PERCEIVED JUSTICE, ETHNIC IDENTITY, AND INTERNATIONAL STUDENTS’ SOCIOCULTURAL ADAPTATION

By

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To all who nurtured my intellectual curiosity, academic interests, and sense of scholarship throughout my lifetime, making this milestone possible
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My study focused on factors associated with international students’ sociocultural adaptation in the United States. I examined international students’ sociocultural adaptation from a social justice perspective and from a cultural perspective. The results showed that perceived procedural justice was significantly related to international students’ sociocultural adaptation. However, involvement in ethnic identity search activities moderated this relationship. Specifically, international students with high ethnic identity involvement showed less sociocultural adaptation difficulty when their perceived procedural justice was low; however, their sociocultural adaptation was stabilized when perceived procedural justice was high. The results implied that perceived justice is worth further attention in studies of international students’ sociocultural adaptation, and that cultural variables may serve as moderators of the justice-adaptation effect, even though they might not have direct associations with international students’ sociocultural adaptation. Limitations and future research directions were also addressed.
CHAPTER 1
INTRODUCTION

According to Open Doors’ annual report (Institute of International Education, 2005), there were 565,039 international students enrolled in United States (U.S.) colleges and universities in 2005. From a social justice perspective, international students should be recognized as members of U.S. society because they not only contribute to U.S. scientific and technological competitiveness but also bring in about 13.3 billion dollars to the U.S. economy each year (Institute of International Education, 2005). Unfortunately, the experience of many international students in the U.S. has been far from welcoming. In addition to adjustment difficulties they face from moving to a new environment, many international students are also vulnerable to discrimination and racism similar to that experienced by U.S. racial/ethnic minorities. However, much less attention has been focused on international students in social justice research compared to other populations such as immigrants and racial/ethnic minorities.

More specifically, international students’ ethnic identity and sociocultural adaptation have received minimal research attention in the field of psychology. Mullins, Quintrell, and Hancock’s (1995) research shows that international students experienced discrimination both on- and off-campus. Previous research also shows that international students are more reluctant to seek counseling services on campus (Bradley, Parr, Lan, Bingi, & Gould, 1995) and they also have higher discontinuation rates (Pedersen, 1991). Even though they have adjustment difficulties, international students usually do not resort to the counseling services on campus. This phenomenon could result from international students thinking the university services would not be helpful; therefore, they may resort to their existing resources such as their own ethnic groups for problem-solving assistance. In my study, I focused on analyzing international students’ sociocultural adaptation with specific attentions to their ethnic identity and their
perceived justice based on experiences with university services. In the following paragraphs, literature relevant to the understanding of international students’ sociocultural adaptation, perceived justice, and ethnic identity will be reviewed.

**Sociocultural Adaptation**

**Distinction between Sociocultural Adaptation and Psychological Adjustment**

A similar term to sociocultural adaptation, “social adaptation”, is often used vaguely in the health care and medical literature as well as the education literature. Paris and White-Williams (2005) provided a general definition for social adaptation as one’s ability to “function as a member of society.” In cross-cultural research, Ward and Kennedy (1999) argued that cross cultural adaptation could be divided into two distinct constructs: psychological adjustment and sociocultural adaptation. Psychological adjustment refers to psychological well-being or satisfaction whereas sociocultural adaptation refers to the ability to “fit in” within a particular society. Ward (1996) suggested that sociocultural adaptation could be examined in terms of social skills and cultural learning while psychological adjustment could be best understood within the stress coping framework.

**Relationship between Sociocultural Adaptation and Psychological Adjustment**

Existing literature has shown that psychological adjustment is highly correlated with sociocultural adaptation among sojourners, people temporarily residing abroad, often for academic purposes (Ward & Kennedy, 1999). Zheng and Berry (1991) found that sociocultural adaptation problems relating to personal relationships, food, and recreation in the new cultural environment predicted psychological and psychosomatic symptoms. A study investigating Chinese international students’ adjustment in a British university also revealed that psychological stress was significantly correlated with sociocultural adaptation difficulties, especially in the area of daily life functioning. Specifically, the greater stress they experienced,
the lower GPA they received at the end of the classes (Spencer-Oatey & Xiong, 2006). Psychological adjustment variables were also found to be highly associated with the social adaptation among the Portuguese immigrant adolescents in France (Neto, 2002). Since previous research has shown that sojourners’ sociocultural adaptation highly predicts their psychological adjustment, understanding international students’ sociocultural adaptation could very possibly provide insights on helping them become more psychologically adjusted. While most previous research has put more focus on psychological adjustment, my study focuses on their sociocultural adaptation.

**Sojourners’ Sociocultural Adaptation**

While the focus of my study is on international students who are present sojourners in the U.S., these students may become first-generation immigrants in the future. Thus, the relevant sociocultural adaptation literature on immigrants is also examined here although Sussman (2002) pointed out that sojourners and immigrants may have different cultural adjustment experiences because of their different motivations and expectations of staying in the host country. Ward and Kennedy (1999) found that sojourners experienced more sociocultural adaptation difficulty than sedentary groups in the host country. They concluded from previous research that factors involved in sojourners’ sociocultural adaptation include length of time in the new culture, cultural knowledge, amount of interaction and identification with host nationals, cultural distance, language fluency, and acculturation. We can easily see that these factors are either parts of or are very close to the construct of acculturation which has extensive literature that is beyond the scope of my study. The over emphasis on acculturation factors also revealed the lack of studies about ethnic identity’s relationship to sojourners’ sociocultural adaptation, which will be further explored in the literature review of ethnic identity. Below, I focus on discussing the factors that are more relevant to the analyses of sojourners’ sociocultural adaptation.
Length in host culture

Ward and Kennedy (1996a; 1996b) point out that sojourners’ sociocultural adaptation seems to follow a learning curve with rapid improvement during the first few months of the cross-cultural transition and a gradual leveling-off of learned social and cultural skills later. This phenomenon is intriguing because it seems to suggest that the sojourners’ sociocultural adaptation could be set in the very beginning when they first arrive at the host country. And, international students’ first experiences with the host country usually started from the university. Therefore, how they were treated initially by the university representatives might decide their first experience and this could be crucial for their later sociocultural adaptation.

Host national language fluency

Although language difficulty is common for international students, previous research did not generate a consensus of its relationship with sojourners’ sociocultural adaptation. Senel (2003) found that psychosocial adaptation was predicted by better English proficiency. Ward, Bochner, and Furnham (2001) reviewed previous research on sojourners and found that fluency in the host language is associated with better sociocultural and psychological adjustment, but Ward and Kennedy’s study (1993a) also showed that language fluency is not always linked to psychological adjustment. Neto’s (2002) study about Portuguese immigrant adolescents in France also showed that language fluency in the host country was the most significant predictor of social adaptation. Neto argued that this result was consistent with previous studies that fluency in the host culture language is positively correlated with sociocultural adaptation. Particularly, those fluent in host culture language experience fewer social difficulties (Sano, 1990; Ward & Kennedy, 1994) and had increased interaction with the host nationals (Ward, Chang, & Lopez-Nerney, 1999). However, Aronowitz’s (1984) review of previous research showed that local
language fluency and usage did not significantly predict immigrant children’s social adaptation. This seems to suggest language fluency may not obviously lead to sociocultural adaptation.

**Interaction with host nationals.**

Ward and Kennedy (1993b) found that international students who had more interaction with host nationals had fewer social difficulties, more improved communicative abilities, and better general adaptation to life overseas. Having more local friends has also been found to be associated with lower stress level (Redmond & Bunyi, 1993). However, Ward and her colleagues found that both the New Zealand expatriates and Malaysian students who reported having more contact with Singaporeans experienced more acculturative stress (Ward & Kennedy, 1992, 1993b).

Ward and Rana-Deuba (2000) suggested that the incongruent findings might result from the “quality” rather than the quantity of sojourners’ interaction with host nationals. In other words, if the interaction experiences are not pleasant or helpful, it may not increase sojourners’ sociocultural adaptation. This highlights the importance of international students’ perceived justice in their interaction experiences. In addition, Spencer-Oatey and Xiong (2006) found that Chinese international students rated social interactions as the most difficult on the sociocultural adaptation scale. Their follow-up interview revealed that some students complained about the lack of opportunities to interact with native students and the university did not provide enough services or supports to assist their daily life adjustment. This finding revealed that the university’s services could play an important role in assisting international students more socioculturally adapted.
Perceived Justice

Social Justice Research in Psychology

As Katz (2005) points out, previous justice research in psychology can be roughly divided into two domains: developmental psychology and social psychology. Psychologists using the developmental perspective analyze justice from an intra-personal perspective and link justice to cognitive perception or moral development, while social psychologists study justice by focusing on the social forces behind it. I adopt the perspective of social psychology with systemic and contextual changes emphasized in my study. From this theoretical point of view, international students’ perceived justice serves more as an independent variable rather than a dependent variable.

Types of Justice

There are mainly two types of justice widely discussed in the social justice literature, namely, distributive justice and procedural justice. Distributive justice is concerned with how the distribution of resources affects an individual’s psychological, social, and economic well-being (Deutsch, 1975, p. 137). While distributive justice is concerned with the fairness of the outcome of the decision-making process, procedural justice focuses more on the appraisals of how people are treated in the decision-making process (Fondacaro, Jackson, & Luescher, 2002; Lind & Tyler, 1988). Brockner and Wiesenfeld (1996) pointed out that distributive justice would be deemed less important for people if procedural justice is high because, ideally, fair distribution will occur through fair procedure in the long run (Chory-Assad & Paulsel, 2004). Therefore, my study will mainly focus on perceived procedural justice.

Definition and Conceptualization of Procedural Justice

Procedural justice has received more attention in the psychology literature since the publication of the book *Procedural Justice: A Psychological Analysis* (Thibaut & Walker, 1975).
Tyler (1991) defined procedural justice as “how people evaluate their experience with managerial authorities by considering the fairness of decision-making procedures.” Rooted in social identity theory (Tajfel & Turner, 1986), the relational model of procedural justice suggests that people care about fair treatment because it describes the quality of their relationship with others in self-relevant groups.

**Measurement of Procedural Justice**

Tyler and Lind (1992) reviewed various measures of procedural justice and found a wide variation in how procedural justice is operationalized and measured in research studies. Fondacaro and his colleagues (2002; 2005) identified the need for reliable, valid, and comprehensive measures of procedural justice. They developed empirically based perceived justice measures which include procedural justice and distributive justice subscales for the family context (Fondacaro, Jackson, & Luescher, 2002) and for the healthcare context (Fondacaro, Frogner, & Moos, 2005). Based on Fondacaro and his colleague’s extensive review of previous literature, they proposed ten dimensions, operationalized as factors in the Family Justice Inventory (FJI; Fondacaro et al., 2002), in measuring procedural justice: process control, voice, consistency, neutrality, accuracy, correction, dignity/respect, standing/status recognition, trust, and global procedural fairness. In subsequent work on the Health Care Justice Inventory (HCJI; Fondacaro et al., 2005), they added three more dimensions: consent, decision control, and procedural satisfaction.

