Adaptation of the Psychological-Behavioral Acculturation Scale to a Community of Urban-based Mexican Americans in the United States

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Introduction

Population groups arriving to a new country bring language, traditions, values and beliefs from their culture. These may affect health status by modifying access to care, adherence, continuity of care, preventive screening, doctor-patient communication, having a regular source of care, use of traditional remedies, feeding practices, and prescription practices.[1] As there is a solid linkage between how an individual acts and the nurturing culture, it is reasonable to expect that when cultural influences are modified, the individual changes as well.[2] This process of change is generically referred to as acculturation; it was originally described as a complex process whereby a migrant group (as a result of the exposure to a cultural system that was significantly different from its own) modified social norms, attitudes, values, and behaviors toward those typical of the mainstream or host society.[3] This process may entail relinquishing or retaining some of the characteristics of the culture of origin, or cultures in which people were socialized or supplied important life experiences.[4]

Although originally proposed as a group phenomenon,[3] acculturation has long been conceptualized as an individual-level phenomenon whereby change will occur at different levels and rates,[2] or even result in an intensification of original culture, or overemphasis of mainstream norms.[5,6] By and large there are no hard and fast rules of universal application to measure acculturation.[7,8] Furthermore, it is not clear how acculturation operates, but it has been referred to as an important mediator in health.[9] Reviews of the relationship between acculturation and health among Latinos[8-10] observed that acculturation models often resorted to simpler unidimensional scales, merely using unreliable measures of acculturation such as language knowledge and command, or proxy measures,[9] to connote the continuum between complete pres-

Objective: To report the psychometric properties of the Psychological-Behavioral Acculturation Scale (P-BAS), a tool gauging behavioral and psychological acculturation after adapting it through formative research to people of Mexican origin in the United States.

Methods: We analyzed data from adapted P-BAS questionnaires in the TalaSurvey study, using standard methods to establish internal consistencies (Cronbach's alpha), construct validity, and ascertain if the value orientation profile differed by ethnic group.

Results: In 2012-13, 505 respondents (mean age 45.2 ±14.1, 56% female) participated: 250 European Americans (EA) and 255 people of Mexican origin (MA).

Conclusions: Although internal consistencies of 15 value orientation measures were occasionally low, overall results were encouraging. A weighted combination of value orientation scores strongly discriminated between EA and MA. Additionally, the pattern of relationships among MAs identified between acculturation scores and the validity contrasts supported the construct validity of the proposed dual framework. The trend was particularly evident for most behavioral variables. *Ethn Dis.* 2015;25(4):469-478; doi:10.18865/ed.25.4.469

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ervation of culture of origin, to complete immersion in mainstream culture. But models acknowledging that immersion in the mainstream culture may coexist with other cultural poles,[11] fit with the Berry model,[2,12] and provide more detail of how acculturation is shaped.

One approach to complement current understanding of the acculturation process is to incorporate more dimensions to gauge more accurately how individuals adapt to new conditions, and the differential uptake of traits from the original or the mainstream cultures. Specifically, the psychological dimension of acculturation has been found to be of central importance when relating acculturation to health and other social issues. Only a few acculturation scales have complemented the behavioral with the psychological dimension to produce a broader measure.[13-18] The sparse use of the psychological dimension of acculturation is evident in many scales that attempt to measure acculturation of Latino immigrants to the United States. We sought to validate an acculturation instrument that could start to address such shortcoming. The Psychological-Behavioral Acculturation Scale (P-BAS)[16] is a multi-dimensional acculturation scale developed for Vietnamese migrants in Australia to incorporate both behavioral and psychological dimensions.[12,19] P-BAS includes separate scales to evaluate the different dimensions of acculturation, such as values, ethnic interaction, language use and choice, cultural domain, participation and identity. In so do-

ing, the P-BAS responds to contemporary acculturation research and addresses major criticisms of current acculturation scales used for Latinos in the United States.[8,9]

The P-BAS tool goes beyond the simpler unidimensional approaches to gauge acculturation depending

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upon a combination of preferred use of language and self-definition of ethnic heritage, such as the Hazuda and the Cuellar scales.[20,21] Furthermore, the validation of the P-BAS incorporated the comparative culture toward which the group is acculturating.[22] A comparative group offers a more valuable insight into the process of acculturation and helps put findings in perspective by providing an indication of how the original culture and the new culture interact to produce a new set of values, attitudes, and beliefs.[12] Without this information, there is no way of ascertaining if the cultural variable selected has, in fact, been properly identified as an antecedent of differences in observed behavior.

The purpose of our study was to provide initial evidence of the psychometric properties of P-BAS adapted to assess acculturation of people of Mexican origin living in an urban setting in the United States.

METHODS

Our report is part of a larger study on social networks in people of Mexican origin, the TalaSurvey Study. Ethical clearance was obtained from Indiana University (IRB 1210009746). Participation was anonymous, voluntary and confidential. A complete informed consent form was not collected insofar as the study did not collect personal identifiers; however, participants were fully briefed in writing and verbally of other consent aspects, purpose of the study and their rights and responsibilities derived from taking part in the study. Participants received monetary compensation for their time. An advisory panel adapted two P-BAS questionnaire[16] versions: one focused on people of Mexican origin (Mexican Americans, MA) and another one focused on people of European American (EA) background. Translation and back translation were undertaken. The questionnaire was discussed by the advisory panel with MA community members to verify literacy level, clarity, and relevance. These community members did not take part in the main study. The session was content-analyzed to typify values and concepts. After an iterative process of improvement and discussion leading to a more refined questionnaire, a second discussion session took place with new community members. P-BAS questionnaires were thus adapted to target the experiences of MAs (in English or Spanish) and of EAs (English only). Questionnaires did not include

personal identifiers or a time limit. Survey administration took place separately for EAs and for MAs.

