Development and Validation of a Pre-migration Acculturation Measure

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Abstract

An area that has been largely overlooked in the acculturation literature is acculturation that occurs before migration. Therefore, the goal of our study was to develop a measure of pre-migration acculturation that would assess relevant behaviors and anticipations developed in one's country of origin before migration. Seventy-four university students who migrated to the United States of America at the age of 10 or older completed an online survey. The results revealed that both pre-migration anticipations and pre-migration behaviors demonstrated good Cronbach's alphas, providing preliminary evidence of reliability. Pre-migration anticipations and pre-migration behaviors were moderately correlated, providing preliminary evidence of construct validity. Both pre-migration anticipations and pre-migration behaviors predicted post-migration acculturation to the United States (via a regression analysis), providing preliminary evidence of predictive validity.

Keywords: Acculturation, Migration, Immigration, University Students

El desarrollo y la validación de una medida de aculturación de pre-inmigración

Compendio

Un área que ha sido pasada por alto en gran medida por los estudios en aculturación es aquella que ocurre antes que se efectúe la inmigración. En vista de esto, el objetivo de nuestro estudio fue de desarrollar una medida de la aculturación que ocurre durante el proceso de pre-inmigración que ayudará a cuantificar separadamente las conductas y expetativas que un individuo desarrolla en su propio país antes que emigre hacia otro. La muestra de este estudio incluye a setenta y cuatro estudiantes universitarios que emigraron a los Estados Unidos de Norteamérica a la edad de 10 años o más. Estos estudiantes completaron nuestra encuesta a través de la Internet. Los resultados del estudio proporcionaron apoyo preliminar para la confiabilidad y la validez de la a medida de aculturación de pre-inmigración.

Palabras clave: Aculturación, Migración, Inmigración, Estudiantes de Universidad

Acculturation has been defined as a process of mutual behavioral and psychological change when groups and individuals from different cultures come into continuous contact with one another (Berry, 2003, 2006; Berry & Sam, 1997). Acculturation research has a history of over 70 years and is often investigated in order to determine the adaptive outcomes of immigrants and refugees after their transition to the new host society (e.g., Vedder, van de Vijver, & Liebkind, 2006). Acculturation is a complex construct and includes several domains, including behaviors, values, identity, knowledge, and language (Zea, Asner-Self, Birman, & Buki, 2003).

Researchers have examined various demographic variables as proxies of acculturation to a person's new country of residence, including country of birth, generational status, and length of time living in the United States (Escobar & Vega, 2000). Research has revealed that length of stay in one's new country influences acculturation (Ward, Okura, Kennedy, & Kojima, 1998) and that a long-lasting stay (and a younger age at immigration) makes it easier for immigrants to become familiar with their new environment (Beiser, Wood, Barwick et al., 1988; Liebkind, 1996). Acculturation is also influenced by cultural knowledge, degree of interaction and identification with the host culture. cultural distance, linguistic competence, and attitude (Searle & Ward, 1990; Ward, 2001). Language has been identified as critical to acculturation, as it is the main

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way immigrants interact with the people of the new country (Miglietta & Tartaglia, 2009).

Although several research studies have examined the impact of a multitude of variables on people's acculturation to their new country, the extant research has typically focused on *post-migration acculturation*. One area of acculturation that has yet to receive much attention is *pre-migration acculturation*, or acculturation that occurs before a person moves to a new country – the first stage of the acculturation process (Yijala, 2010). Pre-migration acculturation, or "pre-acculturation," refers to "a level of familiarizing with the language, history, values and norms of the new culture prior to migration" (Berry, Phinney, Sam, & Vedder, 2006; p. 49). Researchers have recommended that future investigations address pre-migration acculturation. For example, Chun and Akutsu (2003) state:

Unlike earlier waves of immigrants to this country, many immigrants who have recently arrived were increasingly exposed to the U.S. culture in their countries of origin because of heightened globalization in communications and commerce. Future studies should therefore account for acculturation that occurs before migration and may include investigating the relationship of postmigration to prior knowledge of American customs and behaviors acquired in one's country of origin (p. 112).

