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Demographic Correlates of Acculturation and Sociocultural Adaptation: Comparing International and Domestic Students

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ABSTRACT

This study examined the relationship between international and domestic students' demographic factors on acculturation and sociocultural adaptation. It also examined the extent to which cultural values, uncertainty avoidance (UA) and power distance (PD), might explain two types of sociocultural adaptation: social interaction and localizing. A sample of 207 international and 173 domestic students from a northern California university completed a self-report survey. As expected, international students had higher sociocultural adaptation than U.S. students, but this difference did not vary by marital status or length of stay. Also, women who came from high UA and large PD countries (vs. low UA and high PD countries) had greater social interaction adaptation. These findings demonstrate that students' cultural backgrounds play an important role in their adaptation. This is an important finding as it signals that counselors in higher education institutes might need to collaborate with academic staff to help international students adjust. Female students from high UA and large PD countries may be especially in need of assistance to cope with sociocultural adaptation. Additional implications and future research needs are discussed.

Keywords: acculturation, counseling, international students, sociocultural adaptation

INTRODUCTION

According to the 2018 Institute of International Education's (IIE) annual report, international students constituted 5.5% (nearly 1.1 million students) of the total U.S.

higher education population. Although international students come from different cultural backgrounds, they experience similar adjustment problems and they experience them more than their domestic peers, who may also be adjusting to a new higher education setting (Duru & Poyrazli, 2011). According to Tummala-Narra and Claudius (2013), international students face challenges including problems with immigration status, coping with new foods and customs, limited English proficiency, and separation from their families and friends. These challenges constitute acculturation stressors of adjusting to a new culture (Yakunina, Weigold, & Weigold, 2013).

Acculturation refers to a process of cultural changes due to contact with others (Berry, 1997). Healthy acculturation is evidenced in making new friends in the host environment and engaging with the host culture. Acculturation problems are evidenced by loneliness, lack of confidence in English, lack of contact with the host culture, lack of social support, and stress-related illnesses (Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004; Ward & Searle, 1991). These problems also signify sociocultural adaptation problems (Constantine, Okazaki, & Utsey, 2004; Duru & Poyrazli, 2007; Wilton & Constantine, 2003; Wu & Mak, 2012). Sociocultural adaptation refers to "how well an acculturating individual is able to manage daily life in the new cultural context" (Berry, 2005, p. 709).

Although there is considerable research on sociocultural adaptation (e.g., Berry, 1997; Ward & Kennedy, 1994; Ward & Searle, 1991) among international students and sojourners, there is minimal research identifying demographic correlates of self-identified international students' sociocultural adaptation in the United States (exceptions include Duru & Poyrazli, 2007; Mokounkolo & Taillandeir-Schmitt, 2008; Polek, Berge, & Van Oudenhoven, 2008; Wilton & Constantine, 2003). Examples of demographics that have been studied in relation to immigrant and international student acculturation include age, sex, length of residence, and education (Duru & Poyrazli, 2007; Polek, Berge, & Van Oudenhoven, 2008; Ponterotto et al., 2001; Wilton & Constantine, 2003). Additionally, studies that look at college students' acculturation (e.g., Ponterotto et al., 2001; Wilton & Constantine, 2003) have tended to focus only on internationals and have not considered whether acculturation for domestics might be different (Ponterotto et al., 2001's, study, however focused on self-identified Greek Americans and Italian Americans). Fritz, Chin, and DeMarinis (2008) found that internationals compared with domestics had more difficulties on social issues and being apart from family, but the existing literature has generally not paid great attention to domestics. Therefore, this study examines the extent to which self-identified international students' (here on out referred to as "internationals") demographic factors relate to acculturation, specifically their identity with the host culture and their level of sociocultural adaptation in the United States. These relationships are also compared with a sample of self-identified domestic U.S. students (here on out referred to as "domestics"), that is, students who indicate that they were born and raised in the United States or identify themselves as American by nationality.

College students, whether domestic or international, likely experience sociocultural adaptation during their transitions to college life. Some adjust to increased independence to fulfill academic needs, whereas others adjust to the

experience of separating from their families and to their new social environment for the first time. Moreover, internationals deal with language barriers, potentially less social support, and all other aspects of living in a new culture (Duru & Poyrazli, 2007; Yeh & Inose, 2003). Acculturation research has tended to focus on a person's identity to both host and home country, and only internationals can report on both host and home country; domestics can only report on home country. It is important, therefore, to increase understanding on how both internationals and domestics adapt to a new environment and demographic factors related to this process. To be able to compare internationals and domestics, we focus on how students identify with the host culture, in this case the U.S. culture. It is important to compare self-identified domestics and internationals in terms of demographic variables and their level of identification with U.S. culture in order to avoid erroneous conclusions.

