An Examination of the Relationship Between Adjustment Problems, Homesickness, Perceived Discrimination and Psychological Wellbeing among International Students

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This dissertation titled
An Examination of the Relationship Between Adjustment Problems, Homesickness, Perceived Discrimination and Psychological Wellbeing among International Students

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Abstract

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An Examination of the Relationship Between Adjustment Problems, Homesickness, Perceived Discrimination and Psychological Wellbeing among International Students

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The purpose of the study was to explore the influence of adjustment problems, homesickness, and perceived discrimination on the psychological well-being of international college students. Additionally, there was an examination of whether there were any gender differences as they relate to adjustment issues, homesickness, perceived discrimination and psychological wellbeing.

A convenience sample of international college students (N=145) aged 18 to 41 was recruited to participate in the study. The data were collected using the Michigan International Students Problem Inventory (MISPI), the Acculturative Stress Scale for International Students (homesickness and perceived discrimination scales) and the scale of Psychological Well-Being (SPWB). Additionally, all participants were requested to complete the demographics questionnaire. To analyze the data, Pearson correlations coefficients, descriptive statistics, multiple regression analysis and t-test were used.

Results indicated that adjustment problems, homesickness and perceived discrimination were significantly and negatively correlated with psychological well-being. Regression analyses results also showed that adjustment problems, homesickness and perceived discrimination significantly predicted psychological well-being. Implications are discussed and suggestions for interventions are also provided. Additionally, limitations of current study as well as future directions are presented.
This dissertation lovingly dedicated to my mother, Elif Can and my father, Ekrem Can
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Chapter 1: Introduction

Psychological Well-Being Defined

Psychological well-being is defined as a network of related constructs that refer to an individual’s subjective experience of flourishing. Ryff’s (1989) research, for example, has identified “feeling competent, that one is able to meet the demands offered by one's social environment (e.g., school or work), self-determined decision making, satisfying interpersonal relationships, purpose in life, and self-acceptance” (Schwartz et al., 2013, p. 302) as distinct constructs of psychological well-being.

In addition to identifying the constructs composing psychological well-being, research across many disciplines has been devoted to understanding variables (and relationships between these variables) such as ethnicity or race and religion that influence the level of psychological well-being people experience (e.g., Gulacti, 2014; Sheu, Chong, Cheng & Lin, 2014; Iwamoto & Liu, 2010). Examples of such disciplines include, but are not limited to, sport psychology (Brown & Fry, 2014; Draugelis, Martin, & Garn, 2014) biological medicine (Zheng et al., 2014) and even kinesiology (Bray & Kwan, 2006).

A particularly rich strand of research related to psychological well-being has begun to evolve in the disciplines of counseling and related mental health professions. This is because it is the role of mental health professionals to treat individuals experiencing psychological distress. As such, it is of particular importance to the field of counseling and related disciplines to continue the advancement of understanding the factors that contribute to psychological well-being. This information allows counselors
and clinicians to intervene and treat factors contributing to psychological distress (and therefore increase levels of psychological well-being).

**Populations of Concern**

**College students.** One population experiencing considerable psychological distress is college students. Indeed, research suggests that college students experience greater mental health issues than non-student samples of the same age (e.g. Kitzrow, 2003; Gore et al., 2011). For instance, Twenge, Gentile, DeWall, Ma, Lacefield, and Schurtz (2010) investigated the prevalence of psychological distress among college students in America and found these individuals experienced considerable depression, paranoia, and hypomania.

Due to the presence of such psychological distress among the college-age population, researchers have given attention to the psychological well-being of both undergraduate (e.g., Schwartz et al., 2011; Wang & Castañeda-Sound, 2008; Demir & Orthell, 2009) and graduate (Saricaoğlu & Arslan, 2013; Haynes et al., 2012) students. Among this population, several domains of college life experiences have been shown to be related to psychological well-being.

One such domain related to psychological well-being is academics. Wang and Castañeda-Sound (2008) found that academic self-efficacy (i.e., how competent individuals feel in academic-related activities) was positively related to psychological well-being. Relatedly, Haynes and colleagues (2012) found that how well individuals navigated their personal and academic roles was related to levels of psychological well-being.
Another domain related to psychological well-being is social relationships. For instance, Whitton et al. (2013), looked at the relationship between relationship status and psychological well-being and found that being in a committed relationship, as opposed to being single, was associated with fewer depressive symptoms among females. On a broader consideration of social relationships, Crocker, Luhtanen, Blaine and Broadnax (1994) considered collective self-esteem’s relationship to psychological well-being. They define collective self-esteem as people’s perceptions of how others view their group (i.e., how a Black student thinks other people view Black people in general) and found that collective self-esteem predicted psychological well-being. When looking at racial comparisons, it was also found this effect was particularly strong for Black students when compared to White and Asian college students (Crocker et al., 1994).

An examination of racial differences connects to another strand of research that examined college students from diverse backgrounds. Researchers considered the influence of different cultural backgrounds and race on college students’ levels of psychological well-being. Specifically, studies in this vein elucidate the relationship between unique factors experienced by diverse college students and psychological well-being. One potential factor unique to individuals from diverse cultural and racial backgrounds is acculturative stress. For instance, Schwartz and colleagues (2013) found that among college students from immigrant families (i.e., American college students whose parents were born in another country), strong attachment to a cultural group was associated with increased psychological well-being. However, psychological well-being was identified primarily as an individualist construct, which may be a source of conflict and stress for people of a collectivist orientation (Schwartz et al., 2013). Such a conflict
would coincide with Park et al.’s (2014) finding that acculturation stress negatively correlated with psychological well-being.

Additional factors predicting psychological well-being among diverse college students is academic satisfaction and success. In their study of two Asian samples, Sheu and colleagues (2014) found that academic satisfaction and success significantly predicted self-reports of psychological well-being. Their results are consistent with other studies finding similar results among Mexican American (Ojeda et al., 2011) and Portuguese (Lent et al., 2012) student samples, which implies the influence of academic adjustment is an important construct to consider to understand the overall mental health of college students.

**International college students.** As mentioned previously, one branch of research on psychological well-being has addressed the nature of psychological well-being among people from different cultural and ethnic backgrounds both within the United States (e.g., Crocker et al., 1994; Iwamoto & Liu, 2010) and in other countries (e.g., Ayyah-Abodo & Sanchez-Ruiz, 2012; Bhullar, Hine & Phillips, 2014; Sivis-Cetinkaya, 2013).

In recent years, there has been a relative increase in the amount of research focused on international students who attend colleges and universities in the United States (Poyrazli & Graham, 2007; Rahman & Bahurudin, 2009; Zhou, Frey & Bang, 2011). International students are a diverse group representing a large number of countries, different religions, languages, age groups, and cultural backgrounds (Rahman & Bahurudin, 2009). Importantly, Reid and Dixon (2012) reported that the numbers of international students enrolled at U.S. universities are growing (p. 29). Specifically, in the 2012-2013 academic year there were over 810,000 international students officially
enrolled at colleges and universities in the US, an increase of 7.2% compared to the previous academic year (Open Doors Report, 2013).

Further, this population experiences many difficulties as they integrate into a new culture, and these differences will vary in extremity based on one’s culture of origin (Nilsson & Anderson, 2004). Nevertheless, all international students experience some degree of cultural difference between their culture of origin and U.S. culture, and all must learn to manage these differences without their familiar social support system (Nilsson & Anderson, 2004; Reid & Dixon, 2012). As such, international students encounter many special and unique challenges in adjusting to academic and cultural enclosing such as "language barriers, cultural differences and racial discrimination, social interaction and personal adjustment difficulties in their life" (Reid & Dixon, 2012, p. 30). Therefore, it is important for researchers to identify and understand factors that contribute to the psychological well-being of the international student population and add to the existing body of literature pertaining to the mental health of college students.

Some researchers have approached the task of adding to the existing literature by conducting cross-cultural comparisons of various factors as they relate to psychological well-being. To illustrate, Chung and Gale (2006) compared self-differentiation (the tendency to want to make oneself distinct from other people) and psychological well-being between Korean and European American (EA) students and found that self-differentiation was greater among EAs than Koreans which is in line with individualistic cultural orientation and values. Further, this self-differentiation was more predictive of psychological well-being in EA students than in Korean students. This finding implies the importance of examining predictors of psychological well-being among international
students as they navigate a culture that may have different values and orientations from their own.

Several factors related to psychological well-being have emerged from research conducted with international samples. For instance, Guo, Li, and Ito (2014) stated that one important factor is acculturative stress, defined as the stress experienced when one must adjust and adapt to a new social or cultural environment. The authors found that among Chinese international students, levels of acculturative stress were positively related to loneliness and negatively related to psychological well-being. Further, Yu, Chen, Li, Liu, Jacques-Tiura and Yan (2014) indicated that acculturative stress was particularly high among individuals who were single, not prepared for the transition into a new culture, and did not belong to an organized religion which suggests that access to social support may be one way to combat acculturative stress.

Another factor related to psychological well-being among international college students is the types of identities these individuals form. For example, Lee, Yun, Yoo, and Nelson (2010) compared the ethnic identity of adopted Korean Americans (KAs), immigrant/US born KAs, and Korean international students. The authors found immigrant/US born KAs had higher ethnic identity as measured by Multigroup Ethnic Identity (MEIM) than adopted KAs and Korean international students. Moreover, a negative correlation between ethnic identity and negative affect emerged only for Korean international students. Jung, Hecht and Wadsworth (2007) examined how gaps in the various identities people possess might be directly related to levels of psychological well-being. Results revealed that large discrepancies between participants’ self-views and the self expressed in social communication were related to high levels of depression. Thus, it
appears that identity development and social relationship are important to consider when examining the psychological well-being of international students.

In light of the research presented, perhaps the most convincing evidence of the importance of studying factors that predict psychological well-being among international students is feedback from these individuals themselves. Several researchers have conducted studies that aim to uncover the themes of experiences of groups of individuals using qualitative research. For instance, notably, McLachlan and Justice (2003) conducted a study to illuminate the struggles international students encounter as they move to the United States and integrate into the culture. International students may experience several prominent ‘transition shocks’ including academic and social differences, and homesickness. The students identified developing a surrogate family as the primary coping strategy (e.g., developing close relationships with faculty mentors, other international students, as well as American friends). This management strategy is consistent with findings from other research examining coping strategies among international students (Tseng & Newton, 2003).

Based on these findings, it is evident that international students face unique barriers as they move and adjust to a new culture. The empirical and qualitative research reviewed points to several predictors of psychological well-being that either have not yet been addressed or need to be further addressed with a more generalizable sample. The next section will discuss the rationale for these predictors.

**Possible Predictors of Psychological Well-Being Among International Students**

Recent research has attempted to identify various predictors of psychological well-being (e.g., Gulacti, 2014; Sheu et al., 2014; Iwamoto & Liu, 2010). To date,
research implicates three factors: adjustment problems, homesickness, and perceived discrimination that might predict the nature of psychological well-being among international students (Chung & Gale, 2006; Jung, Hetch & Wadsworth, 2007; Poyrazli & Lopez, 2007). Gender, has also been implicated as a factor predicting psychological well-being (McWhirter, 1997; Quimby & O’Brien, 2006; Rodriquez, 1994). These four variables are detailed in the subsequent sections.

**Adjustment problems.** Adjustment problems refer to barriers that international students face as they become acclimated to a new culture. Within this section, two domains of adjustment are discussed: academic adjustment and psychosocial adjustment.

According to the Open Doors (2013) report, the United States hosts the largest number of both international undergraduate and graduate students in the world. Although international students are very crucial to U.S. universities, there are not many studies specifically focused on international students' academic transition and specifically, adaptation to U.S. higher education.

That said, current research has revealed that academic faculty and staff in America have made some progress in responding to the unique and special needs of international students in the United States. For example, Eland (2001) pointed out international students can meet their academic and educational goals, but they could be achieved more easily in institutions that catered to the unique needs of this population.

Research indicates that international students struggle with specific academic and learning issues when studying in a foreign country (Angelova & Riazantseva, 1999). In addition, Zhou, Frey and Bang (2011) attempted to explore which aspects of education can lessen the impact of learning issues among international students and some studies
have highlighted the importance of the student-professor relationship for international
students' academic adaptation to U.S. schools. They found that for international students,
"people who were important for these students' adjustment included professors,
colleagues, and school staff as well as family members far away in their home countries" (p. 82). This finding is consistent with Poyrazli and Graham’s (2007) results which found
that a well-developed student-professor relationship was a key factor influencing
international students' academic adjustment to different teaching styles and cross-cultural communications.

Accordingly, Mamiseishvili (2012) examined academic integration among first-
year international students who attended two-year versus four-year institutions in the US. The author found that the nature of the relationship between students and their academic advisors had an effect on their persistency in their academic programs. Further, results highlighted the notion that international students should meet with their academic advisors regularly and interact with instructors so as to increase the likelihood of persisting in their programs.

Another factor potentially influencing students’ persistence in their academic programs is the nature of the academic environment in which students learn, and more specifically, the degree to which these environments differ from those to which students are accustomed. Zhou, Frey and Bang (2011) sought to understand differences in academic environments and found that academic environment differences affected international students' learning behavior and style of study.

Language barriers are another factor that pose a problem for academic adjustment for international students (Poyrazli & Graham, 2007). The authors found the majority of
international students in their study sample experienced difficulties regarding their
language ability which played a role in their success and persistence in their academic
programs. This claim is echoed in the qualitative study of Zhou, Frey and Bang (2011)
who found that many participants, especially those who did not speak the English
language in their home country, found American English a very significant obstacle in
their academic lives. Similarly, Reid and Dixon (2012) stated that due to language
barriers, international students who did not speak fluent English, suffer in classrooms
during lectures, presentations, and seminar-based conversations. This theme is consistent
with qualitative research by Choi (2006) who interviewed 15 international students in
order to understand the academic difficulties they faced. The author found those who
possessed insufficient English skills experienced severe difficulties listening to and
understanding class lectures.

Another domain related to adjustment among international college students is
their psychosocial and cultural adjustment as they transition to a new culture. While
international students are studying in the US, they often face difficulties pertaining to the
education system, language barriers, as well as life-style, and social differences. As such,
much research has revealed that due to these differences, international students
experience increased mental illnesses and psychological problems (such as stress,
depression, homesickness, and emotional and social loneliness) as they transition into a
new culture (Zhou, Frey & Bang, 2011). Hyun and colleagues (2007) found that
participants reported experiencing high levels of emotional distress in relation to
academic problems as well as social issues which is consistent with findings from other
research (Yi, Lin, & Kishimoto, 2003). These studies indicate that obstacles experienced
by international students affect their psychological well-being and acclimation to a new culture. Chief among these obstacles are the psychosocial and cultural differences international students face.

Wang (2009) stated that "international students who come from different cultures and circumstances face many changes in many aspects of their lives such as in geographical location, weather conditions, food, language, behaviors and values, social interactions, and educational systems" (p. 23). As such, international students trying to assimilate into a different culture might face several problems and barriers such as participation in academic and social communities within a new culture which is illustrated in various studies examining acculturation among international students. For instance, Nilsson and Anderson (2004) define the acculturation process as “the behavioral and internal changes in individuals as they experience first-hand contact with a new culture” (p. 306). Kumaraswamy (2009) reviewed research on adjustment problems among international students and compiled several adjustment variables into a comprehensive list based on the literature. The following variables were suggested to influence adjustment among international students: age, gender, marital status, English language proficiency, academic level (i.e., college and graduate level), sources of support, major fields of study, length of stay, region of the world and country of origin, size of school, orientation, living arrangements, previous international experience, national status, and parent's educational background. Additionally, Wang (2009) identified resiliency as another variable influencing adjustment.

Another potential variable related to psychosocial and cultural adjustment is level of alcohol consumption (Koyoma & Belli, 2011). Several studies have adopted the task
of finding out whether international students tend to consume more alcohol compared to their U.S. peers. Koyoma and Belli (2011) examined alcohol use, acculturative stress, and drinking motivations of international and American undergraduate students attending a U.S. institution. The results of the study indicated that the level of alcohol consumption by both groups did not seem to be problematic. Moreover, the authors stated that future studies might provide different results, as alcohol consumption among college students continues to be a problem in many institutions in the United States.

Sociocultural adjustment has been identified as a factor related to psychological well-being among international students and is of particular relevance to the current research (Cemalcilar & Falbo, 2008). The authors conducted a longitudinal study of international students (N = 90) to determine the impact of cultural transition on psychological well-being and sociocultural adaptation. They found from pre-transition to post-transition, (a) international students reported a significant decline in psychological well-being, increased identification with the host culture, and stable identification with their home culture; and (b) sociocultural adaptation was influenced by the acculturation strategy adopted by students such as having an effective separation strategy in their adaptation to the host culture. It should be noted that while these findings are insightful, the study only spanned a period of a few months and may not capture the broader implications of adjustment problems experienced by individuals several months or even years after a cultural transition. As such, it is unclear if the results can be generalized to international students several months or years after the cultural transition.

A convincing area of research that illuminates the implications of the academic, social, and cultural barriers experienced by international students is on underutilization of
college counseling services. Several studies demonstrate that despite the difficulties and issues international students in the US are facing, many do not tend to seek individual and group counseling from college counseling services regarding their psychological and socio-cultural issues (Kumaraswamy, 2013; Li, Wong, & Toth, 2012; Mori, 2000; Yoon & Jepsen, 2008). Possible reasons for underutilization of counseling centers by international students have pointed to a variety of different factors such as stigmatization of mental health issues (Yoon & Jepsen, 2008) and language barriers (Tsai & Wong, 2010) which pose a problem for international students who experience adjustment issues because the very issues for which they need counseling are often the same issues that prevent them from getting help.

Taking into consideration of all of these findings, it becomes clear that more research needs to be done to understand the connection between the adjustment problems among international students and their psychological well-being. When international students arrive on campus for the first time in the US, they face many adjustment issues both in academic and social domains. Due to such drastic changes in the realms of academics, social life, and communication (i.e., language barriers) it is important to consider the psychological implications of these changes. The present research aims to contribute to this understanding by examining how adjustment among international students might predict levels of psychological well-being.

**Homesickness.** Another problem identified in the literature that international students face when adapting to a new culture and lifestyle is homesickness. Homesickness has been defined as “the distress and functional impairment caused by an actual or anticipated separation from home and attachment objects such as parents”
(Thurber et al., 2007, p. 192). Some studies have shown that homesickness is one of the most frequently reported concerns of international college students in the United States (Yi, Lin, & Kishimoto, 2003). Rajapaksa and Dundes (2002-2003) found more than 30% of international college students expressed feelings of homesickness, however, the percentage of international students experiencing homesickness is not consistent in the literature (Thurber & Walton, 2007). Regardless of the exact prevalence, homesickness appears to be a frequently reported problem faced by international students in the United States.

Poyrazli and Lopez (2007) found that homesickness is related to psychological well-being among international students. Specifically, the presence of homesickness among international students has been linked to behaviors and attitudes that may lead to depression and other mental health problems (Poyrazli & Lopez, 2007). The authors found that international students reported significantly higher levels of homesickness and perceived discrimination than U.S. students. They explained, "homesickness in college students is usually discussed as a byproduct of culture shock, which can induce feelings such as alienation, anxiety, depression, homesickness, rejection and loss, hopelessness, and low self-esteem" (p. 264). As such, it makes sense that international students experienced greater amounts of homesickness than U.S. college students.

A number of demographic variables have been related to homesickness among international students. Poyrazli and Lopez (2007) found that international students who lived in the US for a longer period of time reported the highest levels of homesickness, but younger students reported higher levels of homesickness than older students (Poyrazli & Lopez). This is consistent with other findings in the literature showing that younger
people tend to experience more homesickness than older people (Kazantzis & Flett, 1998). It should be noted that gender has also been related to homesickness among international students, in that female students experience more homesickness than male students (Stroebe et al., 2002).

Another demographic variable related to levels of homesickness is one’s country of origin. Ye (2005) argued the levels of homesickness and acculturative stress, one experiences depends on the degree of difference between one’s country of origin and the new culture to which one adjusts. This is consistent with previous studies showing that Asian international students consistently report greater acculturative stress than European international students in the United States (Poyrazli et al., 2004; Wei et al., 2007; Yeh & Inose, 2003) which is consistent with the findings of Constantine, Okazaki, and Utsey (2004).

Other factors related to levels of homesickness among international students in the United States are language difficulties, academic adjustment, and social support (Angelova & Riazantseva, 1999; Eland, 2001; Mamiseishvili, 2012; Poyrazli & Graham, 2007; Zhou, Frey & Bang, 2011). In previous research, language barriers have consistently been shown to influence levels of homesickness among international students in the US (e.g., Poyrazli & Lopez, 2007; Ye, 2005; Yeh & Inose, 2003). Further, individuals’ perceptions and expectations of their English skills might affect levels of homesickness as well (Greenland & Brown, 2005). The authors found international students’ expectations of their English skills might contribute to and affect their homesickness levels.
Homesickness has also been shown to negatively impact academic performance among both U.S. college students and international college students in the United States. For example, Terry, Leary and Mehta (2013) found that levels of homesickness were negatively related to academic satisfaction. That is, undergraduate college students who scored low in academic satisfaction reported high levels of homesickness (Terry et al., 2013). Among international students specifically, Willis, Stroebe, and Hewstone (2003) found that levels of homesickness were positively correlated with academic problems, indicating the more homesick one felt, the greater troubles he or she experienced in schoolwork. Thus, it appears that homesickness is related to poor academic performance and satisfaction among international and non-international college students.

Another variable related to homesickness among international students in the United States is social support and connectedness (Duru & Poyrazli, 2007; Yeh & Inose, 2003) as social connectedness has been shown to negatively correlate with both acculturative stress and homesickness among international students in the US. Conversely, the more social connectedness experienced by international students in the US, the less homesickness and acculturative stress they feel. This finding is consistent with a study conducted by Constantine, Anderson, Berkel, Caldwell, and Utsey (2005), which found that international students who perceived greater amounts of social acceptance also reported lower levels of adjustment problems. Van Tilburg, Vingerhoets, and Heck (1997) examined various coping strategies for homesickness. Their results indicate that individuals with plenty of social support, as opposed to individuals who lack social support, are less likely to suffer from homesickness. Chataway and Berry (1989) found similar results with a population of Chinese, French Canadian, and English
Canadian students studying in Canada. They determined that Chinese students, the majority of whom were international, tended to have the least amount of social interaction and connectedness with students of the host country. As such, it appears that social support is an important factor related to homesickness among international students.

Another factor closely related to social support that has been studied in relation to homesickness (Longo & Kim-Spoon, 2013) and psychological well-being (Richards, 1991), is level of religiosity. Richards (1991) found that being religious was related to lower levels of depression among first semester college students and students who identified as religious reported less separation anxiety from their parents when compared to students who identified as non-religious.

However, the positive influence of religiosity on levels of depression and homesickness is not consistent in the literature. In a recent study, Longo and Kim-Spoon (2013) found that religiosity did not impact the relationship between homesickness and depression indicating that being highly religious, as opposed to non-religious, did not decrease depressive symptomology due to levels of homesickness among college students. It may be that measuring how religious someone is does not necessarily capture his or her worshiping habits, meaning that someone who is religious may not attend church regularly and may not benefit from the social support provided to individuals who identify as religious.