To date, only a handful of studies have examined premigration acculturation, and this has primarily been in the form of pre-migration anticipations, attitudes, or expectations. In one such study (Bhattacharya & Schoppelrey, 2004), 75 pairs of parents who recently immigrated to the United States with their children from three non-English speaking countries (Bangladesh, India, and Pakistan) were interviewed about their retrospective, pre-migration anticipations of life success in the United States of America and their subsequent post-migration experiences. In another study (Negy, Schwartz, & Reig-Ferrer, 2009), Hispanic immigrants living in the United States of America recalled their pre-migration expectations about life in the United States and their post-migration experiences. The participants in the study completed the Premigration Retrospective and Postmigration Experiences Survey (PREPE), a 24-item self-report instrument developed by Negy et al. (2009). The goal of the PREPE was to assess, via retrospection, how immigrants had imagined life would be in the United States before they arrived (pre-migration anticipations) and how their lives are currently experienced in the United States (post-migration experiences). In another study (Yijala, 2010), 325 potential migrants from Russia to Finland

were surveyed on a variety of variables, including perceived acculturation expectations and perceived cultural similarity.

The Present Study

The literature on pre-migration acculturation is small, leaving a great deal of room for exploration. Therefore, the goal of our study was to develop a measure of pre-migration acculturation that would measure two dimensions of pre-migration acculturation: pre-migration anticipations and pre-migration behaviors. After ascertaining the preliminary reliability and validity of the pre-migration acculturation measure (via internal consistencies and correlations), we wished to further examine the predictive validity of the pre-migration acculturation measure by testing if, after controlling for relevant variables, pre-migration anticipations and pre-migration behaviors predicted post-migration acculturation to the United States.

Method

Participants

The data from 74 participants (41 females, 33 males) were analyzed for our study. We recruited participants from three universities in the Midwestern region of the United States. Eligible participants had to fit three criteria: (1) born outside the United States, (2) moved to the United States at the age of 10 or older, and (3) lived in the United States for one year or longer. The participants were an average age of 20.26 years (SD = 1.92), with a range of 18 years to 25 years. On average, the participants had lived in the United States 5.46 years (SD = 3.22), with a range of one year to 13 years. The participants were born in 30 countries, representing five continents (Asia, North America, South America, Europe, and Africa). The most frequently reported countries of origin were India (16%), China (13%), Iran (8%), Bosnia and Herzegovina (7%), and Colombia (5%).

Measures

Demographics. The participants provided demographic information, including gender, age, country of birth, and length of time living in the United States. They also responded to three questions that were related to acculturation:

Desire to live permanently in United States. The participants responded *yes* or *no* to the following question: *Do you wish to live permanently in the United States?*

Expectations and/or hopes met in United States. The participants responded to the following question:

To what degree has your life in the United States met the expectations and/or hopes you had before you moved here? The response was given on a 4-point scale (not at all to completely).

Degree of difference between birth country and United States. The participants responded to the following question: Overall, how "different" is the United States from your home country? The response was given on a 7-point scale (not at all different to completely different).

Pre-migration acculturation to United States.

Among the three authors, we developed our premigration acculturation measure. We developed the measure via three methods: (1) our familiarization with the acculturation research, (2) discussions among us (the second and third authors moved to the United States after the age of 10 and could therefore provide personal experiences), and (3) interviews (conducted by the first author) with a small group of university students who had moved to the United States at the age of 10 or older.

Before completing the pre-migration acculturation measure, the participants read: When answering the following questions, please think of your time living in your country BEFORE you moved to the United States. These questions consider what your life was like BEFORE you moved to the United States, as well as what your thoughts were about the United States BEFORE you moved here. Participants responded to the items on a 4-point scale (false, partly false, partly true, true).

The pre-migration anticipations measure consisted of eight items. The items contained key words including anticipated, looked forward to, and imagined, and covered topics including comfort, feeling at home, acceptance, social functions, and values. Two example items: I anticipated that I would be accepted by Americans; I imagined what my life would be like in the United States. A higher mean score indicates a greater degree of pre-migration anticipations. The pre-migration anticipations measure had a Cronbach's alpha of .80.

The pre-migration behaviors measure consisted of 13 items. The items contained key words including *informed, involved, listened, watch, and spoke*, and covered topics including current affairs, English proficiency and use, music, food, and movies. Two example items: *I spoke English with at least one friend; I watched American movies*. A higher mean score indicates a greater degree of pre-migration behaviors. The pre-migration behaviors measure had a Cronbach's alpha of .82.