THEORETICAL FRAMEWORK

Acculturation

The acculturation process includes two primary dimensions, (a) maintenance of original cultural identity and (b) maintenance of relations with other groups (Ward & Kennedy, 1994). Within these two dimensions are four categories or acculturation strategies: integration, separation, assimilation, and marginalization (Ward & Rana-Deuba, 1999). Integration refers to maintaining normative practices and attitudes from one's native culture while concurrently adopting normative practices and attitudes from one's host culture. With the separation strategy, individuals avoid involvement with people in the new culture, but maintain relationships with people from their original culture. Assimilation refers to a preference to interact with the larger society, accompanied by little interest in maintaining connections with the original culture. Finally, in marginalization, individuals neither seek to maintain their original culture nor interact with the new society (Berry, 1997).

Several factors have been found to influence acculturation strategies. They include demographics, such as sex, length of residence, education, ethnic identity, values, public or private life domain, communication, participation in host culture, food choices, desire for children, and availability of co-ethnics (Berry, 1997; Krishnan & Berry, 1992).

Sociocultural Adaptation

People who have difficulty adapting to their host environment often experience acculturation problems (Berry, 2005). Levels of sociocultural adaptation differ across individuals and likely due to differences in individuals' psychological characteristics, attitudes of the dominant group, attitudes of their own cultural group, acculturation strategy, and demographic factors (Castillo, Zahn, & Cano, 2012). Searle and Ward (1990) developed the sociocultural adaptation scale (SCAS) to assesses respondents' feelings about how they fit in with the host culture and with their life in the host culture. In order to compare sociocultural adaptation between self-identified internationals and domestics, only items related to adapting to social interactions and

the local culture (referred to as "localizing") were retained. Thus, the study compares internationals and domestics on their levels of social interactions and localizing.

Hypotheses

Cultural Exposure and Biographic Data

The few studies that compare international and domestic students on sociocultural adaptation have shown that internationals have a tendency to experience more psychological and adjustment problems than domestic students (Poyrazli et al., 2004; Yeh & Inose, 2003). On the basis of the above findings, the first hypothesis is a general one to confirm prior results.

Hypothesis 1a: Internationals will have more sociocultural adaptation difficulty than domestics.

Hypothesis 1b: Internationals will identify less with the host culture than domestics.

Parental Residence

There is little research on the effects of parental residence on student adjustment, but Kagan and Cohen's (1990) work suggests a possible connection. Association with the host culture and divergence from one's own ethnic community helps individuals adjust to a host culture, and studies of first, second, and third generation ethnic groups usually support this idea (Kagan & Cohen, 1990). Although no studies have directly examined the extent to which a person's caregiver is acculturated into U.S. culture, it is likely that caregivers who were not born in the host culture are less able to support the child's acculturation into the host culture. Therefore, it is hypothesized that:

Hypothesis 2: For either internationals or domestics, caregivers who have lived in the United States at some point in their lives (i.e., first, second, or third generation U.S.-born or immigrant to the United States) will have greater identification with the host culture (an indicator of integration or assimilation) and less sociocultural adaptation difficulty than students whose caregivers never immigrated to the USA (i.e., never lived in the USA).

Length of Stay

Length of stay is another demographic factor that may be related to acculturation and sociocultural adaptation difficulty. Wilton and Constantine (2003) found that Latin American and Asian students reported lower levels of distress the longer they resided in the USA. Therefore, it is hypothesized that:

Hypothesis 3: Internationals' length of stay in the USA will negatively relate to sociocultural adaptation difficulty and positively relate to identification with the host culture. The more time the internationals live in

the USA, the greater their identity with the host culture and the less sociocultural adaptation difficulty.

Marital Status

Marital status is another potential correlate of sociocultural adaptation difficulty. Among students, previous research offers mixed findings. In one, Asian students found that social support negatively correlated with sociocultural adaptation difficulty and that married students reported higher levels of social support than single students (Poyrazli et al., 2004). Thus, married students might have less sociocultural adaptation difficulty than single students. However, in another study, married students reported higher levels of sociocultural adaptation difficulty (Duru & Poyrazli, 2007). Despite the equivocal results and given that literature on spousal or partner support shows ameliorative effects, we hypothesize:

Hypothesis 4: Married internationals will have lower mean scores on sociocultural adaptation difficulty and greater identification with the host culture than single internationals.

Role of Sex

Some studies comparing male and female internationals did not find any differences in terms of acculturation or sociocultural adaptation (Duru & Poyrazli, 2007; Yeh & Inose, 2003). However, Cakir and Guneri (2011) found that Turkish female (compared to male) immigrants to the United Kingdom or USA did not have positive acculturation (i.e., they did not identify with the host culture). This study seeks to add incremental findings regarding female (vs. male) internationals', as well as domestics' (for which there is no research), sociocultural adaptation difficulty, which could serve as a foundation for further studies of international students in comparison to immigrants from the same countries or domestic students.