**Perceived discrimination.** Due to the fact that international students are typically racially and ethnically different from those in their host culture, many of these students experience perceptions of discrimination. Perceived discrimination is defined as an
“[experience of] discrimination based on race or color, receiving mistreatment, and feeling socially isolated” (Poyrazli, Thukral, & Duru, 2010, p. 26). Perceived discrimination appears to be a problem not only faced by international students but also among college students in the US who are from diverse cultural and racial backgrounds. For instance, Landrine and Klonoff (1996) comment on estimates of racial harassment (RH) experienced by ethnic minority students, and report that more than 98% of these individuals experience at least one act of racial discrimination within a year’s time. They also found that racially diverse college students experienced significantly more RH in comparison to White (majority) college students. Perceived discrimination also appears to have longitudinal implications among U.S. college students, such that the effects of perceived discrimination persist over long periods of time (Huynh & Fuligni, 2012).

Even though American college students of diverse racial and ethnic backgrounds experience perceived discrimination, research shows that perceived discrimination is particularly prevalent among international college students. For instance, Poyrazli and Lopez (2007) compared levels of perceived discrimination between international and American college students and found that international students reported significantly greater levels of perceived discrimination (and homesickness) than U.S. college students. Interestingly, European international students reported significantly less perceived discrimination than international students of other races or ethnicities (Poyrazli & Lopez, 2007) which suggests that perceived discrimination is a significant problem that international students face when moving to a new country and assimilating into a different culture.
Since perceived discrimination is a problem faced by many international students, it is important to emphasize that experiencing discrimination has been related to decreased psychological well-being among ethnic minority groups (e.g., Cokley, Hall-Clark, & Hicks, 2011; Donovan, Huynh, Park, Kim, Lee, & Robertson, 2012). Specifically, when people attribute negative events in their lives to acts of discrimination, it negatively impacts psychological well-being. Armenta, and Hunt (2009) found that perceptions of racism and discrimination among Latino Americans were linked to indicators of poor psychological well-being such as depression and low self-esteem. This finding is consistent with research conducted by Cronin, Levin, Branscombe, Laar and Tropp (2012), who also found a negative relationship between perceived discrimination and psychological well-being.

Of particular importance to the present research, perceived discrimination has been directly linked to psychological well-being among populations of immigrants and international students. Jasperse, Ward, and Jose (2012) examined perceived discrimination among immigrant Muslim women living in New Zealand. The authors found various aspects of Muslim identity moderated the relationship between perceived religious discrimination and psychological well-being suggesting that levels of perceived discrimination affects psychological well-being, but this relationship depended upon one’s level of identification as a Muslim (Jasperse et al., 2012).

Duru and Poyrazli (2011) examined the relationship between perceived discrimination, social connectedness, and adjustment problems among Turkish international students in the United States. The results revealed that social connectedness was negatively related to adjustment difficulties indicating that the more social
connectedness participants experienced, the fewer adjustment problems they reported. On the other hand, perceived discrimination positively predicted adjustment difficulties, suggesting that as people experienced more perceived discrimination, they reported greater adjustment difficulties. These findings are consistent with findings from Jurcik, Ahmed, Yakobov, Solopieieva-Jurcikova, and Ryder (2013) examining perceived discrimination, social connectedness, and factors of psychological well-being. Thus, it appears that social support is related to both perceived discrimination and psychological well-being.

Perceived discrimination has also been linked to academic satisfaction among international college students. Wadsworth, Hecht, and Jung (2008) examined the impact of identity gaps, perceived discrimination, and acculturation on educational satisfaction among 218 undergraduate and graduate international students. Important to the present discussion, perceived discrimination was negatively related to educational satisfaction suggesting that as participants reported greater perceptions of discrimination they reported lesser educational satisfaction in American college classrooms. It appears that for international students, perceived discrimination not only has negative impacts of psychological well-being, but may also have implications for psychosocial and academic adjustments as well.

Gender. Researchers often include demographic information in their studies to understand the composition of their study sample. Sometimes, these demographic variables produce an effect within the study. One such demographic variable implicated in research on psychological well-being is gender. Several studies have found gender effects in a number of domains that are either related to or that predict psychological
well-being (Demir & Orthell, 2009; Johnson, Batia & Haun, 2008; McWhirter, 1997; Quimby & O’Brien, 2006; Rodríguez, 1994).

One domain that has revealed gender effects is in the realm of academics. Among Latinos, research has shown that males (Rodríguez, 1994) and females (McWhirter, 1997) perceive and experience unique obstacles and barriers in higher education. Additionally, some research has focused on one specific gender within the academic domain. Haynes et al. (2012) looked at how role conflict among women exclusively might be related to levels of psychological well-being and found that women experienced many role conflicts, but the greatest was between their personal and academic life. This conflict was associated with the lowest levels of psychological well-being within the study sample, making it apparent that participant gender may have an effect in the domain of academic adjustment.

Another domain that has observed gender effects in relationship to psychological well-being is social relationships. Quimby and O’Brien (2006) found that, among women, social support was a significantly strong predictor of various aspects of psychological well-being such as psychological distress, self-esteem, and overall life satisfaction. Whitton, Weitbrecht, Kuryluk, and Bruner (2013) also found support for the idea that social relationships, as a contributing factor to psychological well-being, might vary based on gender. They found that being in a committed relationship was associated with fewer depressive symptoms among women than men which is in line with findings by Demir and Orthell (2009), who found that women possessed higher quality real and ideal friendships than men, suggesting the importance of committed relationships for women, be they platonic or romantic in nature.
Taken together, these findings reveal a possible trend of gender differences on factors related to psychological well-being. The findings discussed here cover gender differences in domains of academic adjustment and social relationships. It could be gender differences emerge in relationship to other predictors in this study. As such, gender is included as a predictor not only to observe its prediction of psychological well-being but also to assess its correlation with other predictors in the study.

**Statement of the Problem**

Research on psychological well-being among college students has identified several influential variables in the development and maintenance of psychological well-being including academic adjustment, social relationships with others, and gender. Research on psychological well-being among international students paints a similar picture, but emphasizes the increased difficulty that international students face when moving and assimilating into a new culture with different values, cultural orientations, and social norms. However, the research on psychological well-being among international students (a) examined undergraduates exclusively, (b) used qualitative methods of structured interviews with a small sample of individuals (it should be noted that while quantitative studies of international students’ psychological well-being do exist, this research is few and far between and more balance is needed within the literature), and (c) examined the potential predictor variables of psychological well-being, but does not directly test their predictive value on psychological well-being.

As such, the present research aimed to contribute to the literature by including a sample that includes both undergraduate and graduate international students. This study was conducted using quantitative methodology. In addition, perceived discrimination
may not be a factor for all domestic students, but may be relevant for international
students. There is a paucity of studies that include perceived discrimination as a variable.
Finally, this study examined specific predictors of psychological well-being and directly
tested their predictive value on psychological well-being.

Research Questions

This study aimed to answer the following questions:

**Question 1:** Do adjustment problems as measured by the Michigan International
Students Problem Inventory (MISPI; Porter, 1966) account for a significant amount of
variance in the psychological well-being of international college students as measured by
Ryff’s (1989) Scales of Psychological Well Being (SPWB)?

**Question 2:** Does homesickness as measured by the Acculturative Stress Scale for
International Students (ASSIS; Sandhu & Asrabadi, 1994) account for a significant
amount of variance in the psychological well-being of international college students as
measured by the SPWB (Ryff, 1989)?

**Question 3:** Does perceived discrimination as measured by the ASSIS (Sandhu &
Asrabadi, 1994) account for a significant amount of variance in the psychological well-
being of international college students as measured by the SPWB (Ryff, 1989)?

**Question 4:** Is there a significant difference between male and female college
international students’ levels of adjustment problems, homesickness, perceived
discrimination, and psychological well-being?

Null Hypotheses

For the purposes of this study, there are four research hypotheses corresponding
to research questions one, two, three, and four.
Null Hypothesis 1: Adjustment problems as measured by the MISPI (Porter, 1966) do not account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989).

Null Hypothesis 2: Homesickness as measured by the ASSIS (Sandhu & Asrabadi, 1994) does not account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989).

Null Hypothesis 3: Perceived discrimination as measured by the ASSIS (Sandhu & Asrabadi, 1994) does not account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989).

Null Hypothesis 4: There are no significant differences between male and female international college students’ levels of adjustment problems, homesickness, perceived discrimination, and psychological well-being.

Significance of Study

As mentioned previously, research on psychological well-being among international students primarily examines undergraduate student populations exclusively, uses qualitative methods, and investigates potential predictor variables but does not directly test their predictive value on psychological well-being.

The present study is significant because it addresses the above-mentioned issues based on the literature on psychological well-being among international college students. Specifically, the current study included a sample of both undergraduate and graduate international students and used quantitative methodology. Finally, this study examined
specific predictors of psychological well-being and directly test their predictive value on psychological well-being.

Furthermore, this research has potential to provide a framework for mental health professionals to target methods and treatments to this population in that it provides empirical data regarding the psychological functioning of international students and identifies potential areas that can be targeted by mental health professionals to improve their psychological well-being.

Limitations and Delimitations of the Study

Limitations. There are several limitations for this study. First of all, due to the nature of the sampling procedure of the study, the results cannot be generalized to individuals who are non-student internationals. Second, the demographic composition of international students at a single Midwestern institution of higher education may not be representative of the demographics of international students in higher education institutions in the United States in general. Third, assessments are based on self-report, so participants’ subjective perceptions were collected, and as such, some self-report assessment instruments are based on experiences that have already occurred, so recalling prior experiences might have impact on data due to memory biases. Fourth, due to lack of randomization of participants, the relationships between the variables cannot be attributable to causal links but are merely correlational in nature. Finally, this study does not include a comparison condition of non-international students, so it remains unclear whether the nature of the predictors of psychological well-being are the same or different from non-international undergraduate and graduate students.
**Delimitations.** On the basis of previous research, this study includes adjustment problems, homesickness, perceived discrimination and biological sex as correlates, and examines the relationship between psychological well-being and these aforementioned variables. Other variables that might be relevant to psychological well-being, such as a direct measure of cultural orientation (individualist/collectivist), religious, socioeconomic status, and depression levels, are not included in this study. The study is delimited to a single institution.

**Definition of Terms**

**Psychological well-being.** According to Ryff (1989), psychological well-being is defined as a multifaceted construct consisting of six contributing factors. As such, possessing psychological well-being refers to meeting adequate levels of the following factors: a) autonomy, b) environmental mastery, c) personal growth, d) positive relationships with others, e) purpose in life, and f) self-acceptance.

**Adjustment problems.** Adjustment among international students is defined by Porter (1966) as the degree of difficulty experienced by individuals in a number of problem areas encountered by international students. Problem areas include: (a) admission-selection, (b) orientation service, (c) academic record, (d) social-personal, (e) living-dining, (f) health service, (g) religious service, (h) English language, (i) student activity, (j) financial aid, and (k) placement service.

**Homesickness.** According to Thurber and colleagues (2007), homesickness is defined as the “distress and functional impairment caused by an actual or anticipated separation from home and attachment objects such as parents” (p. 192).
**Perceived discrimination.** According to Poyrazli, Thukral, and Duru (2010), perceived discrimination is defined as any experience “...of discrimination based on race or color, receiving mistreatment, and feeling socially isolated” (p. 26).

**Biological sex.** American Psychological Association (2008) defines biological sex as “the anatomical, physiological, and genetic characteristics associated with being male or female” (p. 1).

**International student.** International students are students on U.S. campuses who are not U.S. citizens, permanent citizens, or refugees (Rahman & Bahurudin, 2009).

**Summary**

This chapter provided information with respect to background literature and the importance of the proposed study to the area of psychological well-being research. The definitions of terms, along with research questions were presented in order to clarify study questions and aims. Moreover, limitations and delimitations of the study were discussed. The next chapter will critically review the related professional literature and research outcomes for psychological well-being among both domestic and international college students.
Chapter 2: Review of Literature

This chapter will review literature regarding the definition and examination of psychological well-being among U.S. and international college students. This chapter discusses how college students face problematic experiences as they adjust to college life, including more demanding academic expectations and developing new social relationships.

Additionally, this chapter reviews the unique problems faced by international college students studying in the United States and how these problems influence psychological well-being. Specifically, this chapter reviews research on adjustment problems (both academic and psycho-social), homesickness, and perceived discrimination, and argues that these variables should be considered as predictors of psychological well-being among international students in the present research.

Psychological Well-Being Defined

Psychological well-being is a term that refers to one’s optimal psychological functioning and general experience of well-being (Ryan& Deci, 2001). The study of well-being throughout history has to many different theoretical examinations of what optimal functioning means and the constituent parts which are discussed in subsequent sections.

Hedonic theory of subjective well-being. One branch of study of psychological well-being has been conducted under the theoretic framework of hedonic well-being. Hedonic well-being refers to a person’s subjective experience of pleasure and happiness, conceptualization that dates back to the time of ancient philosophers (e.g., Aristippus, fourth century B.C.; in Ryan & Deci, 2001). The psychological examination of hedonic well-being has been primarily concerned with understanding people’s subjective
experience of general pleasure and happiness (Diener & Lucas, 1999). According to hedonic psychologists such as Deiner and Lucas (1999), well-being is defined as the subjective well-being of individuals which consists of overall life satisfaction, the presence of positive affect or mood, and the absence of negative affect of mood. Therefore, research studying subjective well-being has been concerned with identifying factors that contribute to the presence or absence of the aforementioned elements.

Some psychologists argue that subjective well-being is not a sufficient enough account of an individual’s well-being, because it is only concerned with the general experience of happiness (Diener & Lucas, 1999). Researchers have argued that an individual’s well-being is more than just experiencing happiness. As such, the investigations of well-being have to a branch in the literature under an ‘eudaimonic’ theoretical framework, which is discussed in the next section.

Eudaimonic theory of psychological well-being. As mentioned previously, researchers using the theoretical framework of eudaimonic well-being are concerned with factors other than happiness exclusively that compose a person’s well-being. Waterman (1993) considered the notion that people have specific goals and values in line with their ‘true self’ and are motivated to actualize goals and values in their everyday lives. Researchers have expanded the notion of subjective well-being under the broader term of psychological well-being and using this definition, psychological well-being is defined as a network of related constructs that refer to an individual’s subjective experience of flourishing (Diener & Lucas, 1999; Gulacti, 2014; Ryan & Deci, 2001; Sheu et al., 2014; Wateman, 1993). Ryff’s (1989) research identified “feeling competent, that one is able to meet the demands offered by one's social environment (e.g., school or work), self-
determined decision making, satisfying interpersonal relationships, purpose in life, and self-acceptance” (p. 1072) as distinct constructs of psychological well-being. The present research examines psychological well-being of individuals in line with Ryff’s theoretical definition.

In addition to identifying the constructs composing psychological well-being, several studies across many disciplines have been devoted to understanding variables, and relationships between these variables, which influence the level of psychological well-being people experience (e.g., Gulacti, 2014; Iwamoto & Liu, 2010; Sheu et al., 2014). Examples of such disciplines include, but are not limited to, sport psychology, (Brown & Fry, 2014; Draugelis et al., 2014) biological medicine, (Zheng et al., 2014) and kinesiology (Bray & Kwan, 2006).

A particularly rich strand of this research developed out of counseling and clinical psychology since it is the job of counselors and clinical psychologists to treat and provide help for individuals suffering from psychological distress. As such, it is of particular importance to the field of counseling and clinical psychology to advance an understanding of factors that contribute to psychological well-being. Such information would allow counselors and clinicians to intervene and treat factors contributing to psychological distress, and potentially increase levels of psychological well-being. In the next two sections, factors contributing to psychological well-being among two particular study populations: college and international students will be discussed.

**Psychological Well-Being among College Students**

College students’ mental health issues. One population experiencing considerable psychological distress is college students which could be due to the fact that
when college students embark on their college education, they experience a number of challenges in adjustment, such as getting acclimated to new academic standards, unique social relationships, and being away from home for the first time. College campuses are becoming increasingly diverse, and an increase in mental health issues could be in part due to the changing demographics of the college student population. The 2013 Lawlor Group report of demographic trends in higher education found that more first-generation students, as well as students from low income families, are attending college (Lawlor, 2013), making it hard for these individuals to pay for their education and leaving them unprepared for college-level study. Further, the 2013 United States Census Bureau report of school enrollment in the United States found that campuses are becoming increasingly diverse in terms of student race, and age, and that the gender gap is widening. Such changing demographics among the college student population may impact their mental health needs, and it is the job of college counselors and psychologists to identify and address these changing needs.

Research on college students’ mental health is consistent with this notion. Indeed, research suggests that college students experience greater mental health issues than non-student samples of the same age (Gore et al., 2011; Kitzrow, 2003). Tosevski, Milovancevic, and Gajic (2010) reviewed literature on university students’ personality and psychopathology to identify risk factors related to university students’ psychological well-being and outlined several risk factors involved in the development of psychopathy in college students, including high anxiety, low self-efficacy, and pre-existing mental health issues prior to enrollment in college. Further, the most common mental health
disorders among college students were identified as substance abuse, depression, self-harm and suicide, eating disorders, and anxiety disorders.

Consistent are the findings of Twenge, Gentile, DeWall, Ma, Lacefield, and Schurtz’s (2010) cross-temporal meta-analysis who investigated the prevalence of psychological distress among college students in America by looking at data using the Minnesota Multiphasic Personality Inventory (MMPI) between the years of 1938 and 2007. They searched for articles with specific inclusion criteria which included:

a) participants were high school students or college under-graduates at conventional four-year institutions (e.g., not two-year colleges, not military academies); b) participants were attending high school or college in the United States; c) means were reported for unselected groups of students, not those chosen for scoring high or low on a measure or singled out for being maladjusted, clients at a counseling center, children of alcoholics, etc., d) the sample had at least 10 participants (in the final dataset, sample sizes ranged from 16 to 3282), and e) means were reported for the sample on the MMPI-A (for high school students) or the MMPI or MMPI-2 (for college students). (p. 148)

Data revealed significant implications for mental health among college students indicating a significant increase in symptoms of psychopathy over time from generation to generation. Specifically, in comparison to college students in the 1930s and 1940s, college students in 2007 scored more than one standard deviation higher on measures of psychopathy. The authors argue this trend may be due to the fact that students are experiencing a shift in goal orientation regarding their education. In particular, they argue that students are experiencing increasingly extrinsic demands on their education rather
than intrinsic reasons for obtaining an education, which is influencing their mental health negatively.

**College life and psychological well-being.** Due to the presence of psychological distress among the college student population, several researchers have examined psychological well-being among both undergraduate (e.g., Demir & Orthell, 2009; Schwartz et al., 2011; Wang & Castañeda-Sound, 2008) and graduate (Haynes et al., 2012; Sarıcaoğlu & Arslan, 2013) student populations. From the research, several domains of college life have been shown to be related to psychological well-being and are discussed in the next two sections.

**Academics.** One domain influencing psychological well-being among college students is academic life. Wang and Castañeda-Sound (2008) were concerned with the relationship between generational status on various factors related to academics such as self-esteem, academic self-efficacy (i.e., how competent individuals feel they are in their academic life and how confident they are in their academic abilities), perceived social support, and psychological well-being. They were particularly interested in generational status because college students who are the first in their family to attend university (as opposed to students whose parents already have a college degree) may experience greater barriers and obstacles when embarking on their academic career. Indeed, research has shown that first-generation college students (FGCSs) feel particularly unprepared for college studies and are prone to feeling overwhelmed (Hertel, 2002).

Wang and Castañeda-Sound (2008) surveyed a total of three hundred sixty-seven students from a large public university on the West Coast. Among these individuals, 128 identified as FGCS while 239 were not FGCSs (NFGCSs). They completed measures of
self-esteem, academic self-efficacy, perceived social support, and psychological well-being. Self-esteem was measured using the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), academic self-efficacy was measured using the College Self-Efficacy Inventory (CSEI; Solberg, O’Brien, Villareal, Kennel, & Davis, 1993), and social support was measured using the Social Support Appraisals (SS-A, Vaux et al., 1986). Finally, psychological well-being was measured using a composite score of three measures: the stress subscale of the Rhode Island Stress and Coping Inventory (Fava, Ruggiero, & Grimley, 1998), the Brief Symptom Inventory (Derogatis & Melisaratos, 1983), and the Satisfaction With Life Scale (SWLS; Deiner, Emmons, Larsen, & Griffin, 1985). Results showed that FGCSs showed significantly more somatic symptoms and significantly lower levels of academic self-efficacy in comparison to NFGCs. Additionally, self-esteem was identified as the single most important predictor for FGCSs’ psychological well-being. However, this study has some limitations in that all of the scales are oriented to Western cultural perspectives and the study sample was not ethnically diverse (only 44% were identified as minorities). Therefore, the generalizability of these findings might not apply to individuals of diverse backgrounds, or at least might not apply to the same degree.

Haynes and colleagues (2012) provide a more qualitative perspective of the relationship between academics and psychological well-being. They conducted analyses of female doctoral students in their research and argued that women in higher education, especially in doctoral programs, experience conflicting roles in academic and social domains. Specifically, the authors wanted to understand how these women perceive well-being as it related to their academic and social lives. A total of eight female doctoral students participated in semi-structured interviews in the study. During the interviews,
researchers asked questions to assess participants’ definitions, descriptions, and examples of psychological well-being. Sample questions included: “How do you define well-being? To what extent do you think your well-being has been influenced by your academic studies?” and “what do you do to maintain your well-being” (p. 5).

After interviews were completed, participant responses were coded for specific metaphorical phrases describing perceptions of well-being. The most prominent metaphor that emerged was “well-being as Constitution” where ‘constitution’ is defined as descriptions of overall physical and psychological health. Within this framework, participants described their well-being in terms of psychological distress, physical activity, and mental strain due to high levels of stress and anxiety. Interestingly, participants described their ‘constitutional’ well-being as being influenced by conflicts, or and ‘internal battle’ between personal and academic roles and indicated it negatively influenced their psychological well-being. This study is unique in two senses: 1) the study takes a close look at a small group of women as they describe their intimate perceptions of well-being as they relate to social and academic aspects of their life, and 2) the study examines well-being among women in graduate, not undergraduate school as the studies thus far have described. This uniqueness also serves as a limitation to the generalizability of the findings. Would similar findings emerge among a larger group of women? What about a group of men? Further, do role conflicts exist among the undergraduate student population as well? Future research might try to answer these questions either qualitatively or quantitatively.

**Social relationships.** In addition to academics, another domain related to psychological well-being is the social relationships of college students. As college
students begin their studies, they are forced to make new friends and form new relationships. Since college students are a population of diverse perspectives and values, it can be difficult to form relationships with individuals who possess the same opinions and beliefs (Crocker, Luhtanen, Blaine, & Broadnax, 1994; Whitton, Weitbrecht & Kuryluk, 2013). Problems with forming relationships may also influence a person’s mental health negatively. As such, many researchers have investigated how social relationships are related to psychological well-being among college students.

Whitton, Weitbrecht, and Kuryluk (2013) looked at the relationship between committed dating relationships and mental health among college students. Their sample consisted of 889 undergraduate students who were either single or in a committed (exclusive) dating relationship. Of these 889 participants, 285 were men and 604 were women. Participants ranged from 18 to 25 years of age and were predominately White (84%) and in heterosexual (98.9%) relationships. They completed measures of demographic information, depressive symptomology, and alcohol use. The demographic items asked for participant gender, age, year in college, and race. Depressive symptomology was assessed using the Center for Epidemiological Studies – Depression Scale (CES-D) and asked participants how often they experienced 20 depressive symptoms during the past week. Finally, alcohol use was measured using the Alcohol Use Disorders Identification Test (AUDIT).

