Published in final edited form as:

Hisp Health Care Int. 2010 March 1; 8(1): 14–22. doi:10.1891/1540-4153.8.1.14.

Using the Revised Acculturation Rating Scale for Mexican Americans (ARSMA-II) with Older Adults

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Abstract

Projections for the year 2030 show that Latinos are expected to make the largest population increase. Cultural values create expectation levels about what will happen to the elderly. Acculturation is a concept that has been studied extensively, yet the relationship between age and acculturation has not been a focus of study. The present study has proposed an alternate way of scoring the ARSMA-II based on receiver operating characteristics. Specifically, this approach looks at participants' responses to two individual items to determine the level of acculturation of the older adults. It is a quicker method and one that could save healthcare providers a great deal of time as well as help them better understand their clients' level of acculturation; thus, being able to provide the appropriate educational materials.

Keywords

Caregiving; ethnicity; acculturation; older adults

There is a growing trend in the ethnic makeup of the population of the United States. The U.S. Census Bureau (2002) reports that, presently, 12% of the population is 65 or older and is expected to increase by 34% in the next twenty years. Within this growing population is the increasing number of ethnic minority groups. The Latino population is expected to make the largest population increase (328%) of any minority group by the year 2030 (U.S. Census Bureau, 2002). With this increase, there is a definite need to understand the problems and issues experienced by this group. As with other ethnic groups, the proportion of elderly Latinos will result in an increase in the prevalence of dementia in this ethnic group. It can be expected that there will be a substantial increase in the number of individuals being cared for by a family member. For many Latinos, mobility in their lifetime has meant emigrating away from familial roots and a known way of life, with adaptations to new circumstances that may have involved isolation, new affiliations, and values. Family members who are struggling with these adaptations and changes find it difficult to accept the responsibility of

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Disclosure: The authors have reported no conflicts of interest.

their elder member, which results in destructive ways of adjusting, thus negatively affecting the caregiver and care for the elder (Comas-Diaz & Grenier, 1998).

Acculturation occurs when groups of individuals from different cultures come into contact with each other, which results in changes in the attitudes, values, and behaviors of either or both groups (Trimble, 2003; Redfield, Linton, & Herskovitz, 1936). The essential concept of acculturation is change and adaptation. Traditionally, culture change was seen as a process away from one's own culture in a linear manner and culminated in the full and complete internalization of another culture. More recent research suggests that acculturation may not only be a linear process necessarily, but rather it may occur along many dimensions. Berry (1980) was one of the first researchers to develop a multidimensional model. According to his theory, there are four strategies people use: assimilation, separation, integration, and marginalization.

Cuellar, Arnold, and Maldonado (1995) agree that acculturation is a multidimensional process. However, they believe that the process occurs along affective, behavioral, and cognitive domains. The behavioral level includes different types of behaviors, such as customs, foods, the music one chooses to listen or dance to, and verbal behavior or language. The affective aspect deals with the emotions that have cultural connections, such as the way a person feels about important aspects of identity, symbols that are loved or disliked, and the meaning one attaches to life itself. The cognitive level includes beliefs about male and female roles, ideas about the nature of illness, and fundamental values (Cuellar et al., 1995).

The Acculturation Rating Scale for Mexican Americans-II (ARSMA-II) (Cuellar et al., 1995) is a scale that was designed to quantify the construct of acculturation. It measures acculturation along three primary factors: language, ethnic identity, and ethnic interaction. Normative data were obtained with a university student population in South Texas. They represented five generational levels of Mexicans, Mexican-Americans, and White non-Latinos from varying socioeconomic statuses and representing both sexes equally.