Based on their factor analysis of the HCJI, the procedural justice items loaded on three factors: trust, impartiality, and participation (Fondacaro et al., 2005). After modification and adaptation, this measure may well be applied to contexts other than the family or healthcare context. In my study, the procedural justice subscale on the HCJI was modified to measure international students’ perceived procedural justice in the university setting when they first
arrived in the U.S., which may include their various experiences of interacting with university administrations or university representatives in the international center, their department, or their program.

**Perceived Justice and Adjustment among Sojourners**

There have been relatively few studies that examine sojourners’ perceived justice. For the most part, these studies adopted the term “perceived discrimination,” which frequently appears in studies on racial/ethnic minority and immigrant populations. In a study about international students and scholars in the U.K. and Germany (Krahe, Abraham, Felber, & Helbig, 2005), participants who were more identifiable as foreigners by appearance reported receiving more discrimination. Using perceived discrimination as the dependent variable, this study also found that more positive contact with host nationals was associated with lower levels of perceived discrimination. Surprisingly, language proficiency did not show an effect on the overall perceived discrimination. However, higher language proficiency was correlated with greater perceived verbal discrimination for sojourners in Germany.

Several studies have used “perceived discrimination” among sojourners in predicting other psychological variables. In a study on international students in Norway, Sam (2001) found that perceived discrimination significantly predicted international students’ life satisfaction; this finding was particularly significant for students from Africa and Asia. However, host language proficiency and having a host national friend did not have a significant effect on their life satisfaction. Leong and Ward’s (2000) study of Chinese sojourners in Singapore found that perceived discrimination was associated with increased identity conflict.

**Perceived Discrimination and Adjustment among Immigrants**

More studies have examined the relationship between perceived discrimination and sociocultural adaptation among immigrant populations. For example, Aycan and Berry (1996)
found a positive correlation between perceived discrimination and amount of social difficulties among Turkish immigrants in Canada. In a study on Cuban immigrant adolescents, Vega, Gil, Warheit, Zimmerman, and Apospori (1993) found an association between perceived discrimination and other sociocultural adaptation problems such as delinquency, drug use, and anti-social behaviors.

**Perceived Justice and Student Adjustment in the University Setting**

There are some studies focusing on the university setting and college classroom in the organizational justice literature. Colquitt (2001) found that students’ perceived justice was positively related to compliance with class rules and satisfaction with grades. Chory-Assad (2002) showed that undergraduate college students’ perceived procedural fairness positively predicted motivation and affective learning in the course and negatively predicted aggression toward the instructor. Chory-Assad and Paulsel (2004) noted that only “perceived procedural justice” negatively predicted student aggression and hostility when they used hierarchical multiple regression analyses, even though perceived distributive and procedural justice were both negatively correlated with student aggression and hostility. They also found that perceived procedural justice negatively predicted students’ indirect aggression such as revenge and deception. More importantly, perceived procedural justice and perceived distributive justice did not seem to interact to predict student aggression, hostility, or resistance. Chory-Assad and Paulsel (2004) concluded from their findings and previous research that distributive justice may not be as important as procedural justice in the school setting (Tyler & Caine, 1981). Based on these study results, the main focus of perceived justice in my study will rest on perceived procedural justice rather than perceived distributive justice.
Ethnic Identity

Definition of Ethnic Identity

From the preceding literature review about sociocultural adaptation, I found that there is a lack of research on ethnic identity and its association to sojourners’ adaptation. To further understand how ethnic identity plays a role in sojourners’ sociocultural adaptation, I review literature relating to the construct of ethnic identity here. According to Helms (1999), ethnicity denotes the oldest ancestry one can recall about his/her national, regional, or tribal origins and cultural traditions. The term “ethnic identity” has been defined and measured in various ways and usually without theoretical grounding (Phinney, 1990). My study adopts Phinney’s (1990) definition and measurement of ethnic identity.

Following the roots of social identity theory (Tajfel & Turner, 1986), Phinney (1990) conceptualized ethnic identity as one’s subjective sense of belonging to an ethnic group and the accompanying feelings and attitudes for this group membership. Phinney (1992) termed this aspect of ethnic identity “ethnic affirmation and belonging.” After reviewing previous research, Phinney (1990) also included “ethnicity/ethnic self-identification” as the key factor in defining ethnic identity. This aspect of ethnic identity directly links to measurement issues. Phinney pointed out that even ethnic self-identification may be oversimplified by the outsiders’ assumption of visibly distinct features in determining ethnic identity status. Researchers need to use open ended questions and multiple-choice items to assess one’s ethnic self-identification because participants may not consider themselves members of the ethnic identity assigned or assumed by the researchers. Phinney’ conceptualization of ethnic identity also includes “ethnic behaviors and practices,” which refer to one’s involvement in the social life and cultural practices of one’s ethnic group (Phinney, 1990). Phinney listed some possible indicators of
ethnic behaviors and practices such as language, friendship, religious affiliation and practice, social organizations, cultural traditions, political ideology and activity, and area of residence.

Phinney (1992) proposed that the three factors of ethnic identity, namely, “ethnicity/ethnic self-identification,” “ethnic affirmation and belonging,” and “ethnic behaviors and practices,” directly translate to the three components in Phinney’s Multigroup Ethnic Identity Measure (MEIM). In addition, Phinney (1989) proposed a three-stage model of ethnic identity that progresses from “unexamined ethnic identity,” to “ethnic identity search,” to “achieved ethnic identity.” Although this looks like a developmental process, Phinney (1990) warned that the meaning of ethnic identity achievement may vary across different individuals and ethnic groups. She suggested that achievement may not equate to a higher ethnic involvement. Likewise, some people may remain in or return to the first stage.

**Ethnic Identity and Psychological Well-being**

The relationships between ethnic identity and various mental health variables have been widely researched. I highlight some of the most recent and important studies for each related construct here. One important finding is the strong connection between self-esteem and ethnic identity. Phinney, Cantu, and Kurtz (1997) found a positive relationship between self-esteem and ethnic identity among African American, Latino, and Caucasian adolescents in diverse ethnic contexts. In addition to self-esteem, Sam (2000) also found that high ethnic identity had strong predictive power for better “mental health” and “life satisfaction” among Norwegian adolescents. These results are consistent with other previous studies. Phinney’s (1991) research showed that strong ethnic identity among immigrants was associated with positive self-esteem and psychological adjustment.
Ethnic Identity and Sociocultural Adaptation

Sussman (2002) pointed out that identifications with the home culture and the host culture have been recognized as the key predictors to the different adjustment experiences in cultural adjustment studies. However, a study about Portuguese second generation immigrant adolescents in France showed that there was a negative main effect of ethnic identity in predicting social adaptation (Neto, 2002). The adolescents who labeled themselves as Portuguese experienced more social difficulties than those who identified themselves as French. In addition, a significant effect of “migratory plans” on social adaptation was also found in this study. Specifically, those who were determined to stay in France experienced better social adaptation than those who planned to stay temporarily and those who were undecided on their plans. While this finding was interpreted by the author as a causal relationship, it was actually a correlational survey study; therefore, ethnic identity might be the result rather than the cause in this relationship. The rejection-identification theory of ethnic identification, which will be discussed later, may well explain this alternative perspective.

Rejection-identification model

Based on social identity theory, researchers have found that in-group identification will increase when individuals perceive prejudice and discrimination from the dominant group (Tajfel & Turner, 1986). Although this model could be applied to different social groups, I focus on discussing the studies that are related to different ethnic groups. Branscombe, Schmitt, & Harvey (1999) confirmed this Rejection-Identification Model in their study of an African American population. They found that the across-situation discrimination and prejudice from the dominant group not only predicted worse scores in terms of psychological well-being but also increased the participants’ in-group identification. Within the social identity literature, similar findings have also been reported by other studies examining different ethnic groups such as Jews (Dion &
Earn, 1975), Hispanics (Chavira & Phinney, 1991), and Mexican Americans (Schmitt &
Branscombe, 2002). In these studies, each ethnic group identified more with their group as they
perceived more prejudice and discrimination against their group.

**International Students’ Ethnic Identity**

Schmitt, Spears, and Branscombe (2003) tested the Rejection-Identification Model on
international students and found there was a positive relationship between perceived
discrimination and identification among international students. However, the specific link
between perceived discrimination and nationality was not found; instead, international students
from different nations seemed to form a new identity of “international students in the U.S.”
Although this result may be due to the specific questions that were asked in this study, it seems
to suggest that there was no relationship between international students’ perceived discrimination
and specific ethnic or national identification.

Some other previous studies did not use the term of ethnic identity, but these studies
examined constructs that are very similar to ethnic identity. Several studies showed that for
sojourners, strong identification with the home country and culture seems to predict better
psychological adjustment, but identification with the host country/culture is unrelated to
found that home cultural identity maintenance was related to better psychological adjustment
among Chinese sojourners in the United States. Recent research further verified that weak
identification with home culture was associated with mood disturbances among sojourners in
Nepal (Ward & Rana-Deuba, 2000).

In terms of social interaction, Al-Sharideh and Goe (1998) found that strong ties with other
students from the same cultural background strongly predicted better personal adjustment while
assimilation to American culture better predicted improved the international students’ personal
adjustment only when there were fewer ties with people with the same cultural backgrounds. In addition, strong ties with Americans seem to have an independent positive effect on the international students’ adjustment. Senel (2003) examined the relationship between ethnic identity and psychosocial adaptation among international students and the results suggested that sojourners’ psychosocial adaptation was predicted by their ethnic identification.

**Theoretical Models for Perceived Justice, Ethnic Identity, and Sociocultural Adaptation**

Due to the lack of literature and theories that link the three major constructs in a coherent manner, my study uses the buffering model of social support (Cohen & Wills, 1985) and the match hypothesis (Frese, 1999) to explain the possible interrelationships of the major constructs.

**The Buffering Model of Social Support**

In the social support literature, the buffering model hypothesizes that social support would become more relevant to one’s well-being primarily when the person is under stress because social support “buffers” people from pathogenic stressful events (Cohen & Wills, 1985). In other words, social support would appear most important when stress is high but less salient when stress is low. Ethnic groups theoretically would provide the social support with direct social resources for international students. High ethnic identity may therefore buffer perceived discrimination and enhance international students’ sociocultural adaptation.

