariance between different types of institutions (public vs. private vs. community college), native and non-native English speakers, level of cultural adaption, and so on.

Longitudinal studies of how perceived campus safety or scales relates to academic retention and completion rates can also provide more information on how campus safety perceptions and experiences impacts student success. Finally, future research can focus on understanding the construct campus safety for other minorities on college campuses, such as LGBTQ students, Muslim students, and first-generation college students.

**Conclusion**

In conclusion, there is a major gap in the literature on international students’ experiences of campus safety in the US. Previous research in this area has emphasized the sociocultural challenges that these students experience during their time in Western countries like Australia and US. Much discussion has contributed to identifying internal attributes of international students that are related to such experiences. In an attempt to extend the literature, this study addressed international students’ experiences that are embedded in the overall external campus environment, through an EFA focused on understanding the construct of campus safety. The current study also examines the impact of demographic characteristics and personality differences in understanding international students’ experiences of safety on campus. From an administrative perspective, both academic professionals, as well as higher education professionals/student affairs personnel, can help facilitate a supportive environment to enhance international students’ experiences on campuses in the US. The ISSQ can be applied to varied academic institutions, allowing pertinent staff to obtain a more comprehensive understanding of the campus experiences of international students.
References


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*Journal of Community Psychology, 14*, 6-23.


*Journal of International Students, 4*(2), 137-149.


*Counseling Outcome Research and Evaluation, 4*(2), 75-98.


APPENDIX A
Demographic Questionnaire

1. Your Country of Origin/Nationality: ______________
2. Race/Ethnicity: __________________
3. Gender: M F Other □
4. Age: ______
5. Specify your Faith/Religion/Spiritual tradition: _______________ (e.g., Buddhist, Islam, Hindu, etc.) or None
6. How long have you lived in the U.S.(years/months): ________________
7. Perceived proficiency in English (check one)
   ___ Low
   ___ Moderate
   ___ High
8. Year in College/University (check one):
   ___ Freshman (first year)   ___ Master’s
   ___ Sophomore (second year) ___ Doctoral
   ___ Junior (third year)     ___ Other (Please specify; e.g., English
   ___ Senior (fourth year)    ___ Language Learner) __________
9. Which state of the U.S. is your institution located in: ______________
10. Location of institution (check one):
    ___ Urban/City                ___ Other (Please specify:
    ___ Suburban/Outskirts of the city ___________
    ___ Rural
11. Type of Institution (check one):
    ___ 4-Year University/college   ___ Community College
        (Private)                   ___ Other (Please specify:
    ___ 4-Year University/college (Public) __________
12. Please rate your current level of adaptation (or level of comfort) to US culture (particularly in the region you now live)?
    ___ I have not yet adapted.
    ___ I am beginning to adapt.
    ___ I have adapted fairly well.
    ___ I have adapted extremely well
### International Student Safety Questionnaire (ISSQ)

For each statement, please mark the number that BEST reflects your current perception as an international student living in the United States. Please try to answer all of the statement/items based on your experience. There are NO right or wrong answers, as we only want to learn about your current experience and opinions. Your responses will not be shown to anyone outside of the research team and NO identifying information will be revealed. Your views will help the University develop more helpful policies and procedures to better serve all international students.

(Strongly Disagree [SD], Disagree [D], Somewhat Disagree [SWD], Neutral [N], Somewhat Agree [SWA], Agree [A], Strongly Agree [SA])

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<tr>
<th>Statements</th>
<th>1 SD</th>
<th>2 D</th>
<th>3 SWD</th>
<th>4 N</th>
<th>5 SWA</th>
<th>6 A</th>
<th>7 SA</th>
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<td>1. I feel my university is welcoming to international students.</td>
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<td>2. Professors and instructors are helpful in providing me academic support when needed.</td>
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<td>3. I am generally someone who gets stressed easily.</td>
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<td>4. I feel like I belong in my classes.</td>
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<td>5. I fear that I might get robbed on/around campus.</td>
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<td>6. I have heard people on campus make unkind (e.g., insensitive, degrading and/or stereotypical) remarks about international students.</td>
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<td>7. When I interact with my American classmates, I feel like I am being judged negatively, as an international student.</td>
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<td>8. I feel comfortable walking around campus any time of day.</td>
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<td>9. The campus is a safe place for me.</td>
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<td>10. I feel comfortable with approaching my professors to ask clarifying questions.</td>
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<td>11. I am generally a relaxed person.</td>
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<td>12. I feel comfortable with discussing academic issues with professors/instructors when needed.</td>
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<td>13. I am not treated fairly by university staff because of my status as an international student.</td>
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14. I fear that I might get physically attacked on/around campus.

