

Peer Reviewed Article

ISSN: 2162-3104 Print/ ISSN: 2166-3750 Online

Volume 4, Issue 4 (2014), pp. 314-329

©*Journal of International Students*

<http://jistudents.org/>

Acculturation and Linguistic Factors on International Students' Self-Esteem and Language Confidence

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Abstract

Acculturation and linguistic factors were examined as predictors of self-esteem and language confidence among 91 international college students. The majority of participants were Asian (64.8%), female (59.3%), and graduate students (76.9%). Assimilative (adopting host cultural values) and integrative (blending both host and home cultural values) modes of acculturation, less frequency of contact with host culture members, and lower quality of contact predicted higher self-esteem. Less social support and lower English language confidence also predicted higher self-esteem. Also, higher self-esteem was positively related to greater perceived daily hassles (minor stressors faced by students). Furthermore, longer length of stay and greater assimilation and integration scores significantly predicted greater English language confidence. Limitations and implications for international students and educational institutions are discussed.

Keywords: international students, acculturation, language confidence, self-esteem

International students comprise a significant and growing proportion of United States' higher education institutions (Misra & Castillo, 2004). However, little is known about the experience of international students in the U.S. in terms of acculturation, coping, and self-esteem. International students are individuals who are studying at a degree-granting post-secondary accredited academic institution in the U.S. (USCIS, 2009). According to USCIS, student exchange programs are designed to promote the exchange of ideas and skills in a variety of fields (USCIS, 2009).

International students contribute to the cultural richness of universities (Tan, 1994) and spend more than \$15.5 billion on tuition and living expenditures in the U.S. (Institute of International Education, 2008). Furthermore, the U.S. Department of State sees potential for growth among this population and has targeted recruitment efforts for international studies in countries like China, Vietnam, India, and Brazil (Institute of International Education, 2008). Thus, the majority of international students in the U.S. are from countries where English is not one of the official languages (Institute of International Education, 2008).

Entering college is a period of transition with inherent stressors, but for international students studying in another country carries additional stressors, such as adapting to cultural differences, dealing with language barriers, having reduced support from family and friends, and having concerns regarding visas. Not much is known about the impact of these stressors on international students' self-esteem. Therefore, the present study investigated the cultural and social contexts that impact self-esteem among international students by applying Dalton, Elias, and Wandersman's (2001) ecological framework of coping and Berry's (2003) acculturation framework.

The Ecological Framework of Coping

Dalton et al.'s (2001) ecological framework of coping describes how the coping process is affected by "culture, social structure, and community norms" (Dalton et al., 2001 p. 221) and explains how individuals transition between and within systems in relation to stressors. *Stressors* are the external demands that tax individuals' abilities to cope (Dalton et al., 2001). Dalton et al. (2001) describes four types of stressors: 1) major life events (e.g., marriage, immigration); 2) daily hassles (e.g., money problems, struggling in class due to language confidence); 3) life transitions (e.g., entering college, homesickness); and, 4) ambient/chronic (e.g., illness, adjustment issues). According to Dalton et al., daily hassles are shorter-term stressors compared to longer-term changes, like major life events. However, daily hassles can become chronic stressors if they involve long-term and relatively stable conditions. For example, an international student's current language problems (daily hassle) may reduce her social opportunities (long-term impact), which may negatively impact her sense of competence (chronic stressor).

Self-Esteem and the Ecological Model of Coping

Using Dalton et al.'s (2001) ecological framework of coping, the present study explored the relationships between coping resources (i.e., social support, language confidence, and length of stay) and self-esteem. Coping resources have been found to play a role in adjustment (Ye, 2006; Yeh & Inose, 2003) and acculturative stress (Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004); however, few studies have examined the impact of coping resources on self-esteem among international students.

Social support and self-esteem. Studies have shown that social support plays a role in self-esteem, at least for high school students. De Wit, Karioja, Rye, and Shain (2011) found that less peer and teacher support over time results in lower self-esteem and greater depression among high school students. No recent studies have examined social support and self-esteem among international college students; however, Yeh and Inose (2003) found that greater social connectedness and social support network satisfaction negatively predicted distress related to adjusting to the new host culture among international students studying in the U.S. Also, Ye (2006) found that greater satisfaction with support networks was related to better emotional health for Chinese international students studying in the U.S., and greater amounts of online emotional support for these students were related to less stress due to the acculturation process. Therefore, it is predicted that social support for international students would play an important role in their adjustment, specifically their self-esteem. Moreover, given that families of students likely remained in the country of origin, the focus in the present study will be on social support from friends in the student's linguistic community in the U.S. (i.e., speakers of the same language of origin) and from the English-speaking community in the U.S.