**The Match Hypothesis**

The match hypothesis is further built upon the buffering model. Cohen and Wills (1985) contended that the buffering effect would be most significant when there is a “match” between the kind of stressors and the type of available support. Frese (1999) extended their argument about matching and hypothesized that social support with direct access to social resources should have the most significant effect on social stressors. His study on German blue-collar workers confirmed that the more socially-oriented symptoms of psychological dysfunction such as
irritation/strain and anxiety were most affected by the buffering effect of social support than the other, less socially oriented symptoms such as psychosomatic complaints and depression. In other words, the match of “social” stressors and socially oriented symptoms showed the most significant buffering effect of social support. The match hypothesis suggests that the buffering effect of ethnic identity may be most significant between international students’ perceived discrimination and their sociocultural adaptation because there is a match between social stressor and socially oriented symptoms.

**Rationale**

From the above literature review of the major constructs in my study, we can conclude that there are gaps between cultural approaches and social justice approaches relating to research on international students’ adjustment. Within the cultural framework, research about sojourners’ adjustment was mainly divided into psychological adjustment and sociocultural adaptation. Although research about sojourners’ psychological adjustment links ethnic identity to sojourners’ psychological well-being, the intra-psychic focus loses insight into the social interaction aspect of sojourners’ adjustment process. The relationship between ethnic identity and sojourners’ sociocultural adaptation still awaits further research.

In addition, previous studies on sociocultural adaptation emphasized cognitive processes and abilities or acculturation. These studies focused on international students’ personal improvement and therefore, the research results could then easily become excuses to blame the victims. In addition, there were much fewer studies looking at sojourners’ adjustment from the social justice perspective. Most prior organizational justice research focused on settings like families, classrooms, or workplaces and powerless populations such as wives, adolescents, and employees. International students who are vulnerable to discrimination, such as racial/ethnic minorities and immigrants, have not received much research attention within the social justice
field. Although several researchers have attempted to link perceived discrimination to sojourners’ psychological well-being, the concept of perceived justice has not yet been linked to sojourners’ sociocultural adaptation. Therefore, the objective of my study was to examine international students’ sociocultural adaptation from both social justice and cultural perspectives, with a particular focus on ethnic identity. I generated the following research questions and hypotheses to further explore the gaps in previous literature.

The first research question relates to whether perceived justice predicts more sociocultural adaptation among international students. Previous research has shown that perceived discrimination among sojourners predicts less psychological adjustment, such as lower life satisfaction (Sam, 2001) and increased identity conflicts (Leong & Ward, 2000). And previous research has also shown that sojourners’ sociocultural adaptation is highly associated with their psychological adjustment (Ward & Kennedy, 1999; Zheng & Berry, 1991). Therefore, I hypothesized that international students’ perceived procedural justice would predict their sociocultural adaptation as well.

The second aim of my study is to determine whether international students’ ethnic identity is positively related to their sociocultural adaptation. Previous research has shown that cultural identity maintenance is related to better psychological adjustment among sojourners (Luo, 1996; Ward et al., 1999; Ward & Kennedy, 1994). In addition, Senel’s (2003) study on international students suggested that sojourners’ psychosocial adaptation was predicted by their ethnic identification. Therefore, I hypothesized that international students’ higher ethnic identity predicts their better sociocultural adaptation.

The third aim of my study is to explore whether ethnic identity moderates the relationship between perceived justice and sociocultural adaptation among international students. According
to the buffering model of social support and the match hypothesis (Cohen & Wills, 1985), social support from the ethnic groups could theoretically buffer the stressful feelings of perceived procedural injustice and therefore help sojourners to have better sociocultural adaptation. When perceived procedural justice is high, ethnic identity might not appear especially helpful; however, when perceived procedural justice is low, ethnic identity may be crucial to international students’ sociocultural adaptation. Therefore, I hypothesize that the association between perceived justice and sociocultural adaptation among international students would be moderated by ethnic identity level.
CHAPTER 2
METHODS

Participants

A total of 152 international students at the University of Florida were recruited to complete a survey either online or in hard-copy paper format. Specifically, 89 students completed the online survey and 63 students completed the paper form of the survey. Overall, 29 participants did not finish 90% of the survey (19.1%) and four participants failed to answer both quality testing items correctly (2.6%). The data from those 33 participants were deleted, leaving 119 participants in the sample.

Among the remaining 119 participants, 59.7% were Asian/Pacific Islanders (including 8.4% Eastern Indian), 21.0% were White/Caucasian, 14.3% were Hispanic/Latino/Latina, 2.5% were Arab/Middle Eastern, 0.8% was Black/Africans, 0.8% was multiracial, and 0.8% did not report their race/ethnicity. Compared with the statistics provided by Open Doors’ (Institute of International Education, 2005) annual report on international students, this sample seems roughly proportionate to the international student body in the U.S colleges and universities and similar to the international student population of UF with the exception that there were fewer Black/Africans in my sample. The Open Doors’ annual report on international students in the U.S. (Institute of International Education, 2005) shows that students from Asia comprised the majority (58%), followed by Europe (12.7%), Latin America (12%), Africa (6.3%), South America (6.1%), the Middle East (5.5%), and Central America (3.4%). In addition, according to the UF International Center’s Fall 2006 statistics, 60.9% of UF international students are from Asia, 15.9% from Latin America, 11.6% from Europe, 10.1% from South America, 5.0% from Middle East, 4.2% from Africa, and 3.2% from Central America.
In terms of gender composition, 54.6% of the sample were male and 45.4% were female. Approximately 80.7% were single and 19.3% were married. The mean age of the sample was 26.88 years ($SD = 5.28$), with a range from 18 to 44. The time participants had spent studying in the U.S. ranged from less then 1 month to 182 months ($M = 28.80$ months or about 2 years and 5 months; $SD = 28.19$ months). A total of 58.8% were Ph.D. students, 21.0% were master’s students, 12.6% were undergraduate students, and 6.7% reported studying in other programs which may include the intensive English language program, exchange student programs, or post-doctoral programs. 0.8% of respondents did not specify their program. A total of 94.1% of the sample reported that their first language was not English.

**Measures**

**Demographic Questionnaire**

The participants were asked to complete a demographic questionnaire in the first part of the survey, including questions about age, gender, years in the U.S., migratory plans, language fluency, and some questions about experiences/attitudes toward counseling services on campus. A copy of the demographic questionnaire is located in Appendix A.

**Perceived Justice Inventory**

Perceived procedural justice was measured by the procedural justice items of the Perceived Justice Inventory (PJI), which I adapted from the Health Care Justice Inventory (HCJI; Fondacaro et al., 2005). The HCJI has different versions with items that are modified to be applied to different contexts, for example, the provider version (HCJI-P) and the health plan version (HPJI-HP). The PJI contains the same items as the HCJI and I only modified the context-specific terms to measure international students’ perceived justice of the university’s services “when they first arrived in the U.S.” Here is an example of the modification: on the first item of
the HCJI-P, “Your health plan representative listened to you” was modified as “Your university representative listened to you” in the PJI.

The PJI contains a total of 34 items with 28 procedural justice items and 6 distributive justice items. It uses a four-point Likert scale for response options ranging from 0 (strongly disagree) to 3 (strongly agree); higher total scores indicate more perceived justice. Based on my literature review, I only used the procedural justice items in my analyses; however, the total score of the PJI distributive justice items could possibly be used for further analyses. Fondacaro et al.’s (2005) study of a sample with mostly Caucasian and Asian clients showed that the reliability for the HCJI’s procedural justice subscales were pretty high, with Cronbach’s coefficient alpha of .93, .91, and .91 for the HCJI-P procedural justice subscales, Trust, Impartiality, and Participation and alphas of .89, .86, and .87 for the HCJI-HP procedural subscales, Trust, Impartiality, and Participation. In addition, they found these subscale scores were all significantly correlated to the patients’ satisfaction level ($p < .01$), which suggests good concurrent validity. A copy of the Perceived Justice Inventory is located in Appendix B.

**Multigroup Ethnic Identity Measure**

Ethnic identity level was measured by the Multigroup Ethnic Identity Measure (MEIM) (Phinney, 1992). The MEIM is a 12-item Likert-type scale with response options ranging from 1 (strongly disagree) to 4 (strongly agree). The MEIM contains two subscales: Ethnic Identity Search (EIS) and Affirmation, Belonging, and Commitment (ABC) (Robert, Phinney, Masse, Chen, Roberts, & Romero, 1999). Based on samples of a variety of ethnic groups in related studies, Fischer and Moradi (2001) concluded that MEIM scores have shown good reliability in comparison to other identity measures, with Cronbach alphas ranging from .70 for a mixed sample of African Americans and African Nationals to .92 for a sample of Caucasian college women. Specifically, Cronbach alphas for the EIS subscale ranged from .65 for a sample of
Muslim adolescent girls to mid-.80 for a sample of ethnically diverse college students. Cronbach’s alphas for the ABC subscale ranged from mid-.70 for a sample of ethnically diverse high school students to mid-.80 for a sample of Muslim female teenagers. As for the MEIM’s validity, Robert et al. (1999) stated that one strong indicator for the measure’s construct validity is the positive association between MEIM scores and the degree of ethnicity salience across various ethnic groups. Fischer and Moradi (2001) reviewed studies about the MEIM and concluded that the construct validity of the MEIM is fairly good because the global and subscale scores were related to other cultural variables in theoretically predicted directions. A copy of the MEIM is located in Appendix C.

**Sociocultural Adaptation Scale**

Sociocultural adaptation (difficulty) was measured by the Sociocultural Adaptation Scale (SCAS). This is an instrument especially designed for sojourners, namely international students who are not immigrants. The SCAS is a 29-item five-point Likert-type scale with response options ranging from 1 (no difficulty) to 5 (extreme difficulty). The author of the SCAS suggested using the mean item score when using the SCAS (Colleen Ward, personal communication). Previous research using factor analysis also did not support the division of the behavioral subscale and cognitive subscale (Ward & Kennedy, 1999). Therefore, the mean item score was used in my analyses. Higher mean item scores represented more sociocultural adaptation difficulty. As for the SCAS’s reliability, Ward and Kennedy (1999) concluded from previous studies that the internal consistency alphas have ranged from .75 for a sample of Britons in Hong Kong to .91 for a sample of multinational international students in New Zealand. Also, support for the SCAS’s construct validity was shown through the significant correlations between SCAS scores and measures of psychological well-being in various studies (Ward & Kennedy, 1999). Please see Appendix D for a copy of the SCAS.
Quality Testing Items

Two quality testing items were included to check whether the participants’ responses were valid. These items were worded as, “This is a quality testing item, please just write 2 (Mainly Disagree) for this item.” If the participants failed to answer both of the quality items correctly, their responses were excluded from my analyses. However, if they left the quality items blank or at least answered either quality item correctly, their responses were retained. Please see Appendix B, item 15, for an example of a quality testing item.