The ARSMA-II contains two scales. Scale 1 measures Anglo orientation (AOS) and Mexican orientation (MOS). Scale 2 measures the concepts of marginality and separation; however, it is an experimental scale that needs to be adequately validated (Cuellar et al., 1995). Since the ARSMA-II was orthogonally developed, it allows for the two scales to be used separately. For the purposes of this study, only Scale 1 was used. Scale 1 has 30 items that assess four factors: (1) language use and preference; (2) ethnic identity and classification; (3) cultural heritage and ethnic behaviors; and (4) ethnic interaction. The four factors are organized into two subscales that measure orientation toward the Mexican culture and the Anglo culture. The MOS contains 17 items. It has a coefficient alpha of .88, while the AOS has 13 items and a coefficient alpha of .83. Each item is scored on a Likert scale from 1 (*not at all*) to 5 (*extremely often or almost always*). The ARSMA-II is able to generate linear acculturation categories (Levels 1-5 defined below). For each subject, a mean MOS score is computed by summing the scores of the 17 items and dividing by 17. Likewise, a mean AOS score is obtained by summing the 13 items and dividing by 13. The MOS mean is subtracted from the AOS mean to obtain an acculturation score that represents an individual's score along a continuum from very Mexican oriented to very Anglo oriented. Low scores indicate a Mexican orientation while high scores indicate an Anglo orientation.

The criteria for including subjects into one or the other of the acculturative categories on ARSMA-II is generally based on the obtained scores on the MOS and the AOS using the following scores as suggested by Cuellar et al. (1995): Level 1 represents a Very Mexican Orientation (mean < -1.33); Level 2 represents Mexican oriented to Approximately

Balanced Bicultural (mean ≥ -1.33 and $\leq -.07$); Level 3 represents Slightly Anglo Oriented Bicultural (mean $> -.07$ and < 1.19); Level 4 represents Strongly Anglo Oriented Bicultural (mean ≥ 1.19 and < 2.45); and Level 5 represents Very Assimilated or Anglicized Individual (mean > 2.45). The ARSMA-II has been found to have strong construct and concurrent validity as well as high convergent validity as measured by correlating acculturation scores from the original ARSMA with those scores derived from the ARSMA-II (Cuellar et al., 1995).

This study uses data gathered from the baseline assessment interviews of the *Reducing Stress in Hispanic and Anglo Dementia Caregivers Project*, also known as the Stress Management Project (SMP), and the *Resources for Enhancing Alzheimer's Caregiver Health (REACH)* to develop an alternate way to score the ARSMA-II (Cuellar et al., 1995) using empirical means. The new scoring method complements the original scoring and allows a measure that has been traditionally used in research to be used in practice.

Methods

Participants

The sample used in the current study consisted of a total of 199 Hispanic women caring for relatives with either a diagnosis of or signs/symptoms of Alzheimer's disease (AD) or another form of dementia. One hundred ten of these participants were enrollees in the REACH project, a 6-site cooperative agreement research project sponsored by the National Institute on Aging and the National Alliance for Nursing Research. The remaining 89 Hispanic participants were enrollees in the SMP - one of four studies that comprise a National Institute of Aging Program Project entitled "Stress, the HPA (Hypothalamic-Pituitary-Adrenal Axis), and Health in Aging". Both projects, which were conducted through Stanford University School of Medicine and the VA Palo Alto Healthcare System, were designed to test the effectiveness of different interventions for family dementia caregivers (the study design for REACH has been described elsewhere (Coon, Schulz, & Ory, 1999). Details regarding the specifics of the SMP intervention program can be obtained from the authors upon request.

From these projects, only those Hispanic participants who completed the ARSMA-II measure (prior to participation in any of the interventions being evaluated) were included in the analyses ($N=197$) of which 72% ($n = 141$) self-identified as Mexican-American and 28% ($n = 56$) a mixture of Puerto Rican American, El Salvadorian American, Cuban American, and other Hispanic Americans.

Inclusion/exclusion criteria—Participants in these two projects were required to be female, at least 21 years of age, and caring for an elder relative with either a diagnosis of or signs/symptoms of AD or another form of dementia. **REACH INCLUSION CRITERIA:** Participants had to have been a caregiver for at least six months, to spend at least four hours a day in caregiving activities, and plan to remain as a caregiver in the San Francisco Bay Area for at least eighteen months, the duration of the study. Caregivers were not eligible if they were not living with the care recipient, undergoing chemotherapy or radiation treatment for cancer, had undergone more than three hospitalizations in the past year, or were terminally ill. **SMP INCLUSION CRITERIA:** Participants had to have been a caregiver for at least six months, spend at least eight hours a week in caregiving activities, own a phone, and plan to remain in the San Francisco Bay Area for at least six months, the duration of the study. Caregivers were also required to collect saliva samples for two consecutive days, at pre-determined intervals, in order to assess certain physiological indices of stress, including cortisol. Caregivers were excluded from this project if they were cognitively impaired,

diagnosed with Cushing's or Addison's disease, and/or were terminally ill with a life expectancy of less than six months.