Language confidence and self-esteem. Using Dalton et al.'s (2001) framework, language confidence can be viewed as a coping resource. Although no studies have investigated language confidence on self-esteem among international college students studying in the U.S., Pak, Dion, and Dion (1985) found that self-confidence in English was positively related to self-esteem, perceived sense of personal control, and satisfaction with life among international students living in Toronto. Also, Swagler and Ellis' (2003) interviews with Taiwanese graduate students studying in the U.S. revealed that actual English ability was not significantly predictive of adaptation to the new environment. Rather, apprehension about communication and English language confidence were positively related to adaptation. Therefore, based on these findings, it is expected that English language confidence among international students studying in the U.S. would also be positively related to self-esteem.

Length of stay and self-esteem. The more time spent in a host country, the more likely international students will be exposed to the host culture's language. Therefore, length of stay in the U.S. can be considered a coping resource in Dalton et al.'s (2001) ecological framework of coping. Lay and Nguyen (1998) found that more recent immigrants to Canada reported more out-group hassles and higher levels of depression than students who had lived in Canada for longer periods of time. Similar results were found in Wilton and Constantine's study (2003), where a longer length of stay for international students related to lower self-reported psychological concerns. Thus, based on the previous literature length of stay is expected to be positively related to self-esteem.

Daily hassles and self-esteem. As stated earlier, daily hassles are short-term stressors, such as learning a language or current struggles with finances (Dalton et al., 2001). Few studies have investigated daily hassles on self-esteem, but Gaudet and Clément (2005) found that daily hassles were negatively associated to self-esteem for French-speaking students in Canada. Moreover, they found that daily hassles were not related to other mediator variables, such as identity maintenance, involvement, and social support. Therefore, given Gaudet and Clément's findings, it is expected that daily hassles would be negatively related to self-esteem for international students in the U.S.

Berry's Acculturation Framework

One of the stressors international students must also contend with is adapting to the new host culture. Berry (2003) provides a general framework that outlines the potential cultural and psychological adaptation strategies for individuals when they come in contact with a new culture. This adaptation, or acculturation, can occur at multiple levels. At the cultural/group level, the non-dominant and dominant groups' prior relationship, their form of contact, and any cultural changes experienced by both groups upon contact, are key considerations. At the psychological level, the individual's psychological changes and the effects of eventual adaptation to new situations are key considerations. These psychological changes can include behavioral adaptation (e.g., eating food from the new culture, dressing in the fashion of the new culture), emotional adaptation (e.g., experiencing depression), or sociocultural adaptation (e.g., feeling increased competence in daily intercultural interactions) (Berry, 2003).

Acculturation strategies. For international students coming to the U.S., the four strategies (or modes) for acculturation can be assimilation, separation, integration and marginalization (Berry, 2003). In the assimilation strategy, individuals do not want to maintain their cultural identity and seek interactions with other cultural groups. Alternatively, in the separation strategy, individuals want to maintain their culture and avoid interaction with other groups. In the integration strategy, a balance is sought wherein individuals want to maintain their cultural identity but also interact with

the larger society. Lastly, in the marginalization strategy little interest is shown in maintaining one's culture and the individual limits interactions with others from the host culture. Berry posits that marginalization can result from failed attempts at assimilation, leading to cultural loss, and minimal participation in the larger society.

According to the Institute of International Education (2008), most international students (61%) studying in the U.S. come from countries in Asia where there is a strong emphasis on community. This emphasis on communities is also referred to as a collectivistic cultural value, where integration and separation strategies of acculturation are more often considered, and there is a strong desire for one's ethnocultural group to maintain its cultural heritage (Lalonde & Cameron, 1993). In addition to valuing community, collectivistic cultures also value interdependence and group goals, whereas individualistic cultures (e.g., U.S., Great Britain, and Canada) emphasize autonomy, independence, and personal goals (Lee, Beckert, & Goodrich, 2010). Furthermore, previous research indicates that assimilation, separation, and integration modes of acculturation are more often reported among immigrant and international student populations than marginalization (Lalonde & Cameron, 1993; Masgoret & Gardner, 1999). Therefore, in the present study only the strategies of assimilation, separation, and integration will be examined in the context of self-esteem and language confidence among international students.

The specific mode of acculturation chosen by international students can vary. Kim and Berry (1986) found that the strategy of assimilation is less attractive to those having a distinct appearance from the dominant group, such as Asian international students, as well as those who are affected by racism and discrimination. However, as international student populations continue to grow (Institute of International Education, 2008), and as Hispanic and Asian ethnic groups grow in the U.S. (U.S. Department of Commerce & U.S. Census Bureau, 2011), international students studying in states where there are large numbers of their own ethnic group (such as California and New York) may not perceive as much physical distinction between themselves and other students. Thus, it is expected that international students would prefer assimilation or integration strategies as these might provide students more positive adjustment experiences to the new culture.