Post-migration acculturation to United States.

Post-migration acculturation to the United States was measured via the Stephenson Multigroup Acculturation Scale (SMAS; Stephenson, 2000). The SMAS is a 32-item, 4-point scale measuring the strength of engagement and affiliation in one's native/ethnic culture and United States culture. The SMAS is applicable to members of any cultural group, as the items are not group-specific. In our study, we only administered and analyzed the United States subscale to measure postmigration acculturation. Example items of the 15-item United States subscale include: I am informed about current affairs in the United States; I feel at home in the United States. The items are rated on a 4-point scale (false, partly false, partly true, true). A higher mean score indicates higher engagement and affiliation in United States culture. In the present study, the United States subscale had a Cronbach's alpha of .89.

Procedure

Before initiating participant recruitment, we received approval from the Institutional Review Boards of the three universities. Once permission was obtained, we recruited participants via psychology courses, campus clubs, and e-mail lists. The survey was only available to participants online. The first section of the online survey contained the recruitment statement which informed participants about the study. The participants expressed their consent to participate by completing the survey. The survey took an estimated time of 40 minutes to complete. The participants received either course credit or the chance to enter a raffle to win a \$25 gift certificate.

Results

Descriptives

Table 1 shows the means, standard deviations, frequencies, and percentages of the study variables. To examine if country of origin impacted study results, we created a new variable, *language origin*, based on participants' birth country. For this variable, the participants were coded 1 if their birth country's language is of Latin origin (N = 17), or coded 2 if their birth country's language is not of Latin origin (N = 57). Although it would have been ideal to make comparisons among the participants based on country of birth, there were too many countries represented (30) to reasonably do so. Therefore, the participants were separated by their language origin.

Table 1 Means, Standard Deviations, Frequencies, and Percentages of Study Variables (N = 74)

	M	SD	N	%
Gender Female Male			41 33	55.4 44.6
Age	20.26	1.92		
Length of Time in US (years)	5.46	3.22		
Language Origin Latin Not Latin			17 57	23 77
Desire to Live Permanently in US Yes No			46 28	62.2 37.8
Expectations/Hopes Met in US	2.88	.81		
Degree of Difference between Birth Country and US	5.28	1.40		
Pre-migration Anticipations	2.88	.61		
Pre-migration Behaviors	2.53	.63		
Post-migration Acculturation	3.18	.60		

Correlations

Intercorrelations among the study variables are presented in Table 2. Four variables were significantly correlated with the dependent variable, post-migration acculturation to the United States. A higher degree of pre-migration anticipations was associated with higher post-migration acculturation to the United States (r = .55, p < .01). Higher endorsement of the United States meeting one's expectations and/or hopes was associated with higher post-migration acculturation to the United States (r = .48, p < .01). Longer length of time living in the United States was associated with higher post-migration acculturation to the United States (r = .33, p < .01). Finally, a higher degree of premigration behaviors was associated with higher post-migration acculturation to the United States (r = .29, p < .05).

The preliminary validity of the pre-migration acculturation measure was ascertained by examining the correlation matrix. The low-to-moderate correlation between pre-migration anticipations and pre-migration behaviors (r = .25, p < .05) provides preliminary evidence of construct validity, as both pre-migration anticipations and pre-migration behaviors are measuring a related construct of pre-migration acculturation. The strong correlation obtained between pre-migration anticipations and post-migration acculturation to the United States (r = .55, p < .01) provides preliminary evidence of the predictive validity of pre-migration anticipations. The moderate correlation obtained between pre-migration behaviors and post-migration acculturation to the United States (r = .29, p < .05) provides preliminary evidence of the predictive validity of pre-migration behaviors.

Two additional correlations of note are: (1) the negative correlation between pre-migration behaviors and perceived difference between the United States and country of origin (r = -.29, p < .05), and (2) the positive correlation between pre-migration anticipations and endorsement that the United States has met expectations and/or hopes, post-migration (r = .24, p < .05).