Inclusion criteria for both projects also included characteristics of care recipients, who had to have a score of 23 or less on the Mini Mental State Examination (MMSE; Folstein, Folstein, & McHugh, 1975) or have a documented dementia diagnosis, be unable to perform one or more Activities of Daily Living (ADL; Katz, Ford, Moskowitz, Jackson, & Jaffe, 1963) and/or two or more Instrumental Activities of Daily Living (IADL; Lawton & Brody, 1969). Care recipients were excluded if they were terminally ill with a life expectancy of less than six months.

Procedures

Participants were recruited as caregiver-care recipient dyads. Eligible caregivers provided informed consent for themselves and the care recipient. Assent was obtained from the care recipient. Bilingual/bicultural research assistants, trained in the administration of an assessment instrument and treatment materials, were utilized to interview participants in their homes as well as conduct the interventions. The Spanish version of the ARSMA-II was used when necessary (Cuellar et al., 1995).

Measures

Of the various caregiver measures collected in the projects, two from the baseline assessment were used in the current analysis.

Sociodemographic characteristics—Information was gathered on age; country of birth (US or outside the US); years in the US; primary language spoken (English or Spanish); years of formal education; country resided in during last year of education; and annual household income (less than or more than \$30,000 annually).

Revised Acculturation Rating Scale for Mexican Americans (ARSMA-II)—As described above, the ARSMA-II (Cuellar et al., 1995), an orthogonal and multidimensional scale, measures the frequency with which an individual engages in activities related to Anglo and Mexican culture. Due to the fact that not all Hispanic participants in the current study were Mexican-American, all questions were asked in terms of the respondents' specific culture. For example, "My friends now are of *Mexican* origin" was changed to "My friends now are of *Puerto Rican* origin" if the respondent specified that she was Puerto Rican during the administration of the sociodemographic measure. Scale 1 of the ARSMA-II consists of two subscales, a 13-item Anglo Orientation Subscale (AOS) (e.g., "I associate with Anglos", "My thinking is done in the English language") and a 17-item Mexican Orientation Subscale (MOS) (e.g., "I enjoy listening to Spanish language music", "My thinking is done in the Spanish language"). Respondents were asked to rate how frequently they engage in these activities on a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely often or almost always*). In our sample, Cronbach's alpha was .93 for the AOS subscale ($M = 3.1$, $SD = 1.0$) and .83 for the MOS subscale ($M = 3.9$, $SD = .65$).

Data Analyses

Initial comparisons assessed the extent to which Hispanic caregivers from the two projects differed on inclusion criteria and demographic variables of interest. A series of one-way analysis of variance (ANOVA) and chi-square analyses were used to compare continuous and categorical variables, respectively. Principle components factor analysis (PCA) was conducted on the AOS and MOS separately using the FACTOR procedure of SPSS 12.0.1. In order to obtain a set of independent interpretable factors, varimax rotation was used.

Visual inspection of eigenvalues and scree plot analysis were used as criteria in deciding the number of components to be retained.

Based on signal detection theory methods (McFall & Treat, 1999), a Receiver Operating Characteristics (ROC) analysis, which allows researchers to evaluate and determine the ability of tests to differentiate individuals with a characteristic from individuals without the characteristic (Kraemer, 1992), was used to determine optimal cutoff values putting equal emphasis in avoiding false positives and false negatives. The ROC analysis assesses the accuracy of ordinal or continuous predictors by plotting all possible pairs of sensitivity and specificity values (Wang, Turnbull, Gröhn, & Nielsen, 2006). Then the optimal cutpoint is identified for each of the predictors, as well as the overall optimal predictor. In this analysis, the ROC served as a data reduction mechanism that would allow for the differentiation of three acculturation groups.