Results revealed that being in a committed dating relationship was related to better mental health than being single, but this relationship differed based on gender and mental health scale. For women only, being in a dating relationship was associated with fewer depressive symptoms and lower rates of clinical depression. Being in a committed
relationship was associated with less problematic alcohol use for both genders in comparison to participants who identified as single. Findings suggest that developing a committed, romantic relationship may contribute to positive psychological health among college students. However, it should be noted that it was a rather heterogeneous sample in terms of race and sexual orientation such that participants were mostly White and in heterosexual relationships. Findings might not be generalizable to minority students or students in homosexual/bisexual relationships.

It is important not only to examine psychological health in the presence or absence of social relationships, but to also consider people’s own perceptions of their social involvement with others. Crocker, Luhtanen, Blaine, and Broadnax (1994) investigated the relationship between collective self-esteem (CSE) and psychological well-being. Collective self-esteem is derived from research on social identity theory that describes the ‘self’ not only in terms of the individual but also in terms of one’s membership with a social group. To illustrate, Tajfel (1981) described the social or collective self as: “that aspect of an individual’s self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value and emotional significance attached to that membership” (p. 255). Crocker and colleagues (1994) examined the relationship between collective self-esteem and various measures of psychological well-being. Particularly, they were concerned with understanding how discrepancies between private CSE (how individuals evaluate their social group(s) privately) and public CSE (how people think others evaluate their social group(s)) might contribute to levels of psychological well-being.
Participants consisted of a diverse group of 238 undergraduate students of varying racial backgrounds (40.3% Caucasian, 38.2% Black/African American, 14.1% Asian, and 6.7% other). Participants completed measures of CSE, personal self-esteem, depression, life satisfaction, and hopelessness. CSE was measured using the CSE Scale developed by Luhtanen and Crocker (1992). Self-esteem was measured using the Rosenberg (1965) Self-Esteem Scale and life satisfaction was measured using the Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). Depression was assessed with the short form on the Beck Depression Inventory (BDI; Beck & Beck, 1972), and hopelessness was assessed with the Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974). Results revealed that the congruence between public and private CSE differed based on the participant’s race. White participants’ private and public CSE were moderately related, suggesting moderate congruence. Among Asians, private and public CSE were related most strongly, suggesting the highest congruence between these aspects of the self. Among Black participants, however, the relationship between private and public CSE was almost zero, suggesting almost no congruence. More central to their study though is the relationship between CSE and psychological well-being. Overall, CSE was identified as a strong predictor of psychological well-being, but the nature of this prediction differed based on racial group. For Whites and Asians, higher scores on the public CSE scale were related to higher scores on psychological well-being, while the relationship was nonsignificant for Blacks. Conversely, higher scores on the private CSE scale were related to higher levels of psychological well-being for Black participants, but not for White and Asian participants. In sum, this study revealed two important points: first, how people view themselves in terms of their social group membership is related to
psychological well-being and second, the relationship may be stronger or weaker based on an individual’s race. The examination of racial differences connects to another strand of research that has looked at college students of diverse backgrounds which is discussed in the next section.

**College students from diverse backgrounds.** Researchers have considered the influence of different cultural backgrounds and racial differences on psychological well-being. Specifically, studies in this vein try to make clear the relationship between unique factors experienced by diverse college students and psychological well-being. One factor unique to individuals of diverse cultural and racial backgrounds is acculturative stress. Schwartz and colleagues (2012) define acculturation as “the process of balancing one’s heritage culture with the culture of the receiving country or region” (p. 301) which can be very stressful (Akhtar, 1999). Schwartz and colleagues (2012) examined how acculturation was related to psychological well-being among first-generation and second-generation immigrant college students. Participants consisted of 2,754 students from 30 colleges and universities around the United States. Forty percent identified as first-generation immigrant students while sixty percent identified as second-generation immigrant college students. Students completed measures of cultural practices, cultural values, cultural identification, and well-being. Results indicate that across gender, immigrant generation, and ethnicity, possessing individualistic values was positively related to psychological well-being and subjective well-being. Further, identification with an American, country of origin, or both cultures was positively correlated with well-being which suggests the importance of developing strong cultural values and identification in order to maintain positive psychological well-being. It should be noted that psychological
well-being was identified primarily as an individualist construct, which may be a source of conflict and stress for people with a collectivist orientation (Schwartz et al., 2013). Such conflicts coincide with Park et al.’s (2014) finding that acculturation stress negatively correlated with psychological well-being.

Much like the general college student population, academic satisfaction and success appears to be another factor predicting psychological well-being among diverse college students. Sheu, Chong, Chen, and Lin (2014) examined how academic competence and satisfaction predicted aspects of well-being among college students in Taiwan and Singapore. Their study consisted of 317 Taiwanese students and 263 college students in Singapore who completed measures of extraversion and emotional stability, independence and interdependence, global life satisfaction, in addition to satisfaction, stress, goal progress, self-efficacy, outcome expectations, and supports related to academics. They found that academic satisfaction and success significantly predicted self-reports of psychological well-being.

These findings are consistent with previous work by Lent, Taveira, and Lobo (2012) who examined the same variables among a population of Portuguese college students and used structural equation modeling where academic variables were hypothesized to lead to constructs of well-being. Results demonstrated that paths from academic satisfaction lead to life satisfaction and academic self-efficacy and support produced significant paths to academic satisfaction. Further, academic stress led to academic self-efficacy and goal progress. These findings are consistent with other studies with similar results for Mexican Americans (Ojeda et al., 2011). Taken together, these findings imply the influence of academic adjustment on psychological well-being is a
rather robust effect among college students of diverse cultural and ethnic backgrounds. Also, the influence of academic adjustment appears to generalize to college students of both majority and minority backgrounds. The remainder of this chapter will focus on the international segment of the college student population.

**Psychological Well-Being among International Students**

International undergraduate and graduate students are a growing population in the United States. During the 2012-2013 academic year, a total of 810,000 international students were enrolled in the United States (Open Doors Report, 2013). In the following year, the number of international students enrolled in the United States in the 2013-2014 academic year had risen to 886,052 with an 8.1% growth in first-year international students. Even more surprising is that from the 1999-2000 to the 2013-2014 academic year, the number of international students increased by 72% and the number of institutions hosting 1,000 or more international students rose from 135 to 231 (Open Doors Report, 2014).

As these statistics suggest, international college students are a unique and fast growing population within institutions in the United States. While the nature of psychological well-being among people from different cultural and ethnic backgrounds both within the United States (e.g., Crocker et al., 1994; Iwamoto & Liu, 2010) and in other countries (e.g., Ayyah-Abodo & Sanchez-Ruiz, 2012; Bhullar, Hine, & Phillips, 2014; Sivis-Cetinkaya, 2013), has been presented, international college students as a unique population in the United States has yet to be reviewed.

International students are a unique population in that they experience unique problems and barriers as they assimilate into a new culture. As such, there has been a
relative increase in recent years in the amount of research conducted with international students who attend colleges and universities in the United States (Bahurudin & Rahman, 2009; Poyrazli & Graham, 2007; Zhou, Frey, & Bang, 2011). International students are a heterogeneous group in terms of national and cultural backgrounds. Accordingly, Nilsson and Anderson (2004) argue that the degree of difficulty experienced by international students tends to be associated with the degree of dissimilarity between the students’ native culture and the U.S. culture, suggesting that students from English-speaking countries may have an easier time adjusting to U.S. culture compared with students from other countries.

Nevertheless, all international students experience some degree of cultural difference between their culture of origin and U.S. culture, and all must learn to manage these differences without their familiar social support system (p. 306). International students encounter many unique challenges in adjusting to academic and cultural life such as "language barriers, cultural differences and racial discrimination, social interaction and personal adjustment difficulties in their life" (Reid & Dixon, 2012, p. 30). Furthermore, international students differ from American students in terms of racial or ethnic identity because of the special needs involved with learning to adapt and study in the U.S. (Burlew & Allyne, 2010). Therefore, it is important researchers try to identify and understand factors that contribute to the psychological well-being of the international student population.

**Cross cultural comparisons.** Some researchers have conducted cross-cultural comparisons of various factors as they relate to psychological well-being. Examining
variables across cultures, allows one to understand how two cultural orientations may have a different relationship to psychological well-being.

Chung and Gale (2006) compared self-differentiation (the tendency to want to make oneself distinct from other people) and psychological well-being between Korean and European American (EA) students. Their sample consisted of 427 Korean undergraduates in South Korea and 375 EA students in America. Students completed measures of self-differentiation and psychological well-being, with psychological well-being measured using instruments of self-esteem and depression. Self-differentiation was assessed using the Differentiation of Self Inventory-Revised (DSI-R, Skowron & Schmitt, 2003), self-esteem using the Rosenberg Self-Esteem scale (1965) and depression using the Center for Epidemiologic Studies Depression scale (Radloff, 1977). Results revealed differences between these two groups on self-differentiation scores such that self-differentiation was greater among EAs than Koreans. This finding can be due to American culture being relatively individualistic while Korean culture is relatively more collectivist in orientation. Importantly, self-differentiation was more predictive of psychological well-being in EA students than Korean students. In other words, the way that we measure psychological well-being in the United States (both in terms of how psychological well-being itself and its related factors) may have different implications for students of different cultural orientations. Therefore, it is imperative to examine and understand the predictors of psychological well-being among international students as they navigate a culture full of different values and orientations.

**Influences on psychological well-being.** Several factors related to psychological well-being have emerged from research using international college student samples.
Acculturative stress and ethnic identity/identity conflict are discussed in the following sections.

**Acculturative stress.** As was previously discussed regarding college students of diverse backgrounds, one factor related to psychological well-being among international students is acculturative stress. A broad definition of acculturative stress is the stress people experience when they are forced to adjust and adapt to a new a social or cultural environment (Schwartz et al., 2012). Guo, Li, and Ito (2014) examined how Chinese international students used social networking sites (SNS) and its relation to their levels of perceived social capital, psychological well-being, and acculturative stress. The study sample was composed of 142 Chinese international students studying in northern Japan. Participants completed a survey of instruments measuring social networking site use, perceived social capital, psychological well-being, and acculturative stress. While acculturative stress did not relate to SNS use, the results showed that participant levels of acculturative stress were negatively related to psychological well-being, and positively related to levels of loneliness. That is, as individuals experience greater levels of acculturative stress, they experience less psychological well-being and more loneliness.

Yu, Chen, Li, Liu, Jacques-Tiura and Yan (2014) also examined acculturative stress among international students. The study sample was composed of 567 international students at Wuhan University in Wuhan, China who completed the International Student Health and Behavior Survey which identifies levels of acculturative stress, key influential factors, and demographic information. Acculturative stress was measured using the Acculturative Stress Scale for International Students (Sandhu & Asrabadi, 1994). Influential factors included (a) place of origin identified as nationality, (b) religious
beliefs, (c) length of stay in China, and (d) level of preparedness for studying in China. Demographic information included age, gender, marital status, educational attainment prior to arriving in China, and current major. The authors found that acculturative stress was significantly related to a number of influential factors and demographic variables. In particular, acculturative stress was greatest among individuals who were single, not prepared for the transition to a new culture, and did not belong to an organized religion, which suggests that access to social support may be one way to combat acculturative stress (Yu et al., 2014).

**Ethnic identity and identity conflict.** Another factor related to psychological well-being among international college students is the identities they form and maintain as they assimilate into a new culture. Lee, Yun, Yoo, and Nelson (2010) examined ethnic identity among several samples. Specifically, they compared the ethnic identity of adopted Korean Americans (KAs), immigrant/U.S. born KAs, and Korean international students. Of the 107 Korean college students who participated in this study, 51 were KA adoptees, 27 were U.S.-born or immigrated to the US prior to the age of 12, and 29 were international students from South Korea. Participants completed several questionnaires either in class or at a group meeting, depending on where they were recruited for the study. Questionnaires included measures of ethnic identity, positive and negative affect, and overall life satisfaction. Ethnic identity was measured using the Multigroup Ethnic Identity Measure (MEIM; Lee & Yoo, 2004), positive and negative affect were measured using the 20-item version of the Positive and Negative Affect Schedule (PANAS). Finally, the SWLS was used to measure global life satisfaction (i.e., psychological well-being). Results revealed that immigrant/U.S. born KAs had higher ethnic identity than
adopted KAs and Korean international students. Moreover, a negative correlation between ethnic identity and negative affect emerged, but only among Korean international students.

In addition to examining ethnic identity, some researchers have looked at identity gaps, or how people’s self-identities may be inconsistent with the way others see them (public identities). Jung, Hecht and Wadsworth (2007) examined how identity gaps might be directly related to levels of psychological well-being. These studies build off the Communication Theory of Identity (Hecht, 1993), which differentiates four ‘layers’ of identity: personal, relational, enacted, and communal. Personal identity refers to one’s self-concept, while the relational layer refers to one’s perception of how he/she is viewed by others. The enacted layer of identity refers to how one’s self is expressed through communication with others, and the communal identity pertains to one’s collective identity or group membership. Identity gaps are defined as inconsistencies between these different identity layers.

The authors assessed participants’ acculturation, perceived discrimination, personal-enacted identity gap, personal-relational identity gap, depression levels, social support, and social undermining. Results revealed that when people possessed ‘personal-enacted’ identity gaps (or, large discrepancies between their self-views and the self that is expressed in social communication) it was related to the strongest levels of depression (Jung et al., 2007). Thus, it appears development of ethnic identity as well as identity cohesion/consistency are important factors to consider when examining the psychological well-being of international students.
**Qualitative research on international students’ well-being.** In light of the existing research, perhaps the most convincing evidence of the importance of examining factors that predict psychological well-being among international students are the words of the students themselves. Notably, McLachlan and Justice (2002) conducted research to illuminate the struggles international students encounter as they move and integrate into the culture of the United States. Of the most prominent ‘transition shocks’ international students experience are academic differences, social differences, and homesickness.

Regarding academic differences, one male participant provided insight into the plight of academic adjustment for international students:

> And during my little dilemma in the beginning when I got a little frustrated, a little bogged down [with academic workload], I went to my student advisor, and I confided in him because I mean... my whole appearance was noticeable. My dorm mates would notice and inquire what was wrong. I was this close to breaking down. And you know to be honest for an [a person from my culture] to say that... is really, it's a pretty big deal because we go through a lot of hardships, and we take it. But this was having both a physical and psychological toll. I actually did get sick. Probably lack of food and lack of rest. For international students, work becomes primary; health and family become secondary. (McLachlan & Justice, p. 29)

In terms of social differences, the authors indicated sixteen participants (80% of the sample) believed they lacked the physical and social support from family and friends from their culture which leads to great levels of homesickness, as detailed in the
following passage where a male undergraduate student described his loneliness and isolation as a wound.

There's nothing you can do other than let time heal you. I tried a lot of things, and it's just time that heals the wound of homesickness. And sometimes I would really, really feel bad, and the only thing that kept me here was thinking about why I was here. I come from a middle class family [in my country] and this was our opportunity of coming up in social status, and I had to. I didn't have any other choice, and that's what kept me here. (McLachlan & Justice, 2002, p. 29)

The authors highlighted coping strategies that emerged to address the transition shocks international students experience. The primary coping strategy was developing a surrogate family (e.g., developing close relationships with faculty mentors, other international students, as well as American friends), a finding consistent with other research examining coping strategies among international students (Tseng & Newton, 2003).

It is clear from the reviewed research that international students are of particular importance when examining factors that contribute to psychological well-being because they face unique barriers as they move and adjust to a new culture. Both the empirical and qualitative research discussed so far points to several predictors of psychological well-being (e.g., academic/social adjustment problems, acculturative stress, homesickness, social support, social connectedness, ethnic/racial identity, origin of country, and gender) that either have not yet been addressed or need to be addressed further and with a more generalizable sample. The rationale for these predictors is discussed in the next section.
Factors Influencing Psychological Well-Being: Possible Predictors

Adjustment problems. Adjustment problems refer to barriers international students face as they become acclimated to a new culture. Within this section, two domains of adjustment are discussed: academic adjustment and psychosocial adjustment among international students.

Academic adjustment. According to the Open Doors (2013) report, the United States has hosted the largest number of both international undergraduate and graduate students in the world. Although international students are very crucial to U.S. universities, there are not many studies specifically focused on international students' academic transition and adaptation to U.S. higher education specifically.

Current research revealed that American academic faculty and staff have made some progress in responding to the unique and special needs of international students in the United States. Eland (2001) pointed out that international students can meet their academic and educational goals, but “their experience could be less stressful and more meaningful if institutions of higher education take into account their unique needs” (p. 99). Angelova and Riazantseva (1999) also indicated that international students struggle with specific academic and learning issues in relation to studying in a foreign country.

A recent study by Zhou, Frey and Bang (2011) used individual interviews with ten different international students to better understand their academic adaptation and unique needs in U.S. higher education. The international students in the study expressed "they gained benefits from such interactions, but also encountered challenges occasionally. People who were important for these students' adjustment included professors, colleagues, and school staff as well as family members far away in their home
countries" (p. 82). Moreover, findings implied the student-professor relationship is crucial and effective for international graduate students' academic adaptation to U.S. schools.

Poyrazli and Graham (2007) found that a well-developed student-professor relationship was a key factor influencing international students' academic adjustment to different teaching styles and cross-cultural communications. The authors note some participants explained they had difficulties with their student-professor relationships because they were not able to effectively communicate due to language barriers and cultural differences. For instance, one student from a collectivist culture stated, "sometimes I got lost in communicating with professors, and sometimes I ran out of words" (p. 82). In a similar vein, another international student from an individualistic culture explained challenges with their professors' academic expectations:

There are so different expectations from the teachers, especially those of grading and writing. Specifically, how they [professors] graded the paper was very different from what I knew. They [professors] wanted a different style in writing. What I got from the comment was that my professors did not like my writing style at all, which they thought was too sophisticated. They liked it to be very straightforward, very easy to understand. They don't like when you use like long and complicated words. Maybe they want it to be more accessible here in the United States. (Poyrazli & Graham, p. 83)

Mamiseishvili (2012) examined the profile of first-year international students who attended two-year versus four-year institutions in the US. The author explored the extent to which students' social and academic integration to their host schools were related to
their relationships with faculty and academic advisors. The author found the nature of the relationship between students and their academic advisors had an effect on persistence in their academic programs. Further, results highlighted the notion that international students should meet with their academic advisors regularly and interact with instructors so as to increase the likelihood of persisting in their programs.

Another factor potentially influencing students’ persistence in their academic programs is the nature of the academic environment in which students learn, and more specifically, the degree to which these environments differ from what students are used to. Zhou, Frey and Bang (2011) sought to understand differences in academic environments and defined academic environment differences as involving unfamiliar (a) class teaching strategies and activities, (b) learning and educational materials, and (c) different assignment style and evaluation form. The authors found academic environment differences affect international students' learning behavior and style of study. Some participants mentioned that utilization of school services (e.g., campus facilities, office resources, writing center, and library) were essential and absolutely necessary for their academic adjustment to a U.S. academic environment.

As noted earlier, language barriers pose a problem for academic adjustment among international students. Poyrazli and Graham (2007) found the majority of international students in their study experienced difficulties regarding their language ability which played a role in their success and persistence in their academic programs. Zhou, Frey and Bang (2011) found that many participants, especially those who do not speak English language in their home country, found American English a very significant obstacle in their academic lives. One participant, an English-native speaker, claimed "the
accent usually made people misunderstand me" (p. 85). Another participant who worked as a teaching assistant felt frustrated because his/her American students always complained about his/her English in the classroom. Reid and Dixon (2012) stated that due to language barriers, international students who did not speak fluent English suffer in classrooms during lectures, presentations, and seminar based conversations.

Choi (2006) interviewed 15 international students in order to understand the academic difficulties these individuals faced. Choi emphasized that, participants who indicated possessing insufficient English skills experienced severe difficulties listening to and understanding class lectures. Further, the author highlighted that insufficient language proficiency might be an obstacle regarding completion of assignments and major projects. To illustrate, one participant expressed:

We have this language barrier, speaking, writing. When I write a paper I feel as if I am handicapped. I don't have any problem with the content since I have already learned it in my own country. But I am disadvantaged since, as a non-native student, the absolute time needed to do an assignment is longer than the natives because of this English. (Choi, p. 58)

**Psychosocial adjustment.** While international students are studying in the US they often face difficulties pertaining to the education system, language barriers, as well as life-style and social differences. Research has revealed that due to these differences, international students experience increased mental illnesses and psychological problems such as stress, depression, homesickness, and emotional and social loneliness as they transition into a new culture (Zhou, Frey & Bang, 2011). Hyun and colleagues (2007) conducted a study on the psychological distress experienced by 551 international
graduate students (63% male and 34% female) from different institutions. Results revealed that a substantial portion (44%) of participants reported experiencing high levels of emotional distress in relation to academic problems and social issues. Similar conclusions were drawn by Yi, Lin, and Kishimoto (2003) who found the greatest concerns of international students regarding seeking counseling services were academics, anxiety, and depression. Further, the findings of their study suggest that GPA, age, gender, and level of education (undergraduate and graduate) were predictors for understanding the reasons for seeking mental health services by international students.

Research also compared undergraduate and graduate international students in terms of adjustment. Wang (2009) found that international graduate students experienced more alternatives in choosing housing than undergraduate students and explained most international students prefer to stay with other international students who come from the same ethnic background. Wang also indicated school size was an important predictor of adjustment level of international students. "The students who were at small colleges had quite different experiences from those at larger universities" (p. 29).

Such studies show that obstacles experienced by international students affect their psychological well-being and acclimation to a new culture. Chief among these obstacles are the psychosocial and cultural differences international students face. Wang (2009) states that "international students who come from different cultures and circumstances face many changes in many aspects of their lives such as in geographical location, weather conditions, food, language, behaviors and values, social interactions, and educational systems" (p. 23). Kumaraswamy (2013) emphasizes that "college students frequently have more complex problems today than they had over decade ago--common
stressors in college include greater academic demands, being on your own in a new environment, changes in family relations, changes in social life, exposure to new people ideas and temptations" (p. 1). Additionally, college and graduate international students might face psychological and mental issues such as anxieties about aspects of study including exams and presentations, general stress and anxiety, depression, lack of self-confidence and low self esteem, managing transitions, loneliness and homesickness, and suicidal thoughts (Kumaraswamy, 2013).

International students trying to assimilate into a different culture might face several problems and barriers such as participation in academic and social communities within a new culture which is illustrated in various studies examining acculturation among international students. Nilsson and Anderson (2004) define the acculturation process as “the behavioral and internal changes in individuals as they experience first-hand contact with a new culture” (p. 306). Further, Chapdelaine and Alexitch (2004) describe assimilation into a new culture as a cultural shock and emphasize that acculturation involves “the multiple demands for adjustment that individuals experience at the cognitive, behavioral, emotional, social, and physiological levels, when they relocate to another culture” (p. 168).

A review of literature conducted by Kumaraswamy (2013) reviewed research on adjustment problems among international students and compiled several adjustment variables into a comprehensive list. The following variables were found to influence adjustment among international students: age, gender, marital status, English language proficiency, academic level (i.e., college and graduate level), sources of support, major fields of study, length of stay, region of the world and country of origin, size of school,
orientation, living arrangements, previous international experience, national status, and parent's educational background. Relatedly, Wang (2009) identified resiliency as another variable influencing adjustment and showed that international students’ level of resiliency had the strongest affect on adjustment. In other words, a student with high levels of resilience tends to have fewer adjustment problems. The study also identified students’ country of origin as another important variable that plays a role in predicting adjustment.