Table 2 Intercorrelations among the Independent Variables and Dependent Variable (N = 74)

	1	2	3	4	5	6	7	8	9	10
1. Gender		05	.22	.09	03	.00	.14	03	.03	.03
2. Age			.12	.04	12	13	12	22	10	21
3. Length of Time in US	3			.17	45**	.19	.11	01	.36**	.33**
4. Language Origin					10	.04	.13	.23*	16	.01
5. Desire to Live Perman	nently in	US				16	04	11	.23*	18
6. Expectations/Hopes N	Met in U	S					.08	.24*	.10	.48**
7. Degree of Difference								.04	29*	.07
8. Pre-migration Anticip	pations								.25*	.55**
9. Pre-migration Behavi	ors									.29*
10. Post-migration Accu	ılturatior	1								

Note.

Gender (1 = male, 2 = female), Language Origin (1 = Latin, 2 = non-Latin), Desire to Live Permanently in US (1 = yes, 2 = no).

Hierarchical Regression Analysis

Evidence of the predictive validity of the pre-migration acculturation measure was further ascertained by conducting a hierarchical regression analysis in order to examine if pre-migration anticipations and pre-migration behaviors predicted post-migration acculturation to the United States, while controlling for the other study variables. Before the regression analysis was conducted, the correlations among the independent variables were observed – the correlations were low to moderate, removing major concerns of multicollinearity. In the regression analysis, there were three steps. In step one, the demographic variables were entered into the model: gender (1 = male, 2 = female), age, length of time in the U.S., and language origin (1 = Latin, 2 =non-Latin). In step two, the three questions related to acculturation were entered: desire to live permanently in United States (1 = yes, 2 = no), expectations and/ or hopes met in United States, and the degree of difference between birth country and United States. In step three, the two dimensions of the pre-migration acculturation measure – pre-migration anticipations and pre-migration behaviors – were entered.

In step one of the analysis, with the demographic variables included, the model was significant: F(4, 69) = 3.79, p < .01, with an R^2 value of .13. In step two, with the addition of the three questions related to acculturation entered, the model was again significant: F(7, 66) = 4.62, p < .001, with a significant R^2 change from .13 to .26 (p < .01). In step three, with the addition of pre-migration anticipations and pre-migration behaviors, the model was again significant: F(9, 64) = 11.18, p < .001, with a significant R^2 change from .26 to .56 (p < .001). The final model indicated that 56% of the variance in post-migration acculturation to the United States was explained by the nine independent variables in the model.

In the final model, length of time living in the United States was the strongest predictor of post-migration acculturation to the United States (β = .45, p < .001), followed closely by pre-migration anticipations (β = .42, p < .001), pre-migration behaviors (β = .32, p < .01), and finally, the degree to which participants' expectations and/or hopes had been met in the United States (β = .25, p < .01). See Table 3.

^{*} p < .05, **p < .01.

Table 3 Hierarchical Regression Analysis for Variables Predicting Post-migration Acculturation to the US (N = 74)

Variable	β	R^2	Change R ²
Step One			
Gender	07	.13	.18**
Age	26*		
Length of Time in US	.38**		
Language Origin	03		
Step Two			
Gender	04	.26	.15**
Age	20		
Length of Time in US	.29*		
Language Origin	04		
Desire to Live Permanently in US	01		
Expectations/Hopes Met in US	.40***		
Degree of Difference	004		
Step Three			
Gender	07	.56	.28***
Age	09		
Length of Time in US	.45***		
Language Origin	12		
Desire to Live Permanently in US	.02		
Expectations/Hopes Met in US	.25**		
Degree of Difference	.10		
Pre-migration Anticipations	.42***		
Pre-migration Behaviors	.32**		

Note. Gender (1 = male, 2 = female), Language Origin (1 = Latin, 2 = non-Latin), Desire to Live Permanently in US (1 = yes, 2 = no). Final model: F(9, 64) = 11.18, p < .001, $R^2 = .56$.

^{*} p < .05, ** p < .01, *** p < .001.

Discussion

The goal of our study was to develop a measure of pre-migration acculturation that would measure two dimensions of pre-migration acculturation: pre-migration anticipations and pre-migration behaviors. After ascertaining the preliminary reliability and validity of the pre-migration acculturation measure (via internal consistencies and correlations), we wished to further examine the predictive validity of the pre-migration acculturation measure by testing if (via hierarchical regression), after controlling for relevant variables, pre-migration anticipations and pre-migration behaviors predicted post-migration acculturation to the United States.