Results

Sociodemographic characteristics of the sample

Table 1 illustrates the socioeconomic characteristics of the sample used. The only difference between the participants from the two projects was the number of years caregiving, $F(1, 195) = 6.13, p < .05$). The sample from REACH ($M = 6.5, SD = 6.9$) had been providing care significantly longer than the SMP sample ($M = 4.4, SD = 4.2$). When taken as a whole, the sample had a mean age of 51.7 ($SD = 12.3$); they had spent an average of 35.9 ($SD = 16.9$) years in the US, 5.5 ($SD = 5.9$) years caregiving, and 12.0 ($SD = 7.3$) hours a week providing care. Of particular interest, more than half of the sample was foreign born (61.4%). Although four participants did not attend school, the average number of years of education was 10.5 ($SD = 4.4$) with 47.7% attending their last year of education in a foreign country, and over half the sample, 59.4% ($n = 117$), preferred to speak in Spanish and earned less than \$30,000/year (56.3%; $n = 111$).

Factor Analyses

A principle components factor analysis (PCA) with varimax rotation was utilized in order to extract the most independent constructs. Initial results for the AOS (13-items) revealed a two-factor solution with eigenvalues greater than 1, which accounted for 63.1% of the cumulative sample variance. Factor 1, having an eigenvalue of 7.13, accounted for 54.9% of variance, and Factor 2 accounted for only 8.3% of variance. Initial results for the MOS (17-items) revealed a four-factor solution with eigenvalues greater than 1, which accounted for 61.0% of the cumulative variance. Factor 1 accounted for 35.1% of the variance, Factor 2 accounted for 10.9% of variance, Factor 3 accounted for 8.7% of variance, and Factor 4 accounted for 6.4% of variance.

Visual inspection showed that Factor 2 of the AOS and Factor 4 of the MOS were each comprised of one item (Item 27 - “*I like to identify myself as an Anglo American*” - that loaded at .67 and Item 28 - “*I like to identify myself as an a Mexican American*” - that loaded at .53, respectively). These items were dropped, and PCAs were conducted again for each of the scales. These analyses resulted in the identification of a one-factor solution for the AOS (accounting for 58.3% of variance with an eigenvalue of 7.0) and a three-factor solution for the MOS (accounting for 56.5% of the cumulative variance with eigenvalues 1.46 and above). Table 2 provides the item means and standard deviations for the sample ($n = 191$), unrotated item factor loadings, and item communalities for the AOS. Item mean scores reflect the following choices: 1 = not at all, 2 = very little/not very often, 3 = moderately, 4 = much/very often, 5 = extremely often/almost always. The lowest item mean scores are found on the AOS. There were three items with the lowest mean scores, “My

friends while I was growing up were of Anglo origin,” ($M = 2.1$; $SD = 1.4$), “My contact with the USA has been” ($M = 2.3$; $SD = 1.6$) and 30 “I like to identify myself as an American” ($M = 2.7$; $SD = 1.3$). These items were substantively about contact and identification with Caucasians. The highest mean item score on the AOS was found on item 9 “I enjoy English language television,” ($M = 4.4$; $SD = 1.0$). For tables 2 and 3, items are ordered according to their factor loadings (from highest to lowest).

Table 3 provides the item means and standard deviations for the sample ($n = 189$), rotated item factor loadings for all three factors, and item communalities for the MOS. The three MOS factors were operationally defined as Social Interaction (SI; Factor 1), Communication (CM; Factor 2), and Parental and Self-Identification (PSI; Factor 3). The lowest item mean scores found on the MOS were in items 17 “My thinking is done in the Spanish language,” ($M = 3.0$; $SD = 1.4$) and 12 “I enjoy reading in Spanish (e.g. books)” ($M = 3.0$; $SD = 1.5$). Both items loaded on the CM factor. The highest item mean scores were also found on the CM factor. These were item 22, “My friends while I was growing up were of Mexican origin,” ($M = 4.7$; $SD = .84$) and item 18, “My contact with Mexico has been,” ($M = 4.6$; $SD = .97$).

Scores for each of the factors were computed by averaging the responses to create four new subscales of the ARSMA-II measure. As expected Cronbach's alpha for the AOS (12-items) was .93 ($N=191$, $M = 3.2$, $SD = 1.1$), indicating that the scale had high internal consistency.