Procedure

Purposive sampling was conducted to recruit University of Florida (UF) international students to take the survey. The anonymous survey was first administered as an online survey. An invitation letter was sent out as an email through the UF international students’ listserv and other various UF international student organizations’ listservs. The same invitation letter was also posted on various UF international students’ related websites. In the invitation email/post, there was a link that the participants could click on to go to the website to take the online survey. There were 89 people who responded to the online survey, and 61 people finished the online survey. Additional paper copies with the same invitation letter and content were distributed to UF international students at various international student events, including international coffee house (a weekly, informal gathering for international students hosted by the university’s International Center), Chinese and Taiwanese New Year’s celebration, and Korean students’ church gatherings. There were 60 participants who took the survey in the paper form, and 42 of these participants completed the survey. Please see Appendix E for documents related to the process of obtaining permission from the UF Institutional Review Board (IRB) to conduct my study.
CHAPTER 3
RESULTS

Preliminary Analyses

Inclusion of Participants Based on the Quality Testing Items

I excluded the four participants (one from the online survey and three from the paper form survey) who answered both of the quality testing items incorrectly. A series of independent-samples \( t \)-tests was then conducted on the variables to justify the inclusion of the participants who only answered one quality testing item correctly and those who left these items blank. The results show that there was no significant mean difference (\( p > .05 \)) between the 103 participants who answered both quality items correctly and the 16 participants who only answered one correctly or left both items blank: sociocultural adaptation (SCAS), \( t (117) = -.16 \), Perceived Procedural Justice (PPJ), \( t (117) = -.87 \), MEIM-ABC, \( t (117) = .87 \), and MEIM-EIS, \( t (117) = -.17 \). Therefore, it was deemed justifiable to include in the analyses these 16 participants who did not completely fail the two quality testing items.

Similarity of Data from Different Sources

A series of independent-samples \( t \)-tests was conducted to examine whether the data collected from online and from the paper forms were justified to be combined in the analyses. Table 3-1 shows the means and standard deviations from each of the measures, from both the online and paper form surveys. For SCAS, the mean difference between the participants from the online and paper form formats was not significant, \( t (117) = -.38, p > .05 \). For PPJ, the Levene’s test was significant, so I used statistics with equal variance not assumed; the mean difference between the participants from online and from the paper form format was not significant, \( t (114.43) = -.78, p > .05 \). Ethnic identity variables were measured using the two MEIM subscales: ABC and EIS. For the ABC subscale, the mean difference was not significant, \( t (117) = .16 \),
For the EIS subscale, the mean difference was also not significant, \( t (117) = -1.25, p > .05 \).

Overall, there were no significant group differences found for the proposed variables between the participants who filled out the survey online and on paper. The two sources of data were therefore combined into one sample for all subsequent analyses.

**Normality Assumption**

The normality assumption of the variables was checked. Table 3-2 shows the skewness and kurtosis values of the variables in the analyses. Due to the small sample size, the Z score significance level of .01 was deemed appropriate (Field, 2000). I found that PPJ and ABC were somewhat negatively skewed, but EIS’ and SCAS’s Z score values did not exceed 2.56. All the variables’ Kolmogorov-Smirnov tests for normality were significant \( p < .05 \). However, the normal Q-Q plots and detrended normal Q-Q plots were acceptable, as were their histograms for EIS and SCAS. There were some outliers for PPJ, ABC, and SCAS, but none of the outliers were extreme points. In addition, Table 3-3 indicates that there was not much difference between each variable’s Mean and 5% Trimmed Mean (the mean after deleting the 5% outliers), and the differences were all well below one standard deviation. Overall, based on the various criteria discussed above, EIS and SCAS seemed roughly normally distributed, but PPJ and ABC were negatively skewed. Because the outliers did not seem to impact the means, they were all kept in the analyses. To address the non-normality of PPJ and ABC, I used square root transformation with the procedures suggested by Tabachnick and Fidell (2006) for mildly negatively skewed variables. The transformed PPJ (tPPJ) variable had a highly significant negative correlation with the original PPJ variable \( r = -.97, p < .01 \) and the transformed ABC (tABC) variable also had a highly significant negative correlation with the original ABC variable \( r = -.98, p < .01 \).

Therefore, I reversed the direction when interpreting tPPJ and the tABC. The skewness and kurtosis values of these variables are also listed in Table 3-2.
Factor Analysis of Perceived Procedural Justice

Originally, Fondacaro et al. (2005) proposed three factors for the construct of procedural justice - Trust, Impartiality, and Participation. However, because the PJI was adapted to measure international students’ perceived justice of university services, it was necessary to check the measure’s factor structure for this specific sample. An oblique-rotation exploratory factor analysis (EFA) with the Promax procedure was conducted on the 28 procedural justice items from the PJI. A promax procedure was appropriate here because it allowed the possible factors to correlate with each other to find a better fit for the data structure, in addition to the initial test of orthogonal solution (Russell, 2002). After rotation, four factors were extracted with eigenvalues ranging from 12.63 to .75. They accounted for a total of 57.0% of the variance.

Reise, Waller, and Comrey (2000) suggested using a parallel analysis to decide the number of eligible factors that should be retained or retracted (p. 290). In a parallel analysis, a random set of data can be generated based on the sample size and the number of scale items in a study. By examining where the scree plot derived from my study crosses the scree plot from the simulated dataset, Reise et al. (2000) suggested that factors with smaller eigenvalues than the simulated eigenvalues should not be extracted. The parallel analysis generated a simulated random data set based on my sample size of 119 and 28 variables. By examining the first five simulated eigenvalues (2.03, 1.86, 1.74, 1.64, and 1.55) and the initial eigenvalues (13.02, 1.95, 1.54, 1.16, and 0.98), I found support for two perceived procedural justice factors, with the first factor explaining about 46.49% of variance (eigenvalue = 13.02) and the second factor explaining an additional 6.97% of variance (eigenvalue = 1.95) before rotation.

An oblique-solution EFA with promax procedure was then conducted by specifying a two-factor structure. After rotation, the two factors collectively accounted for 50.0% of the variance (Factor 1 eigenvalue = 12.57, 44.9%; Factor 2 eigenvalue = 1.43, 5.1%). However, results also
showed that factor 1 and factor 2 were highly correlated ($r = .73$). Therefore, a one factor solution of perceived procedural justice seemed more appropriate for this sample. Finally, an EFA was conducted with the one-factor structure. This single factor explained 44.7% of the variance with the eigenvalue of 12.53 after extraction. A stringent factor loading criterion of .50 was used to aid item-retention decisions, and four items (item 28, 2, 7, and 21) with factor loadings less than .50 were therefore excluded. The factor loadings are presented in Table 3-4. Perceived procedural justice (PPJ) was measured by the 24 procedural justice items that had factor loadings higher than .50.

**Reliability of Variables in the Analyses.**

Score reliabilities (Cronbach’s coefficient alphas) were satisfactory and ranged from .73 to .96 for this sample. The 24-item Perceived Procedural Justice Subscale’s reliability was .96. As for ethnic identity measured by the MEIM, the 5-item EIS subscale’s reliability was .73 and the 7-item ABC subscale’s reliability was .87. The 29-item SCAS’s reliability was .92 for this sample.

**Analyses**

**Perceived Procedural Justice and Sociocultural Adaptation**

A bivariate correlation analysis was conducted to test the hypothesis that international students’ perceived procedural justice would predict their sociocultural adaptation. The total summed score of the 24 procedural justice items in the PJI was used to represent international students’ perceived procedural justice, whereas the level of international students’ sociocultural adaptation difficulty was represented by the mean item score on the SCAS. Therefore, in this bivariate correlation, I entered the variables, tPPJ and mean-SCAS. Also, I chose the one-tailed test of significance for this bivariate correlation because there was a directional hypothesis derived from previous literature. The result indicated that perceived procedural justice was
indeed positively correlated with sociocultural adaptation, although the relationship was relatively modest ($r = .17, p < .05$). The effect size is considered small to medium (Cohen, 1992).

**Ethnic Identity and Sociocultural Adaptation**

A multiple regression analysis was conducted to test whether international students’ ethnic identity negatively predicted their sociocultural adaptation. The scores of the MEIM’s subscales, EIS and tABC, were simultaneously entered as independent variables, and the SCAS mean item score served as the dependent variable. Regression diagnostics revealed no significant concerns regarding multicollinearity (VIF = 1.30 and Tolerance = .77). In addition, the bivariate correlation between tABC and EIS was lower than .70 ($r = -.48, p < .01$), which confirmed the adequacy of using the two subscales scores rather than a total MEIM score in the regression (Tabachnick & Fidell, 2006, p. 84). Examination of the normal probability plot of the standardized residuals did not show signs of violation for normality. Examination of the scatter plot of the standardized residuals also did not show signs of violation for linearity or homoscedasticity. In terms of standardized residual values, there was only one outlier identified that exceeded three standard deviations. In terms of Mahalanobis distance values, only one of the values exceeded the critical value for two independent variables (13.82). In terms of Cook’s Distance, none of the values exceeded 1. Overall, there were no outliers that were too deviant from the normal distribution. However, the results showed that the regression model with EIS and tABC as the independent variables was not significant, $F (2, 116) = .76, p > .05$ and it accounted for only 1% of the variation in international students’ sociocultural adaptation difficulty, $R^2 = .01, p > .05$. According to Cohen’s (1992) standard on $R^2$, the effect size of ethnic identity factors on sociocultural adaptation was small.
**Moderation Effect of Ethnic Identity Factors**

Two separate hierarchical multiple regression analyses were conducted to test whether either ethnic identity factor would moderate the relationship between international students’ perceived procedural justice and sociocultural adaptation difficulty. To deal with the collinearity problem of the interaction product term in the regression, every entered variable was centered from their mean (Aiken & West, 1991).

In the first hierarchical multiple regression analysis testing the moderation effect of tABC, centered tPPJ and centered tABC were entered in the first block while their centered product term was entered in the second step. The SCAS mean item score served as the dependent variable. Regression diagnostics revealed no significant concerns regarding multicollinearity (VIF ranged from 1.00 to 1.01 and Tolerance ranged from .99 to 1.00). There were also no concerns related to normality, linearity, or homoscedasticity when I examined the residual plots. In addition, there were no outliers identified that exceeded three standard deviations for its standardized residuals. Mahalanobis distance value revealed only two case values above the critical value for three independent variables (16.27) and no values of Cook’s Distance exceeded one.

Results indicated a lack of a significant moderator effect of tABC on the relationship between perceived procedural justice and sociocultural adaptation. The first block of results showed that the regression model with tPPJ and tABC as independent variables was not significant, $F (2, 116) = 2.45, p > .05$. A combination of tPPJ and tABC accounted for only 4% of the variance of international students’ level of sociocultural adaptation difficulty. The second step results showed that the additional interaction term of tABC with tPPJ was not significant either, $\Delta R^2 = .01, F (1, 115) = 1.14, p > .05$. Thus, ethnic identity in terms of the aspect of affirmation, belonging, and commitment did not appear to moderate the relationship between
international students’ perceived procedural justice and their level of sociocultural adaptation difficulty.