Another potential variable related to psychosocial and cultural adjustment is an individual’s level of alcohol consumption. Several studies have explored whether international students tend to consume more alcohol when compared to their U.S. peers. Koyoma and Belli (2011) examined alcohol use, acculturative stress, and drinking motivations of international and American undergraduate students attending a U.S. institution. The results indicated that the level of alcohol consumption by both groups of students did not seem to be problematic and did not demonstrate that international students were at high-risk in terms of alcohol consumption because of their cultural adaptation in the US. Future studies might attempt such a comparative study in the future, as alcohol consumption among college students continues to be a problem in many institutions in the United States. (Koyoma & Belli, 2011)

Particularly relevant to the current research, sociocultural adjustment has been identified as a factor related to psychological well-being among international students. Cemalcilar and Falbo (2008) conducted a longitudinal study of international students ($N = 90$) who were accepted at Texas University for the 2002-2003 academic year which looked at how international students’ cultural transition effected their psychological well-being, sociocultural adaptation and academic adaptation. Measures were administered in
two phases. The first phase (pre-transition) took place in June of 2002 prior to the start of the academic year and the second phase (post-transition) took place in the middle of November 2002, roughly three months into the first academic semester.

Two major findings emerged from the study. First, from pre-transition to post-transition, international students reported a significant decline in psychological well-being, increased identification with the host culture, and stable identification with their home culture (Cemalcilar & Falbo, 2008). Second, sociocultural adaptation was influenced by students’ acculturation strategy. Participants were classified using four acculturation strategies based on scores on the Acculturation Index (AI; Ward & Rana-Deuba, 1999). Based on these scores, four acculturation strategies emerged: bicultural (equal identification with host and home culture), assimilated (greater identification with host than home culture), separated (greater identification with home than host culture) and marginalized (decreased identification with both home and host cultures). Those adopting a separation strategy at pre-transition experienced the lowest sociocultural adaptation compared to bicultural, assimilated, and marginalized strategy groups (Cemalcilar & Falbo, 2008).

It should be noted that while these findings are insightful, this study only spanned a few months and may not capture the broader implications of adjustment problems experienced by individuals several more months or even years after a cultural transition. As such, it is not known if these results can be generalized to international students several months or years after the cultural transition.

Studies of the underutilization of college counseling services illuminate implications of academic, social, and cultural barriers experienced by international
students. Findings indicate that despite difficulties and issues international students in the US are facing, many do not seek individual and group counseling from college counseling services (Kumaraswamy, 2013; Li, Wong, & Toth, 2012; Mori, 2000; Yoon & Jepsen, 2008). Yoon and Jepsen (2008) mentioned that international students might be unwilling to seek assistance from college counseling centers because in many collectivist Asian cultures, individuals perceive that mental health and psychological issues are highly stigmatized. Consequently, these students seek other informal resources such as family, friends and religious institutions rather than formal counseling services (Frey & Roysircar, 2006). Tsai and Wong (2010) also mentioned that language barriers might be important obstacle in counseling for international students which poses a huge problem for international students who experience adjustment problems because very adjustment issues for which they need counseling are the same issues preventing them from getting help.

Considering all these findings, it becomes clear that more research is needed to understand the connection between adjustment problems among international students and their psychological well-being. When international students arrive on campus for the first time in the US, they face many adjustment issues in both academics and social interactions. Due to drastic changes in the realms of academics, social life, and communication (i.e., language barriers) it is important to consider the psychological implications of such changes. The present research aims to contribute to this understanding by examining how adjustment among international students might predict levels of psychological well-being.
Homesickness. In the literature, another problem that international students face when adapting to a new culture and lifestyle is homesickness. Homesickness has been defined as “the distress and functional impairment caused by an actual or anticipated separation from home and attachment objects such as parents” (Thurber et al., 2007, p. 192). Research has shown that homesickness is one of the most frequently reported concerns of international college students in the United States (Yi, Lin, & Kishimoto, 2003). Rajapaksa and Dundes (2002-2003) reported that more than 30% of international college students expressed feelings of homesickness. Estimates of the percentage of students suffering from homesickness vary in the literature, with estimates ranging from 19% to 91% (Thurber, Walton, & The Council on School Health, 2007). Regardless of the prevalence rates, homesickness appears to be a frequently reported problem faced by international students in the United States.

Homesickness has been implicated as a major factor related to psychological well-being among international students and specifically, the presence of homesickness among international students' has been linked to behaviors and attitudes that may lead to depression and other mental health problems (Poyrazli & Lopez, 2007). Poyrazli and Lopez compared levels of homesickness and perceived discrimination among international and U.S. college students and sampled a total of 429 college students (198 international students and 241 U.S. students). They compared these two populations on measures of homesickness, perceived discrimination, and demographic variables and found international students reported significantly higher levels of homesickness and perceived discrimination than U.S. students. The authors explain, "homesickness in college students is usually discussed as a byproduct of culture shock, which can induce
feelings such as alienation, anxiety, depression, homesickness, rejection and loss, hopelessness, and low self-esteem" (p. 264). As such, it makes sense that international students experienced greater amounts of homesickness than U.S. college students.

The literature also suggests a number of demographic variables are related to levels of homesickness among international students. Poyrazli and Lopez (2007) found that age and length of stay in the US were related to levels of homesickness such that older students and international students who lived in the US for a longer period of time reported the highest levels of homesickness. Interestingly, homesickness was negatively correlated with age, such that younger students reported higher levels of homesickness than older students did (Poyrazli & Lopez). This finding is consistent with other findings in the literature showing that younger people tend to experience more homesickness than older people (Kazantzis & Flett, 1998). However, other researchers have found that age and homesickness do not have a linear relationship, but rather particular age groups are more likely to experience homesickness (Beck et al., 2003; Eureling-Bontekoe, Brouwers, & Verschuur, 2000). It should be noted that gender has also been related to homesickness among international students, such that female students experience more homesickness than male students (Stroebe et al., 2002).

Another demographic variable related to levels of homesickness is one’s country of origin. Ye (2005) suggested significant differences exist between international students’ country of origin regarding levels of homesickness and acculturative stress and argued that levels of homesickness and acculturative stress one experiences depends on the degree of difference between one’s country of origin and the new culture to which one adjusts. In addition to that, in previous studies, Asian international students
consistently report greater acculturative stress than European international students in the United States (Yeh & Inose, 2003; Poyrazli et al., 2004). One study of Chinese international students in Britain revealed a 94.9% rate of homesickness (Lu, 1990). On the other hand, Constantine, Okazaki, and Utsey (2004) reported that international students who come from African countries experienced greater acculturative stress and homesickness than Asian and Latino international student at colleges in the US. Additionally, their results showed that Latino international students indicated greater psychological distress in comparison to Asian students, and that Asian students reported lower levels of acculturative stress than international students of African countries studying in the US. In sum, it appears that a number of demographic variables are related to homesickness among international students, such as age, gender, and country of origin.

Other factors related to levels of homesickness among international students in the United States are language difficulties, academic adjustment, and social support. Language barriers have consistently been shown to influence levels of homesickness in international students in the US (Poyrazli & Lopez, 2007; Ye, 2005; Yeh & Inose, 2003). Individuals’ perceptions and expectations of their English skills may also affect levels of homesickness. For example, Greenland and Brown (2005) found that international students’ perception of their English skills might contribute to and affect their homesickness levels.

Homesickness has also been shown to negatively impact academic performance among both U.S. and international college students in the United States. Terry, Leary, and Mehta (2013) examined levels of self-compassion, homesickness, depression, and satisfaction with college life and academia among non-international college students in
the United States exclusively. They sampled 119 undergraduates who just entered their first year of college at a midsized private university in the southeastern United States. Results revealed levels of homesickness were negatively related to academic satisfaction. That is, undergraduate college students who rated low in academic satisfaction rated high in levels of homesickness (Terry et al., 2013).

Among international students specifically, homesickness has been described as a multifaceted experience, including missing one’s family and friends, feeling lonely, home ruminations, and adjustment problems (Willis, Stroebe, & Hewstone, 2003). According to Willis et al. (2003), one aspect of adjustment problems is academic adjustment and found that among international students, levels of homesickness were positively correlated with academic problems. The more homesick one felt, the greater troubles he or she experienced in their schoolwork indicating homesickness is related to poor academic performance and satisfaction among international as well as non-international college students.

Another variable related to homesickness among international students in the United States is social support and connectedness. Social connectedness has been shown to negatively correlate with both acculturative stress and homesickness among international students in the US (Duru & Poyrazli, 2007; Yeh & Inose, 2003) indicating more social connectedness experienced by international students in the US, the less homesickness and acculturative stress they feel. This finding is consistent with a study conducted by Constantine, Anderson, Berkel, Caldwell, and Utsey (2005) who sampled 320 international college students from 33 different countries of origin, and four different universities in the United States. They measured levels of self-concealment, social self-
efficacy, acculturative stress, and depression. Results showed that international students who perceived greater amounts of social acceptance reported lower levels of adjustment problems.

Van Tilburg, Vingerhoets, and Heck (1997) examined various coping strategies for homesickness and results indicate individuals with plenty of social support, as opposed to individuals who lack social support, are less likely to suffer from homesickness. Chataway and Berry (1989) found similar results in a population of Chinese, French Canadian, and English Canadian students studying in Canada and determined that Chinese students, the majority of whom were international, tended to have the least amount of social interaction and connectedness with students of the host country. As such, it appears that social support is an important factor related to homesickness among international students.

Another factor closely related to social support that has been studied in relation to homesickness (Longo & Kim-Spoon, 2013) and psychological well-being (Richards, 1991) is level of religiousness. Richards (1991) examined the relationship between emotional adjustment, psychological separation from parents, and levels of religiosity among college students. Richards (1991) found that being religious was related to lower levels of depression among first semester college students. Further, students who identified as religious reported less separation anxiety from their parents when compared to students who identified as non-religious.

However, the influence of religiosity on levels of depression and homesickness is not consistent in the literature. In a recent study, Longo and Kim-Spoon (2013) explored religiousness as a potential moderator in the relationship between homesickness and
depression levels among freshman college students. The authors sampled 311 freshmen (195 female, 116 male) at a large Southeastern U.S. university. The breakdown of religious denomination of participants was as follows: 40% Protestant, 30% Roman Catholic, 20% nonreligious, and 10% other religions. The authors found religiousness did not moderate the relationship between homesickness and depression. Stated differently, being highly religious, as opposed to non-religious, did not buffer against depressive symptomology experienced because of homesickness among college students. To put this inconsistency in the context of social support, it may be that measuring how religious someone is does not necessarily capture his or her worshiping habits. That is, someone who is religious may not attend church regularly and so may not benefit from the social support provided to individuals who identify as religious.

**Perceived discrimination.** Due to the fact that international students are typically racially and ethnically different from those in their host culture, many experience perceptions of discrimination. Perceived discrimination is defined as a “[experience of] discrimination based on race or color, receiving mistreatment, and feeling socially isolated” (Poyrazli, Thukral, & Duru, p., 26, 2010). Perceived discrimination appears to be a problem faced not only by international students but also among college students in the US who are of diverse racial and cultural backgrounds. Landrine and Klonoff (1996) reported that more than 98% ethnic minority students experienced at least one act of racial harassment (RH) within a year’s time. They examined experiences of RH of both white and racially diverse college students in the United States and found that racially diverse college students experienced significantly more RH when compared to White (majority) college students (Landrine & Klonoff).
Perceived discrimination also appears to have longitudinal implications among US college students. Huynh and Fuligni (2012) examined participants’ reports of discrimination at three different points throughout their college transition: 12th grade of high school, two years into college, and four years into college and found that over time, perceived discrimination decreased but societal devaluation increased. Further, perceived discrimination was correlated with depressive symptomology consistently over time. Thus, it appears that the effects perceived discrimination can persist over time for U.S. college students who are ethnic minorities.

Even though American college students of diverse racial and ethnic backgrounds experience perceived discrimination, research shows that perceived discrimination is particularly prevalent among international college students. Poyrazli and Lopez (2007) compared levels of perceived discrimination between international college students and American college students. Their sample consisted of 439 college students, 198 international students and 241 U.S. college students. Participants completed measures of homesickness, perceived discrimination, and demographic information. First, international students reported significantly greater levels of perceived discrimination (and homesickness) than U.S. college students. Second, years of residence in the United States and participant race or ethnicity significantly predicted perceived discrimination indicating the longer international students lived in the United States, the higher levels of perceived discrimination they reported. European international students reported significantly less perceived discrimination than international students of other races or ethnicities (Poyrazli & Lopez, 2007). These findings suggest perceived discrimination is
a significant problem that international students face when moving to a new country and assimilating into a different culture.

Since perceived discrimination is a problem faced by international students, it is important to emphasize that experiencing discrimination has been related to decreased psychological well-being among ethnic minority groups (Cokley, Hall-Clark, & Hicks, 2011; Donovan, Huynh, Park, Kim, Lee, & Robertson, 2012). Specifically, when people attribute negative events in their lives to acts of discrimination it negatively impacts their psychological well-being. Armenta and Hunt (2009) found that perceptions of racism and discrimination among Latino Americans were linked to indicators of poor psychological well-being such as depression and low self-esteem. Cronin, Levin, Branscombe, Laar and Tropp (2012) conducted a longitudinal study looking at the buffering effects of increased ethnic identification on the negative impacts of perceived discrimination based on a model developed by Branscombe, Schmitt, and Harvey (1999) called the rejection-identification model (RIM). Cronin and colleagues (2012) argue that by identifying strongly with one’s racial group, perceptions of discrimination may protect people from the negative impacts of such perceptions. Consistent with this hypothesis, the authors found a negative relationship between perceived discrimination and psychological well-being, but the relationship became nonsignificant when a person ranked high on measures of ethnic identification.

Of particular importance to the present research, perceived discrimination has been directly linked to psychological well-being among populations of immigrants and international students. Jasperse, Ward, and Jose (2012) examined perceived discrimination among immigrant Muslim women living in New Zealand. They sampled
153 Muslim women living in the cities of Auckland, Hamilton, and Wellington and over half (53%) of these women identified as international students, while 37% identified as employed, and 10% were unemployed. Participants completed measures of three aspects of Muslim identity (psychological, behavioral, and visible) perceived religious discrimination, life satisfaction, and psychological symptoms and found that the various aspects of Muslim identity moderated the relationship between perceived religious discrimination and psychological well-being. They found that perceived discrimination predicted poor psychological well-being, but only among individuals who possessed moderate to strong psychological Muslim identity. Regarding the behavioral aspect of Muslim identity (i.e., engaging in Islamic practices), perceived discrimination did not predict psychological well-being among those who were moderate to high in behavioral Muslim identity, however psychological well-being was affected by perceived discrimination among those who were low in behavioral Muslim identity. It appears that perceived discrimination affects psychological well-being, but that relationship depends on one’s level of identification as a Muslim (Jasperse et al., 2012).

Duru and Poyrazli (2011) examined the relationship between perceived discrimination, social connectedness, and adjustment problems among Turkish international students in the United States. A total of 229 Turkish students from a number of universities across the United States completed an online survey which consisted of measures of demographic information, adjustment difficulties, social connectedness, and perceived discrimination. Adjustment difficulties was measured using the Adjustment Difficulties subscale of the Utrecht Homesickness Scale created by Stroebe, Van Vilet, Hewstone, and Willis (2002). Social connectedness was measured using the Social
Connectedness Scale (Lee & Robbins, 1995) and perceived discrimination was measured using the perceived discrimination subscale of the Acculturative Stress Scale for International Students (Sandhu & Asrabadi, 1998). The authors found that social connectedness was negatively related to adjustment difficulties such that the more social connectedness participants experienced, the fewer adjustment problems they reported. Perceived discrimination positively predicted adjustment difficulties, such that as people experienced more perceived discrimination they also reported greater adjustment difficulties (Duru & Poyrazli, 2011).

Duru and Poyrazli’s (2011) findings are consistent with other studies examining perceived discrimination, social connectedness, and factors of psychological well-being. Jurcik, Ahmed, Yakobov, Solopieieva-Jurcikova, and Ryder (2013) examined how perceptions of ethnic density, “the protective effect related to a greater proportion of people from the same ethnic group living in a particular neighborhood” (p. 662) might be related to perceived social support, perceived discrimination, and psychological well-being. The authors sampled a population of international students studying at an English speaking university in Montreal, Canada. Participants completed measures of perceived ethnic density, acculturation, perceived social support, perceived discrimination, and psychological well-being (using a negative indicator of depressive symptomology) and found perceptions of ethnic density were negatively related to both depression and perceived discrimination. That is, the more ethnic density people perceived, the less depression and perceived discrimination they experienced which implicates the important role of social support as it relates to both perceived discrimination and psychological well-being.
Relatedly, perceived discrimination has been linked to academic satisfaction among international college students. Wadsworth, Hecht, and Jung (2008) examined the impact of identity gaps, perceived discrimination, and acculturation on educational satisfaction among 218 undergraduate and graduate international students. Perceived discrimination was negatively related to educational satisfaction, indicating that greater perceptions of discrimination were associated with lower levels of educational satisfaction in American college classrooms. Thus, it appears for international students, perceived discrimination not only has negative impacts on psychological well-being, but may also have implications for psychosocial and academic adjustment as well.

**Gender.** Researchers often include demographic information to understand the composition of their study sample, but sometimes, these demographic variables also produce an effect within the study. One such demographic variable implicated in research on psychological well-being is gender. Much research found gender effects are either related to or predict psychological well-being.

One domain that has revealed gender effects is in the realm of academics. For instance, among Latinos, research has shown that males perceive more alienation and isolation in their academic studies in higher education than females (Rodriquez, 1994). However, McWhirter (1997) found female Latinos feel as though they experience more educational barriers in higher education than Latino males.

Some research focused upon one specific gender within the academic domain. Haynes et al. (2012) looked at how role conflict exclusively among women might be related to levels of psychological well-being. As Johnson, Batia, and Haun (2008) state:
role conflicts require enormous amounts of time and emotional energy that can lead to physical and emotional health problems, causing more stress and thus more conflict and problems for the students. (p. 12)

This statement was illustrated in Haynes et al.’s (2012) research findings who found that women experienced many role conflicts, but the greatest role conflict they faced was the one between their personal and academic life, a conflict associated with the lowest levels of psychological well-being within the study sample. So, it appears that participant gender may have an effect in the domain of academic adjustment.

Another domain with observed gender effects is social relationships. Quimby and O’Brien (2006) examined predictors of psychological well-being among nontraditional female students with children, and found social support was a significantly strong predictor of various aspects of psychological well-being such as psychological distress, self-esteem, and overall life satisfaction. Whitton, Weitbrecht, Kuryluk, and Bruner (2013) also found that being in a committed relationship, as opposed to being single, was associated with fewer depressive symptoms among women than men, which is in line with findings by Demir and Orthell (2009), who found that women possessed higher quality real and ideal friendships than men, suggesting the importance of committed relationships for women, be they plutonic or romantic in nature.

Taken together, these findings reveal a possible trend of gender differences on factors related to psychological well-being in the domains of academic adjustment and social relationships. Therefore, it could be that gender differences might be related to other predictors. As such, gender is included as a predictor in the current study not only
to test its ability to predict psychological well-being and its correlation with the other predictors in the study.

Summary

This chapter explained how the construct of psychological well-being is currently conceptualized in the literature. Definitions of psychological well-being, including different theoretical interpretations of this construct, were explained. Further, populations of concern and problem areas related to psychological well-being among these different populations were discussed. Among college students, concerns of mental health, academic adjustment, and social relationships were emphasized. Among international college students, cross cultural comparisons, acculturative stress, ethnic identity/identity conflict, and qualitative examinations were presented. Finally, considering international college students exclusively, potential predictors (adjustment problems, homesickness, perceived discrimination, and biological sex) of psychological well-being were introduced.

Even though literature on psychological well-being has examined and identified a number of factors related to psychological well-being among international students, few have examined how these factors are simultaneously related to psychological well-being. Thus, the current research study investigated the potential predictor model of adjustment problems, homesickness, perceived discrimination, as well as biological sex on psychological well-being. The following chapter will elaborate on the methodology and research instruments utilized in this study.
Chapter 3: Method

In this chapter, the methodology used to conduct the study is presented. Additionally, operational definitions of variables, sampling procedures, and instrumentation to be utilized in this study will be explained. Finally, data collection and analysis procedures will be presented.

The purpose of the study was to explore the influence of adjustment issues, homesickness, and perceived discrimination on the psychological well-being of international college students. Additionally, there was an examination of whether there are gender differences as they relate to adjustment issues, homesickness, perceived discrimination and psychological wellbeing.

The participants of this study were undergraduate and graduate international students enrolled at a Midwestern University. Participants were requested to complete five self-report questionnaires measuring adjustment problems, homesickness, perceived discrimination, psychological well-being and demographic information. The data gathered via these measures were examined using descriptive statistics, simple and multiple linear regression, and independent sample t-tests analyses. Approval from the Institutional Review Board (IRB) at the university was obtained prior to data collection.

Research Questions and Hypotheses

The current study aimed to answer the following questions:

**Question 1:** Do adjustment problems as measured by the Michigan International Students Problem Inventory (MISPI; Porter, 1966) account for a significant amount of variance in the psychological well-being of international college students as measured by Ryff’s (1989) Scales of Psychological Well Being (SPWB)?
Null Hypothesis 1: Adjustment problems as measured by the MISPI (Porter, 1966) do not account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989).

Question 2: Does homesickness as measured by the Acculturative Stress Scale for International Students (ASSIS; Sandhu & Asrabadi, 1994) account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989)?

Null Hypothesis 2: Homesickness as measured by the ASSIS (Sandhu & Asrabadi, 1994) does not account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989).

Question 3: Does perceived discrimination as measured by the ASSIS (Sandhu & Asrabadi, 1994) account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989)?

Null Hypothesis 3: Perceived discrimination as measured by the ASSIS (Sandhu & Asrabadi, 1994) does not account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989).

Question 4: Is there a significant difference between male and female college international students’ levels of adjustment problems, homesickness, perceived discrimination, and psychological well-being?
**Null Hypothesis 4:** There are no significant differences between male and female international college students’ levels of adjustment problems, homesickness, perceived discrimination, and psychological well-being.

**Procedure**

**Population.** The target population for this study included international students (undergraduate and graduate) who were enrolled in academic courses at a Midwestern university.

**Sampling procedure.** The sample for this study was international students in undergraduate and graduate courses at a Midwestern university. This study utilized a convenience sampling procedure. The researcher contacted course instructors, either via email or in person, to request permission to collect data from international students enrolled in their courses. The researcher communicated with the instructors, who granted permission to arrange for the collection of data.

The sample size of the current study was determined based on a precision efficacy analysis for regression (PEAR; Brooks and Barcikowski, 2012) where in sample sizes for multiple regression analyses are chosen so as to maximize power while maintaining generalizability of the model.