Research Question 1: Do international and domestic female students differ from international and domestic male students on sociocultural adaptation difficulty?

Cultural Differences

When internationals enter a new culture, they could experience uncertainty about the culture, which could create anxiety. For example, Yeh and Inose (2003) found that compared with students from Asia, Africa, and Central America, students from Europe were significantly less likely to experience acculturative distress. According to Hofstede (2001), every society reinforces its own ways to adapt to uncertainty. Uncertainty avoidance (UA), that is, a tendency to escape from ambiguous situations (Hofstede, 2001), is one type of (culture-level) adaptation. Different cultures reinforce different ways to react to ambiguous situations. Hofstede defined low UA cultures as those where people are less resistant to change, have lower levels of anxiety and strain, and have greater subjective well-being than people in high UA

cultures. Cultures rated high on UA encourage certainty in social and institutional processes in order to enable individuals to know how to behave in various situations (Hofstede, 2001). On Hofstede's (2001) scale of 0 to 100, a low score means that the people in the country are more comfortable with ambiguity, more likely to take risks, and less dependent on structured rules. Countries with high scores on UA reinforce stability, structured rules, and its people are less comfortable taking risks (Hofstede, 2001).

Power distance (PD) is another salient cultural value that evaluates the degree to which less powerful members in a society accept and expect power to be spread unequally (Hofstede, 2001). Low PD cultures emphasize equality and openness between boss and subordinate, whereas high PD cultures emphasize hierarchy, power, and wealth (Hofstede, 2001). In countries where men and women are not equal and rules for interacting with others are strict, women are less likely to be independent decision-makers (Mann et al., 1998) and, if alone in a host culture, are likely to experience a great deal of sociocultural adaptation difficulty (Lee & Padilla, 2014). However, there is little research on this topic; therefore, we pose the following question:

> **Research Question 2:** Do female internationals differ on sociocultural adaptation as a function of their countries' rankings on UA and PD cultural values?

METHODS

Procedures

This study used archival data obtained from the second author. Surveys were distributed directly to undergraduate and graduate domestics and internationals in a northern California university classroom setting and also via the U.S. Postal Service to international students for whom the International Students Services office had addresses. In the domestics' survey, participants compared their experiences and behaviors with other people from the USA whereas in the internationals' survey, participants compared their experiences and behaviors with other people from their home country and also with people from the USA.

Participants

The archival dataset used for this study included 406 students. Data for 26 participants were discarded because the participants completed less than two-thirds of the survey. The final dataset included 380 students: 173 domestics and 207 internationals. Among the domestics, 39.4% were male, and 60.6% were female. Among internationals, 45.1% were male, and 54.9% were female. The length of internationals' current stay in the USA ranged from less than a year to 23 years (M = 4.33, SD = 3.37). The majority of domestics were single (90.17%), and 4.04% were married, remarried, or living with a partner. Among internationals, 81.46% were single, and 16.10% were married, remarried, or living with a partner.

Most (60.5%) internationals were born in East Asia/Pacific Islands, 16.6% were born in West Asia, 10.2% were born in Europe, and 6.3% were born in Latin America/Caribbean. Furthermore, the majority (85.4%) of students who completed the domestic survey were born in the USA; 10.5% were born in East Asia/Pacific Islands. Students who were born outside of the USA but completed the domestic survey did so because they self-identified as U.S. students.

Internationals' and domestics' caregivers' immigration status (i.e., the number of generations in the USA) were also gathered. Caregiver refers to the primary person who raised and took care of the study participant. Typically, the caregivers are the parents. Among domestics, 43.3% of primary and 42.1% of secondary (meaning the 2nd most relevant person who raised the participant) caregivers are immigrants to the USA. For domestics, 29.2% of primary caregivers are third generation U.S. born, 15.2% are second generation U.S. born, and 12.3% are first generation U.S. born. Among the secondary caregivers of domestics, 37.2% are third generation, 7.6% are second generation, and 13.1% are first generation U.S. born.

Among internationals, the majority of students' caregivers had never immigrated to the USA; however, at least 12% of the internationals' caregivers had immigrated to the USA. Specifically, among the persons perceived as primary caregivers, 11.3% were immigrants to the USA, 1.0% were first generation U.S.-born, and only 0.5% were third generation U.S.-born. None of the internationals had second generation U.S.-born primary caregivers. Among secondary caregivers, 11.2% were immigrants to the USA, and only 0.6% were third generation U.S.-born. None of the internationals' secondary caregivers were first or second generation U.S.-born.