Self-Esteem and the Acculturation Framework

In the context of Berry's (2003) acculturation framework self-esteem may be impacted by acculturation strategy, quality and contact with a host culture, and language confidence among international students. For example, although they did not specifically study self-esteem, Masgoret and Gardner (1999) found a positive relationship between well-being and the acculturation modes of integration and assimilation, with integration being the strongest predictor of well-being. In the present study, similar findings are expected in that integration and assimilation strategies should be positive predictors of self-esteem.

In addition, Berry's (2003) framework suggests that the degree of contact and quality of contact with the dominant culture may also impact self-esteem and adaptation to the culture. For example, Heggins and Jackson (2003) found that among Asian international students, participation with activities in the host culture, holding on to traditional values, and having external pressures, were factors that supported their adjustment process. Also, Heggins and Jackson suggest that participation was important in establishing relationships beneficial to supporting Asian international students' transition to the U.S. Furthermore, Poyrazli et al. (2004) found that international students reported less acculturative stress when they socialized primarily with Americans, whereas those who socialized primarily with international students and equally with both Americans and non-Americans reported higher levels of acculturative stress. Berry (1974) defined acculturative stress

as the stress reactions (e.g., uncertainty, depression, and anxiety) that result from behavioral changes in the acculturation process. In the present study, it is predicted that greater contact and better quality of contact with the host culture would relate to higher self-esteem for international students.

Language Confidence and Acculturation

Length of time and language. Length of time in the host country has been used in previous research “as an approximation of the respondent’s level of assimilation or familiarity with the host society” (Lay & Nguyen, 1998, p. 174). Consequently, the longer international students stay in the U.S., the more opportunities to use their English skills. Therefore, the present study predicts that international students’ language confidence would be positively influenced by greater length of stay because of Lay and Nguyen’s finding that length of stay can increase familiarity and adaptation (i.e., more language use and language confidence) to the host society.

Acculturation strategy and language. Studies have shown that participants with greater English language confidence report higher levels of cultural identity maintenance (Gaudet & Clément, 2005), which indicates an integrative acculturation strategy. Therefore, it is also expected that acculturation strategies are associated with language confidence, specifically strategies that increase use of the English language (i.e., assimilation and integration).

Present Study and Hypotheses

Previous studies on the social, cultural, and language factors that impact self-esteem and language confidence among international students in the U.S. have been limited. Moreover, studies that have looked at these variables did not use appropriate measures for acculturation (Nguyen et al., 1999). Therefore, the purpose of the present study was to examine the social, cultural, and language factors that contribute to non-native English-speaking international students’ self-esteem and language confidence. The following hypotheses were tested:

1. Greater length of stay in the U.S., greater frequency of contact with members of the host country, and better quality of contact with members of the host country will predict higher self-esteem.
2. Greater perceived social support from one’s own linguistic community, greater perceived social support from the English-speaking community, and greater English language confidence will predict higher self-esteem.
3. Higher self-esteem will be significantly correlated with lower perceived daily hassles.
4. Higher integration and assimilation mode scores will predict higher self-esteem.
5. Greater length of residency in the host country and higher integration and assimilation scores will predict greater English language confidence.

Method

Participants

Questionnaires were administered to 110 participants, of which 92 completed the surveys and met the criteria of English being their second language. Participants were recruited mainly from a private southern California university and also from colleges and universities including in New York, Pennsylvania, and Washington D.C., between 2009 and 2010. The data 92 international student participants were screened for missing values on 11 continuous variables (self-esteem, length of residence in the host country, frequency of contact with members of the host country,

quality of contact with members of the host country, social support from own linguistic community, social support from the English-speaking community, English language confidence, perceived daily hassles, and two acculturation modes—integrative and assimilation), and two missing values were detected in the length of residence variable for two participants. Given the small number of missing values, the participants were included in the study and their values were replaced with the mean for this variable. Furthermore, with the use of a $p < .001$ criterion for Mahalanobis distance, one outlier (participant 90) was detected on the variable of length of residence and removed from the sample. Therefore, 91 participants were included in the final analysis. Participants ranged in age from 19-45 years ($M = 26.12$, $SD = 4.24$). The majority of participants were female (59.3%; $n = 54$). Graduate students constituted 76.9% of the sample. The highest frequency of native language spoken was Chinese (36.3%). Participants reported speaking at least one language other than English. Of the 91 participants, 29 spoke three languages or more, and years of speaking English ranged from 1 to 40 years. The majority of participants hailed from China (23.1%) and reported their ethnic identification as Asian (64.8%). See Table 1 for demographic data reported by the sample.