Using this method of sample size selection by Brooks and Barcikowski (2012), with a moderate effect size ($\rho^2 = .25$) and power estimate of .80, a total of 28 participants are required for each variable (all predictors plus the dependent variable). As this study includes four variables (adjustment, homesickness, perceived discrimination, and psychological well-being (dependent variable) the minimum sample size required for this study was 112 participants.
Operational definitions of variables. In this study, a continuous variable of overall adjustment problems was calculated by summing all items on the Michigan International Student’s Problem Inventory (MISPI; see Appendix D). Higher scores on this variable indicated more adjustment problems and lower scores on this measure indicated less adjustment problems. Additionally, continuous variables were created for all of the problem areas on the MISPI (a total of 11) by summing the items that correspond to each problem area. For example for overall adjustment problem scores, higher scores indicated greater adjustment problems in a specific area, and lower scores indicated less adjustment problems in a specific area.

Homesickness was defined as a continuous variable in this study. This variable was computed by summing items (4 total) on the homesickness subscale of the Acculturative Stress Scale for International Students (ASSIS; see Appendix E). This variable was scaled so that higher scores on this variable indicated greater levels of homesickness and lower scores indicated lower levels of homesickness.

Perceived discrimination was a continuous variable in this study. This variable was computed by summing items (8 total) on the ‘perceived discrimination’ subscale of the ASSIS. This variable also was scaled so that higher scores indicated greater perceived discrimination and lower scores indicated less perceived discrimination.

Moreover, a dichotomous biological sex variable was created by assigning “0” for participants who identified as female and “1” for participants who identified as male.

Instrumentation

This section will provide information with respect to all of the instruments utilized in this study.
Michigan International Students Problem Inventory (MISPI). Adjustment was be measured using the MISPI. The MISPI instrument was administered in the current study for several reasons. First, the MISPI satisfies the purposes of this study such that: “the Michigan International Student Problem Inventory is a quick and reliable way of identifying problems perceived by students on an individual campus” (Spaulding & Flack, 1976, p. 33). Second, according to literature, MISPI is the most frequently used instrument to measure and identify adjustment problems of international students (Pedersen, 1991; Wang, 2009). This measure was developed by Porter (1966) in 1962 and was revised in 1977 and consists of a total of 132 items partitioned into eleven subscales that assess different adjustment problem areas encountered by international students. The subscales (problem areas) include: (a) admission-selection, (b) orientation service, (c) academic record, (d) social-personal, (e) living-dining, (f) health service, (g) religious service, (h) English language, (i) student activity, (j) financial aid, and (k) placement service.

**Reliability and validity.** According to Gay and Airasian (2000), validity is the most important feature of an instrument because “it [validity] is concerned with the appropriateness of the interpretations” (p. 161) According to the authors, there are three different types of validity: content validity, criterion-related validity, and construct validity.

In terms of validity, Porter (1966) tested the concurrent validity of the MISPI. Porter administered the MISPI to 108 international students and 50 native students, and applied the Mooney Problem Check List—College form (MPCL) to 46 international students and 47 American students in the US. In the MPCL, the mean score was 44.97 for
the American students and the mean score was 21.24 for the international students, with the difference of the two mean scores significant at an alpha level of .05, indicating there was a significant difference between groups on this measure.

In addition, on the MISPI, Porter (1966) found a mean score of 11.26 for American students and 15.06 for the international students, with significant mean differences at an alpha level of .05. Accordingly, these results indicated the two questionnaires were correlated and the two instruments showed significant differences between the two groups of students at the p < .05 level. As a result, Porter’s research indicated that the MISPI is a valid instrument to be administered among international students.

Gay and Airasian (2000) define reliability as “…the degree to which a test consistently measures whatever it is measuring” (p. 169). The most frequently used measures of reliability are test-retest reliability and internal consistency reliability. Internal consistency reliability of the MISPI was evaluated by Porter (1966) using the Spearman-Brown split-half method and a total scale reliability estimate of .67 was achieved. He also applied the Kuder-Richardson formula which indicated an internal consistency reliability of .58 and subscale reliability ranging from .47 to .76. In addition, Porter (1966) also found that “sub-scale correlation coefficients above .16 are significant at the .05 level for degrees of freedom of 106 and these sub-scale total coefficients range from .49 on the English Language versus Total Scale to .78 for the Admission-Selection versus Total Scale” (p. 8). For the current study, the mean item score was .69 (SD = .38), with an internal reliability estimate (α) of .97.
Acculturative Stress Scale for International Students (ASSIS). The ASSIS scale will be used to measure two of the predictor variables in the present research: homesickness and perceived discrimination. The ASSIS is a 36-item questionnaire developed by Sandhu and Asrabadi (1994), and contains seven subscales that assess factors composing overall acculturative stress experienced by international students: perceived discrimination, homesickness, perceived hate, fear, culture shock, and guilt. The scale also includes a miscellaneous category. This instrument asks participants to indicate their level of agreement with each item using a 5 point Likert scale where 1 = strongly disagree and 5 = strongly agree.

In the present research, the ASSIS was used because it has been tested and validated among samples of international students specifically, and is the only measure of acculturative stress developed specifically for international students (Duru & Poyrazli, 2011; Sandu & Asrabadi, 1998). For the purposes of this study, only items from the ‘homesickness’ and ‘perceived discrimination’ subscales were used. The homesickness subscale consists of four items, and the perceived discrimination subscale consists of eight items. Therefore, participants only completed twelve items from the ASSIS.

Reliability and validity. The ASSIS has been shown to be a very reliable and valid measure by both Poyrazli and colleagues (2004) as well as Yeh and Inose (2003) who reported strong reliability scores. Regarding validity, Sandu and Asrabadi (1998) conducted analyses on the ASSIS including all subscales, and a Cronbach’s alpha of .94 was obtained. Additionally, Duru and Poyrazli (2011) obtained a Cronbach’s alpha of .84 in their study.
In this current study, the mean item score was 2.86 ($SD = .93$), with an internal reliability estimate ($\alpha$) of .75 for Homesickness scale and the mean item score was 2.13 ($SD = .83$), and obtained a Cronbach’s alpha of .89 for Perceived Discrimination scale.

**Scales of Psychological Well-Being.** Psychological well-being was measured using the Ryff Scales of Psychological Well-Being (SPWB; see Appendix F). This measure exists in long, medium, and short forms. For the purposes of this study, the medium form (consisting of 42 items) was used. The present research used this scale because it has been shown to be a very reliable and valid measure (Seifert, 2005) and it captures several aspects of psychological well-being simultaneously. The Ryff SPWB measures six aspects of psychological well-being: (a) autonomy, (b) environmental mastery, (c) personal growth, (d) positive relationships with others, (e) purpose in life, and (f) self-acceptance. The Ryff SPWB consists of six subscales corresponding to each of these six aspects of psychological well-being. The scale items exist on a six-point Likert scale where 1 = strongly disagree and 6 = strongly agree.

**Reliability and validity.** During scale development, Ryff (1989) ran reliability analyses for each of the subscales and results indicated the SPWB has high internal consistency reliability on each of the subscales (autonomy = .86, environmental mastery = .90, personal growth = .87, positive relationships = 91, purpose in life =.90 and self-acceptance = .93). Validity was also assessed by correlating the scale with pre-existing scales measuring psychological well-being. Results showed that “correlations with prior measures of positive functioning (i.e., life satisfaction, affect balance, self-esteem, internal control, and morale) are all positive and significant, with coefficients ranging from .25 to .73. Similarly, correlations with prior measures of negative functioning (i.e.,
powerful others, chance control, depression) are all negative and significant, with coefficients ranging from —.30 to —.60” (p. 1074). As such, the Ryff SPWB has been shown to be reliable and valid. For the current study, the mean item score was 4.51 (SD = .56), with an internal reliability estimate (α) of .91.

Demographics questionnaire. A demographics questionnaire consisting of 11 items included in the present study to assess gender, age, current relationship status, college major, academic status, length of time in the US, country of origin, race/ethnicity, relationship with advisor/faculty, living situation and social support (see Appendix G).

Data Collection Procedures

Maximum sampling method was used in order to recruit diverse international students from different countries in the world. Participants were selected for this study using convenience-sampling procedures. There were more than 1800 international college students from over 100 countries at a large Midwestern university in the US. Also, thirty member organizations are provided on campus for international students. The researcher contacted the international student organizations (e.g., African Languages Association, Arabic Language Student Association, Association for Cultural Exchange, Chinese Student and Scholar Association, Indian Student Association and Latino and Hispanic Student Union) to request permission to collect data during the organization’s meetings. This permission was requested via personal communication with faculty advisors and student presidents of various international student unions at the Midwest University. The researcher also contacted instructors in the department of the English Language Program (ELP) at the Midwest University to see if the researcher would be able to collect data from students enrolled in ELP classes. During this communication,
permission was requested to distribute the surveys to potential participants during class time and international student union meetings. The researcher communicated with the faculty advisor and student president of international student union, and/or course instructors in the ELP department to set up a time and place to collect data. The final sample included 145 international students from 30 different countries (See Table 2). The twenty-one English language learner students were recruited from 11 different classes in the English Language Program (ELP) at a Midwestern University.

The instruments were distributed to the participants after the proposed study was approved by the Institutional Review Board. The researcher prepared a script that explained the aim and significance of the study. Next, the experimenter went to each class during the assigned time and place to collect data. Prior to distributing the questionnaire packet, the experimenter read the script to the student and emphasized the voluntary nature of the study. Moreover, information regarding the purpose and importance of the study, information about the anonymity, and the anticipated time to complete the study was provided. The researcher distributed the paper-based surveys which included an informed consent statement to the potential participants. Course instructors were not present during data collection, and students were assured that their participation would not be tied to their performance on the course in any way.

Participants also were informed to separate the consent form from the survey package and sign it. They were informed to put the surveys and consent forms in separate envelope after they completed them. The researcher kept the envelopes in his office.

During the data collection process, participants were asked to complete a total of five measures. Adjustment problems were assessed using the Michigan International
Students Problem Inventory (MISPI; Porter, 1996). Both homesickness and perceived discrimination were measured using the Acculturative Stress Scale for International Students (ASSIS), since this measure has both homesickness and perceived discrimination subscales (Sandhu & Asrabadi, 1994). Psychological well-being was assessed using Ryff’s (1989) Scales of Psychological Well Being (PSWB) in the study. Additionally, all participants were requested to complete the demographics questionnaire last, which asked about participant biological sex, age, relationship status, college major, grade level, length of residency in the U.S., country of origin, and ethnic/racial background, relationship with their faculties/advisor, and social support. Participants completed their survey in about 30 minutes. Furthermore, as the questionnaires may have caused some participants to experience emotional and psychological distress, information about counseling services at the Midwest University and how to access these services were provided.

**Data Analysis Procedures**

For data collection and analysis, in the present study, quantitative methodology was utilized. Descriptive analysis was utilized in order to investigate the levels of psychological well-being, adjustment problems, homesickness, and perceived discrimination among international college students. Descriptive analyses were also used to provide information about the demographic composition of the study sample.

Multiple linear regression analyses were utilized for this study to determine whether or not adjustment problems, homesickness, and perceived discrimination explained a significant amount of variation in psychological well-being. Linear regression analyses were conducted (whereby adjustment problems, homesickness, and
perceived discrimination are entered one at a time) to find out if these predictors remain significant when in the presence of the others. Moreover, to be able determine the relationship between psychological well-being, adjustment problems, homesickness, perceived discrimination, and biological sex (as well as other demographic information), correlation analysis were utilized. In sum, descriptive, intercorrelational, and regression analyses were conducted, using an alpha level of .05 for all statistical analyses. Finally, t-test analyses were utilized to compare levels of adjustment problems, homesickness, perceived discrimination, and psychological well-being between male and female international students.

**Analysis of Research Questions.** The following research questions and hypotheses were tested in the current study.

**Question 1:** Do adjustment problems as measured by the Michigan International Students Problem Inventory (MISPI; Porter, 1966) account for a significant amount of variance in the psychological well-being of international college students as measured by Ryff’s (1989) Scales of Psychological Well Being (SPWB)?

**Null Hypothesis 1:** Adjustment problems as measured by the MISPI (Porter, 1966) do not account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989).

**Question 2:** Does homesickness as measured by the Acculturative Stress Scale for International Students (ASSIS; Sandhu & Asrabadi, 1994) account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989)?
Null Hypothesis 2: Homesickness as measured by the ASSIS (Sandhu & Asrabadi, 1994) does not account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989).

Question 3: Does perceived discrimination as measured by the ASSIS (Sandhu & Asrabadi, 1994) account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989)?

Null Hypothesis 3: Perceived discrimination as measured by the ASSIS (Sandhu & Asrabadi, 1994) does not account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989).

Question 4: Is there a significant difference between male and female college international students’ levels of adjustment problems, homesickness, perceived discrimination, and psychological well-being?

Null Hypothesis 4: There are no significant differences between male and female international college students’ levels of adjustment problems, homesickness, perceived discrimination, and psychological well-being.

Research hypotheses 1, 2, and 3 were examined simultaneously using multiple linear regression statistical analyses. Each predictor was entered into a multiple linear regression model with psychological well-being as the dependent variable to see whether or not each hypothesis was true or false. In addition to that, research hypothesis 4 was analyzed using a t-test analyses to compare mean scores on adjustment problems, homesickness, perceived discrimination, and psychological well-being between male and female international college students. Furthermore, two exploratory analyses were
examined in order to explore whether any of the study variables in the model significantly explained the predictive relationship in psychological well-being.

**Summary**

This chapter provided information regarding the methodology that was utilized in this study. The procedure of the study was explained in detail. Further, information about the instruments that were used was presented. Data collection procedures along with data analysis procedures were thoroughly explained. In the chapter that follows, the reader will become familiar with the results.
Chapter 4: Results

This chapter describes the result of the present study, which divided into four main sections. In the first section the preliminary analyses performed are presented. The second section includes the descriptive statistics related to the major study variables. In the third section the assumptions for multiple regressions analysis and independent sample t-test are explained. In the final part of this chapter, the results of data analyses of the four research questions and of the exploratory and supplementary analyses are summarized.

The four research questions that guided this study are:

**Question 1:** Do adjustment problems as measured by the Michigan International Students Problem Inventory (MISPI; Porter, 1966) account for a significant amount of variance in the psychological well-being of international college students as measured by Ryff’s (1989) Scales of Psychological Well Being (SPWB)?

**Question 2:** Does homesickness as measured by the Acculturative Stress Scale for International Students (ASSIS; Sandhu & Asrabadi, 1994) account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989)?

**Question 3:** Does perceived discrimination as measured by the ASSIS (Sandhu & Asrabadi, 1994) account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989)?

**Question 4:** Is there a significant difference between male and female college international students’ levels of adjustment problems, homesickness, perceived discrimination, and psychological well-being?
Preliminary Analyses

The statistical analyses in the study were preceded by data-cleaning procedures which removed invalid and missing data for each variable (adjustment problems, homesickness, perceived discrimination, gender and psychological well-being). This process resulted in eight surveys being discarded because of missing data and yielded 145 usable surveys for data analysis. Internal consistency of all the variables was determined by calculating Cronbach’s alpha correlation coefficients of all the variables. Furthermore, the assumptions for multiple regression analyses were performed to ensure the fidelity of the statistical analyses.

Descriptive Statistics

The final sample consisted of 145 international college students. The demographic characteristics of the sample are presented in tables 1, 2, 3, and 4. In terms of age, participants ranged from 18 to 41 years (M = 26, SD = 4.62). With regard to gender, 46.9% (n = 68) identified as male, whereas 53.1% (n = 77) identified as female. A substantial majority identified as single (70.3%, n = 102), whereas 26.2% (n = 38) identified as married, and 2.1% (n = 3) as divorced. In terms of academic level, the majority of the participants were graduate level students (65.5%, n = 95), whereas 20.0% (n = 29) were pursuing undergraduate studies, and 14.5% (n = 21) identified as a student in an English language program. The most common college affiliation was the College of Art & Science (37.9%, n = 55), followed by the College of Engineering (18.6%, n = 27), the College of Education (16.6%, n = 24), and the College of Business (10.5%, n = 31).
Table 1

Participant Age, Gender, Relationship Status, Field of Study and Academic Rank

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (N = 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>4.62</td>
<td></td>
</tr>
<tr>
<td><strong>Gender (N = 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>68</td>
<td>46.9%</td>
</tr>
<tr>
<td>Female</td>
<td>77</td>
<td>53.1%</td>
</tr>
<tr>
<td><strong>Relationship Status (N = 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>102</td>
<td>70.3%</td>
</tr>
<tr>
<td>Separated</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Married</td>
<td>38</td>
<td>26.2%</td>
</tr>
<tr>
<td>Divorced</td>
<td>3</td>
<td>2.1%</td>
</tr>
<tr>
<td>Widowed</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td><strong>Field of Study (N = 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Art &amp; Sciences</td>
<td>55</td>
<td>37.9%</td>
</tr>
<tr>
<td>Business</td>
<td>18</td>
<td>12.4%</td>
</tr>
<tr>
<td>Education</td>
<td>24</td>
<td>16.6%</td>
</tr>
<tr>
<td>Communication Studies</td>
<td>11</td>
<td>7.6%</td>
</tr>
<tr>
<td>Engineering</td>
<td>27</td>
<td>18.6%</td>
</tr>
<tr>
<td>Fine Arts</td>
<td>6</td>
<td>4.1%</td>
</tr>
<tr>
<td>Health &amp; Human Services</td>
<td>2</td>
<td>1.4%</td>
</tr>
<tr>
<td>Undecided</td>
<td>2</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>Academic Rank (N = 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>7</td>
<td>4.8%</td>
</tr>
<tr>
<td>Sophomore</td>
<td>2</td>
<td>1.4%</td>
</tr>
<tr>
<td>Junior</td>
<td>8</td>
<td>5.5%</td>
</tr>
<tr>
<td>Senior</td>
<td>12</td>
<td>8.3%</td>
</tr>
<tr>
<td>Graduate; Master Level</td>
<td>51</td>
<td>35.2%</td>
</tr>
<tr>
<td>Graduate; Doctoral Level</td>
<td>44</td>
<td>30.3%</td>
</tr>
<tr>
<td>English Language Program</td>
<td>21</td>
<td>14.5%</td>
</tr>
</tbody>
</table>
In terms of the ethnic/racial composition of the participants (see Table 2), the majority 43.4% of participants reported that they were Asian, 17.9% were Middle Eastern, 13.8% were Caucasian/White, 11.0% were African, 6.2% were Latino and 4.1% were Indian. Three and a half percent reported that they belonged to the ‘other’ racial or multi ethnic group. The most common five countries of origin included China (20.0%, n = 29), Turkey (13.8%, n = 20), Saudi Arabia (7.6%, n = 11), India (6.9%, n = 10), and Ghana (6.9%, n = 10).
<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethnicity (N = 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caucasian/White</td>
<td>20</td>
<td>13.8%</td>
</tr>
<tr>
<td>Asian/Asian American</td>
<td>63</td>
<td>43.4%</td>
</tr>
<tr>
<td>African/African American</td>
<td>16</td>
<td>11.0%</td>
</tr>
<tr>
<td>Indian/Indian American</td>
<td>6</td>
<td>4.1%</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>9</td>
<td>6.2%</td>
</tr>
<tr>
<td>Middle Eastern</td>
<td>26</td>
<td>17.9%</td>
</tr>
<tr>
<td>Multiracial</td>
<td>2</td>
<td>1.4%</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2.1%</td>
</tr>
<tr>
<td><strong>Country of Origin (N = 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Algeria</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Angola</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Brazil</td>
<td>7</td>
<td>4.8%</td>
</tr>
<tr>
<td>China</td>
<td>29</td>
<td>20.0%</td>
</tr>
<tr>
<td>Columbia</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Germany</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Ghana</td>
<td>10</td>
<td>6.9%</td>
</tr>
<tr>
<td>Guyama</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Kenya</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Libya</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Loas</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Mauritania</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Mexico</td>
<td>2</td>
<td>1.4%</td>
</tr>
<tr>
<td>Nepal</td>
<td>2</td>
<td>1.4%</td>
</tr>
<tr>
<td>Nigeria</td>
<td>2</td>
<td>1.4%</td>
</tr>
<tr>
<td>Indonesia</td>
<td>6</td>
<td>4.1%</td>
</tr>
<tr>
<td>India</td>
<td>10</td>
<td>6.9%</td>
</tr>
<tr>
<td>Iran</td>
<td>7</td>
<td>4.8%</td>
</tr>
<tr>
<td>Japan</td>
<td>2</td>
<td>1.4%</td>
</tr>
<tr>
<td>Jordan</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Oman</td>
<td>5</td>
<td>3.4%</td>
</tr>
<tr>
<td>Pakistan</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Palestine</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>11</td>
<td>7.6%</td>
</tr>
<tr>
<td>South Korea</td>
<td>3</td>
<td>2.1%</td>
</tr>
<tr>
<td>Spain</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>2</td>
<td>1.4%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>3</td>
<td>2.1%</td>
</tr>
<tr>
<td>Thailand</td>
<td>10</td>
<td>6.9%</td>
</tr>
<tr>
<td>Turkey</td>
<td>20</td>
<td>13.8%</td>
</tr>
<tr>
<td>Vietnam</td>
<td>1</td>
<td>.7%</td>
</tr>
</tbody>
</table>
Regarding living situation of participants, more than half stated they live with roommates while studying in the U.S. (n= 93; 64.1%) whereas 14.5% (n=21) live alone. In response to the question regarding the number of years participants have lived in the US, 39.3 % lived in the US for less than one year, 44.8% lived in the US between 2-5 years, and the remainder (15.9%) were in the US for five years or more. See Table 3 for details.

Table 3

Living Situation and Years in the U.S.

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Living Situation (N= 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alone</td>
<td>21</td>
<td>14.5%</td>
</tr>
<tr>
<td>With roommates</td>
<td>93</td>
<td>64.1%</td>
</tr>
<tr>
<td>With significant other</td>
<td>8</td>
<td>5.5%</td>
</tr>
<tr>
<td>With my family</td>
<td>22</td>
<td>15.2%</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>.7%</td>
</tr>
<tr>
<td><strong>Years lived in the U.S. (N= 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1 years</td>
<td>57</td>
<td>39.3%</td>
</tr>
<tr>
<td>2-5 years</td>
<td>65</td>
<td>44.8%</td>
</tr>
<tr>
<td>5 + years</td>
<td>23</td>
<td>15.9%</td>
</tr>
</tbody>
</table>

Finally, in terms of international students’ relationship with their advisor, a substantial majority indicated they have had an effective relationship with their advisors while studying in their department (69%, n = 100; See Table 4). In contrast, a minority (8.3%, n = 22) indicated they strongly disagreed (n= 3) or somewhat disagreed (n= 9) when responding to the question regarding having an effective relationship with their advisor. In regard to social support, 71.0% (n= 103) believed they had a good support
system outside of the classroom whereas 6.9% (n= 10) indicated that they did have a
good social support system with 22.1% (n= 32) reporting they were uncertain.