In the second hierarchical multiple regression analysis, centered tPPJ and centered MEIM-EIS were entered in the first block and their product term was entered in the second step to predict the SCAS mean item score. Regression diagnostics revealed no significant concerns regarding multicollinearity (VIF ranged from 1.005 to 1.011 and Tolerance ranged from .99 to 1.00). Examination of the normal probability plot and the scatter plot of the regression standardized residuals did not show signs of violation for normality, linearity or homoscedasticity. There were no outliers identified for standardized residuals and no violation for Cook’s Distance value. There was only two Mahalanobis distance value that exceeded the criterion for three independent variables (16.27).

The first block results showed that tPPJ and MEIM-EIS did not account for significant variation in SCAS scores, \( R^2 = .04, F (2, 116) = 2.30, p > .05 \). However, the second step results showed that the additional interaction term of EIS by tPPJ was significant, \( F (1, 115) = 5.30, p < .05 \) and the interaction term accounted for additional 4% of the variation in international students’ sociocultural adaptation difficulty, \( \Delta R^2 = .04, p < .05 \). This indicated that ethnic identity search moderated the relationship between international students’ perceived procedural justice and their level of sociocultural adaptation difficulty. Although the effect size of the moderation effect of EIS was considered small according to Cohen’s (1992) standard on \( R^2 \), a 2 to 3% interaction or moderation effect in survey studies is considered a relatively large moderation effect (McClelland & Judd, 1993).

**Plotting the moderation effect**

To aid in interpreting the interaction effect, results were plotted following recommendations by Aiken and West (1991, pp. 12-14). This plot appears in Figure 3-1. First, a
regression equation including the unstandardized B weights of tPPJ, EIS, and their interaction term was calculated. By assigning EIS values as the EIS mean and plus and minus one standard deviation, three plot lines were created representing the relationships between perceived procedural justice and sociocultural adaptation (difficulty) when ethnic identity search values ranged from high to low. Specifically, when perceived procedural justice was low (tPPJ at the point of one standard deviation “above” the mean; recall tPPJ was transformed from PPJ), high and low EIS values resulted in a restricted range of predicted SCAS scores from 2.20 to 2.34. When perceived procedural justice was high (tPPJ at the point of one standard deviation “below” the mean), high and low EIS values resulted in more variable SCAS scores, which ranged from 1.90 to 2.28. The difference between high EIS and low EIS participants’ SCAS scores of .38 was almost two-thirds of the SCAS standard deviation (.61), which suggested a large effect size difference.

Significance of the simple regression slopes

To further test whether these three simple regression slopes with EIS at high, medium, and low values are significantly different from zero, I conducted simple regression analyses outlined by Aiken and West (1991). In this procedure, two new moderation variables were created by using the moderator (EIS) variable minus and plus one EIS standard deviation. Furthermore, these two new variables and the original EIS were multiplied by the predictor (tPPJ) to form three interaction terms. Then, the criterion variable (SCAS) was regressed on the predictor (tPPJ), the conditioned moderation variables (EIS minus 1 SD above the mean, at the mean, and 1 SD below the mean), and their product terms. As indicated by Aiken and West (1991), the t-tests of the predictor variable’s (tPPJ) regression coefficients in the regression equations reflect whether these simple regression slopes are significantly different from zero. The results are shown in Table 3-5. As indicated in Table 3-5, the relationship between tPPJ and SCAS was
significant only for the participants with low EIS but nonsignificant for those with high and medium EIS. In addition, these simple slopes were also significantly different from one another and coefficient of the moderation term was significant (tPPJxEIS, $\beta = -.21$, $t = -2.30$, $p < .05$) in the test of moderation effect (Aiken and West, 1991).

**Exploratory Analyses**

I also explored other variables which were not included in my main hypotheses. Since my focused variable, tPPJ, only had a modest relationship with international students’ sociocultural adaptation difficulty, other variables that may have significant or stronger relationships with international students’ level of sociocultural adaptation difficulty were explored using a series of bivariate correlations. The results showed that international students’ perceived distributive justice ($r = -.21$, $p < .05$), level of discomfort in communicating in English ($r = .43$, $p < .01$), and length of study in the U.S. ($r = -.27$, $p < .01$) were all significantly related to their level of sociocultural adaptation difficulty.

The correlations show that the relationships between sociocultural adaptation and these variables were all in predicted directions. Specifically, there was a negative relationship between international students’ sociocultural adaptation difficulty and perceived distributive justice, a negative relationship between their sociocultural adaptation difficulty and their length of study in the U.S., and a positive relationship between their sociocultural adaptation difficulty and their level of discomfort in communicating in English. According to Cohen (1992), perceived distributive justice and length of study in the U.S. represented small effect sizes and level of discomfort in communicating in English had a medium to large effect size.
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</table>
Table 3-4. Exploratory factor analysis of the Perceived Procedural Justice (PPJ) items.

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Item</th>
<th>Factor Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Overall, you were satisfied with the way your university representative treated you during decision making.</td>
<td>.89</td>
</tr>
<tr>
<td>13</td>
<td>You were treated as a valued student member of the university.</td>
<td>.83</td>
</tr>
<tr>
<td>25</td>
<td>Overall, your university representative treated you fairly.</td>
<td>.82</td>
</tr>
<tr>
<td>15</td>
<td>Your university representative did not pay attention to what you had to say.</td>
<td>-.81</td>
</tr>
<tr>
<td>1</td>
<td>Your university representative listened to you.</td>
<td>.80</td>
</tr>
<tr>
<td>9</td>
<td>Your university representative was open to your point of view.</td>
<td>.77</td>
</tr>
<tr>
<td>18</td>
<td>You felt comfortable with the way your university representative handled the situation.</td>
<td>.76</td>
</tr>
<tr>
<td>16</td>
<td>Your university representative was biased against you.</td>
<td>-.73</td>
</tr>
<tr>
<td>11</td>
<td>Your university representative was honest with you.</td>
<td>.72</td>
</tr>
<tr>
<td>17</td>
<td>The decision was based on as much good information and informed opinion as possible.</td>
<td>.71</td>
</tr>
<tr>
<td>19</td>
<td>Your university representative treated you with dignity.</td>
<td>.70</td>
</tr>
<tr>
<td>3</td>
<td>Your university representative handled the situation in a very thorough manner.</td>
<td>.70</td>
</tr>
<tr>
<td>12</td>
<td>Your university representative showed little concern for you as an individual.</td>
<td>-.69</td>
</tr>
<tr>
<td>6</td>
<td>You were treated as if you didn’t matter.</td>
<td>-.67</td>
</tr>
<tr>
<td>23</td>
<td>You felt you had personal control over how the situation was handled.</td>
<td>.67</td>
</tr>
<tr>
<td>22</td>
<td>Your university representative asked about your preferences for what should be done.</td>
<td>.66</td>
</tr>
<tr>
<td>10</td>
<td>Your university representative handled the situation in a very careless manner.</td>
<td>-.66</td>
</tr>
<tr>
<td>5</td>
<td>Your university representative treated you with respect.</td>
<td>.64</td>
</tr>
<tr>
<td>4</td>
<td>Your university representative did something improper.</td>
<td>-.63</td>
</tr>
<tr>
<td>27</td>
<td>Your university representative probably treated you worse than other students because of your personal characteristics.</td>
<td>-.62</td>
</tr>
<tr>
<td>14</td>
<td>You fully agreed with the solutions that you and your university representative arrived at.</td>
<td>.60</td>
</tr>
<tr>
<td>24</td>
<td>You felt you had personal control over the decision that was made.</td>
<td>.59</td>
</tr>
<tr>
<td>20</td>
<td>Your university representative probably treated you with less respect than other students.</td>
<td>-.57</td>
</tr>
<tr>
<td>8</td>
<td>Your university representative asked for your input before a decision was made.</td>
<td>.56</td>
</tr>
<tr>
<td>21</td>
<td>You had a choice to reject your university representative’s recommendation.</td>
<td>.48</td>
</tr>
<tr>
<td>7</td>
<td>You accepted your university representative’s decision.</td>
<td>.42</td>
</tr>
<tr>
<td>2</td>
<td>Your university representative treated you in an impartial manner.</td>
<td>.42</td>
</tr>
<tr>
<td>28</td>
<td>You could have had the decision reconsidered.</td>
<td>.11</td>
</tr>
</tbody>
</table>
Table 3-5. Simple slope regression analyses of procedural justice (tPPJ) predicting sociocultural adaptation (SCAS) at low, medium, and high ethnic identity involvement (EIS).

<table>
<thead>
<tr>
<th>Regression slope</th>
<th>B</th>
<th>Std. error of B</th>
<th>Beta</th>
<th>t</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCAS on tPPJ at high EIS</td>
<td>-.02</td>
<td>.05</td>
<td>-.06</td>
<td>-.46</td>
<td>.65</td>
</tr>
<tr>
<td>SCAS on tPPJ at mean EIS</td>
<td>.06</td>
<td>.03</td>
<td>.15</td>
<td>1.70</td>
<td>.09</td>
</tr>
<tr>
<td>SCAS on tPPJ at low EIS</td>
<td>.01</td>
<td>.05</td>
<td>.37</td>
<td>2.93</td>
<td>.004</td>
</tr>
</tbody>
</table>

Figure 3-1. Moderation effect of ethnic identity involvement (EIS) for the relationship between procedural justice (tPPJ) and sociocultural adaptation (SCAS). * Higher tPPJ scores mean lower procedural justice and higher SCAS scores mean more sociocultural adaptation difficulty.
CHAPTER 4
DISCUSSION

Previous research on sojourners’ adjustment has focused on studying how cultural variables are associated with personal psychological well-being. My study goes beyond the current literature to examine a systemic factor, perceived procedural justice, and its association, along with ethnic identity, to international students’ level of sociocultural adaptation.

Specifically, the first analysis examined the relationship between international students’ perceived procedural justice of university services and their level of sociocultural adaptation difficulty. The results revealed that there was a significant positive relationship between international students’ perceived procedural justice and their sociocultural adaptation. In my study, international students were asked to recall how they were treated by university representatives when they first came to the U.S. The study result thus suggests that how they perceived being treated predicted their current level of sociocultural adaptation. Previous studies have only examined the effects of sojourners’ perceived discrimination on their psychological well-being (Leong & Ward, 2000; Sam, 2001). The current study further indicated that perceived unfair treatment may actually impact sojourners’ sociocultural adaptation as well. This finding raises the importance of considering international students’ perceived procedural justice in the university’s services. However, the result is correlational in nature. It is possible that international students’ current sociocultural adaptation might affect their recalled perception of earlier experiences with university services. Therefore, future research with experimental or longitudinal designs could further determine how procedural justice principles measured with the PJI may be applied to improving the university’s services for international students and how these improvements may affect students’ sociocultural adaptation. Also, future studies could examine the relationship between their current perceived procedural justice of university services
and their sociocultural adaptation. In addition, one valuable direction of future research would be the exploration of other factors that may be associated with sojourners’ perceived procedural justice regarding university services.