This study provides preliminary support for the reliability of the pre-migration acculturation measure, as the pre-migration anticipations dimension had a Cronbach's alpha of .80 and the pre-migration behaviors dimension had a Cronbach's alpha of .82. This study also provides preliminary support for the validity of the pre-migration acculturation measure. The low-tomoderate correlation between pre-migration anticipations and pre-migration behaviors (r = .29, p < .05) provides preliminary evidence of construct validity, as both pre-migration anticipations and pre-migration behaviors are measuring a related construct of postmigration acculturation to the United States. The strong correlation between pre-migration anticipations and post-migration acculturation to the United States (r = .55, p < .01), and the moderate correlation between pre-migration behaviors and post-migration acculturation to the United States (r = .29, p < .05) lend support to the predictive validity of pre-migration acculturation.

Evidence for preliminary predictive validity was also obtained by using hierarchical regression to examine the predictive power of pre-migration anticipations and pre-migration behaviors on post-migration acculturation to the United States (after controlling for relevant variables including length of time living in the United States). Results of the analysis indicated that pre-migration anticipations ($\beta = .42, p < .001$) and pre-migration behaviors ($\beta = .32$, p < .01) were the second and third strongest predictors of post-migration acculturation the United States, respectively, after length of time living in the United States ($\beta = .45$, p < .001). In the final regression model, when pre-migration anticipations and pre-migration behaviors were added, the R^2 value increased from .26 to .56. The predictive validity of pre-migration anticipations and pre-migration behaviors, as demonstrated by the regression analysis, lends preliminary evidence that pre-migration acculturation is a relevant and impactful construct. Further, the finding that pre-migration anticipations served as a stronger predictor of post-migration acculturation than

pre-migration behaviors demonstrates the possibility that, although behavioral pre-migration acculturation is important, psychological pre-migration acculturation may be more important.

Acculturation has been studied for several decades because of its impact on immigrants' adjustment and psychological health. Our pre-migration acculturation measure provides the possibility of identifying those individuals among recent immigrants who might have more difficulty with acculturation due to lack of behavioral and/or psychological pre-migration acculturation. For example, colleges or international/immigration service and support centers could administer these measures to incoming international students or immigrants to identify individuals who were less prepared or acculturated before the move and provide greater support and services.

Our study points out the value of psychologically preparing for one's migration to a new country. Those individuals who anticipate that they will be accepted by people in the United States and will like their life in the United States are more likely to engage and affiliate with their new country. Thus, workers who serve college students, immigrants, and perhaps sojourners to the United States might work to help these people, pre-migration, become more psychologically prepared for their impending move. This may help ensure that after their move to the United States, they acculturate to a greater degree and are then less likely to experience maladjustment.

One of the major limitations to our study is that the participants represented a large range of length of time living in the United States (one year to 13 years). There may be have been some bias involved in the results when participants recalled their experience many years ago as opposed to more recently. The nature of the pre-migration acculturation measure may lend itself to increased error as participants have lived in the United States for a longer time. However, retrospective accounts have been the typical method of conducting research in this area (Bhattacharya & Schoppelrey, 2004; Negy et al., 2009). Another limitation of our study is that the recruitment procedure in was non-random, and it is possible that those who chose to respond to the survey are in some ways fundamentally different from those who did not choose to respond. Further, there is considerable heterogeneity in the sample in terms of country of birth. We tried to address this by creating the language origin variable (i.e., non-Latin language origin, or Latin language origin). The examination of pre-migration anticipations and pre-migration behaviors among a more homogenous group is certainly warranted, as this will help to further establish the validity of our measure.

Our recommendations for future research in this area include larger sample sizes, a greater number of predictors for post-migration acculturation to the United States (perhaps including personality variables such as extroversion and/or openness and more detailed reasons for migration such as refugee, employment, and family), and more post-migration acculturative and adaptive outcomes beyond the one used in the present study. Future research may also work to develop premigration acculturation measures that are relevant to populations beyond university students. Although research on university students' lives is essential (Alonso, Lucas, Izquierdo, & Lobera, 2006; Lomeli & Noriega, 2005), university students represent only a small portion of the population at large and also the population of immigrant communities. Many people who migrate to the United States are not university students and they may have different pre-migration experiences.

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