Table 4

*Relationship with Academic Advisor, Relationship with Faculties and Social Support*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relationship with advisor (N= 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>3</td>
<td>2.1%</td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>9</td>
<td>6.2%</td>
</tr>
<tr>
<td>Uncertain</td>
<td>33</td>
<td>22.8%</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>40</td>
<td>27.6%</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>60</td>
<td>41.4%</td>
</tr>
<tr>
<td><strong>Relationship with faculty (N= 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>3</td>
<td>2.1%</td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>5</td>
<td>3.4%</td>
</tr>
<tr>
<td>Uncertain</td>
<td>31</td>
<td>21.4%</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>68</td>
<td>46.9%</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>38</td>
<td>26.2%</td>
</tr>
<tr>
<td><strong>Social Support (N= 145)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>3</td>
<td>2.1%</td>
</tr>
<tr>
<td>Somewhat disagree</td>
<td>7</td>
<td>4.8%</td>
</tr>
<tr>
<td>Uncertain</td>
<td>32</td>
<td>22.1%</td>
</tr>
<tr>
<td>Somewhat agree</td>
<td>59</td>
<td>40.7%</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>44</td>
<td>30.3%</td>
</tr>
</tbody>
</table>

**Testing of Assumptions for Regression Analysis and Independent T-Tests**

The assumptions for statistical regression analysis and t-tests were tested
following Field’s (2013) suggestions. The first assumption of regression analysis was
assumption of normality (Field). In other words, to test the normality of the distribution
of residuals, normal Q-Q plot and histogram of standardized residuals were checked
(Field). In the analysis, univariate and bivariate descriptive statistics were run to identify
outliers and test normality. The results showed there were no outliers and the data was normally distributed (See figures 1-8 in the Appendices). The Kolmogorov-Smirnov test and Shapiro-Wilk test was used to compare the scores in the sample to a normally distributed set of scores with the same mean and standard deviation (Field, 2013, p. 185). According to these test results, the results of these analyses yielded that the regression assumptions were met (see Table 5).

Table 5

*Test of Normality for Major Study Variables*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Kolmogorov-Smirnova</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Df</td>
</tr>
<tr>
<td>Perceived Discrimination</td>
<td>.092</td>
<td>145</td>
</tr>
<tr>
<td>Homesickness</td>
<td>.080</td>
<td>145</td>
</tr>
<tr>
<td>Adjustment Problems</td>
<td>.081</td>
<td>145</td>
</tr>
<tr>
<td>Psychological Well Being</td>
<td>.062</td>
<td>145</td>
</tr>
</tbody>
</table>

Note: * This is a lower bound of the true significance.

To test for the assumption of normality for the independent sample t-test the data was examined for outliers. The extreme values found in psychological wellbeing and adjustment problems did not affect the results of the independent sample t-test. The tests were run with and without the extreme values and no significant difference was found between males and females. Therefore the researcher’s decision was to keep the outliers
as part of the in the dataset. The Kolmogorov-Smirnov test and Shapiro-Wilk test depicted in Table 6 indicates that the assumption of normality for the t-test was met.

Table 6

*Test of Normality for Independent Sample T-Test by Gender*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Df</td>
</tr>
<tr>
<td>Perceived</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discrimination</td>
<td>Female</td>
<td>.096</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>.097</td>
</tr>
<tr>
<td>Homesickness</td>
<td>Female</td>
<td>.100</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>.095</td>
</tr>
<tr>
<td>Adjustment</td>
<td>Female</td>
<td>.088</td>
</tr>
<tr>
<td>Problems</td>
<td>Male</td>
<td>.080</td>
</tr>
<tr>
<td>Psychological</td>
<td>Female</td>
<td>.060</td>
</tr>
<tr>
<td>Well Being</td>
<td>Male</td>
<td>.089</td>
</tr>
</tbody>
</table>

*Note: * This is a lower bound of the true significance.

In the following sections, descriptive statistics are presented, followed by testing research questions.

**Primary Analysis Results**

Table 7 presents the means, standard deviations, and Cronbach alphas of the primary variables. The reliability correlations range from .97 to .75. Detailed Cronbach’s Alpha results of each test are included in table 7.
Table 7

Means, Standard Deviations and Cronbach’s Alpha for the Scales

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustment Problems</td>
<td>.691</td>
<td>.384</td>
<td>0.97</td>
</tr>
<tr>
<td>Homesickness</td>
<td>2.867</td>
<td>.939</td>
<td>0.75</td>
</tr>
<tr>
<td>Perceived Discrimination</td>
<td>2.139</td>
<td>.832</td>
<td>0.89</td>
</tr>
<tr>
<td>Psychological Well Being</td>
<td>4.512</td>
<td>.561</td>
<td>0.91</td>
</tr>
</tbody>
</table>

Table 8 presents the bivariate correlations between the study variables (adjustment problems, homesickness and perceived discrimination) and well-being. The statistical correlation analysis indicated that adjustment problems was significantly and negatively correlated with psychological well-being ($r = -.47$, $p < .05$). Homesickness was significantly and negatively correlated with psychological well-being ($r = -.17$, $p < .05$). Perceived discrimination was also significantly and negatively correlated with psychological well-being ($r = -.22$, $p < .05$).

Table 8

Pearson Correlations Among Major Study Variables

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Psychological Wellbeing</td>
<td>-</td>
<td>-.475*</td>
<td>-.220*</td>
</tr>
<tr>
<td>2</td>
<td>Adjustment Problems</td>
<td>-.475*</td>
<td>-</td>
<td>.259</td>
</tr>
<tr>
<td>3</td>
<td>Perceived Discrimination</td>
<td>-.220*</td>
<td>.259</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Homesickness</td>
<td>-.174*</td>
<td>.302</td>
<td>.358</td>
</tr>
</tbody>
</table>
Testing the Research Questions and the Null Hypotheses

**Question 1.** Do adjustment problems as measured by the Michigan International Students Problem Inventory (MISPI; Porter, 1966) account for a significant amount of variance in the psychological well-being of international college students as measured by Ryff’s (1989) Scales of Psychological Well Being (SPWB)?

A linear regression was run using adjustment problems to predict psychological wellbeing with an alpha level set at .05. The results of the study show that adjustment problems account for a significant amount of the variance in psychological well-being $F(1, 143) = 41.6, p < .000$. $R = .475$. $R^2 = .225$. The null hypothesis is rejected since adjustment problems account for 23% of the variance in psychological well-being. The results of the analysis are presented in Table 9.

Table 9

*Results of Regression Analyses for Adjustment Problems Predicting Psychological Well-being*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>B</th>
<th>df</th>
<th>Sig.</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustment Problems</td>
<td>-.693</td>
<td>.107</td>
<td>-.475</td>
<td>1</td>
<td>.000*</td>
<td>-6.450</td>
</tr>
</tbody>
</table>

*Note. $R^2 = .23$ *p < .05

**Question 2.** Does homesickness as measured by the Acculturative Stress Scale for International Students (ASSIS; Sandhu & Asrabadi, 1994) account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989)?
A linear regression was run using homesickness to predict psychological wellbeing with an alpha level set at .05. The results show that homesickness accounts for a significant proportion of the variance in psychological well-being $F (1, 143) = 4.47, p = .036$. $R = .174$. $R^2 = .03$. The null hypothesis is rejected and homesickness accounts for 3% of the variance in psychological well-being. The results of the analysis are presented in Table 10.

Table 10

Results of Regression Analyses for Homesickness Predicting Psychological Well-being

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>$\beta$</th>
<th>df</th>
<th>Sig.</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homesickness</td>
<td>-.104</td>
<td>.049</td>
<td>-.174</td>
<td>1</td>
<td>.036</td>
<td>-2.114</td>
</tr>
</tbody>
</table>

*Note. $R^2 = .03$. *$p < .05$

**Question 3.** Does perceived discrimination as measured by the ASSIS (Sandhu & Asrabadi, 1994) account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989)?

A linear regression was run using perceived discrimination to predict psychological wellbeing with an alpha level was set at .05. Results indicate that perceived discrimination accounts for a significant amount of the variance in psychological well-being $F (1, 143) = 7.292, p = .008$. $R = .22$. $R^2 = .049$. The null hypothesis is rejected since perceived discrimination accounts for 5% of the variance in psychological well-being. The results of the analysis are presented in Table 11.
Table 11

*Results of Regression Analyses for Perceived Discrimination Predicting Psychological Well-being*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>B</th>
<th>Df</th>
<th>Sig.</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Discrimination</td>
<td>-.149</td>
<td>.055</td>
<td>-.220</td>
<td>1</td>
<td>.008</td>
<td>-2.70</td>
</tr>
</tbody>
</table>

*Note. R² = .05.  *p<.05

**Question 4.** Results from independent t-tests are found in Table 12. A description of each test follows.

a. Is there a significant difference between male and female international college students’ levels of adjustment problems?

An independent sample t-test was run comparing males and females on adjustment problems with an alpha level set at .05. The results show no significant difference between male and female international students pertaining to levels of adjustment problems t (143) = 1.051, p = .295 and the null hypothesis was not rejected.

b. Is there a significant difference between male and female international college students’ levels of homesickness?

An independent sample t-test was run comparing males and females on ratings of homesickness with an alpha level set at .05. The results of the analysis show no significant difference between male and female international students pertaining to homesickness t (143) = .791, p = .43, therefore, the null hypothesis was not rejected.

c. Is there a significant difference between male and female international college students’ levels of perceived discrimination?
An independent sample t-test was run comparing males and females on perceived discrimination with an alpha level set at .05. The results of the analysis show no significant difference between male and female international students pertaining to perceived discrimination \( t (143) = .199, p = .843 \), so the null hypothesis was not rejected.

d. Is there a significant difference between male and female international college students’ levels of psychological well-being?

An independent sample t-test was run comparing males and females on psychological wellbeing with an alpha level set at .05. The results of the analysis show no significant difference between male and female international students pertaining to psychological wellbeing \( t (143) = .008, p = .994 \), and the null hypothesis was not rejected.
Table 12

Results of Independent Sample T-Test of Between Gender Differences on Study Variables

<table>
<thead>
<tr>
<th>Groups</th>
<th>Female (N=77)</th>
<th>Male (N=68)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>AP</td>
<td>.722</td>
<td>.377</td>
<td>.655</td>
</tr>
<tr>
<td>HS</td>
<td>2.925</td>
<td>.946</td>
<td>2.801</td>
</tr>
<tr>
<td>PD</td>
<td>2.152</td>
<td>.883</td>
<td>2.125</td>
</tr>
<tr>
<td>PWB</td>
<td>4.513</td>
<td>.530</td>
<td>4.512</td>
</tr>
</tbody>
</table>

Notes: AP= Adjustment problems, HS= Homesickness, PD= Perceived Discrimination, PWB= Psychological Well Being,

Exploratory Analysis

Exploratory question-1. Do the 11 sub-scales of adjustment problems as measured by the Michigan International Students Problem Inventory (MISPI; Porter, 1966) account for a significant amount of variance in psychological well-being as measured by the SPWB (Ryff, 1989)?

Using the 11 sub-scales of adjustment problems as predictors, the results show that the model is significant F (11, 133) = 6.268, p = .000. R² = .341. The 11 subscales of adjustment problems explain 34% of the variance in psychological well-being. The results of the analysis are presented in Tables 13 and 14.
Table 13

Results of Regression Analyses for 11 Subscales of Adjustment Problems Predicting Psychological Well-being

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>B</th>
<th>Sig.</th>
<th>T</th>
<th>Zero-order</th>
<th>Partial</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission Prob.</td>
<td>.206</td>
<td>.177</td>
<td>.168</td>
<td>.246</td>
<td>1.164</td>
<td>-.359</td>
<td>.100</td>
<td>.082</td>
</tr>
<tr>
<td>Orientation Prob.</td>
<td>.485</td>
<td>.198</td>
<td>.368</td>
<td>.016*</td>
<td>2.451</td>
<td>-.333</td>
<td>.208</td>
<td>.172</td>
</tr>
<tr>
<td>Academic Prob.</td>
<td>-.152</td>
<td>.182</td>
<td>-.132</td>
<td>.405</td>
<td>-.835</td>
<td>-.433</td>
<td>-.072</td>
<td>-.059</td>
</tr>
<tr>
<td>Social-Personal</td>
<td>-.535</td>
<td>.198</td>
<td>-.417</td>
<td>.008*</td>
<td>2.705</td>
<td>-.487</td>
<td>-.228</td>
<td>-.190</td>
</tr>
<tr>
<td>Living-Dining</td>
<td>-.223</td>
<td>.187</td>
<td>-.164</td>
<td>.236</td>
<td>-1.190</td>
<td>-.402</td>
<td>-.103</td>
<td>-.084</td>
</tr>
<tr>
<td>Health Service</td>
<td>-.024</td>
<td>.180</td>
<td>-.018</td>
<td>.896</td>
<td>-1.31</td>
<td>-.394</td>
<td>-.011</td>
<td>-.009</td>
</tr>
<tr>
<td>Religious Service</td>
<td>.014</td>
<td>.128</td>
<td>.012</td>
<td>.912</td>
<td>.111</td>
<td>-.351</td>
<td>.010</td>
<td>.008</td>
</tr>
<tr>
<td>English language</td>
<td>-.213</td>
<td>.128</td>
<td>-.202</td>
<td>.100</td>
<td>-1.657</td>
<td>-.472</td>
<td>-.142</td>
<td>-.117</td>
</tr>
<tr>
<td>Student Activity</td>
<td>-.165</td>
<td>.179</td>
<td>-.132</td>
<td>.359</td>
<td>-.921</td>
<td>-.485</td>
<td>-.080</td>
<td>-.065</td>
</tr>
<tr>
<td>Placement Prob.</td>
<td>-.305</td>
<td>.167</td>
<td>-.255</td>
<td>.069</td>
<td>-1.832</td>
<td>-.364</td>
<td>-.157</td>
<td>-.129</td>
</tr>
</tbody>
</table>

Note: $R^2 = .341, P < .05$
Table 14

*Ranking of Adjustment Problems on the basis of Mean of Means on the Subscales of MISPI (N = 145)*

<table>
<thead>
<tr>
<th>Subscales of MISPI</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>English Language Problems</td>
<td>.8092</td>
<td>.53341</td>
</tr>
<tr>
<td>Financial Aid Problems</td>
<td>.7764</td>
<td>.50429</td>
</tr>
<tr>
<td>Admission Selection Problems</td>
<td>.7580</td>
<td>.45668</td>
</tr>
<tr>
<td>Placement Service</td>
<td>.7477</td>
<td>.46873</td>
</tr>
<tr>
<td>Academic Record Problems</td>
<td>.7356</td>
<td>.48793</td>
</tr>
<tr>
<td>Health Service Problems</td>
<td>.7046</td>
<td>.43134</td>
</tr>
<tr>
<td>Living Dining Problems</td>
<td>.6989</td>
<td>.41262</td>
</tr>
<tr>
<td>Orientation Service Problems</td>
<td>.6891</td>
<td>.42551</td>
</tr>
<tr>
<td>Social Personal Problems</td>
<td>.6546</td>
<td>.43755</td>
</tr>
<tr>
<td>Student Activity Problems</td>
<td>.6161</td>
<td>.44826</td>
</tr>
<tr>
<td>Religious Service Problems</td>
<td>.4121</td>
<td>.47322</td>
</tr>
</tbody>
</table>

For the second exploratory question, a Pearson correlational analysis was used and computed bivariate correlations among all the subscales of adjustment problems (total 11 subscales) and psychological well-being (see Table 15). Results of the statistical correlational analyses indicated that subscales of adjustment problems were significantly and negatively correlated with the psychological well-being at p < .05 alpha level. For instance, admission problems were negatively correlated with psychological well-being in the current sample of international students (r = -.36, p < .05). Additionally, findings
indicated the strongest correlational relationship was between social-personal adjustment problems and psychological well-being ($r = -0.49$, $p < .05$) whereas the weakest relationship was between financial aid and psychological well-being ($r = -0.28$, $p < .05$). All of the statistical correlational results are presented in Table 15.

### Table 15

Results of Pearson Correlations between 11 Subscales of Adjustment Problems and Psychological Well-being

<table>
<thead>
<tr>
<th>Predictor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Well-being</td>
<td>1.000</td>
<td>-.359</td>
<td>-.333</td>
<td>-.433</td>
<td>-.487</td>
<td>-.402</td>
<td>-.394</td>
<td>-.351</td>
<td>-.472</td>
<td>-.485</td>
<td>-.271</td>
<td>-.364</td>
</tr>
<tr>
<td>2.Admission</td>
<td>-.359</td>
<td>1.000</td>
<td>.782</td>
<td>.801</td>
<td>.718</td>
<td>.724</td>
<td>.707</td>
<td>.597</td>
<td>.660</td>
<td>.724</td>
<td>.613</td>
<td>.727</td>
</tr>
<tr>
<td>3.Orientation</td>
<td>-.333</td>
<td>.782</td>
<td>1.000</td>
<td>.797</td>
<td>.818</td>
<td>.740</td>
<td>.744</td>
<td>.684</td>
<td>.609</td>
<td>.714</td>
<td>.580</td>
<td>.646</td>
</tr>
<tr>
<td>4.Academic</td>
<td>-.433</td>
<td>.801</td>
<td>.797</td>
<td>1.000</td>
<td>.748</td>
<td>.729</td>
<td>.774</td>
<td>.631</td>
<td>.742</td>
<td>.753</td>
<td>.573</td>
<td>.635</td>
</tr>
<tr>
<td>5.Social</td>
<td>-.487</td>
<td>.718</td>
<td>.818</td>
<td>.748</td>
<td>1.000</td>
<td>.746</td>
<td>.766</td>
<td>.710</td>
<td>.642</td>
<td>.774</td>
<td>.591</td>
<td>.620</td>
</tr>
<tr>
<td>6.Living</td>
<td>-.402</td>
<td>.724</td>
<td>.740</td>
<td>.729</td>
<td>.746</td>
<td>1.000</td>
<td>.759</td>
<td>.657</td>
<td>.548</td>
<td>.706</td>
<td>.689</td>
<td>.627</td>
</tr>
<tr>
<td>7.Health</td>
<td>-.394</td>
<td>.707</td>
<td>.744</td>
<td>.774</td>
<td>.776</td>
<td>.759</td>
<td>1.000</td>
<td>.599</td>
<td>.596</td>
<td>.637</td>
<td>.656</td>
<td>.640</td>
</tr>
<tr>
<td>8.Religious</td>
<td>-.351</td>
<td>.597</td>
<td>.684</td>
<td>.631</td>
<td>.710</td>
<td>.657</td>
<td>.599</td>
<td>1.000</td>
<td>.481</td>
<td>.623</td>
<td>.512</td>
<td>.572</td>
</tr>
<tr>
<td>9.English</td>
<td>-.472</td>
<td>.660</td>
<td>.609</td>
<td>.742</td>
<td>.642</td>
<td>.548</td>
<td>.596</td>
<td>.481</td>
<td>1.000</td>
<td>.749</td>
<td>.385</td>
<td>.498</td>
</tr>
<tr>
<td>10.Student</td>
<td>-.485</td>
<td>.724</td>
<td>.714</td>
<td>.753</td>
<td>.774</td>
<td>.706</td>
<td>.637</td>
<td>.623</td>
<td>.749</td>
<td>1.000</td>
<td>.573</td>
<td>.644</td>
</tr>
<tr>
<td>11.Financial</td>
<td>-.271</td>
<td>.613</td>
<td>.580</td>
<td>.573</td>
<td>.591</td>
<td>.689</td>
<td>.656</td>
<td>.512</td>
<td>.385</td>
<td>.573</td>
<td>1.000</td>
<td>.796</td>
</tr>
<tr>
<td>12.Placement</td>
<td>-.364</td>
<td>.727</td>
<td>.646</td>
<td>.635</td>
<td>.620</td>
<td>.627</td>
<td>.640</td>
<td>.572</td>
<td>.498</td>
<td>.644</td>
<td>.796</td>
<td>1.000</td>
</tr>
</tbody>
</table>

*Note: $R^2 = .341$, $P < .05$*

**Exploratory question-2.** Do adjustment problems, homesickness and perceived discrimination account for a significant amount of variance in the psychological well-being?
Multiple regression was used for the second exploratory research question. Findings indicate the model is significant $F (3, 141) = 14.477, P < 0.000$, and $R^2 = .235$.

Adjustment problems, homesickness and perceived discrimination account for 24% of the variance in psychological wellbeing. The results of the analysis are presented in Table 16.

### Table 16

*Results of Regression Analyses for Adjustment Problems, Homesickness and Perceived Discrimination Predicting Psychological Well-being*

<table>
<thead>
<tr>
<th>Predictor</th>
<th>B</th>
<th>SE</th>
<th>B</th>
<th>Sig.</th>
<th>T</th>
<th>Zero-order</th>
<th>Partial</th>
<th>Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustment Problems</td>
<td>-.653</td>
<td>.114</td>
<td>-.447</td>
<td>.000*</td>
<td>-5.707</td>
<td>-.475</td>
<td>-.433</td>
<td>-.420</td>
</tr>
<tr>
<td>Perceived Discrimination</td>
<td>-.070</td>
<td>.54</td>
<td>-.104</td>
<td>.197</td>
<td>-1.295</td>
<td>-.220</td>
<td>-.108</td>
<td>-.095</td>
</tr>
<tr>
<td>Homesickness</td>
<td>-.001</td>
<td>.048</td>
<td>-.002</td>
<td>.983</td>
<td>-.022</td>
<td>-.174</td>
<td>-.002</td>
<td>-.002</td>
</tr>
</tbody>
</table>

*Note: $R^2 = .235$, $P < .05$*

### Summary

In this chapter, results of the analyses for statistical assumptions, descriptive statistics, correlations analyses and four main research questions with two exploratory research questions were presented. A discussion of results is presented in the following chapter. Moreover, implications, limitations, and suggestions for future research will also be discussed in the chapter 5.
Chapter 5: Summary, Discussion and Limitations

In this chapter, the researcher provides a summary of the findings relative to the research questions, followed by a discussion of the findings and implications of the results for relevant stakeholders. Finally, the limitations of the study are examined and suggestions for future research to address these limitations will be offered.

Summary of the Current Study

The purpose of the present study was to explore the role of adjustment problems, homesickness and perceived discrimination in predicting psychological wellbeing of international college students currently studying in the United States. Furthermore, this study examined whether any differences between female and male students existed relative to adjustment problems, homesickness and perceived discrimination. The sample comprised of 145 international students studying at a Midwestern university. The participants, as detailed in the previous chapter, varied with regard to age, gender, race/ethnicity, origin of country major, and level of education. In the section that follows the researcher discusses the results in the context of previous studies. Statistical analysis of the data, as outlined in chapter three was used to answer the following research questions:

Discussion

Research question one. Do adjustment problems as measured by the Michigan International Students Problem Inventory (MISPI; Porter, 1966) account for a significant amount of variance in the psychological well-being of international college students as measured by Ryff’s (1989) Scales of Psychological Well Being (SPWB)?
The regression model analysis indicated adjustment problems accounted for 23% of the variance in the psychological well-being among this sample of international college students. Moreover, adjustment problems emerged as the predictor which contributed largest to the amount of variance in psychological well-being.

In addition, the results indicate that relation between adjustment problems and psychological well-being were negatively correlated. This suggests that international students who have fewer adjustment problems tend to report higher levels of psychological well-being. An examination of the relationship between the predictors shows modest positive correlations (which satisfies the assumption of the independence of variables) but nonetheless the direction of the relationship indicates that an increase in perceived discrimination increases adjustment problems and vice-versa and an increase in homesickness also contributes to adjustment challenges.

A review of the self-report by the participants regarding the relationship with their academic advisor and the faculty members in their program indicates that 70% of the participants had positive relations with their academic advisors. In addition, 50% of the international students report having a positive attitude about their communication with faculty. Similarly, previous studies have highlighted the importance of the student-professor relationship for international students' academic adaptation to U.S. schools. For example, Zhou, Frey and Bang (2011) found that for international students, "people who were important for these students' adjustment included professors, colleagues, and school staff as well as family members far away in their home countries" (p. 82). This is consistent with Poyrazli and Graham’s (2007) findings that a well-developed student-
professor relationship was a key factor influencing international students' academic adjustment to different teaching styles and cross-cultural communications.