Table 1
Frequencies of Demographic Information of Participants (n = 91)

Characteristics	<i>n</i>	%
Female	54	59.34
Male	37	40.66
Graduate	70	76.92
Undergraduate	21	23.08
Pursuing MBA	37	40.66
Pursuing health related degrees (nursing, health)	9	9.89
Pursuing social science degree	7	7.69
Pursuing science or engineering degree	6	6.59
Pursuing "Other" degrees ($n \leq 5$ per category)	32	35.16
Chinese speaking	30	32.96
Arabic speaking	11	12.09
Thai speaking	11	12.09
Spanish speaking	6	6.59
"Other" languages spoken ($n \leq 5$ per category)	33	36.26
1-5 years of learning English	18	19.78
6-10 years of learning English	29	31.87
11-20 years of learning English	22	24.17
>20 years of learning English	8	8.79

Measures

Variables. For the first two hypotheses, the independent (predictor) variables are continuous quantitative variables: frequency of contact, quality of contact, linguistic community social support, English-speaking community social support and English language confidence. The dependent (criterion) variable of self-esteem is also a continuous quantitative variable. For the third hypothesis, the two continuous quantitative variables are self-esteem score and daily hassles score. For the fourth hypothesis, the independent (predictor) variables are integration score and assimilation score, two continuous and quantitative variables. The dependent (criterion variable) is self-esteem score. For the final hypothesis, the quantitative independent (predictor) variables are length of residency, integration score, and assimilation score. The quantitative dependent variable (criterion) is English language confidence score.

Demographic data. Students were asked information concerning their age, gender, native language, number of languages spoken, amount of time studying English in years, length of time living in the U.S. in months, ethnic identification, native country, level of education, and area of study.

Cronbach's alpha coefficients. According to Helms, Henze, Sass, and Mifsud (2006), there are a variety of opinions regarding interpreting Cronbach's alpha (α) values, with some researchers defining "acceptable" as alpha values greater than .70, while other researchers determining acceptability based on previous research findings. Helms et al. suggest that no matter what interpretation researchers choose they should provide a rationale for what they consider acceptable. For the present study, reliability coefficients obtained from the present sample that were similar (within a range of .10) to the original research were considered acceptable.

Self-esteem. Rosenberg's Self-Esteem Scale (SES; 1965) has been used with various populations including high school students, college students, and other adults from a range of occupations and ethnic backgrounds (Corcoran & Fischer, 1987). According to Corcoran and Fischer (1987), scores on the scale showed good internal consistency as indicated by a Guttman scale coefficient of reproducibility ($\alpha = .92$). In addition, concurrent, known-groups, predictive, and construct validity has been demonstrated for the SES in terms of significant correlation with other self-esteem measures (Corcoran & Fischer, 1987). The scale includes 10 statements based on a 4-point Likert scale (1 = "strongly agree", 4 = "strongly disagree"). Scores above 25 indicate high self-esteem, while scores below 15 indicate low self-esteem (Rosenberg, 1987). In the present study, scores on the SES showed low internal consistency ($\alpha = .67$) compared with Corcoran and Fischer's previous research.

English language confidence. Two scales were used to measure students' English language confidence. The first scale regarding English Use Anxiety (Clément, Smythe, & Gardner, 1976) included eight items using a 6-point scale (from 1 "strongly disagree" to 6 "strongly agree"). Three items (4, 5 & 6) were reversed coded. A high score indicates high anxiety when using English. Clément et al., reported the scale reliability for scores on this measure as $\alpha = .71$. The second scale in the measure assessed English Language Confidence and included six items using a 6-point Likert scale (from 1 "strongly disagree" to 6 "strongly agree"). Clément and Kruidenier (1995) and Clément (1986) reported $\alpha = .74$ and $\alpha = .93$, respectively, for this scale.

In a study by Gaudet and Clément (2005), after recoding the items the researchers summed the two scales (i.e., English use anxiety and English language confidence) to form a composite score for confidence in the *second language*. Thus, higher English use anxiety scores and lower language confidence scores indicate lower second language confidence, whereas lower English use anxiety scores and higher language confidence scores indicate greater second language confidence (Gaudet & Clément, 2005). Similar to Gaudet and Clément, in the present study on international students, the two scales of English use anxiety and English language confidence was also recoded and measured as a composite score to measure confidence in the second language, i.e., English. Gaudet and Clément reported that the internal consistency for composite scores on the combined measure of language confidence in the second language was $\alpha = .80$. In the present study, scores on the measure also showed similar internal consistency ($\alpha = .90$).