The second analysis examined the relationship between international students’ ethnic identity and their sociocultural adaptation. Surprisingly, the two ethnic identity factors did not significantly predict international students’ level of sociocultural adaptation. Previous studies showed that a high level of ethnic identity is related to ethnic minorities’ psychological well-being (Phinney, Cantu, & Kurtz, 1997; Sam, 2000) and that cultural identity maintenance was associated with sojourners’ better psychological adjustment (Luo, 1996; Ward et al., 1999; Ward & Kennedy, 1994). However, results from the present study suggested that ethnic identity does not seem to have a relationship with international students’ sociocultural adaptation as it might have with their psychological adjustment. In other words, this finding might indicate that ethnic association cannot really directly address international students’ encountered difficulties at school although it might make them feel better in facing the difficulty. We can see from the literature that sojourners’ sociocultural adaptation is highly correlated with their psychological adjustment (Ward & Kennedy, 1999; Zheng & Berry, 1991). Therefore, this result highlights the importance of improving procedural justice in university services to international students to help boost their sociocultural adaptation as well as psychological adjustment.

The third analysis examined whether ethnic identity moderated the relationship between international students’ perceived procedural justice and their sociocultural adaptation. I found one of the ethnic identity factors, Ethnic Identity Search (EIS), did serve as a moderator in this relationship. However, the Affirmation, Belonging and Commitment (ABC) factor did not seem to have a moderation effect.
These moderator results also have several interesting implications. First, the results showed that only the behavioral aspect, and not the emotional aspect of ethnic identity, had the moderation effect on this relationship. Previous studies of the MEIM’s factors indicated that EIS involves an active behavioral involvement in one’s ethnic group and ABC relates to one’s positive feelings and emotional closeness to the ethnic group (Robert et al., 1999). Ethnic identity search is equal to Phinney’s (1990) proposed construct of ethnic identity, “ethnic behaviors and practices.” Therefore, this result seems to suggest that only high behavioral involvement with one’s ethnic group contributes to the moderation effect while the degree of emotional closeness to one’s ethnic group alone does not seem sufficient to make any significant difference in sojourners’ sociocultural adaptation. This finding is consistent with the match hypothesis in the buffering model, which theorizes that social support with direct access to social resources should have the most significant effect on social stressors (Frese, 1999) because only ethnic identity involvement rather than emotional ethnic identification moderated the impact of perceived procedural injustice on the international students’ sociocultural adaptation in my study.

In addition, this moderation effect of ethnic involvement also suggests there might be group differences in international students’ sociocultural adaptation. The level of ethnic identity involvement did not predict sojourners’ sociocultural adaptation directly but served as the grouping criterion differentiating the relationship between perceived procedural justice and sociocultural adaptation among sojourners. In Figure 3-1, we can see clearly that this relationship differed between the international students with high and low ethnic identity involvement. For international students with low ethnic identity involvement, their perceived procedural justice and sociocultural adaptation was positively correlated as predicted. However, for international students with high ethnic identity involvement, it appears there was no relationship between their
perceived procedural justice and sociocultural adaptation. In other words, this suggests that sociocultural adaptation of international students with high ethnic identity involvement may be less responsive to the variation of procedural justice of the university’s services.

This phenomenon could be partly explained by Cohen and Wills’ buffering model (1985), which theorizes that high social support could maintain one’s well-being and buffer the impact of stress. According to my original hypothesis based on the buffering model, high ethnic identity involvement would buffer the impact of low procedural justice and maintain sojourners’ sociocultural adaptation. We can see that the buffering model correctly verified this relationship (Fig. 3-1). Participants with high ethnic involvement had less sociocultural adaptation difficulty when perceived justice was low. (Please notice in Figure 3-1 that higher tPPJ scores correspond to lower perceived procedural justice because the transformed tPPJ was significantly negatively correlated with the original PPJ). Therefore, ethnic identity involvement may be very important in sustaining international students’ sociocultural adaptation when perceived procedural justice is low.

However, it is worth noting that when perceived procedural justice is high, strong ethnic identity involvement may serve more as a stabilizing factor for international students’ possible growth, insofar as sociocultural adaptation can be considered a positive adjustment process and outcome. In Figure 3-1, we can see that when procedural justice was high (lower tPPJ scores), participants with low ethnic identity involvement had less sociocultural adaptation difficulty, but the sociocultural adaptation of participants with high ethnic identity involvement was about the same when perceived procedural justice was low. This finding showed some consistency with Neto’s (2002) study about Portuguese second generation immigrant adolescents, in which he found that there was a negative main effect of ethnic identity in predicting sociocultural
adaptation (Neto, 2002). However, my study did not find a significant main effect of ethnic identity. The stabilizing effect of ethnic identity involvement appeared only when perceived procedural justice was higher. Therefore, a remedial solution of improving procedural justice might not significantly benefit international students with strong ethnic identity involvement because their sociocultural adaptation may not be significantly related to procedural justice. Future research could focus on exploring the sociocultural adaptation of the participants with high ethnic identity involvement. It would also be interesting to assess the stability of ethnic identity in future studies using experimental or longitudinal designs.

In addition to these findings based on my main hypotheses, other variables that may be related to sojourners’ sociocultural adaptation were examined. It was found that international students’ level of discomfort in communicating in English was positively correlated with their level of sociocultural adaptation difficulty. This result is in line with previous findings that host-national language fluency is highly related with sojourners’ sociocultural adaptation (Senel, 2003; Ward et al., 2001). In addition, results indicated that international students’ length of study in the U.S. also negatively correlated with their level of sociocultural adaptation difficulty. This confirmed a previous finding that sojourners’ sociocultural adaptation became better as they stayed in the host nation longer (Ward & Kennedy, 1996a, 1996b). What is surprising is that perceived distributive justice also was negatively related to sociocultural adaptation difficulty in my sample. This is inconsistent with previous theory and studies that have indicated that distributive justice would be deemed less important by people (Brockner & Wiesenfeld, 1996; Chory-Assad & Paulsel, 2004). This finding may reflect the fact that international students indeed have fewer resources in the U.S. Future research could further explore these variables and how they might interact with perceived procedural justice or other cultural variables.
There are several limitations in my study that await further exploration in future research. The first limitation is that my study used a smaller and self-selected sample of international students in just one institution. One merit of the current study is that the sample seems roughly representative of the current international student body in U.S. colleges and universities. Future research that includes large and randomly selected samples may further confirm my findings and their generalizability. A second limitation in the current study is its correlational design. Although the time sequence was set to suggest a causal inference indicating the influence of perceived procedural justice on sociocultural adaptation, it may be argued that participants’ recollections could be biased based on current adjustment experiences. Longitudinal and experimental designs could further ascertain the direction of the relationship.

A third limitation of my study relates to the development and use of the PJI in a university setting. By modifying the HCJI to measure perceived procedural justice for a sojourner population, the PJI is the first measure that incorporates the concept of social justice for sojourners to evaluate the university’s services. Although the PJI had satisfactory reliability in the study sample and the original model, and the HCJI has been shown to be a reliable and valid measure in health care settings (Fondacaro, Frogner, & Moos, 2005), the validity of the PJI might be compromised due to the modification and use in a different population. Future research could further validate the PJI by comparing it with other instruments which measure perceived discrimination. Also, future studies may also apply the PJI to other minority populations in the university setting and explore its factor structure with different populations.

A fourth limitation of my study is that self-report measures might be subject to social desirability. It was found that the MEIM-ABC subscale was somewhat negatively skewed, which
might be the result of the participants’ tendency to provide socially desirable answers. In addition, some international students with certain cultural norms might not feel comfortable expressing their perceived injustice, especially regarding authority figures such as university representatives. This could also be a possible reason why perceived procedural justice was negatively skewed in my sample. Therefore, including a social desirability measure in future studies may be a viable way to address the issue. Finally, the level of sociocultural adaptation difficulty was measured by the SCAS mean score in my study. Previous research has examined multiple dimensions of sociocultural adaptation and their correlations with psychological well-being (Spencer-Oatey & Xiong, 2006). Therefore, the multiple dimensions of sociocultural adaptation and their relationships with perceived procedural justice and other variables could be examined in future research.

Overall, perceived justice appears to be an important construct worthy of greater attention for the sojourner population. My study only focused on perceived procedural justice and sociocultural adaptation; therefore, future research could also examine the interrelated relationships between international students’ perceived procedural and distributive justice and their sociocultural and psychological adjustment. Also, in addition to ethnic identity, future research could explore whether other cultural factors such as acculturation would have direct effects on sojourners’ sociocultural adaptation or a moderation effect on the relationships between sojourners’ perceived justice and adjustment.
APPENDIX A
DEMOGRAPHIC QUESTIONNAIRE

Please complete the following information. Circle on the item that best describes you. Please answer each question as accurately as you can. Remember that all your answers are strictly confidential.

1. What country are you from? (Please write the name of your country below)
   _______

2. What is your gender?
   A. Female
   B. Male
   C. Other, please specify and write here _______

3. What is your age?
   (Please write here) _______

4. What is your relationship status?
   A. Single, not in a relationship
   B. Single, in a relationship
   C. Engaged
   D. Married
   E. Other, please specify and write here _______

5. What is your marital status?
   A. Now married
   B. Widowed
   C. Divorced
   D. Separated
   E. Never married
   F. Other, please specify and write here _______

6. What is your family status?
   A. Alone in U.S.
   B. Living with spouse, family, or relatives in U.S.
   C. Other, please specify and write here _______

7. What is the name of the school you attend now?
   (Please write here) ____________________________

8. What are you currently enrolled in? (circle all that apply)
   A. Language Program
   B. Undergraduate/ Bachelor’s Degree Program
   C. Master’s degree or equivalent program (terminal master’s program)
   D. Doctoral degree program
   E. Other, please specify and write here _______
9. How long have you been in the U.S.? (Please write below)

TOTAL _______ year(s) ____________ month(s)

10. How long have you been studying in the U.S.? (Please write below)
TOTAL _______ year(s) ____________ month(s)

Please specify the time for the following categories:

Before college:
_______ year(s) ____________ month(s)

Undergraduate:
_______ year(s) ____________ month(s)

Graduate:
_______ year(s) ____________ month(s)

Language program:
_______ year(s) ____________ month(s)

Other:
_______ year(s) ____________ month(s)

11. Have you used counseling services on campus?
A. Yes
B. No
C. No, but I used/use counseling services outside of school

12. Will you consider using counseling services on campus in the future?
A. Yes, very likely
B. Maybe
C. Not likely
D. No, it is the last thing I would consider

13. What is the main reason you do not want to use the counseling services on campus?
A. Please circle this if you have used and/or will consider using the counseling services on campus if needed.
B. I do not want to be labeled as having a mental disorder
C. I do not know how counseling works and how it can help me
D. Counseling services are not going to help my problems
E. Language issues
F. I use off-campus counseling services
G. Other, please specify and write here __________
14. How comfortable are you using English to communicate with others?
   A. Very comfortable
   B. Comfortable
   C. Neutral
   D. Uncomfortable
   E. Very uncomfortable

15. Is English your mother tongue (first language)?
   A. Yes
   B. No, please write your first language here __________________

16. Do you want to stay in the United States after you finish school?
   A. Yes
   B. No
   C. Not decided yet
APPENDIX B
PERCEIVED JUSTICE INVENTORY (PJI)– UNIVERSITY REPRESENTATIVE

Section A

We would like to learn about your reactions to how your university representative (for example, staff at the international center, administrator, advisor, program director, or instructor, etc.) makes decisions or provide services that may have important influences on you or other international students.