Scores on the Michigan International Student’s Problem Inventory (MISPI) were used by the researcher to conduct a post hoc analysis to examine the 11 areas of adjustment problems in greater detail. It has to be noted that the primary analysis used was conservative in that all adjustment problems were grouped together which accounted for a 23% variance in psychological health. However when the 11 adjustment problems, as defined by the individual subscales of English language, financial aid, admission/selection, academic placement, health service, living/dining, orientation, social, student activity, and religious were examined as individual variables, they accounted approximately an additional 10% of the variance in psychological wellbeing.

The top three areas rated by international students as causing adjustment problems among the 11-adjustment problems areas were: (i) English language problems ($M = .81$, $SD = .53$); (ii) financial aid related problems ($M = .77$, $SD = .50$); and (iii) admission-selection ($M = .76$, $SD = .46$). This finding is consistent with a previous study by Poyrazli and Graham (2007) who found that the majority of international students in their study experienced difficulties regarding their language ability which played a role in their success and persistence in their academic adjustment. This claim is echoed in the qualitative study of Zhou, Frey and Bang (2011) who found that many participants, especially those who do not speak English in their home country, found American English a very significant obstacle in their academic lives. For example, one participant, an English-native speaker, claimed "the accent usually made people misunderstand me" (p. 85). Another participant, who worked as a teaching assistant, felt frustrated because
American students always complained about his English in the classroom. Similarly, Reid and Dixon (2012) stated that due to language barriers, international students who did not speak fluent English suffer in classrooms during lectures, presentations, and seminar based conversations. These results provide empirical evidence that adjustment problems experienced by international students play a significant role in their psychological health.

**Research question two.** Does homesickness as measured by the Acculturative Stress Scale for International Students (ASSIS; Sandhu & Asrabadi, 1994) account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989)?

Researchers have identified that one of the most important problems challenges international students face is their adaptation to a new culture and life–style. A previous study by Yi, Giseala Lin, and Kishimoto (2003) indicated that homesickness is one of the most frequent problems for international students. Furthermore, among international students, homesickness has been described as a multifaceted experience, including the presence of: missing one’s family and friends, feeling lonely, home ruminations, and importantly, adjustment problems (Willis, Stroebe, & Hewstone, 2003).

The results of the current research pointed out that levels of homesickness significantly predicted international students’ well-being. The results indicate that international students who experience less homesickness tend to have higher levels of psychological well-being scores. This finding is supported by other researchers such as Rajapaksa and Dundes (2003) who reported that more than 30% of international college students expressed feelings of homesickness. Similarly, Poyrazli and Lopes (2007)
indicated that international students reported significantly higher level of homesickness than American students while studying at colleges in the United States. Moreover, the authors explained that international students’ homesickness may have an impact on their psychological well-being in that students might feel more anxiety, depression, rejection, loss, hopelessness and low self-esteem (p. 264). However, in the current study, it is important to recognize that homesickness explains a modest 3% of the variance in psychological wellbeing despite being a significant predictor. This may be due to the homesickness subscale having only four items. On the other hand, the small number of participants in the study (N= 145) may also have affected this outcome.

Another factor related to levels of homesickness among international students in the United States is social support (Poyrazli & Lopez, 2007; Ye, 2005; Yeh & Inose, 2003). Approximately 70% of the participants in the current study reported the international students gain effective social support outside of the classroom setting. The findings of some research conducted previously indicate that social connectedness has been shown to correlate negatively with both acculturative stress and homesickness among international students in the US (Duru & Poyrazli, 2007; Yeh & Inose, 2003). This finding is consistent with a study conducted by Van Tilburg, Vingerhoets, and Heck (1997) who examined various coping strategies for their homesickness. Their results indicate that individuals with social support, as opposed to individuals who lack social support, are less likely to suffer from homesickness. As such, it appears that social support is an important intervening variable related to homesickness and psychological well-being among international college students. Some researchers have articulated that stress associated with being estranged from one’s culture may manifest as somatic
complaints in some Asian cultures (Sue, Sue, Sue, & Sue, 2013). It would be important for the various stakeholders on U.S. college campuses to examine homesickness among the spectrum of adjustment problems as this may shed light on an international student’s academic performance.

**Research question three.** Does perceived discrimination as measured by the ASSIS (Sandhu & Asrabadi, 1994) account for a significant amount of variance in the psychological well-being of international college students as measured by the SPWB (Ryff, 1989)?

The results of the study suggest that perceived discrimination was a significant predictor in explaining the psychological well-being among international college students. However, the findings in the current research indicated perceived discrimination was able to explain only 5% of the variation in psychological well-being. It may be, as previously mentioned, due to the limited sample size or that perceived discrimination was not as strong of a predictor as adjustment problems. The finding of this study was congruent with previous research results by Huynh and Fuligni (2012) who found that perceived discrimination was correlated with depressive symptomology consistently over time. Furthermore, previous research showed that perceived discrimination is particularly prevalent among international college students. For instance, Poyrazli and Lopez (2007) compared levels of perceived discrimination between international college students and American college students. They found that international students reported significantly greater levels of perceived discrimination (and homesickness) than U.S. college students.

As international students experience discrimination, it is crucial to underline that experiencing discrimination has been connected to decreased psychological well-being
for a variety of ethnic groups (e.g., Cokley, Hall-Clark, & Hicks, 2011; Donovan, Huynh, Park, Kim, Lee, & Robertson, 2012). Armenta and Hunt (2009) for example, discovered that poor psychological well-being such as depression and low self-esteem were connected with perceptions of racism and discrimination for Latino Americans. This result was supported by research conducted by Cronin, Levin, Branscombe, Laar, and Tropp (2012). The authors conducted a longitudinal study investigating the buffering influences of increased ethnic identification on the negative impacts of perceived discrimination. They used the rejection-identification model (RIM) developed by Branscombe, Schmitt, and Harvey (1999). Based on this model, Cronin and colleagues (2012) discuss that perceptions of discriminations may cause individuals to refrain from the negative influences of such perceptions. Consistent with this hypothesis, the researchers pointed out there was a negative connection between psychological well-being and perceived discrimination. In the current climate of significant levels of violence and conflict particularly in Muslim countries, discrimination may against international students tends to be on the rise especially given that some of the perpetrators of 911 had student status. Perceived discrimination may take on a subtle form which is challenging for university and law enforcement entities to address but impacts the psychological experience of international students.

Another study, inconsistent with the previous studies by Jasperse, Ward, and Jose (2012) analyzed perceived discrimination experienced among immigrant Muslim women who live in New Zealand. They indicated that several dimensions of Muslim identity moderated the connection between psychological well-being and perceived religious discrimination. This study was supported by other studies which examine perceived
discrimination, social connectedness and factors of psychological well-being. For instance, Ahmed, Yakobov, Solopieieva-Jurcikova, and Ryder (2013) studied ways in which perceptions of ethnic identity might be connected to perceived social support, perceived discrimination, and psychological well-being. It was found that the less ethnic identity people feel, the more depression and perceived discrimination they experienced. It reveals the essential function of social support since it moderates perceived discrimination which in turn impacts psychological well-being.

**Research question four.** Is there a significant difference between male and female college international students’ levels of adjustment problems, homesickness, perceived discrimination, and psychological well-being?

According to the findings of this study, there was no significant difference between male and female international students pertaining to levels of adjustment problems, homesickness, perceived discrimination and psychological well-being. These findings are inconsistent with the previous research findings that gender influences several domains which are either connected to or which point to psychological well-being. For example, one study revealed that among Latino college students, females experience less alienation and isolation in their academic studies in higher education than males (Rodriquez, 1994). McWhirter (1997) reported that Latino males report they experience less educational barriers in higher education than Latino females. On the contrary, several studies have concentrated on one gender through this domain. For example, Haynes et al. (2012) examined the way in which role dilemma among women exclusively might be connected to levels of psychological well-being. Social relationship is another important domain which has analyzed gender effects in relationship to
psychological well-being. For example, Quimby and O’Brien (2006) analyzed predictors of psychological well-being among non-traditional female students with children and determined that social support was a crucial predictor of several aspects of psychological well-being such as psychological distress, self-esteem, and overall life satisfaction. In addition, Weitbrecht, Kuryluk, and Bruner (2013) determined that the belief that gender might influence social relationships has an impact on psychological well-being. They stated that being in a committed relationship was linked with less depressive symptoms among females than males.

Taken together, these findings reveal a possible trend of gender differences on factors related to psychological well-being. The findings cover gender differences in domains of academic adjustment and social relationships. Therefore, in this sample males and females experienced adjustment problems, homesickness and perceived discrimination similarly.

Implications

It is evident based on the present results of the study and the researcher’s analysis and interpretation of the data that adjustment problems, homesickness, perceived discrimination and gender are significant factors that are related to the psychological well-being of international students who were studying at a Midwestern university. These findings have implications for various stakeholders on U.S. college campuses namely, mental health professionals/college counselor, faculty, and administrators. The sections that follow address the implications for these role players as it relates to the findings.

Mental health professionals/college counselors. The findings of the present research address different types of adjustment issues such as challenges, difficulties and
barriers international students experience while studying in U.S. colleges. These so called
issues can be exemplified as different life style and conditions, education system and
language barriers. The current study emphasized that international students have
experienced some psychological problems and mental illness such as stress, depression,
homesickness, and emotional and social loneliness as well as perceived discrimination
while they try to adapt to new cultures in their adjustment. Taken all findings into
consideration, the vital question arises in what way mental health professionals and
university personnel guide international students to handle the challenges and barriers
and make the acculturative process more effective and more supportive in their well-
being.

International students are a heterogeneous group in terms of sociopolitical factors
and cultural difference in the US. International students encounter many special and
unique challenges in adjusting to academic and cultural integration such as "language
barriers, cultural differences and racial discrimination, social interaction and personal
adjustment difficulties in their life" (Reid & Dixon, 2012, p. 30). In addition,
international students have many adaptation issues into a new culture and their need for
counseling is beneficial and useful. In terms of international students' needs, they may
experience different issues including academic adjustments (i.e., language barriers and
learning differences), psychological distress (i.e., depression, anxiety and stress), social
problems (i.e., homesickness, culture shock, and acculturation) and personal problems
(i.e., racism and ethnic discrimination) in their psychological well-being (Yau, 2004).

Furthermore, it is important to mention that mental health professionals who work
with international students should be flexible in considering international students'
expectations in counseling. Second, it is important to note that early intervention might be useful and effective for international students who may not want to complete their degree because of their adjustment problems (e.g., language barriers, orientation, or academic related issues) or psychological issues (Arthur, 1997). The current research found a significant relationship between homesickness, racism and psychological well-being among international college students. Accordingly, providing effective counseling and treatment for international students, college counselor need to be aware of their own bias and attitudes towards these students who may be different as it relates to religion, ethnicity, race and culture while working with international students who are having homesickness or racism issue (Oba & Pope, 2013).

There may also be discrepancies in international students’ educational attainment levels in their adaptation and academic adjustment. To this end, it is very important for counselors to be aware of this fact and approach international students’ needs and necessities and their accompanying well-being accordingly. Counselors should also take into consideration the varying nature of students’ needs based on their educational attainment, in light of development psychology.

Based on the current research findings, it is evident that effective interventions and counseling centers are crucial for international students to help them cope with their psychological health. Effective use of these centers also enables international students to adapt to the American culture in their academic institutions and gain new abilities to effectively and efficiently mitigate their adjustment and cultural issues. It is thus critical for mental health professionals to determine unique and appropriate methods and assessment techniques when determining international students’ needs.
Moreover, based on the findings of the study, the most important challenge international students experience in their adjustment problems is language barriers. Tsai and Wong (2010) indicated that language barriers might be an important obstacle in counseling for international students' willingness to use counseling centers at university campuses. Similarly, previous studies stated that many international students do not tend to seek individual and group counseling from college counseling services regarding their psychological and socio-cultural issues (Kumaraswamy, 2013; Li, Wong, & Toth, 2012; Mori, 2000; Yoon & Jepsen, 2008). Consequently, these students seek other informal resources such as family, friend and religious institutions rather than formal counseling services (Frey & Roysircar, 2006). It is also important to mention that to overcome so-called issues, Kumaraswamy (2013) recommended that counseling centers should provide regular workshop and seminar for these international students who suffer with related psychological (e.g., homesickness and racism), academic and adjustment problems which contribute to international students’ psychological well-being based on the present study’s findings. Tsai and Wong (2010) also recommended that college counselors may visit different international student organizations at campuses to provide information about how counseling can be beneficial and helpful to these students in the process of their adaptation to a new culture and life in the US. Furthermore, Yoon and Portman (2004) highlighted that mental health professionals should have more knowledge regarding international students' special needs and issues that relate to their psychological well-being at university campuses.

According to the current research findings, adjustment problems of international students predict their psychological well-being. Accordingly, group counseling (e.g.,
support groups and psychoeducation groups) might be beneficial and helpful to international students' adjustment and adaptation related to their academic, social and psychological issues (Carr, Koyama, & Thiagarajan, 2003; Chalungsooth & Faris, 2009; Koyoma & Belli, 2011; Tsai & Wong, 2010). For example, Chalungsooth and Faris (2009) demonstrated that an 8-week psychoeducational group counseling was successful and beneficial for international students who discussed and shared their thoughts and feelings for their specific issues such as loneliness, homesickness, the U.S. educational and academic system, and cross-cultural relationships. Similarly, Tsai and Wong (2010) recommended that "college counselors can conduct psychoeducational discussion groups and workshops for international student organizations on topics such as stress management and social skills" (p. 154). In addition, Dipeolu et al. (2007) suggested that support groups might be useful to provide assistance for these students who feel and experience emotional and social loneliness as they adjust to their new culture. Furthermore, Dipeolu, Kang, and Cooper (2007) recommended that group counseling might be beneficial and useful for international student to normalize the difficulties of studying in a foreign country rather than personalizing such experiences.

Tsai and Wong (2010) stated that, social organizations can be useful for international students who may want to use these support groups to relieve their stress and anxiety that relate to their academic, social and personal issues. Accordingly, mental health professionals should be familiar with different social organizations at university campuses so that they may offer such resources to international students.

The study findings revealed both homesickness and perceived discrimination were significantly and negatively correlated with the psychological well-being among
international college students. It is important for the college counselor to be aware that homesickness and racism may affect international students' behaviors and psychological well-being which may contribute to depression, anxiety, rejection, loss, hopelessness and other mental health problems (Poyrazli & Lopez, 2007).

**Faculty.** In the present study, 70% of the participants reported having an effective and positive relationship with their academic advisor as well as faculty in their academic program. Eland (2001) pointed out that international students can meet their academic and educational goals, but “their experience could be less stressful and more meaningful if institutions of higher education take into account their unique needs” (p. 99). Angelova and Riazantseva (1999) also indicated that international students might struggle with academic and learning issues related to studying in a foreign country.

Another recent study by Zhou, Frey and Bang (2011) used individual interviews with ten different international students in order to better understand international students' academic adaptation and unique needs in U.S. higher education. The international students in the study expressed that "they gained benefits from such interactions, but also encountered challenges occasionally. People who were important for these students' adjustment included professors, colleagues, and school staff as well as family members far away in their home countries" (p. 82). Moreover, the study found the student-professor relationship is crucial as it related to international graduate students’ academic adaptation to U.S. schools. This is supported by the study of Poyrazli and Graham (2007), who found that good relationships between student and professor were a key factor that affects international students' academic adjustment in different teaching styles and cross-cultural communications. On the other hand, the authors reported that
some participants reported they had difficulties and were not able to communicate effectively with their professor because of a language barrier and cultural difference. Similarly, using a comparative model, another recent study by Mamiseishvili (2012) examined the profile of first-year international students who attended two-year versus four-year institutions in the US in order to explore to what extent these students' social and academic integration to their host schools was impacted by their relationship with faculty and academic advisors. Mamiseishvili (2012) found the nature of the relationship of students with their academic advisors had an effect on their persistence in their programs. Further results highlighted that international students who meet regularly with their academic advisor and interact with their instructors are more likely persist to in their programs.

Another factor that has a potential impact on students’ persistency in their academic programs is the academic environment which is significantly different from what they are used to. Zhou, Frey and Bang’s (2011) sought to understand this relationship. The authors defined academic environment differences as including unfamiliar class teaching strategies and activities, learning and educational materials, and a different style of assignments, and forms of evaluation. Accordingly, it is important to know these academic differences may affect international students' learning behavior and style in their studies. Based on the findings of this study and the findings of related studies, it is recommended that faculty attempt to understand the specific learning challenges that international students must navigate and adjust the learning environment creatively to accommodate international students without necessarily compromising academic standards.
Administrators/university personnel. Taking into consideration other results of the current study, International Student Services’ roles and responsibilities are very important for international students’ adaptation to their host culture at colleges in the US. It can be concluded that when international students arrive on campus for the first time in the US, orientation programs, providing comprehensive guidance about the American education system, fellowships opportunities, health services, different clubs and organizations, and other cross-cultural experiences, are useful and crucial to international students' process of transition and adjustment to their new culture and educational life. These orientation programs also assist international students' adaptation to new academic and social environments in their host universities (Tas, 2013).

Limitations and Recommendations for Future Research

This section discusses the limitations of this study. Although, significant results are obtained in the aforementioned sections, several limitations exist in this present study. First, although the primary emphasis of this study was to focus on international student’s psychological well-being, several variables were not considered in this study. For instance, in order to determine the degree of significance between males and females on homesickness and psychological well-being, some covariates such as social support, and relationship, etc. were not used in this study. Moreover, religion was not considered as a variable which could be an important support variable. However previous researchers indicated, religion is a significant variable while assessing the condition of international students’ discrimination and psychological well-being. Sodowsky and Plake (1992) indicated in their study that, perceived discrimination and prejudice were higher in Muslim students than other students.
Furthermore, no specific adjustment problem areas such as religious service, admission problems, and academic problems were considered while studying international students’ adjustment problems and psychological well-being. Therefore, in future work, these specific adjustment problems should be considered and its effects on students’ psychological well-being should be further studied.

Another limitation of this study is the sampling procedure. The participants were all selected from students in a Midwest University using a convenience sample which precludes any generalization to students experience in other geographical regions or institutions. Next, there were more graduate than undergraduate student participants. The academic level and maturity of students could have been intervening variables that affected the outcome of this study.

Likert-scale instruments were used to determine students’ adjustment problems, homesickness, perceived discrimination and psychological well being which may not have accurately captured the experiences of the students. A mixed method survey which includes qualitative narratives would add value to future studies of this nature.

Participants who were in an English language program in which their language competencies were limited might be another issue to consider in this study. Researchers may want to consider TOEFL test scores or English levels to screen participants in future investigation using these variables.

The homesickness scale in the current research comprised of only four items. Although previous researchers indicated that the Homesickness scale has high variability, using an instrument that contains more than four items may impact the outcome of future studies.
Additionally, this research presents a quantitative framework in design and analysis. However for future studies, open-ended questions might be asked to international students in order to ease their perceived discrimination and homesickness disclosures. Therefore, more meaningful results can be obtained if the quantitative findings are complemented by qualitative information in the future studies.

**Conclusions**

The purpose of the present research was to explore the relationship between adjustment problems, homesickness, perceived discrimination, gender and psychological well-being among international college students in the US.

International students come to the US from a diverse backgrounds and cultures and thus they promote and increase diversity in the higher education system in the US. It is crucial to determine and address both the academic and non-academic needs of international students that may influence their psychological well-being. Accordingly, this study aimed to better understand international students’ psychological well-being and the role of various factors that are implicated.

College counselors and university personnel are pivotal to help international student and adapt to the culture in the US, and to provide them with a more meaningful experience throughout their studies at American campuses.
References


communication theory of identity. *Communication Monographs, 60*, 76–82.


Doi:10.1080/15538605.2013.785468


research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141-146.


Appendix A: IRB Letter of Approval

The following research study has been approved by the Institutional Review Board at Ohio University for the period listed below. This review was conducted through an expedited review procedure as defined in the federal regulations as Category(ies):

Project Title: The Influence of Adjustment Problems, Homesickness, and Perceived Discrimination on the Psychological Well-Being of International College Students

Primary Investigator: Ahmet Can
Co-Investigator(s):

Faculty Advisor: Yegan Pillay
Department: Counselor Education and Supervision

Shelly Rex, B.S., Compliance Coordinator
Office of Research Compliance

1/14/15 Approval Date
1/13/16 Expiration Date

This approval is valid until expiration date listed above. If you wish to continue beyond expiration date, you must submit a periodic review application and obtain approval prior to continuation.

Adverse events must be reported to the IRB promptly, within 5 working days of the occurrence.

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the project must be approved by the IRB (as an amendment) prior to implementation.
Appendix B: Participant Informed Consent Form

**Title of Research:** The Influence of Adjustment Problems, Homesickness, and Perceived Discrimination on the Psychological Well-Being of International College Students.

**Researcher:** Ahmet Can, M.Ed

You are being asked to participate in research about psychological well-being. For you to be able to decide whether you want to participate in this project, you should understand what the project is about, as well as the possible risks and benefits in order to make an informed decision. This process is known as informed consent. This form describes the purpose, procedures, possible benefits, and risks. It also explains how your personal information will be used and protected. Once you have read this form and your questions about the study are answered, you will be asked to begin the survey if you consent to participate. If you decide not to participate you do not need to do anything. You will be given a copy of this consent form to take with you.

**Explanation of Study**

This study is being conducted as the dissertation project of the principal investigator, Ahmet Can, in partial completion of the doctoral degree in Counselor Education and Supervision. This research is being supervised by Yegan Pillay, Ph.D., Associate Professor of Counselor Education and Supervision at Ohio University. This study will take about 30 minutes to complete. You will be given a confidential survey package asking about psychological well-being, adjustment, homesickness, and perceived discrimination. You will also be asked to complete some basic demographic information about yourself such as your age, major, and biological sex. You do not have to participate in this study if you do not wish to. Your participation is completely voluntary, and is not linked in any way to the course in which you are enrolled. You may stop your participation at any time without experiencing any penalty. You do not have to answer any questions that make you feel uncomfortable or which you would prefer not to answer.

**Risks and Discomforts**

Some of the questions in these questionnaires may cause you to experience some emotional distress. You will be asked to reveal potentially sensitive information regarding your mental health. Even though this survey and your results will remain confidential at all times, you may not feel comfortable revealing some of this sensitive information. If you feel significant emotional distress while completing this survey, you can end your participation at any time without penalty.

**Assistance if Required**

If you or someone you know is experiencing psychological/emotional distress, please contact Counseling and Psychological Services (CPS) at Ohio University. If any of the surveys you filled out today caused you to become upset, please contact CPS. You do not need an appointment to access services for the first time. Please call or visit:
Counseling and Psychological Services, Telephone – 740-593-1616
Hudson Health Center, 3rd Floor
Athens, Ohio 45701

**Benefits**
There are no direct benefits to you by participating in this study. But your responses will contribute to knowledge on this topic, and ultimately, the results may help mental health professionals to better address psychological well-being among international students.

**Confidentiality and Records**
All of your responses to the questionnaires in the survey will remain confidential. This means that your information will not be revealed to anyone outside of the study. Your study responses will be stored physically in a locked file by the principal investigator without any identifying information, so that your results will not be able to be traced back to you. The results of this study will be disseminated through appropriate professional means (e.g. academic journals, etc) with no identifying information attached.