Social support. Gaudet and Clément's (2005) measure of Linguistic Social Support was used to assess students' perceived level of social support from their linguistic community (9 items)

and from the English-speaking community (9 items). Participants in the present study were first instructed to answer the questions keeping in mind their native linguistic speaking relationships, and then they were instructed to think about their English speaking relationships, using a 5-point Likert scale (from 1 “not like me” to 5 “very much like me”). Higher scores demonstrated greater social support from the respective community described in the measured (linguistic or English-speaking). Gaudet and Clément (2005) report the scale reliability for the linguistic community support scale as $\alpha = .87$, and for the English-speaking community scale as $\alpha = .82$. In the present study scores on the linguistic community support measure ($\alpha = .79$) and the English-speaking community measure ($\alpha = .86$) showed similar scale reliability.

Contact. Students’ participation with non-international students was measured by using adapted versions of the Frequency of Contact and the Quality of Contact with Francophones measures (Gaudet & Clément, 2005). In the present study the adapted measure included five items that assessed the frequency of contact with the host culture using a 7-point scale (from 1 “not at all frequent” to 7 “extremely frequent”) and five items that assessed the quality of contact with the host culture using a 7-point scale (from 1 “not at all pleasant” to 7 “extremely pleasant”). Higher scores indicate greater frequency and better quality of contact, respectively. Gaudet and Clément (2005) reported internal consistency for scores on the Frequency of Contact measure as $\alpha = .70$ and the Quality of Contact measure as $\alpha = .80$. In the present study, scores on both Frequency of Contact ($\alpha = .82$) and Quality of Contact ($\alpha = .82$) measures demonstrated similar reliability.

Acculturation mode. Three acculturation scales (Integration, Assimilation, and Rejection) were used to measure students’ acculturation mode. Masgoret and Gardner (1999) adapted Berry’s (1984) version of these three acculturation modes for a Spanish population in Canada. The English version of the Masgoret and Gardner’s acculturation scales were used in the present study, but only the integration and assimilation scales were examined based on the hypotheses. Items were based on a 6-point Likert scale of 1 (strongly disagree) to 6 (strongly agree). The scale consisted of three subscales (Integration, Assimilation, and Rejection). A high score on the Integration scale (items 1, 4, 7, 10, 13, 16, and 18) indicates the desire to be part of both the majority and minority cultures. For the Assimilation Scale (items 2, 5, 8, 11, 14, 17, 19, and 20), a high score indicates that students want to move into the host society and forget their culture. On the Rejection Scale (items 3, 6, 9, 12, 15 & 21), a high score indicates that students want to maintain their native culture and reject the mainstream culture. Masgoret and Gardner (1999) reported internal consistency for scores on the Integration subscale as $\alpha = .68$, for scores on the Assimilation subscale as $\alpha = .86$, and for scores on the Rejection subscale as $\alpha = .60$. In the present study, similar internal consistency results for scores on these subscales were found (Integration $\alpha = .69$; Assimilation $\alpha = .84$; Rejection $\alpha = .66$).

Daily hassles. Lay and Nguyen’s (1998) General Hassles subscale, from their General Hassles Inventory, was used to measure daily hassles. General hassles are everyday hassles that are independent of the respondents’ “immigrant status and the acculturation process” (Lay & Nguyen, 1998, p. 172) and includes such items as “Not keeping up with assigned readings”, “Lack of money”, and “Not enough time to meet my obligations”. Responses for the 19-item measure were based on a 4-point Likert scale (1= Not at all part of my life, 4 = Very much part of my life), with higher scores indicating greater number of daily hassles. Lay and Nguyen (1998) reported that scores for the General Hassles subscale had an internal consistency of $\alpha = .82$. In the present study, scores on the General Hassles subscale showed similar scale reliability ($\alpha = .73$).

Procedure

The questionnaire was available in both paper and online form. Convenience and snowball sampling procedures were used (i.e., participants were asked to encourage their friends or other international students to contact the researcher or visit the online site to complete the study). Additionally, the researcher contacted the advisor and executive committee members of the International Student Organization (ISO) at a university in Southern California to obtain access to students. Professors with large numbers of international students (e.g., business majors) were also asked permission to distribute hard copies of the questionnaire. Flyers were posted across campus with information on the study. Also, the researcher placed an Internet link to the survey on several online social networking sites (e.g., Facebook, Craigslist) asking members to participate or forward the link to eligible participants. Finally, flyers were posted in public places, such as community centers and libraries in New York City.