Measures

Acculturation Index

The Acculturation Index (AI) contains 21 cognitive and behavioral items related to current life (e.g., language, self-identity, cultural activities, clothing, and recreational activities; Ward & Kennedy, 1994). When responding to each of the 21 items, internationals rated the similarity of cultural experiences to people from their home country and to people from the USA, whereas domestics provided similarity ratings to people from the USA. Participants evaluated their current lifestyle and then rated their agreement on a 7-point scale from *strongly disagree* (1) to *strongly agree* (7). Higher mean scores represented stronger identification with the home and/or host country. The co-national identification (i.e., identifying with one's home country) mean item score for internationals was 4.70 (SD = 0.87), host-national identification (i.e., identifying with one's host country) mean item score for internationals was 4.13 (SD = 0.90), and the mean item score for co-national identification among domestics, indicating identification with home country, was 4.34 (SD = 0.71). Internal consistency coefficients were strong. Among internationals, α = .91 for co- (home)-national identification and α = .89 for host-national identification. For domestics, α = .86 on identification with the USA.

Sociocultural Adaptation

The SCAS (Ward & Kennedy, 1999) attempts to tap into intercultural competence and, per the originators of the measure, contains anywhere from 10 to 41 items reflecting behavioral and cognitive aspects of adaptation. It "is a flexible instrument and can be easily modified according to the characteristics of the ….sample" (Ward & Kennedy, 1999, p. 662). A 40-item measure of SCAS was included in the survey completed by the current sample population (not included is "living with your host family," as the item was not relevant to the international student population at the university). Most of the 40 items attended specifically to adaptation factors of foreign nationals, rather than locals. For example, "adapting to local etiquette," "getting used to the pace of life," "Getting used to the local foods," and "using the transportation system" were not clearly relevant for a comparison with domestic students of a primarily commuter university (i.e., a university to which most students drive from their homes and do not live on campus). The scale measures the extent to which participants feel they fit in with U.S. culture. On a 5-point scale, ranging from *no difficulty* (1) to *extreme difficulty* (5), participants evaluated the amount of difficulty with behavioral and cognitive adjustment to each of 40 life factors. Higher mean item scores represent more sociocultural adaptation difficulty, and lower mean scores represent less difficulty, indicative of greater adjustment.

Given the aim of this study was, in part, to compare sociocultural adaptation between domestic and international students, the authors *a priori* identified items from the 40-item measure that appeared to be potentially relevant to both samples. This process resulted in 19 items that were then subjected to an exploratory factor analysis (EFA). Five items[1] did not load on to any factor. After a 14-item EFA six additional items[2] were omitted because they did not clearly load on to the two expected factors related to social interactions and local adjustment (or localizing). Social interaction refers to the process by which we act and react to those around us and includes four items that are related to social situations, including making friends, making yourself understood, going to social events/gatherings/functions, or talking about yourself with others. Factor loadings for the four items on social interaction ranged from .72 to .78 among internationals and .71 and .80 among domestics. The internal consistency for social interaction was .74 for internationals and .75 for domestics in the current sample. Localizing refers to adjusting to a particular area and includes four items, including understanding locals' world view, taking local perspective on the culture, understanding the local value system, and seeing things from the locals' point of view. Factor loadings for the four items on localizing ranged from .84 to .89 among internationals and .81 and .92 among domestics. The internal

1 The items included: "dealing with foreign staff at the university," "understanding the local accent/language," "finding your way around," "being able to see two sides of an intercultural issue," and "dealing with unsatisfactory service."
2 The items included: "following rules and regulations," "dealing with people in authority," "adapting to local accommodation," "communicating with people of a different ethnic group," "understanding jokes and humor," and "dealing with someone who is unpleasant/angry/ aggressive."

consistency of localizing was $\alpha = .88$ for internationals and $\alpha = .89$ for domestics in the current sample.

Uncertainty Avoidance and Power Distance

In order to address the second research question whether sociocultural adaptation difficulty varies by countries' rankings on UA and PD culture values, we categorized internationals' home countries as high, medium, or low on UA and PD based on Hofstede's (2001) rankings and website (https://www.hofstede-insights.com/) rankings of countries. To have adequate cell sizes, we created three clusters consisting of low UA and high PD cultures (China, Vietnam, India, Malaysia, Philippines, Indonesia, and Kenya), high UA and medium PD cultures (Iran, Thailand, Taiwan, and Pakistan), and high UA and high PD cultures (Argentina, Belarus, Brazil, Bulgaria, Colombia, Greece, Hungary, Japan, South Korea, Mexico, Burma, Poland, Russia, Serbia, Slovenia, Spain, and Turkey).