Additionally, while every effort will be made to keep your study-related information confidential, there may be circumstances where this information must be shared with:
* Federal agencies, for example the Office of Human Research Protections, whose responsibility is to protect human subjects in research;
* Representatives of Ohio University (OU), including the Institutional Review Board, a committee that oversees the research at OU;

**Contact Information of Researcher:**
If you have any questions regarding this study, please contact Ahmet Can by e-mail at ahmetcan.ou@gmail.com or my dissertation advisor, Dr. Yegan Pillay, by e-mail at pillay@ohio.edu or telephone at 740-593-9427. If you have any questions regarding your rights as a research participant, please contact Chris Hayhow, Director of Research Compliance, Ohio University, at (740) 593-0664 or hayhow@ohio.edu.

By signing below, you are agreeing that:

- you have read this consent form (or it has been read to you) and have been given the opportunity to ask questions and have them answered;
- you have been informed of potential risks and they have been explained to your satisfaction;
- you understand Ohio University has no funds set aside for any injuries you might receive as a result of participating in this study;
- you are 18 years of age or older;
- your participation in this research is completely voluntary;
- you may leave the study at any time; if you decide to stop participating in the study, there will be no penalty to you and you will not lose any benefits to which you are otherwise entitled.

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**Signature** __________________________ **Date** __________________________

**Printed Name** __________________________
Appendix C: Recruitment Materials - Recruitment E-Mail

For International Student Unions

To Whom It May Concern:

My name is Ahmet Can and I am currently a doctoral candidate in the Counselor Education and Supervision program at Ohio University. I am writing you because I am in the process of completing my doctoral dissertation, which looks at the nature of psychological well-being among international students. As such, I am in need of international student participants for my study. The study involves filling out a paper-form packet of questionnaires, and will last no longer than 30 minutes. I am seeking permission to collect data from the students involved in the _________ student union. If so, please contact me at your earliest convenience to determine a date, time, and place to come in and collect data. Thank you for your consideration.

Best regards,

Ahmet Can

For ELP Courses

To Whom It May Concern:

My name is Ahmet Can and I am currently a doctoral candidate in the Counselor Education and Supervision program at Ohio University. I am writing you because I am in the process of completing my doctoral dissertation, which looks at the nature of psychological well-being among international students. As such, I am in need of international student participants for my study. The study involves filling out a paper-form packet of questionnaires, and will last no longer than 30 minutes. I am seeking permission to collect data from the students enrolled in your ELP course? If so, please contact me at your earliest convenience to determine a date, time, and place to come in and collect data. Thank you for your consideration.

Best regards,

Ahmet Can
Recruitment Script (to be used at data collection time)

This study is being conducted as the dissertation project of the principal investigator, Ahmet Can, in partial completion of the doctoral degree. I will distribute an informed consent form that describes the study. You will have the opportunity to read the form, and I will answer any questions that you have about the study. You will be given a confidential survey package asking you about psychological well-being, adjustment, homesickness, and perceived discrimination. If you agree to participate please answer the questions on the survey. If you do not agree to participate you do not need to answer the questions. Your grade in the class you are in will not be affected by participating or not participating in this study (for ELP course use only). Your participation is completely voluntary, and you may stop your participation at any time without experiencing any penalty. This study will take about 30 minutes to complete. You do not have to answer any questions that make you feel uncomfortable or which you would prefer not to answer. Thank you for your consideration.
Appendix D: Michigan International Students Problem Inventory (MISPI)

Directions:

This is a checklist of problems commonly faced by international students while studying in the United States. Please take the time to read each item carefully. Please indicate how much of a problem each item is for you personally by using the following guide:

- Circle the **number 2** to the right of the statement if you see it as a **major** problem
- Circle the **number 1** to the right of the statement if you see it as a **minor** problem
- Circle the **number 0** to the right of the statement if it does not apply to you

1. Evaluation of my former school credentials 0 1 2
2. Concern about value of a U.S. education 0 1 2
3. Choosing college subjects 0 1 2
4. Treatment received at orientation meetings 0 1 2
5. Unfavorable remarks about my home country 0 1 2
6. Concept of being a international student 0 1 2
7. Frequent college examinations 0 1 2
8. Compulsory class attendance 0 1 2
9. Writing or typing term (semester) papers 0 1 2
10. Concern about becoming too “westernized” 0 1 2
11. Insufficient personal-social counseling 0 1 2
12. Being in live with someone 0 1 2
13. Taste of food in United States 0 1 2
14. Problems regarding housing 0 1 2
15. Being told where one must live 0 1 2
<p>| | |</p>
<table>
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<th></th>
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<tbody>
<tr>
<td>16. Poor eye sight</td>
<td>0 1 2</td>
</tr>
<tr>
<td>17. Recurrent headaches</td>
<td>0 1 2</td>
</tr>
<tr>
<td>18. My physical height and physique</td>
<td>0 1 2</td>
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<tr>
<td>19. Religious practices in United States</td>
<td>0 1 2</td>
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<tr>
<td>20. Attending church socials</td>
<td>0 1 2</td>
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<tr>
<td>21. Concern about my religious beliefs</td>
<td>0 1 2</td>
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<tr>
<td>22. Speaking English</td>
<td>0 1 2</td>
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<tr>
<td>23. Giving oral reports in class</td>
<td>0 1 2</td>
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<tr>
<td>24. Ability to write English</td>
<td>0 1 2</td>
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<tr>
<td>25. Regulations on student campus activities</td>
<td>0 1 2</td>
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<tr>
<td>26. Treatment received at social functions</td>
<td>0 1 2</td>
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<tr>
<td>27. Relationship of men and women in U.S.</td>
<td>0 1 2</td>
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<td>28. Lack of money to meet expenses</td>
<td>0 1 2</td>
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<tr>
<td>29. Not receiving enough money from home</td>
<td>0 1 2</td>
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<tr>
<td>30. Having to do manual labor (work with hands)</td>
<td>0 1 2</td>
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<tr>
<td>31. Finding a job upon returning home</td>
<td>0 1 2</td>
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<tr>
<td>32. Not enough time in U.S. for study</td>
<td>0 1 2</td>
</tr>
<tr>
<td>33. Trying to extend stay in United States</td>
<td>0 1 2</td>
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<tr>
<td>34. Getting admitted to U.S. colleges</td>
<td>0 1 2</td>
</tr>
<tr>
<td>35. Registration for classes each term</td>
<td>0 1 2</td>
</tr>
<tr>
<td>36. Not attending college of my first choice</td>
<td>0 1 2</td>
</tr>
<tr>
<td>37. Relationship with international student advisor</td>
<td>0 1 2</td>
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<tr>
<td>38. Leisure time activities of U.S. students</td>
<td>0 1 2</td>
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<td>39.</td>
<td>Law enforcement practices in the U.S.</td>
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<td>40.</td>
<td>Competitive college grading system</td>
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<tr>
<td>41.</td>
<td>Understanding how to search electronic databases</td>
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<td>42.</td>
<td>Insufficient advice from academic advisor</td>
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<tr>
<td>43.</td>
<td>Being lonely</td>
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<tr>
<td>44.</td>
<td>Feeling inferior to others</td>
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<td>45.</td>
<td>Trying to make friends</td>
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<td>46.</td>
<td>Costs of buying food</td>
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<td>47.</td>
<td>Obtaining credit cards</td>
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<td>48.</td>
<td>Not being able to room with U.S. student</td>
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<td>49.</td>
<td>Hard to hear</td>
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<td>50.</td>
<td>Nervousness</td>
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<td>51.</td>
<td>Finding adequate health services</td>
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<td>52.</td>
<td>Finding worship group of own faith</td>
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<td>53.</td>
<td>Christianity as a philosophy</td>
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<td>54.</td>
<td>Variety of religious faiths in U.S.</td>
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<td>55.</td>
<td>Reciting in class</td>
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<tr>
<td>56.</td>
<td>Understanding lectures in English</td>
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<td>57.</td>
<td>Reading textbooks written in English</td>
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<td>58.</td>
<td>Dating practices of U.S. people</td>
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<td>59.</td>
<td>Being accepted in social groups</td>
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<td>60.</td>
<td>Not being able to find “dates”</td>
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</table>
61. Saving enough money for social events
62. Immigration work restrictions
63. Limited amount U.S. dollar will purchase
64. Becoming a citizen of the United States
65. Changes in home government
66. Desire to not to return home country
67. Understanding college catalogs
68. Immigration regulations
69. Lack of knowledge about U.S.
70. Campus size
71. U.S. emphasis on time and promptness
72. Understanding how to use the library
73. Too many interferences with studies
74. Feel unprepared for U.S. college work
75. Concerned about grades
76. Sexual customs in United States
77. Homesickness
78. Feeling superior to others
79. Learning to drive cars
80. Distances to classes from residence
81. Relationship with roommate
82. Dietary problems
83. Need more time to rest
84. Worried about mental health 0 1 2
85. Having time to devote to own religion 0 1 2
86. Spiritual versus materialistic values 0 1 2
87. Doubting the value of any religion 0 1 2
88. Understanding U.S. “slang” 0 1 2
89. My limited English vocabulary 0 1 2
90. My pronunciation not understood 0 1 2
91. Activities of International Houses 0 1 2
92. U.S. emphasis on sports 0 1 2
93. Problems when shopping in U.S. 0 1 2
94. Finding part-time work 0 1 2
95. Unexpected financial needs 0 1 2
96. Money for clothing 0 1 2
97. Uncertainties in the world today 0 1 2
98. Desire enrolling at another college 0 1 2
99. U.S. education not what was expected 0 1 2
100. Differences in purposes among U.S. colleges 0 1 2
101. Difference in U.S. and home education systems 0 1 2
102. Not being met on arrival at campus 0 1 2
103. College orientation program insufficient 0 1 2
104. Trying to be student, tourist and “ambassador” 0 1 2
105. Attitude of some students toward international students 0 1 2
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<tr>
<td>106. Doing laboratory assignments</td>
<td>0</td>
<td>1</td>
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<tr>
<td>107. Insufficient personal help from professors</td>
<td>0</td>
<td>1</td>
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<tr>
<td>108. Relationship between U.S. students and faculty</td>
<td>0</td>
<td>1</td>
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<tr>
<td>109. U.S. emphasis on personal habits of cleanliness</td>
<td>0</td>
<td>1</td>
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<tr>
<td>110. Not feeling at ease in public</td>
<td>0</td>
<td>1</td>
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<tr>
<td>111. Attitudes of some U.S. people to skin color</td>
<td>0</td>
<td>1</td>
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<tr>
<td>112. Paying bills</td>
<td>0</td>
<td>1</td>
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<tr>
<td>113. Changes in weather conditions</td>
<td>0</td>
<td>1</td>
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<tr>
<td>114. Taking care of children</td>
<td>0</td>
<td>1</td>
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<td>115. Feeling under tension</td>
<td>0</td>
<td>1</td>
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<tr>
<td>116. Service received at health center</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>117. Health suffering due to academic pace</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>118. Criticisms of home land religion</td>
<td>0</td>
<td>1</td>
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<tr>
<td>119. Accepting differences in great religions</td>
<td>0</td>
<td>1</td>
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<tr>
<td>120. Confusion about religion and moral in U.S.</td>
<td>0</td>
<td>1</td>
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<tr>
<td>121. Insufficient remedial English services</td>
<td>0</td>
<td>1</td>
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<tr>
<td>122. Having a non-English speaking roommate</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>123. Holding a conversation with U.S. friends</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>124. Activities of international student organizations</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>125. Lack of opportunities to meet more U.S. people</td>
<td>0</td>
<td>1</td>
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<tr>
<td>126. Concern about political discussions</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>127. Costs of an automobile</td>
<td>0</td>
<td>1</td>
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<tr>
<td>128. Finding employment between college terms</td>
<td>0</td>
<td>1</td>
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</tbody>
</table>
129. Finding jobs that pay well  
0 1 2

130. Insufficient help from placement office  
0 1 2

131. Staying in U.S. and getting a job  
0 1 2

132. Wonder if U.S. education useful at home  
0 1 2

**Subscale and Corresponding Items:**

Admission-selection problems: 1, 2, 3, 34, 35, 36, 67, 68, 69, 100, 101, 102.
Orientation service problems: 4, 5, 6, 37, 38, 39, 70, 71, 72, 103, 104, 105
Academic record problems: 7, 8, 9, 40, 41, 42, 73, 74, 75, 106, 107, 108
Social-personal problems: 10, 11, 12, 43, 44, 45, 76, 77, 78, 109, 110, 111
Living-dining problems: 13, 14, 15, 46, 47, 48, 79, 80, 81, 112, 113, 114
Health service problems: 16, 17, 18, 49, 50, 51, 82, 83, 84, 115, 116, 117
Religious service problems: 19, 20, 21, 52, 53, 54, 85, 86, 87, 118, 119, 120
English language problems: 22, 23, 24, 55, 56, 57, 88, 89, 90, 121, 122, 123
Student activity problems: 25, 26, 27, 58, 59, 60, 91, 92, 93, 124, 125, 126
Placement service problems: 31, 32, 33, 64, 65, 66, 97, 98, 99, 130, 131, 132.

Note: breakdown of subscale items obtained from Xia (1991) p. 39
Appendix E: Acculturative Stress Scale for International Students (ASSIS)

We are interested in how you feel about the following statements. Please read each statement carefully. For each item there is a scale of five numbers, which are described below. Please circle a number to indicate how much the statement applies to you over the past 2 months. There is no “right” or “wrong” answer. Please respond to what you think or how you feel at this point in time.

1 = strongly disagree
2 = somewhat disagree
3 = neutral
4 = somewhat agree
5 = strongly agree

1. I feel that my people are discriminated against:

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<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td></td>
<td>strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td>strongly agree</td>
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2. I am treated differently because of my race.

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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td></td>
<td>strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td>strongly agree</td>
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3- I am treated differently because of my color.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td></td>
<td>strongly disagree</td>
<td></td>
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<td></td>
<td>strongly agree</td>
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4- Many opportunities are denied to me.

<table>
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<tr>
<th></th>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td></td>
<td>strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td>strongly agree</td>
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</table>

5- I am treated differently in social situations.

<table>
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<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
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<tbody>
<tr>
<td></td>
<td>strongly disagree</td>
<td></td>
<td></td>
<td></td>
<td>strongly agree</td>
</tr>
</tbody>
</table>
6- Others are biased toward me.

1  2  3  4  5

strongly       strongly
disagree       agree

7- I feel low because of my cultural background.

1  2  3  4  5

strongly       strongly
disagree       agree

8- I feel that my status in this society is low due to my cultural background.

1  2  3  4  5

strongly       strongly
disagree       agree

9. I feel homesickness for my country and it bothers me.

1  2  3  4  5

strongly       strongly
disagree       agree

10. I feel sad living in unfamiliar surroundings here.

1  2  3  4  5

strongly       strongly
disagree       agree

11. I miss the country and people of my national origin.

1  2  3  4  5

strongly       strongly
disagree       agree

12 I feel sad leaving my relatives behind.

1  2  3  4  5

strongly       strongly
disagree       agree

Perceived Discrimination = items 1, 2, 3, 4, 5, 6, 7, 8
Homesickness = items 9, 10, 11, 12.
Appendix F: Scales of Psychological Well Being (SPSW)

Please indicate how much you agree with the following statements on a scale from 1 to 6 where:
(1) strongly disagree; (2) moderately disagree; (3) slightly disagree; (4) slightly agree; (5) moderately agree; (6) strongly agree.

1. I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people.
   
   1  2  3  4  5  6
   
   strongly     strongly
   disagree     agree

2. In general, I feel I am in charge of the situation in which I live.
   
   1  2  3  4  5  6
   
   strongly     strongly
   disagree     agree

3. I am not interested in activities that will expand my horizons.
   
   1  2  3  4  5  6
   
   strongly     strongly
   disagree     agree

4. Most people see me as loving and affectionate.
   
   1  2  3  4  5  6
   
   strongly     strongly
   disagree     agree

5. I live life one day at a time and don't really think about the future.
   
   1  2  3  4  5  6
   
   strongly     strongly
   disagree     agree

6. When I look at the story of my life, I am pleased with how things have turned out.
   
   1  2  3  4  5  6
   
   strongly     strongly
   disagree     agree

7. My decisions are not usually influenced by what everyone else is doing.
   
   1  2  3  4  5  6
   
   strongly     strongly
   disagree     agree

8. The demands of everyday life often get me down.
   
   1  2  3  4  5  6
   
   strongly     strongly
   disagree     agree
9. I think it is important to have new experiences that challenge how you think about yourself and the world.
   1  2  3  4  5  6
   strongly disagree    strongly agree

10. Maintaining close relationships has been difficult and frustrating for me.
    1  2  3  4  5  6
    strongly disagree    strongly agree

11. I have a sense of direction and purpose in life.
    1  2  3  4  5  6
    strongly disagree    strongly agree

12. In general, I feel confident and positive about myself.
    1  2  3  4  5  6
    strongly disagree    strongly agree

13. I tend to worry about what other people think of me.
    1  2  3  4  5  6
    strongly disagree    strongly agree

14. I do not fit very well with the people and the community around me.
    1  2  3  4  5  6
    strongly disagree    strongly agree

15. When I think about it, I haven't really improved much as a person over the years.
    1  2  3  4  5  6
    strongly disagree    strongly agree

16. I often feel lonely because I have few close friends with whom to share my concerns.
    1  2  3  4  5  6
    strongly disagree    strongly agree

17. My daily activities often seem trivial and unimportant to me.
    1  2  3  4  5  6
    strongly disagree    strongly agree
18. I feel like many of the people I know have gotten more out of life than I have.
   1 strongly disagree  2  3  4  5  6 strongly agree

19. I tend to be influenced by people with strong opinions.
   1 strongly disagree  2  3  4  5  6 strongly agree

20. I am quite good at managing the many responsibilities of my daily life.
   1 strongly disagree  2  3  4  5  6 strongly agree

21. I have the sense that I have developed a lot as a person over time.
   1 strongly disagree  2  3  4  5  6 strongly agree

22. I enjoy personal and mutual conversations with family members or friends.
   1 strongly disagree  2  3  4  5  6 strongly agree

23. I don't have a good sense of what it is I'm trying to accomplish in life.
   1 strongly disagree  2  3  4  5  6 strongly agree

24. I like most aspects of my personality.
   1 strongly disagree  2  3  4  5  6 strongly agree

25. I have confidence in my opinions, even if they are contrary to the general consensus.
   1 strongly disagree  2  3  4  5  6 strongly agree

26. I often feel overwhelmed by my responsibilities.
   1 strongly disagree  2  3  4  5  6 strongly agree
27. I do not enjoy being in new situations that require me to change my old familiar ways of doing things.

1  2  3  4  5  6
strongly disagree

28. People would describe me as a giving person, willing to share my time with others.

1  2  3  4  5  6
strongly disagree

29. I enjoy making plans for the future and working to make them a reality.

1  2  3  4  5  6
strongly disagree

30. In many ways, I feel disappointed about my achievements in life.

1  2  3  4  5  6
strongly disagree

31. It's difficult for me to voice my own opinions on controversial matters.

1  2  3  4  5  6
strongly disagree

32. I have difficulty arranging my life in a way that is satisfying to me.

1  2  3  4  5  6
strongly disagree

33. For me, life has been a continuous process of learning, changing, and growth.

1  2  3  4  5  6
strongly disagree

34. I have not experienced many warm and trusting relationships with others.

1  2  3  4  5  6
strongly disagree

35. Some people wander aimlessly through life, but I am not one of them.

1  2  3  4  5  6
strongly disagree
36. My attitude about myself is probably not as positive as most people feel about themselves.

1  2  3  4  5  6
strongly disagree

37. I judge myself by what I think is important, not by the values of what others think is important.

1  2  3  4  5  6
strongly disagree

38. I have been able to build a home and a lifestyle for myself that is much to my liking.

1  2  3  4  5  6
strongly disagree

39. I gave up trying to make big improvements or changes in my life a long time ago.

1  2  3  4  5  6
strongly disagree

40. I know that I can trust my friends, and they know they can trust me.

1  2  3  4  5  6
strongly disagree

41. I sometimes feel as if I've done all there is to do in life.

1  2  3  4  5  6
strongly disagree

42. When I compare myself to friends and acquaintances, it makes me feel good about who I am.

1  2  3  4  5  6
strongly disagree
Scoring Instruction:

1) Recode negative phrased items: # 3, 5, 10, 13,14,15,16,17,18,19, 23, 26, 27, 30, 31, 32, 34, 36, 39, 41. (i.e., if the scored is 6 in one of these items, the adjusted score is 1; if 5, the adjusted score is 2 and so on…).

2) Add together the final degree of agreement in the 6 dimensions:
   a. Autonomy: items 1,7,13,19,25, 31, 37
   
   b. Environmental mastery: items 2,8,14,20,26,32,38
   
   c. Personal Growth: items 3,9,15,21,27,33,39
   
   d. Positive Relations: items: 4,10,16,22,28,34,40
   
   e. Purpose in life: items: 5,11,17,23,29,35,41
   
   f. Self-acceptance: items 6,12,18,24,30,36,42
Appendix G: Demographic Questionnaire

1. What is your biological sex?
   a. female
   b. male

2. How old are you (in years)? __________

3. What is your current relationship status?
   a. single, never married
   b. separated
   c. married or partnered
   d. divorced
   e. widowed

4. What is your college major? ________________

5. Indicate your current grade level:
   a) Freshman
   b) Sophomore
   c) Junior
   d) Senior
   e) Graduate; Master’s level
   f) Graduate; Doctoral level
   g) English Language Program
   h) Other, please indicate ____________________

6. How many years have you lived in the U.S.? ________________

7. What is your country of origin? ____________________________
8. What is your racial/ethnic background?

   a. Caucasian/White
   b. Asian/Asian American
   c. African/African American
   d. Indian/Indian American
   e. Latino/Hispanic
   f. Middle Eastern
   g. Multiracial
   h. Other: __________________________

9. Please indicate the extent to which you agree with the following statements by circling a number on a scale from 1 to 5 where 1 = strongly disagree and 5 = strongly agree

   a. “I have a good relationship with my academic advisor”
      
      1  2  3  4  5

      strongly disagree
      strongly agree

   b. “I have a good relationship with the faculty in my department”
      
      1  2  3  4  5

      strongly disagree
      strongly agree

10. Indicate your current living situation:

    a. alone
    b. with roommate/s
    c. with my significant other
    d. with my family
    e. Other (please indicate): __________________

11. How would you describe your social support outside of the classroom setting (e.g. friends, host families, etc.)?

    1  2  3  4  5

    strongly disagree
    strongly agree
Figure 1: Distributions of Perceived Discrimination
Figure 2: Normal Q-Q Plot of Perceived Discrimination
Figure 3: Distribution of Homesickness
Figure 4: Normal Q-Q Plot of Homesickness
Figure 5: Distribution of Psychological Well Being
Figure 6: Normal Q-Q Plot of Psychological Well Being
Figure 7: Distribution of Adjustment Problems
Figure 8: Normal Q-Q Plot of Adjustment Problems
Figure 9: Boxplot for Perceived Discrimination by Gender
Figure 10: Boxplot for Psychological Well Being by Gender
Figure 11: Boxplot for Adjustment Problems by Gender
Figure 12: Boxplot for Perceived Homesickness by Gender