Participants who were administered the surveys in person kept one consent form copy for their own records. For participants who completed the study online, consent was given by the participant's agreement to continue with the survey past the consent page. Surveys administered in person took approximately 30 minutes to complete. The researcher was available during in-person data collection for questions and clarification. As incentive, a raffle drawing for one of ten \$15 generic gift cards was also offered to participants. Participants could enter the raffle by typing their email on a separate webpage that was not linked to the survey, or for in-person questionnaires participants could write their email on a separate page following the measures.

Results

Data Screening

All variables were screened for possible code and statistical assumption violations, missing values, and outliers. Missing values were detected in the length of residence variable for two participants. Because of the limited sample size and given that the missing values represented less than 5% of the total data sample, it was deemed necessary to conduct a mean substitution (1.81 years). As stated above, one outlier was detected and removed from the sample. In regards to normality, skewness and kurtosis were deemed appropriate for all variables, except for length of residence in the host country, which required a Log base-10 transformation due to a negatively skewed distribution. Evaluations of assumptions of linearity and multicollinearity were satisfactory. See Table 2 for means and standard deviations of the variables in the study.

Analyses

Given the variables in the study were continuous and quantitative variables measured as interval scale scores, to test the hypothesis that greater length of stay in the U.S., greater frequency of contact with members of the host country, and better quality of contact with members of the host country would predict higher self-esteem, a standard multiple regression analysis was performed. Regression results indicate that the overall model significantly predicted self-esteem, $R^2 = .13$, $R^2_{adj} = .10$, $F(3, 87) = 4.34$, $p = .007$. The model accounts for 13% of the variance in self-esteem; however, none of the variables are individually significant in contributing to the model. Furthermore, contrary to predictions, Pearson's correlation analyses reveal that shorter stay in the U.S., less contact with host country members, and lower quality of contact with host members significantly correlate to greater self-esteem ($p < .05$). A summary of regression and correlation coefficients is presented in Table 3.

Table 2
Means and Standard Deviations for Variables in the Study ($n = 91$)

	<i>M</i>	<i>SD</i>
Criterion Variables		
Self-Esteem	20.07	3.75
English confidence	61.12	13.58
Predictor Variables		
Contact Frequency	23.33	7.20
Length of stay (transformed)	-0.07	.66
Quality of contact	25.08	6.20
Native Social Support	37.60	4.67
American Social Support	31.27	6.48
Daily Hassles	39.73	6.75
Assimilation	21.97	7.56
Integration	34.67	4.73

Table 3
Standard Multiple Regression Analyses for Variables Predicting Self-Esteem

	<i>B</i>	β	<i>t</i>	<i>p</i>	Bivariate <i>r</i>
Contact Frequency	-.154	-.295	-1.909	.060	-.338**
Length of stay (transformed)	-.767	-.135	-1.217	.227	-.251**
Quality of contact	.010	.016	.112	.911	-.212*
Native Social Support	-.141	-.175	-1.639	.105	-.272**
American Social Support	-.047	-.081	-.719	.474	-.251**
English confidence	-.071	-.258	-2.366	.020*	-.337**
Assimilation	.173	.348	3.690	.000**	.441**
Integration	-.250	-.315	-3.342	.001**	-.418**

Note. * $p < .05$; ** $p < .01$

A standard multiple regression analysis was performed to test the hypothesis that greater perceived social support from the participants' linguistic community, greater perceived support from the English-speaking community, and greater participant English language confidence would predict higher self-esteem. Regression results indicate that the overall model significantly predicts self-esteem, $R^2 = .16$, $R^2_{adj} = .13$, $F(3, 87) = 5.32$, $p = .002$, accounting for approximately 16% of the variance in self-esteem. However, contrary to predictions only English language confidence significantly contributed to the model. Furthermore, Pearson's correlation analyses reveal that less linguistic community social support, less English-speaking community social support, and lower English confidence significantly relate to higher self-esteem ($p < .05$). See Table 3 for regression and correlation coefficient data.

A bivariate correlation was conducted to test the third hypothesis that self-esteem and perceived daily hassles would be inversely correlated. Contrary to the prediction, there is a significant and positive relationship between perceived daily hassles and self-esteem, $r = .31$, $p = .003$. The higher the perceived daily hassles score, the higher the self-esteem.

A standard multiple regression analysis was performed to test the fourth hypothesis that higher integration and assimilation scores would predict higher self-esteem. Results indicate that the overall model significantly predicts self-esteem, $R^2 = .29$, $R^2_{adj} = .27$, $F(2, 88) = 17.55$, $p < .001$, accounting for approximately 29% of the variance in self-esteem. However, higher scores on

assimilation and lower scores on integration predict greater self-esteem scores. See Table 3 for regression and correlation coefficient data.