Data Analysis

Independent samples two-tailed *t* test and Pearson correlation were used to test Hypotheses 1 to 4. Analysis of variance (ANOVA) was used for the research questions. In order to address Research Question 2, we used a one-way ANOVA to test for differences among the three clusters: low UA and high PD, high UA and medium PD, and high UA and high PD on social interaction difficulty and localizing difficulty**.**

RESULTS

Cultural Exposure and Biographic Data

Hypothesis 1a stated that internationals will have more sociocultural adaptation difficulty than domestics. An independent samples *t* test supported the hypothesis, $t(377) = -3.55$, $p < .05$; $t(376) = -2.48$, $p < .05$. Internationals ($n = 206$) had significantly more difficulty than domestics ($n = 194$) on both social interaction ($M = 2.23$, $SD = 0.82$ versus $M = 1.94$, $SD = 0.75$) and localizing ($M = 2.01$, $SD = 0.85$ versus $M = 1.79$, $SD = 0.82$) measures. Hypothesis 1b stated that internationals will identify less with the host culture (U.S. culture) than domestics will. An independent samples *t* test, however, yielded no significant difference between internationals ($M = 4.41$, $SD = 0.67$) and domestics ($M = 4.34$, $SD = 0.71$), $t(373) = -0.95$, *ns*.

Parental Residence

Hypothesis 2 stated that students who self-identify as either international or domestic and for whom one or both caregivers are first, second, or third generation U.S.-born or immigrants to the USA will (a) identify more with the host country (i.e., the USA) and (b) have less sociocultural adaptation difficulty than students whose caregivers never immigrated to the USA. Because in this sample, all caregivers of students who identify as domestic were living in the USA, this hypothesis could be

tested only for the internationals. Hypothesis 2 was partially supported. Internationals whose first primary caregivers were immigrants to the USA (n = 24; M = 4.84, SD = 0.81) reported greater identification with the USA than internationals whose first primary caregivers never immigrated (n = 168; M = 4.35, SD = 0.64; t(190) =3.33, p < .05). Identification with the USA did not differ between internationals whose second primary caregivers were immigrants to the USA (n = 20; M = 4.59, SD = 0.67) and internationals whose second primary caregivers never immigrated to the host country (n = 147; M = 4.37, SD = 0.66, t(165) = 1.35, *ns*.

The second part of the hypothesis, which stated that internationals whose caregivers are first, second, or third generation U.S.-born and immigrants to the USA, will have less sociocultural adaptation difficulty than students' whose caregivers never immigrated, was not supported. The means are in the predicted direction, with internationals whose first caregiver was an immigrant to the USA, (n = 25; M = 2.12, SD = 0.92) having less social interaction difficulty than those whose first caregiver never immigrated to the USA (n = 170; M = 2.22, SD = 0.80), t(193) = −0.58, *ns*, but the difference was not significant. Also, internationals whose second caregiver was an immigrant to the USA (n = 20; M = 2.21, SD = 0.97) did not differ on social interaction from internationals whose second caregiver was never an immigrant (n = 149; M = 2.17, SD = 0.77), t(167) = 0.24, *ns*.

Likewise, localizing difficulty did not differ between internationals whose first primary caregiver was an immigrant to the USA (n = 25; M = 2.00, SD = 1.02) and international students whose first primary caregiver never immigrated (n = 169; M = 1.99, SD = 0.82), t(192) = 0.04, *ns*. Localizing difficulty also did not differ significantly between internationals whose second primary caregiver was an immigrant to the USA (n = 20; M = 1.87, SD = 0.98) and those whose second primary caregiver never immigrated (n = 148; M = 2.00, SD = 0.84), t(166) = −0.61, *ns*.

Length of Stay

Hypothesis 3 stated that internationals' length of stay in the USA will negatively relate to sociocultural adaptation difficulty. It was expected that the more time students lived in the USA, the more they would have identified with the country and the less social interaction and localizing difficulty they would have reported. Pearson correlation analyses did not reveal a significant correlation between length of stay and sociocultural adaptation difficulty (see Table 1).

Table 1: Descriptive Statistics and Intercorrelations Among Study Variables for International Students (n = 207)

Variables	*M*	*SD*	1	2	3	4
1. Length of stay(months)	51.97	40.42	—			
2. Social interaction	2.23	0.82	−.01	**.74**		
3. Localizing	2.01	0.85	−.12	.43*	**.88**	
4. Host country identity	4.41	0.67	.07	−.21*	−.32*	**.91**

Note. $p^* < .05$. Coefficients in bold represent Cronbach's alpha (α) internal consistency coefficients.

Although not hypothesized, host country identity negatively correlated with social interaction and localizing difficulty. Furthermore, localizing and social interaction difficulty positively correlated with each other.

Marital Status

Hypothesis 4, that married internationals will demonstrate less sociocultural adaptation difficulty and greater identification with the host culture than single internationals, was not supported. Married internationals (n = 33; M = 2.20, SD = 0.78; M = 2.05, SD = 0.77) did not differ significantly from single internationals (n = 167; M = 2.22, SD = 0.82; M = 1.99, SD = 0.86) on either social interaction and localizing difficulty, respectively, $t(198) = 0.14$; $t(197) = -0.31$, *ns*. Also, married internationals (M = 4.35, SD = 0.65) did not differ significantly from single internationals (M = 4.43, SD = 0.69) on identification with the host culture, $t(194) = 0.60$, *ns*. A post hoc power analysis shows that the effect sizes (Hedge's g) of .025 and .071 (on localizing and social interaction, respectively) are trivial. Observed power of 3.4% and 5.9%, respectively, (at $p < .05$) indicates very low likelihood of Type I error.