15. I feel that I am viewed differently by those on campus due to my appearance, dressing style, etc.

16. I tend to make friends easily.

17. I experience periods of loneliness during my time as a student.

18. When I am struggling with feelings of homesickness and loneliness, I can usually approach others who will support me.

19. I am not treated fairly by my American classmates because of my status as an international student.

20. I struggle with forming friendships with people outside of my cultural/national group due to language difficulties.

21. I think university staff are helpful.

22. I am usually a social person.

23. There is a general hostility on my campus toward international students.

24. I fear that I might be sexually assaulted on/around campus.

25. I am viewed as more intelligent in the classroom because I am an international student.

26. I am fluent in English.

27. I am able to speak with my professors about my challenges as an international student.

28. I am more comfortable being by myself than in large groups.

29. I am mostly a happy person.

30. I am able to make friends with other international students.

31. I am able to make friends with American students.

32. I regularly participate in social activities (clubs and/or groups) on campus.

33. I experience academic challenges because of my English language skills.

34. I am mostly a sad person.

35. I am viewed as less intelligent in the classroom because I am an international student.

36. I am aware of who to contact for help if I experience a crime on/around campus.
37. I am aware of what to do to protect myself if I experience a crime on/around campus.  
38. I fear that reporting a crime on/around campus might impact my visa status.  
39. I am comfortable using student support services when I experience difficulties.  
40. I do not fear walking in the areas outside of campus.  
41. I am aware of the student support services on campus which can provide me with ongoing assistance while attending my university (e.g., health, counseling, financial, etc.).

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<tr>
<th>Statement</th>
<th>Yes</th>
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<tr>
<td>1. I have spoken to a staff or professors/instructors member about my academic needs.</td>
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<td>2. I have experienced theft/robbery on/around campus.</td>
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<td>3. I have experienced unwanted sexual attention on/around campus.</td>
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<td>4. I have used student support services for assistance with my challenges as an international student.</td>
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<td>5. I have experienced physical harm (such as being kicked, pushed, shoved, etc.) on/around campus.</td>
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<td>6. I have experienced verbal threat/attack on/around campus.</td>
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<td>7. I have spoken to a staff or professors/instructors about my safety concerns.</td>
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<td>8. I have experienced unwanted attention or harassment in the form of stalking on/around campus.</td>
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<td>9. I have been forced into sexual contact (such as kissed, touched, raped, etc.) on/around campus.</td>
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<tr>
<td>10. I have experienced unwanted attention/harassment on the internet (cyber-stalking) by someone on campus.</td>
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<td>11. I have experienced emotional and/or physical abuse in my romantic relationship/s on campus.</td>
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<td>12. I have spoken to a staff or professors/instructors about my social-emotional needs.</td>
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</table>

Debrief: Thank you very much for completing this short survey. If you are experiencing any challenges right now and you need support, please visit the international student office as well as the counseling center. (Will provide numbers to those services based on the specific university/campus).
VITA
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EDUCATION

Ph.D. in Counselor Education (CACREP Accredited) May 2017
Old Dominion University, Norfolk, VA

Masters of Science in Clinical Mental Health Counseling (CACREP Accredited) Dec. 2013
Syracuse University, Syracuse, NY

Bachelor of Arts in Psychology May 2010
Graduated with Honors
St. Xavier’s College, Mumbai, IN

PROFESSIONAL PROFILE

Old Dominion University May 2014-May 2017
Graduate Teaching and Research Assistant Norfolk, VA

Harbor Point Behavioral Health Center August 2015-May 2016
Counseling Resident Portsmouth, VA

Family Buddy January 2014-May 2014
In-home Counselor Mumbai, India

Syracuse Behavioral Health January 2013-December 2013
Counseling Intern Syracuse, NY

SELECTED PUBLICATIONS


Ramrakhiani, S. (under review). A phenomenological examination of the experiences and perceptions of female international students’ on campus safety: Implications for college counseling.