Finally, a standard multiple regression procedure was used to test the last hypothesis that greater length of residency in the host country and higher scores on integration and assimilation would predict greater English language confidence. Contrary to predictions, the results indicate that lower scores on assimilation and longer length of residence in the host country contribute significantly to the prediction of English language confidence, $R^2 = .31$, $R^2_{adj} = .29$, $F(3, 87) = 13.30$, $p < .001$, accounting for approximately 31% of the variance. See Table 4 for regression and correlation data.

Table 4
Standard Multiple Regression Analysis for Variables Predicting English Language Confidence

	<i>B</i>	β	<i>t</i>	<i>p</i>	Bivariate <i>r</i>
Length of stay (transformed)	4.683	.228	2.554	.012*	.283**
Assimilation	-.732	-.408	-4.377	.000**	-.479***
Integration	.495	.173	1.853	.067	.315**

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

This study found mixed support for the proposed hypotheses. Contrary to the first hypothesis, less frequent contact, shorter length of stay in the U.S., and lower quality of contact with members of the host country predict greater self-esteem. Second, English language confidence predicts self-esteem, but social support from the participant's linguistic community and support from the English-speaking community are not significant predictors. Specifically, less English confidence is related to greater self-esteem, which is a curious finding and contrary to the second hypothesis. Opposite to the third hypothesis, the present study also shows that higher self-esteem relates to greater perceived daily hassles. In partial support of the fourth hypothesis, greater scores on assimilation and lower scores on integration predict greater self-esteem. Finally, in partial support for the fifth hypothesis, greater length of stay in the host culture, lower assimilation scores, and higher integration scores significantly predict greater language confidence. Possible explanations for these relationships are offered below.

Contact, length of stay, and self-esteem. The lack of support for the variables of frequency might be due to international students preferring less contact with the host country, and finding comfort and security within their own linguistic and cultural groups to help them navigate through the new culture they encounter. Thus, these students would have less contact, and thus less quality of contact, with the host country. Also, the lack of support for the variable of quality of contact with the host country might be due to students having less control in the level of pleasantness with members of the host country. For example, if the contact was generally unpleasant, participants may attribute this to the behavior of host members and not a fault of their own; thus, their self-esteem may not be affected. The literature has not been specific on how or if quality of contact impacts self-esteem (Clément & Baker, 2001; Gaudet & Clément, 2005). Furthermore, in terms of finding no support for the relationship between length of stay on self-esteem, previous research has found that length of stay can be a moderating variable between other variables related to contact and adjustment, such as interactions and friendships with members of the host country (Lysgaard,

1955), English skills (Poyrazli & Lopez, 2007), and social support (Lay & Nguyen, 1998). The present study did not explore the moderation effect of length of stay on these other variables.

Social support, language confidence, and self-esteem. Previous research supports that English language confidence would be a strong predictor of self-esteem, as it may be considered a resource or personal factor (i.e., individual skill; Nguyen et al., 1999). Yet, the present study's findings cannot be explained by previous literature. Perhaps, self-esteem is not impacted by English language confidence because self-esteem may have more to do with other factors, such as cultural identity (Usborne & Taylor, 2010). For example, Usborne and Taylor found that among Aboriginal Canadians, French-speaking Canadians, English-speaking Quebecers, and Chinese North Americans, cultural identity was positively related to self-esteem and subjective well-being. Moreover, participants' level of social support is a variable that is under less control than language use (Ramsay et al., 2007), but whether or not participants had expectations of social support upon coming to the U.S. for studies is unclear.

Daily hassles and self-esteem. The finding that self-esteem is positively associated to daily hassles is also not supported by the literature (Gaudet & Clément, 2005; Lay & Nguyen 1998). A possible explanation for the positive correlation in this study is that when an individual has high self-esteem he/she may take on more responsibilities that can be comfortably accomplished, and, therefore, daily hassles can increase. Also, successfully managing these stressors may be seen as a strength and could possibly increase self-esteem if the students are dealing with these hassles well.

Acculturation and self-esteem. The finding that assimilation but not integration is positively related self-esteem is somewhat supported in the literature. Masgoret and Gardner (1999) found that Spanish immigrants with higher assimilation and integration acculturation modes have higher levels of well-being, increased life satisfaction, and decreased acculturative stress. Perhaps for international students in the present study, the assimilation mode, more so than the integration mode, helps students feel more positive about themselves and their abilities because this mode of acculturation means the students prefer to adapt by spending more time with the host culture, thus helping them adjust more quickly and increase self-esteem. There was not a positive relationship between integration acculturation scores and self-esteem; however, a possible reason for this is that immigrants who expect to permanently reside in a new country may view the integration strategy more positively than international students who are in the country only temporarily because immigrants may not want to lose their cultural heritage, but at the same time they want to adapt to the new culture. Consequently, international students may feel that assimilation is a better strategy for the short-term in order to adjust quickly to the culture because they know they will return to their countries. Future research is warranted to further explore this relationship.