Role of Sex

The first research question indicated if self-identified female internationals and domestics differ from male internationals and domestics on sociocultural adaptation difficulty. Two-way ANOVA was conducted to examine main effects for sex (male or female) and student type (international or domestic) on sociocultural adaptation. Significant main effects emerged for both sex $F(1,370) = 6.60$, $p < .05$ and student type $F(1, 370) = 6.66$, $p < .05$ on social interaction difficulty. Male students had higher social interaction difficulty than female students. Internationals had higher mean scores on both social interaction and localizing difficulty than did domestics (see Table 2). The interaction between sex and student type was not significant on either sociocultural adaptation component.

Table 2: Analysis of Variance for Two Types of Sociocultural Adaptation Difficulty

Source of variation	*SS*	*Df*	*MS*	*F*	ω^2
Social interaction difficulty					
Main effects					
Sex (a)	3.99	1	3.99	6.59*	.02
Student type (b)	6.66	1	6.66	10.99*	.03
a × b	1.22	1	1.22	2.01	.00
Residual	224.36	370	0.61		
Total	1882.48	374			
Localizing Difficulty					

Main effects					
Sex (a)	0.63	1	0.63	0.89	.00
Student type (b)	3.60	1	3.60	5.13*	.01
a × b	0.37	1	0.37	.52	.00
Residual	259.53	369	0.70		
Total	1633.37	373			

*$p < .05$

Cultural Differences

Research Question 2 asked if female internationals' sociocultural adaptation differs due to their home countries' scores on UA and PD. A one-way ANOVA revealed a significant effect for countries' UA/PD category on social interaction difficulty ($F[2, 100] = 3.21$, $p < .05$; see Table 3). A Bonferroni *post hoc* test revealed that social interaction difficulty was significantly lower for the low UA high PD cluster ($M = 1.95$, $SD = 0.61$) than for the high UA high PD cluster ($M = 2.41$, $SD = 0.84$, $p < .05$). Mean scores on localizing did not differ across culture clusters, $F(2, 99) = 0.41$, *ns*.

Table 3: Female International Students' Mean Scores on Sociocultural Adaptation Difficulty Across Three Cultural Clusters

	Sociocultural adaptation difficulty		
Variables	HUAHPD	HUAMPD	LUAHPD
Social Interaction			
M	2.41[a]	2.26	1.95[a]
SD	0.84	0.92	0.61
n	40	28	35
Localizing			
M	2.11	1.95	1.97
SD	0.89	0.71	0.79
n	40	28	34

Note. HUAHPD = High Uncertainty Avoidance High Power Distance; HUAMPD = High Uncertainty Avoidance Medium Power Distance; LUAHPD = Low Uncertainty Avoidance High Power Distance. [a]The shared superscript denotes a significant difference between the means, $p < .05$.

DISCUSSION

The primary purpose of this study was to examine the extent to which demographic factors, including sex, length of stay, marital status, and parental background, relate to internationals' acculturation and sociocultural adaptation to the USA. These relationships were compared to a sample of domestics in order to demonstrate that internationals' sociocultural adaptation difficulty is, in fact, due to being an international student and not merely because the person is a student. Until now, most researchers (e.g., Duru & Poyrazli, 2007; Yeh & Inose, 2003) have studied

internationals without comparing their responses to those of domestics. One study that compared internationals and permanent U.S. resident students did not find any significant differences in terms of their state of mood and irritability; however, internationals found it harder to acculturate than domestics (Fritz et al., 2008).

Sociocultural Adaptation, Acculturation, and Demographic Factors

Cultural Exposure and Biographic Data

It was expected that internationals in the USA would have more sociocultural adaptation difficulty and less identification with the host culture compared with their U.S. domestic counterparts. Hypothesis 1 was partially supported; internationals had more sociocultural adaptation difficulty than domestics, as measured in terms of social interaction and localizing. This result supports previous findings (Duru & Poyrazli, 2007; Poyrazli et al., 2004; Yeh & Inose, 2003) asserting that internationals in the USA have a greater tendency than domestics to experience psychological and adjustment problems. However, there were no differences between internationals and domestics in terms of identification with the host culture. Internationals are likely to be familiar with the U.S. culture before their arrival. Once in the host country, they may find that making cognitive and behavioral changes to align with U.S. culture is desirable and may "adopt" these attributes rather easily. Thus, they may report similar levels of identification with the USA on the Acculturation Index. However, making these changes may be both difficult and stressful. The items retained from the SCAS reflect both personal and cultural challenges. Going to social events and making friends in a new culture may be more difficult and challenge internationals at a deeper level than reporting an "identification" with a new culture. Fritz et al. (2008) found that Asian students had a harder time making new friends than European or U.S. students. Making friends is not easy, and it could be harder for people from some cultures than other cultures.