Receiver Operating Characteristics (ROC) Analyses

In this study, generational status was used as the gold standard to perform the ROC analysis. The SMP subsample of 81 participants was used to perform the ROC analysis because they had provided that information. Generational status was assessed using a 1 item question that asked “Which generation best applies to you?” Participants answered: 1st generation = You were born in Mexico or other country; 2nd generation = You were born in USA; either parent born in Mexico or other country; 3rd generation = You were born in USA, both parents born in USA and all grandparents born in Mexico or other country; 4th generation = You and your parents born in USA and at least one grandparent born in Mexico or other country; or 5th generation = You and your parents were born in USA and all grandparents were born in USA. The following three optimal cut-offs were generated and operationally defined as follows: (1) those who answered less than five (“extremely often” or “almost always”) on item 17 “My thinking is done in the Spanish language” (High Acculturation); (2) those who answered five to item 17 and 3 (“moderately”) or higher to item 9 “I enjoy English language television” (Moderate Acculturation); and (3) those who answered five to item 17 and 3 or lower to item 9 (Low Acculturation).

The three acculturation groups did not differ on age (High: $M = 51.6$, $SD = 12.0$; Moderate: $M = 50.8$, $SD = 13.3$; Low: $M = 53.9$, $SD = 11.6$). The three groups differed on all the other demographic characteristics of interest. The high acculturation group had spent a significantly greater number of years in the U.S. ($M = 40.4$, $SD = 15.6$) and had a higher education level ($M = 11.9$, $SD = 3.7$) when compared to the moderate ($M = 30.7$, $SD = 17.3$; $M = 9.9$, $SD = 4.3$) and low acculturation groups ($M = 29.6$, $SD = 16.8$; $M = 6.9$, $SD = 4.6$). The high acculturated Latinas reported being born in the US (54.1%); tended to have been educated in the US (71%); preferred speaking in English (60.6%); and a larger proportion reported earning over \$30,000/yr (54.1%). This is in contrast to the moderate and low acculturation groups who tended to be born outside of the US (Moderate: 77.6%; Low: 86.7%); were educated outside of the US (Moderate: 65.5%; Low: 89.3%); preferred to speak in Spanish (Moderate: 79.3%; Low: 93.3%); and reported incomes of less than \$30,000/year (Moderate: 67.2%; Low: 73.3%). These details are highlighted in Table 4.

Table 5 illustrates how the three different acculturation groups scored on the AOS and on the three different factors of the MOS. As one would expect, the high acculturation group had the highest AOS score ($M = 3.7$, $SD = .91$), which was significantly higher than the score of the Latinas in the moderate acculturation group ($M = 3.1$, $SD = .91$) and the low acculturation group ($M = 1.9$, $SD = .70$). Conversely, the high acculturated Latinas scored significantly lower on all three factors of the MOS (SI: $M = 3.6$, $SD = .86$; CM: $M = 3.2$, $SD = .81$; PSI: $M = 4.3$, $SD = .95$) when compared to the moderate acculturated Latinas (SI: $M = 4.2$, $SD = .72$; CM: $M = 4.3$, $SD = .58$; PSI: $M = 4.8$, $SD = .41$) and the lower acculturated Latinas (SI: $M = 4.4$, $SD = .63$; CM: $M = 4.3$, $SD = .6$; PSI: $M = 4.8$, $SD = .39$).

Discussion

This study demonstrates an alternative method for assessing acculturation in a sample of older Latina dementia caregivers. A new, empirically based system of scoring and interpreting the ARSMA-II is being proposed when used with an older adult sample in a practice setting. Specifically, this approach looks at participants' responses to two individual items, "My thinking is done in the Spanish language" and "I enjoy English language television" to determine the level of acculturation of the older individuals.

Since health services available to Latinos are underutilized and the access to care is hindered by barriers such as language and low socioeconomic status counterparts (Flores et al., 2002), it is increasingly important to accurately identify those variables that may present as obstacles. Understanding those obstacles may help to inform the development of effective interventions for increasing education among ethnic minority groups.