Length of stay, acculturation, and English confidence. As expected, the longer international students stay in the host country, the greater their language confidence because they more likely have a greater number of interactions with host members at various levels and would practice and speak more English (Lay & Nguyen, 1998). However, results in the present study also show that less assimilated participants tended to have more language confidence. This finding is not supported by previous research. Rather, other studies have found that minimal use of the language (as in the rejection acculturation mode) relate to less language confidence (Masgoret & Gardner, 1999). Perhaps students in the present study feel more language confidence when they seek some limited interactions with the host culture in order to gain experience in speaking the language, but do not completely abandon their own cultural identity (i.e., exhibit lower levels of assimilation). Finally, the results showed that greater integration scores predict greater language confidence, which is supported by the literature. Gaudet and Clément (2005) found that students used the

integration strategy when they wanted to maintain their cultural identity but at the same time increase their English language confidence.

Summary and Implications of the Current Findings

Strengths. The present study had several strengths. Variance accounted for by models was moderate to strong (13% to 31%) and the sample size was sufficiently large. The findings shed light on a growing population in the U.S. that has been under-studied and often overlooked in the literature. Finally, the practical implications may provide support to existing and future international students.

Limitations. Despite some mixed support for the hypotheses, a number of limitations in this study should be noted. First, the study is based on a small cross-sectional sample of international student participants. In addition, for students with minimal English fluency, the questions may have been intimidating. It was assumed that the language of English proficiency was adequate, as participants were required to pass language requirements, such as the TOEFL or IELTS, in order to have attended the U.S. institution. However, this is an assumption especially since the present study found that international students studied English within a wide range of years (1-40 years). Furthermore, Vasquez (2003) found universities may make exceptions such as implementing provisional admission policies where students can take conditional English courses concurrent with their program courses.

Another limitation is that the majority of participants were from Asian countries such as China, Taiwan, and India, limiting generalizability of the findings to students in other countries. Furthermore, this study focuses on direct predictors of self-esteem rather than examining moderating and mediating variables. Also, this current study did not assess the participant's level of involvement with his or her own community (e.g., people from their country, international students from their country, or all international students at their university), which may have moderated the relationships between social support and self-esteem (Nguyen et al., 1999).

Implications. The findings have practical implications for international students in the U.S. Measures that address cultural, social, and language factors, such as ones used in the present study, could be used as screening tools for counselors to help students with language confidence and self-esteem issues while studying in the U.S. Students from collectivistic cultures, such as the majority of students from the present study, may be more reticent in discussing self-esteem or language confidence issues in a face-to-face format (Lee, Beckert, & Goodrich, 2010), thus a screening tool could help in starting a conversation with the student regarding their adjustment to the host culture. In addition, questionnaires can also be used to assess for history of depression, anxiety, low self-esteem, and other mood disorders among this population. In addition to areas for growth or potential concerns, areas of strength can also be assessed among international students, such as asking how the students coped with past adjustment and/or mood issues.

Although frequency and quality of contact did not significantly predict self-esteem, perhaps the contact that international students in the present study had with the host culture were not positive or pleasant. Perhaps following the recommendation of Volet and Ang (1998), changing learning environments to enhance learning and contact between international students and their host culture may be beneficial for international students. The finding that less language confidence is related to higher self-esteem means that self-esteem may be linked to other factors for international

students besides language confidence, and researchers need to explore further the role of language confidence in the adjustment and transition of international students.

The present study linked greater daily hassles to greater self-esteem, and although these stressors have been found to negatively impact international students in other studies (Gaudet & Clément, 2005; Lay & Nguyen 1998), perhaps looking at how resilient international students are in handling their stressors, and how these daily hassles may be forms of strength for the students, should be considered in future studies.

For universities hosting international students it would be beneficial to further investigate their experiences to better understand their needs in the educational and social context. In addition, including samples of international students from countries outside of Asia would be helpful in understanding how to better serve the specific needs of students, since the present study had a large Asian sample. Furthermore, in addition to linguistic support, other sources of support need to be examined, such as support from the institution, significant others, from children, and from parents. It would benefit host institutions to examine these and other variables to better serve this growing and important population, and it would benefit international students in their pursuits of academic success in this country.

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