Parental Residence

It was expected that self-identified internationals' and domestics' caregivers who are first, second, and third generation U.S.-born and immigrants to the USA will have greater host national identification and less social interaction and localizing difficulty than students' whose caregivers never immigrated to the USA. In this analysis domestics' data could not be included because their parents were all U.S.-born or immigrated to the USA. For this reason, only internationals' data were used, and the hypothesis was partly supported. Internationals whose primary caregivers were immigrants to (or born in) the USA had greater host national identification than those whose caregivers never immigrated to the USA. This result supports previous findings that found internationals who are English speaking at home had greater host national identification than students with non-English speaking parents at home because speaking the host language facilitates and contributes to cultural adjustment such as acculturation (Kagan & Cohen, 1990). Although it is not definitively known if the students who are more self-identified with the host culture spoke English at

home, the mere connection with the USA clearly played a role in their identification. In addition, the study revealed that primary caregivers influence students' identification with the host culture, but secondary caregivers do not. Only the primary caregiver's status made a difference in students' identification.

Parental residence did not affect students' sociocultural adaptation, on either social interaction or localizing dimensions. While caregiver residence related to student acculturation/identification, different acculturation strategies did not translate to differences in sociocultural adaptation. Sociocultural adaptation difficulty is likely a result of more factors than simply one's degree of "identification" with the host culture.

Length of Stay

It was expected that internationals' length of stay in the USA would negatively relate to sociocultural adaptation difficulty and positively with host country identification. The more time the student had lived in the USA, the more they were expected to identify with it and the less sociocultural adaptation difficulty they would experience. However, like Ward and Searle (1991), as well as Zhao (2010) and Wilson (2011), no significant relationship was found between length of stay and either identification with the host culture or sociocultural adaptation. These results, therefore, do not support other findings (e.g., Kuo & Roysircar, 2004; Wilton & Constantine, 2003) that internationals report lower levels of distress if they resided in the USA for longer periods. These equivocal results may be due to certain cultural and individual factors combining in ways that we have not detected yet, which may variably affect sociocultural adaptation for some internationals and not others, regardless of length of stay. Perhaps additional (unmeasured) factors are influencing how and whether length of stay affects adaptation and sociocultural adaptation.

Marital Status

The fourth hypothesis, that married internationals would report less sociocultural adaptation difficulty and greater identification with the host culture than single internationals, was not supported. Married and single internationals did not differ on identification with the host culture, localizing, and social interaction difficulty. Lack of support for the hypothesis is unlikely due to sample size (n_{single} =167 vs. $n_{married}$ = 33) of internationals in the study. Thus, per the effect sizes and power analyses, even a reasonably larger sample size for the two groups would unlikely yield significant differences. It may be concluded, therefore, that sociocultural adaptation and host-culture identification does not differ based on marital status. Thus, neither findings indicating that married students report higher levels of sociocultural adaptation difficulty (Duru & Poyrazli, 2007) nor the suggestion that married students experience more stress due to family obligations (Yellig, 2010) were supported. Mohd-Yusoff (2010) did not find significant differences on sociocultural adaptation by marital status among international undergraduate students, surmising that students might have social support from their families, friends, and university personnel. Also, Alshammari (2012) and Thangiah (2010) did not find any relations between marital

status and sociocultural adaptation. Perhaps marriage in itself can be a stressor for some and a support resource for others.

Role of Sex

Experiencing sociocultural adaptation difficulty is a normal process for both female and male students. Two research questions were posed in this study: (1) How do self-identified international and domestic male and female students compare on sociocultural adaptation? (2) Do female internationals differ on sociocultural adaptation as a function of their countries' rankings on UA and PD cultural values? The answer to the first research question is that male and female students, whether domestic or international, did not differ on sociocultural adaptation. However, when combining internationals and domestics, male students had greater social interaction difficulty than female students. This result corroborates previous research findings that there is a difference between male and female students, in general, on sociocultural adaptation (Crockett et al., 2007; Lee & Padilla, 2014). One possible explanation is that women, whether international or domestic, may have better coping skills and may be more open to seeking support than men (Ye, 2006).