The present study had certain limitations that may potentially reduce the generalizability of the findings. Limitations included gender, ethnic, geographic, and health characteristics of the sample. The caregiving sample used in this analysis consisted entirely of women. No male caregivers were used due, in part, to the fact that gender differences in the caregiving experience have been noted in the literature and were expected to confound the results of the main outcomes in the current project (Lauderdale, Andrea, & Coon, 2003). Most of the Latinas were self-identified as Mexican-American, so the results may not be generalizable beyond Mexican-American caregivers. Participants were recruited from one region of the US, making it difficult to generalize these results to caregivers who reside outside of Northern CA. This is especially relevant for Latinos living in areas where access to information and resources in Spanish is even more limited. Participants in this study were relatively healthy and volunteered to be in research. There is a certain amount of selection bias that may confound the results.

Despite the various limitations noted earlier, the current study represents a valuable contribution to the literature and is a foundation for future research on acculturation. Further research is needed using a non-caregiver sample and note any differences between caregiving and non-caregiving samples. Further research is also needed to determine the influence of acculturation on the epidemiology and etiology of diseases such as Alzheimer's disease and diabetes. In sum, the present study proposes an alternate way of scoring the ARSMA-II based on receiver operating characteristics. It is a quick method that could save healthcare providers a great deal of time as well as help them understand just how acculturated their clients; thus providing the appropriate educational materials.

Acknowledgments

This research was supported by Grant numbers AG18784 and AG13289 from the National Institute on Aging. The researchers wish to thank Helena Kraemer, Ph.D. of the Dept of Psychiatry & Behavioral Sciences, Stanford University School of Medicine, for her helpful statistical advice and comments on earlier drafts of this paper.

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Table 1
Caregiver Sociodemographic Characteristics by Project

Sociodemographic Characteristics	Project			<i>p</i>
	REACH (<i>n</i> = 110)	SMP (<i>n</i> = 87)	Total Sample (<i>N</i> = 197)	
	<u><i>M</i> (SD)</u>	<u><i>M</i> (SD)</u>	<u><i>M</i> (SD)</u>	
Age	51.8 (12.9)	51.7 (11.7)	51.7 (12.3)	---
Years in the US	35.7 (17.3)	36.3 (16.6)	35.9 (16.9)	---
Years of Education	10.6 (4.2)	10.4 (4.7)	10.5 (4.4)	---
Years Providing Care	6.5 (6.9)	4.4 (4.2)	5.5 (5.9)	.01
Hours Providing Care	12.2 (7.1)	11.7 (7.6)	12.0 (7.3)	---
	<u>% (<i>n</i>)</u>	<u>% (<i>n</i>)</u>	<u>% (<i>n</i>)</u>	<u><i>p</i></u>
Country of Birth				
US	44.5 (49)	31.0 (27)	38.6 (76)	---
Outside US	55.5 (61)	69.0 (60)	61.4 (121)	---
Country Last Year of School				
US	50.0 (55)	50.6 (44)	50.3 (99)	---
Outside US	49.1 (54)	46.0 (40)	47.7 (94)	---
Language Preference				
English	42.7 (47)	37.9 (33)	40.6 (80)	---
Spanish	57.3 (63)	62.1 (54)	59.4 (117)	---
Income				
Less than 30K	56.4 (62)	56.3 (49)	56.3 (111)	---
More than 30K	43.6 (48)	42.5 (37)	43.1 (85)	---

Table 2
American Orientation Scale (AOS) Item Means and Standard Deviations for Respondents and Factor Loadings and Communalities From Principal-Components Analysis With Varimax Rotation

Item	Factor loading			
	M	SD	1	h ²
2. I speak English.	3.5	1.4	.88	.78
16. My thinking is done in the English language.	3.2	1.4	.87	.58
13. I enjoy reading in English (e.g. books).	3.6	1.3	.85	.54
15. I write in English.	3.7	1.3	.83	.51
10. I enjoy English language movies.	3.8	1.3	.80	.64
4. I associate with Anglos.	3.3	1.5	.76	.72
7. I enjoy listening to English language music.	3.0	1.7	.74	.69
25. My friends now are of Anglo (<i>specific</i>) origin.	3.0	1.7	.72	.76
9. I enjoy English language TV.	4.4	1.0	.71	.35
23. My friends while I was growing up were of Anglo origin.	2.1	1.4	.70	.49
30. I like to identify myself as an American.	2.7	1.3	.65	.52
19. My contact with the USA has been.	2.3	1.6	.60	.42