Please think of a situation or an experience that you had with a university representative when you first came to study in the United States in which a decision was made or service was provided (for example, getting your new I-20, solving tuition fee related issues, transferring credits, deciding which courses to take and waive, disputing a grade, meeting program and school requirements, etc).

If your current university is different from the university you were studying at when you first came to the United States, please write that former university here ______________________ and use your experience with the former university representative to answer the questions.

PLEASE SELECT ONLY ONE SITUATION THAT AFFECTED YOU THE MOST AND BRIEFLY DESCRIBE IT BELOW

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Section B

Please answer the following questions USING THE SITUATION YOU DESCRIBED ABOVE.

1. Did this situation occur when you faced a staff member of the international center?
   
   Yes   No

2. Did this situation occur when you faced an administrator or a clerk at other school administrative offices (e.g., Registrar Office, Graduate School Office, or Financial Aid Office, etc.)?
   
   Yes   No

3. Did this situation occur when you faced a representative in your department/program?
   
   Yes   No
4. Did this situation occur when you faced another party/parties other than the ones listed above that were involved in this situation?

Yes  No

If yes, please specify and write the party/parties here

___________________________________________

5. Was the situation related to your academic study?

Yes  No

6. Did the situation affect your life outside of school?

Yes  No

7. Did other international students get involved in this situation?

Yes  No

8. Was this situation resolved?

Yes  No

If yes, how long did it take to resolve this situation? (Please write here)

_______year(s) _________month(s) _________day(s)
Section C

Read each item carefully and use that item to rate the situation you described above on the following scale, ranging from 1 (strongly disagree) to 4 (strongly agree). Please choose the number that most closely matches your response to each item.

1                                           2                                   3                                 4
Strongly Disagree  Mainly Disagree  Mainly Agree Strongly Agree

_____ 1. Your university representative listened to you.

_____ 2. Your university representative treated you in an impartial manner.

_____ 3. Your university representative handled the situation in a very thorough manner.

_____ 4. Your university representative did something improper.

_____ 5. Your university representative treated you with respect.

_____ 6. You were treated as if you didn’t matter.

_____ 7. You accepted your university representative’s decision.

_____ 8. Your university representative asked for your input before a decision was made.

_____ 9. Your university representative was open to your point of view.

_____ 10. Your university representative handled the situation in a very careless manner.

_____ 11. Your university representative was honest with you.

_____ 12. Your university representative showed little concern for you as an individual.

_____ 13. You were treated as a valued student member of the university.

_____ 14. You fully agreed with the solutions that you and your university representative arrived at.

_____ 15. This is a quality testing item, please just write 2 (Mainly Disagree) for this item.

_____ 16. Your university representative did not pay attention to what you had to say.

_____ 17. Your university representative was biased against you.
18. The decision was based on as much good information and informed opinion as possible.

19. You felt comfortable with the way your university representative handled the situation.

20. Your university representative treated you with dignity.

21. Your university representative probably treated you with less respect than other students.

22. You had a choice to reject your university representative’s recommendation.

23. Your university representative asked about your preferences for what should be done.

24. You felt you had personal control over how the situation was handled.

25. You felt you had personal control over the decision that was made.

26. Overall, your university representative treated you fairly.

27. Overall, you were satisfied with the way your university representative treated you during decision making.

28. Your university representative probably treated you worse than other students because of your personal characteristics.

29. You could have had the decision reconsidered.
Now, we would like you to focus on the **OUTCOME** of the situation you listed above.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly Disagree</td>
<td>Mainly Disagree</td>
<td>Mainly Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

_____30. The decision was based on meeting your needs.

_____31. All in all, the decision was fair to you.

_____32. Overall, you were very satisfied with the decision.

_____33. The decision was very favorable to you.

_____34. The decision was influenced by the amount you contribute to your university.

_____35. The decision was based on treating all students equally.

_____36. Your needs were not met.

_____37. Regardless of effort or input, the outcome here was based on meeting your needs.
APPENDIX C
THE MULTIGROUP ETHNIC IDENTITY MEASURE (MEIM)

In this country, people come from many different countries and cultures, and there are many
different words to describe the different backgrounds or ethnic groups that people come from.
Some examples of the various names of ethnic groups are Hispanic or Latino, African, Black or
African American, Asian, Asian American, Chinese, Filipino, Japanese, Indian, South Korean,
Taiwanese, American Indian, Mexican, Latin American, European American, Caucasian or
White, Irish, German, Greek, Northern Italian and many others. These questions are about your
ethnicity or your ethnic group and how you feel about it or react to it.

Please fill in: In terms of ethnic group, I consider myself to be ___________________________

My father's ethnicity is ______________________________________

My mother's ethnicity is ______________________________________

Use the numbers below to indicate how much you agree or disagree with each statement.

(1) Strongly disagree (2) Disagree (3) Agree (4) Strongly agree

_____ 1- I have spent time trying to find out more about my ethnic group, such as
its history, traditions, and customs.

_____ 2- I am active in organizations or social groups that include mostly members
of my own ethnic group.

_____ 3- I have a clear sense of my ethnic background and what it means for me.

_____ 4- I think a lot about how my life will be affected by my ethnic group membership.

_____ 5- I am happy that I am a member of the group I belong to.

_____ 6- I have a strong sense of belonging to my own ethnic group.

_____ 7- I understand pretty well what my ethnic group membership means to me.

_____ 8- In order to learn more about my ethnic background, I have often talked
to other people about my ethnic group.

_____ 9- I have a lot of pride in my ethnic group.

_____ 10- I participate in cultural practices of my own group, such as special food,
music, or customs.

_____ 11- I feel a strong attachment towards my own ethnic group.

_____ 12- I feel good about my cultural or ethnic background.
APPENDIX D
SCOCIOCULTURAL ADAPTATION SCALE (SCAS)

Sociocultural Adaptation Scale

Please indicate how much difficulty you experience in the United States of America in each of these areas.

Use the following 1 to 5 scale.

<table>
<thead>
<tr>
<th>no difficulty</th>
<th>slight difficulty</th>
<th>moderate difficulty</th>
<th>great difficulty</th>
<th>extreme difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. Making friends.
2. Finding food that you enjoy
3. Following rules and regulations.
4. Dealing with people in authority.
5. Taking an American perspective on the culture.
6. Using the transport system.
7. Dealing with bureaucracy (administrative systems, government, official procedures).
8. Understanding American value system.
10. Seeing things from an American’s point of view.
12. Dealing with someone who is unpleasant.
13. Understanding American jokes and humor.
15. Going to social gatherings.
16. Dealing with people staring at you.
17. Communicating with people of a different ethnic group.
18. Understanding ethnic or cultural differences.
<table>
<thead>
<tr>
<th>no difficulty</th>
<th>slight difficulty</th>
<th>moderate difficulty</th>
<th>great difficulty</th>
<th>extreme difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

19. Dealing with unsatisfactory service.
20. Worshipping (White “not applicable” if you do not worship).
21. Relating to individuals that you are attracted to.
22. Finding your way around.
23. Understanding American political system.
24. Talking about yourself with others.
25. Dealing with the climate.
26. Understanding Americans’ world view.
27. Family relationships.
28. The pace of life.
29. Being able to see two sides of an inter-cultural issue.
30. Understanding the local accent/language.
31. Living away from family members overseas/independently from your parents.
32. Adapting to local etiquette (manners, customs).
33. Understanding what is required of you at university.
34. Coping with academic work.
35. Dealing with staff at the university.
36. Expressing your ideas in class.
APPENDIX E
INSTITUTION REVIEW BOARD DOCUMENTS

1. TITLE OF PROTOCOL:
Effects of Perceived Justice, Ethnic Identity, Acculturation on International Students’ Social and Psychological Adjustment

2. PRINCIPAL INVESTIGATOR(s): (Name, degree, title, dept., address, phone #, e-mail & fax)

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(352) 871-6158
TongAn.Shueh@gmail.com

3. SUPERVISOR (IF PI IS STUDENT): (Name, campus address, phone #, e-mail & fax)

Dr. Kenneth G. Rice
P.O. Box 112250
Gainesville, FL  32611-2250
(352) 392-0601 ext. 246
kgrl@ufl.edu

4. DATES OF PROPOSED PROTOCOL: From _date of approval_ To 8/31/2007

5. SOURCE OF FUNDING FOR THE PROTOCOL:
(As indicated to the Office of Research, Technology and Graduate Education)
None

6. SCIENTIFIC PURPOSE OF THE INVESTIGATION:
The purpose of this study is to understand how international students’ perceived justice, ethnic identity, and acculturation influence their social and psychological adaptation here in the United States.

7. DESCRIBE THE RESEARCH METHODOLOGY IN NON-TECHNICAL LANGUAGE. The UFIRB needs to know what will be done with or to the research participant(s).

Participants will be asked to complete an online survey about their perceived justice, ethnic identity level, and sociocultural adaptation. Measures of depression, satisfaction with life, acculturation, and demographic questions related to language fluency, future residence plan, and counseling experiences will also be included in the survey.
8. POTENTIAL BENEFITS AND ANTICIPATED RISK. (If risk of physical, psychological or economic harm may be involved, describe the steps taken to protect participant.)

There are no anticipated risks and although some of the questions on the survey are of a personal nature, all responses will be confidential. The data will be stored in a file protected by a password which will only be known by the researchers. There is no compensation or direct benefit to the participants for participating in this study. The study results will be very helpful for the universities to improve their services and policies on international students.