The analysis of responses to the second research question suggests that female internationals from cultures with high UA and large PD, such as Argentina, Japan, and South Korea, had greater social interaction difficulty than female internationals from cultures that were low on UA value and high on PD value, such as China, Vietnam, and India. People from high UA cultures tend to see difference as dangerous (Hofstede, 2001), so the current results, wherein the women from high UA cultures had greater social interaction difficulty than others, is consistent with Hofstede's (2001) assertions. Internationals from high UA cultures tend to be less comfortable taking risks, and they usually desire more stability. In contrast, people in cultures with low UA value tend to be more comfortable with ambiguity and like to take risks. This description of UA cultures might explain why internationals who are coming from China, Vietnam, and India have less sociocultural adaptation difficulty than their counterparts. People from some cultures or national groups might be more adaptable to a new culture than others because they have cultural knowledge and intercultural skills (Ward & Kennedy, 1999). However, caution is warranted in generalizing these cultural characteristics to forecast sociocultural adaptation difficulty because the sample in the current study consisted of individuals who came from a fewer array of low UA/high PD countries (i.e., 35 people from seven countries) than high UA/high PD countries (40 people from 17 countries).

Implications of Findings

The present study has important implications for personnel in higher education, such as faculty, advisers, and counselors. That internationals reported more sociocultural adaptation difficulty than their domestic counterparts suggest they may need more support from the institution to cope with the unique stressors. Moreover, internationals' difficulties probably stem from different stressors than do domestics' difficulties. Internationals' unique stressors might include language barriers, cultural

differences, education system, and the physical environment. It is imperative that counselors meeting with students of any cultural background know to expect that different cultural norms, ideas about counseling services, and values held could affect how well interventions intended to mitigate sociocultural difficulties would work out (Olivas & Li, 2006). Research on internationals' psychological needs has shown that they face adjustment difficulties more than their native-born counterparts (Yakushko, Davidson, & Sanford-Martens, 2008). Unfortunately, however, internationals are less likely than domestics to use counseling services (Hyun, Quinn, Madon, & Lustig, 2007; Yakunina & Weigold, 2011), because either internationals are not aware of their need for mental health services (Hyun et al., 2007) or they could experience cultural stigmas for seeing a therapist (Constantine et al., 2004; Hyun et al., 2007).Therefore, college counselors should be prepared to understand the variety of stressors internationals face and their conceptions of therapy in order to help internationals cope with the stressors and perceived stigma of counseling services.

Furthermore, male internationals and domestics reported more social interaction difficulty than female students, which suggests that they might need more help with social situations. This highlights the important role of sex in stress-related social interactions. Having a caregiver who has immigrated to the USA was associated with internationals' identification with the host culture. However, it did not make a difference in terms of sociocultural adaptation. Counselors should be ready to investigate difficulty with sociocultural adaptation whether or not students with caregivers who immigrated to the USA report high levels of identification with the host culture.

Likewise, it is recommended that internationals could use blogging for social support when they are adjusting to a new culture. They can share their experiences and help others to deal with uncertainty and anxiety. According to Nardon, Aten, and Gulanowski (2015), expatriates gain knowledge, new perspectives, and new understanding through blogging, and they feel comforted. Moreover, they suggest that blogging could be an alternative to face-to-face communication to provide social support for adjustment.

Finally, female internationals coming from countries high on UA and high on PD have greater social interaction difficulty than female students from low UA and high PD countries. This result provides a new depth to simply labeling students international or domestic; it provides greater awareness that students' cultural backgrounds play an important role in their adaptation. This cultural nuance is important because it could also explain why internationals' acculturation might differ and why students from some countries might have more difficulty than others. Using this finding, academic staff and counselors can look into how to support internationals who are coming from low versus high UA countries.

Limitations and Future Research

This study has a number of limitations. First, the present dataset is made up of internationals primarily from Asian countries, which means that the conclusions

should be considered tentatively, as more varied representation of cultures are needed to reduce potential bias. Future studies should attempt to survey a larger number of internationals studying in the USA from the Middle East, Africa, South and Central America, and Australia. Further studies also should gather more information about domestics' adaptation process to college or university. Although domestics are staying in the same country, they often leave their homes for a college and still have to adapt to life at a university. Their sociocultural adaptation and adjustment to college life may also be a kind of culture shock that, while not necessarily different at the national level, is different at social and contextual levels.

A second potential constraint is that most of the students in the dataset were single; however, despite this limitation, a power analysis shows that even with an equal number of participants in both categories, differences on sociocultural adaptation among single and married students would not differ. Future research should look more in-depth into the marital life effect, such as marital stressors and marital support on sociocultural adaptation because factors beyond being married itself could be an explanation for mixed results. Third, research to date has yielded equivocal findings regarding the effects of length of stay in the USA on internationals' adaptation patterns. Future research should look into factors that might interact with length of stay, including personal characteristics, such as shyness or assertiveness, and cultural variables, such as UA or PD.

Fourth, the entire sociocultural adaptation measure was not used for the analysis because some items were only relevant to internationals. The eight items retained had good psychometric properties, but it may be beneficial to create a measure *a priori* that aims at assessing both internationals and domestics' sociocultural adaptation, to determine whether it is due to being in a new country or to the situation. Finally, another path for future research may be to employ a longitudinal design that tracks the same study participants over a single year or several years from the time they enter the USA and observe changes that happen over time.

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