Table 3
Mexican Orientation Scale (MOS) Item Means and Standard Deviations for Respondents and Rotated Factor Loadings and Communalities
From Principal-Components Analysis With Varimax Rotation

Item	M	SD	Factor loading			h ²
			1	2	3	
5. I associate with Mexicans (<i>specific</i>) and/or Mexican (<i>specific</i>) Americans.	4.4	.90	.76	.03	.01	.60
6. I enjoy listening to Spanish language music.	4.4	.91	.74	.23	.06	.51
11. I enjoy Spanish language movies.	4.0	1.1	.70	.15	.07	.58
8. I enjoy Spanish language TV.	4.3	1.1	.68	.27	.15	.60
26. My friends now are of Mexican (<i>specific</i>) origin.	3.6	1.3	.65	.18	.07	.56
24. My family cooks Mexican (<i>specific</i>) foods.	3.3	1.4	.59	.19	.34	.52
14. I write in Spanish (e.g. letters).	3.2	1.4	.09	.85	-.05	.65
12. I enjoy reading in Spanish (e.g. books).	3.0	1.5	.18	.78	.04	.72
1. I speak Spanish.	3.8	1.4	.25	.69	.25	.65
17. My thinking is done in the Spanish language.	3.0	1.4	.30	.67	.35	.43
18. My contact with Mexico (<i>specific</i>) has been	4.6	.97	.25	.57	.22	.69
22. My friends while I was growing up were of Mexican (<i>specific</i>) origin.	4.7	.84	.09	.53	.47	.59
3. I enjoy speaking Spanish	4.2	1.2	.49	.51	.08	.51
20. My father identifies himself as "Mexicano" (<i>specific</i>).	4.3	1.0	-.03	.14	.82	.50
21. My mother identifies herself as "Mexicana" (<i>specific</i>).	3.8	1.2	.18	.06	.74	.45
29. I like to identify myself as a Mexican (<i>specific</i>).	4.2	1.3	.14	.14	.68	.50

Table 4
Selected Participant Sociodemographic Characteristics By Acculturation Level

Sociodemographic Characteristics	Acculturation Level			F	p
	High Acculturation (n = 109)	Moderate Acculturation (n = 58)	Low Acculturation (n = 30)		
	M (SD)	M (SD)	M (SD)		
Age	51.6 (12.0)	50.8 (13.3)	53.9 (11.6)	.63	.53
Years in the US	40.4 (15.6)	30.7 (17.3)	29.6 (16.8)	9.4	<.01
Years of Education	11.9 (3.7)	9.9 (4.3)	6.9 (4.6)	19.1	<.01
	% (n)	% (n)	% (n)	χ^2	p
Country of Birth					
US	54.1 (59)	22.4 (13)	13.3 (4)	25.6	<.01
Outside US	45.9 (50)	77.6 (45)	86.7 (26)		
Country Last Year of School					
US	71.0 (76)	34.5 (20)	10.7 (3)	41.7	<.01
Outside US	29.0 (31)	65.5 (38)	89.3 (25)		
Language Preference					
English	60.6 (66)	20.7 (12)	6.7 (2)	41.8	<.01
Spanish	39.4 (43)	79.3 (46)	93.3 (28)		
Income					
Less than 30K	45.9 (50)	67.2 (39)	73.3 (22)	11.2	<.01
More than 30K	54.1 (59)	32.8 (19)	26.7 (8)		

Table 5

ARSMA-II Scale Differences by Acculturation Level

Scales	Acculturation Level										F	p
	High Acculturation (n=109)			Moderate Acculturation (n=58)			Low Acculturation (n=30)					
	n	M	SD	n	M	SD	n	M	SD			
Anglo Orientation	105	3.7	.91	56	3.1	.91	30	1.9	.70	48.4	<.01	
Social Interaction	109	3.6	.86	58	4.2	.72	30	4.4	.63	20.4	<.01	
Communication	108	3.2	.81	57	4.3	.58	29	4.3	.60	58.8	<.01	
Parental and Self-Identification	105	4.3	.95	57	4.8	.41	30	4.8	.39	13.2	<.01	