9. DESCRIBE HOW PARTICIPANT(S) WILL BE RECRUITED, THE NUMBER AND AGE OF THE PARTICIPANTS, AND PROPOSED COMPENSATION (if any):
Three hundred international students at the University of Florida who are 18 years or older will be recruited to participate in this study. The invitation will be sent out through an email with the website link to the online survey. This email will be distributed through international student associations’ email listservs, international friendship organizations’ email listservs, the university international center’s listserv for international students, and possibly the email listservs of some UF departments and programs, ethnic church organizations, and other UF international student related associations in which there are many UF international students. The same invitation letter shown in the “Template for the Invitation Email” will also be posted on the above mentioned organizations’ websites and/or other UF international student related websites.

10. DESCRIBE THE INFORMED CONSENT PROCESS. INCLUDE A COPY OF THE INFORMED CONSENT DOCUMENT (if applicable).

On the first webpage of the online survey, the participants will be shown the consent form. It includes information about the project and the researchers, instructions for participating in this study, potential risks and benefits of the study, and contact information for investigators to answer any questions participants might have about the study. On the bottom of the consent form, the participants will be informed that by clicking on the “Press here to start” button, they indicate that they have read the consent form and agree to the procedures. The participants cannot proceed into the study unless they click that button, saying that they have read and agree with the informed consent form. All participants will also see a debriefing webpage after they finish the survey questions (enclosed). Participants can print a copy of the online informed consent and the debriefing webpages to keep for their records.

Please use attachments sparingly.

__________________________
Principal Investigator's Signature

_________________________
Supervisor's Signature
I approve this protocol for submission to the UFIRB:

____________________________
Dept. Chair/Center Director Date
Template for the Invitation Email

Topic: Survey on International Students’ Adjustment

Content:

Dear Fellow International Students:

Do you want to let your voice heard? Please take some time to participate in this online survey.

My name is Tong-An Shueh and I am a doctoral Counseling Psychology student at the University of Florida. I am conducting a study about how various systemic and personal factors might affect international students’ adjustment in the United States. This study is approved by the IRB office at the University of Florida.

Beside the demographic questions in this survey, you will answer questions relating to how you feel about university services for international students and how you feel about different cultures and life here in the United States. You will also answer questions about how you feel about yourself under these situations and how you adjust to the situations.

It takes about thirty minutes to complete the online survey. Your participation will greatly contribute to our understanding of international students’ adjustment processes here in the U.S. The study results will be very helpful for the universities to improve their services and policies for international students. Your answers will be strictly confidential.

Please click here to take the online survey. Your opinions and feelings are very important! However, if you have already taken this exact online survey before, please do not take it again.

(Website address will appear here for the participants to click)

If you have any questions, please feel free to contact me through the email, TongAn.Shueh@gmail.com.

Thank you so much!

Sincerely yours,

Tong-An Shueh
INFORMED CONSENT FORM

Please read this consent document carefully before you decide to participate in this study.

Purpose of the Research Study:

This questionnaire explores how international students’ adjustment might be affected by different systemic and personal factors.

What you will be asked to do in the study:

In this study, you will answer demographic questions that include items related to language fluency, future residence plan, and counseling experiences, etc. In addition, you will answer questions about how you feel when dealing with university representatives and how you feel about different cultures and life here in the United States. You will also answer questions about how you feel about yourself under these situations and how you adjust to the situations. There are seven parts of measurement in this online survey.

Time required:

About 30 minutes

Risks and Benefits:

There is no potential risk for participating in this study. By participating in the research, international students’ experiences could be understood more and the results could be used to improve universities’ services and policies for international students. There is no financial compensation for participating in this research.

Confidentiality:

Your responses in this study will be confidential to the extent provided by law. You will be assigned a code number, and your responses will be stored in a computer according to the code number and not by name. As such, your name will not be associated with any responses and will not be used in any report. Moreover, all data will be analyzed by group averages and not by individual responses.

Voluntary participation & right to withdraw:

Your participation in this study is completely voluntary. There is no penalty for not participating. You have the right to withdraw from the study at any time without consequence.

Whom to contact if you have questions about the study:

Tong-An Shueh, Department of Psychology, University of Florida, (352) 392-0601 x211, TongAn.Shueh@gmail.com

Dr. Kenneth G. Rice, Department of Psychology, University of Florida, (352) 392-0601 x246, kgr1@ufl.edu
Whom to contact about your rights as a research participant in the study:

UFIRB Office, Box 112250, University of Florida, Gainesville, FL 32611-2250; ph (352) 392-0433, IRB2@ufl.edu

Whom to contact about your rights as a research participant in the study:

I have read the procedures described above. By clicking on the link below, I voluntarily agree to participate in the study, and I can print this page if I wish to receive a copy of this consent form.
Template for Debriefing

You have now completed this online survey. First I would like to thank you for participating in this study.

Let me tell you a little bit about the study and some of the things we hope to find.

We are conducting this research in an effort to understand more how factors such as perceived justice in the university setting, ethnic identity, and acculturation could together affect international students’ social and psychological adjustment. Psychological adjustment was measured with scales for depression and life satisfaction. Demographic characteristics will also be used to help explain the relationships between variables.

We hope to find associations between the above mentioned factors and international students’ social and psychological adjustment. The results can help us to further understand international students’ psychological and social adjustment in the university setting, and the results might be useful to universities as they work to provide better services to international students.

You can print a copy of this webpage for your reference. If you have any questions or comments, please feel free to contact Tong-An Shueh through email, TongAn.Shueh@gmail.com, or his supervisor, Dr. Kenneth G. Rice, Department of Psychology through phone, (352) 392-0601 x 246 or email, kgr1@ufl.edu. If you have any questions about your rights as a research participant, you can contact the IRB office at UFIRB Office, Box 112250, University of Florida, Gainesville, FL 32611-2250 ph, (352) 392-0433, IRB2@ufl.edu

In addition, if you want to know the results of the study (what we found), feel free to contact Tong-An Shueh. We should know some of the results by the Spring 2007 semester.
Because fewer than expected participants have participated in this study, I am asking for approval to make minor changes in participant recruitment procedures. Basically, we want to enhance our recruitment by distributing paper copies to the potential participants. This revision has also been made because many international student-related websites limit the word number of a post.

In order to accommodate some websites’ word limitations in postings, a shorter invitation letter will also be used. The short version of the invitation letter is shown below, titled “Template for the Online Invitation letter (Short Version).”

In addition, participants will be recruited in locations where there are likely to be UF international students, such as during UF international student-related events and gatherings. The researcher will either distribute the paper version of the survey, the invitation letter, and the consent form directly to the potential participants or hand them to a responsible person for distribution. After the participants complete the survey, they could return the survey and the consent form to the same person; and they will at the same time receive the debriefing page. The distributed paper copy of the invitation letter, the informed consent form, and the debriefing form are no different than materials already approved for this study, except that we exclude the text regarding the online website because it is irrelevant for this procedure of collecting data. Another minor modification is that the sentence in the invitation letter used online that read, “However, if you have already taken this exact online survey before, please do not take it again” has been revised to, “However, if you have already taken this exact same survey before either online or on paper, please do not take it again.” Both the invitation letter and consent form are included with this memo.

Thank you so much!
Sincerely yours,
Tong-An Shueh
Dear Fellow International Students:

Do you want to let your voice heard? Please take some time to participate in this survey.

My name is Tong-An Shueh and I am a doctoral Counseling Psychology student at the University of Florida. I am conducting a study about how various systemic and personal factors might affect international students’ adjustment in the United States. This study is approved by the IRB office at the University of Florida.

Besides the demographic questions in this survey, you will answer questions relating to how you feel about university services for international students and how you feel about different cultures and life here in the United States. You will also answer questions about how you feel about yourself under these situations and how you adjust to the situations.

It takes about thirty minutes to complete the survey. Your participation will greatly contribute to our understanding of international students’ adjustment processes here in the U.S. The study results will be very helpful for the universities to improve their services and policies for international students. Your answers will be strictly confidential.

Your opinions and feelings are very important! However, if you have already taken this exact same survey before either online or on paper, please do not take it again.

Please return your completed survey and the inform consent form to the person who distributed the documents to you. If you have any questions, please feel free to contact me through the email, TongAn.Shueh@gmail.com.

Thank you so much!

Sincerely yours,

Tong-An Shueh
INFORMED CONSENT FORM

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Dr. Kenneth G. Rice, Department of Psychology, University of Florida, (352) 392-0601 x246, kgr1@ufl.edu

Whom to contact about your rights as a research participant in the study:

UFIRB Office, Box 112250, University of Florida, Gainesville, FL 32611-2250; ph (352) 392-0433, IRB2@ufl.edu
Whom to contact about your rights as a research participant in the study:

I have read the procedures described above. I voluntarily agree to participate in the study.

Printed
Name:________________________ Sign:_____________________________ Date:________________
You have now completed this survey. First I would like to thank you for participating in this study.

Let me tell you a little bit about the study and some of the things we hope to find.

We are conducting this research in an effort to understand more how factors such as perceived justice in the university setting, ethnic identity, and acculturation could together affect international students’ social and psychological adjustment. Psychological adjustment was measured with scales for depression and life satisfaction. Demographic characteristics will also be used to help explain the relationships between variables.

We hope to find associations between the above mentioned factors and international students’ social and psychological adjustment. The results can help us to further understand international students’ psychological and social adjustment in the university setting, and the results might be useful to universities as they work to provide better services to international students.

If you have any questions or comments, please feel free to contact Tong-An Shueh through email, TongAn.Shueh@gmail.com, or his supervisor, Dr. Kenneth G. Rice, Department of Psychology through phone, (352) 392-0601 x 246 or email, kgr1@ufl.edu. If you have any questions about your rights as a research participant, you can contact the IRB office at UFIRB Office, Box 112250, University of Florida, Gainesville, FL 32611-2250 ph, (352) 392-0433, IRB2@ufl.edu

In addition, if you want to know the results of the study (what we found), feel free to contact Tong-An Shueh. We should know some of the results by the Spring 2007 semester.
LIST OF REFERENCES


BIOGRAPHICAL SKETCH

Tong-An Shueh was born November 27, 1975 in Taipei, Taiwan. He grew up with his parents, one elder sister and one elder brother. He attended National Central University in Tao-Yuan, Taiwan and graduated in 1999 with a B.A. in English and American literature along with teacher education program. After graduating, Tong-An taught in middle school as an English teacher and a trainee counselor for 1 year. Tong-An served in the Taiwan Army for 2 years as a counselor officer. In 2002, he came to the United States to study at Indiana University, Bloomington, where he completed his M.S. in community counseling in 2004 and Ed.S. in mental health counseling in 2005. Tong-An joined the counseling psychology program at the University of Florida in Fall 2005. Tong-An will receive his M.S. in psychology in 2007 and will continue to pursue his Ph.D. in counseling psychology.