Sample Size

A sample size of more than 250 participants provided a fair to good sample size for factor and discriminant analyses, with more than the minimum recommended group size of 20 cases in the smallest group[23] and the minimum of 10 cases per independent variable for discriminant analysis.[24]

Scale Construction and Data Management

Behavioral Acculturation

The operational definition was the adoption of observable aspects of the mainstream culture. Behavioral acculturation was measured using language proficiency and language first learned; languages used with others as a child, at work, and in the media; and exposure to Mexican and non-Mexican groups (at work, friends and peers, in neighborhood, and membership in organizations).

Behavioral Acculturation Scale

Items were first selected on the basis of acculturation theory and literature review, but retained on the basis of psychometric properties.[25] Using principal component analysis, the 15 items of the behavioral section were used to explore the underlying factor structure and identify items that best represented the construct. Items that did not correlate at least .30 with the first unrotated component were excluded from the final scale. Other items

Table 1. Sociodemographic characteristics of EA and MA respondents; construct validity of behavior and psychological acculturation variables for the MA respondents

Variable	EA n= 250	MA n= 255	Behavioral acculturation Mean (SD)	Psychological acculturation Mean (SD)
Proportion of life in United States			*P*<.0001	
.00 - .20		22	2.29 (.72)	-2.48 (1.02)
.201 - .30		55	2.29 (.60)	-2.37 (.90)
.301 - .40		58	2.37 (.64)	-2.51 (.88)
.401 - .99		74	2.71 (.69)	-2.53 (1.01)
1.00		18	3.78 (.90)	-2.16 (1.11)
Income Level			*P*<.0001	
Less than $10,000	38	28	2.20 (.62)	-2.55 (1.03)
$20,000 to $29,999	8	51	2.62 (.73)	-2.49 (1.03)
$30,000 to $39,999	10	56	2.41 (.57)	-2.42 (1.01)
$40,000 to $49,999	14	20	2.73 (.79)	-2.34 (1.06)
$50,000 or more	175	28	3.26 (.71)	-2.21 (.99)
Educational Level			*P*<.0001	*P*<.0001
Elementary incomplete	2	52	2.20 (.82)	-2.94 (.86)
Elementary complete	-	22	2.37 (.58)	-2.50 (.80)
Middle School complete	-	84	2.63 (.75)	-2.55 (.93)
Secondary complete	12	46	2.37 (.51)	-2.41 (.96)
Vocational + post-secondary	234	51	2.91 (.85)	-1.97 (.93)
Gender				
Female	136	149	2.45 (.83)	-2.52 (.94)
Male	114	104	2.64 (.67)	-2.43 (.98)
Self-identification			*P*<.0001	
Mexican		170	2.36 (.67)	-2.47 (.94)
Mexican American, but more Mexican		39	2.58 (.74)	-2.78 (.88)
Mexican American, but more American & American		46	3.15 (.84)	-2.29 (1.01)
Reason to migrate			*P*<.0001	
Family reunion		48	2.42 (.51)	-2.56 (.92)
Born in US + migrated as child		32	3.50 (.90)	-2.15 (.99)
Economic + Education		175	2.38 (.61)	-2.52 (.95)
Size of the location of origin			*P*<.001	*P*<.05
Village + small town		123	2.53 (.78)	-2.45 (.94)
Town		33	2.30 (.68)	-2.90 (.93)
City		98	2.59 (.75)	-2.40 (.96)
Frequency religious participation				*P*<.0001
Every day	54	12	3.03 (.91)	-1.48 (1.20)
3-6 times a week	41	14	2.41 (.62)	-1.86 (.80)
1-2 times a week	134	135	2.56 (.72)	-2.54 (.95)
1-3 times a month	18	51	2.41 (.81)	-2.52 (.80)
Less than once a month	1	27	2.52 (.89)	-2.62 (.89)
Never	-	11	2.53 (.84)	-3.25 (.79)
Partner's country of birth			*P*<.0001	
Mexico		208	2.39 (.60)	-2.56 (.97)
US + other countries		17	3.23 (.94)	-2.20 (1.09)

EA, European Americans; MA, Mexican origin.
Numbers may not add exactly due to missing values.

were eliminated because of lack of variation (ie, first language spoken).

Psychological Acculturation

The operational definition was the degree to which the immigrant group (MA) approached the values orientation assumed to be more characteristic of the mainstream group (EA)[13,14,26] (Table 1). The psychological acculturation dimension also included items on preferred lifestyle and ethnic self-identification.[13,27] Those were considered an independent element of psychological acculturation. Preferred lifestyles were operationalized as the ethnic-specific choices for language, neighborhood, friends' ethnicity, and child's friends' ethnicity. Ethnic self-identification was operationalized as the way one thinks of oneself,[2] in terms of how an individual identifies with the ethnic-specific culture or the mainstream culture.[28]

Value Orientations Scale

A stepwise, discriminant function analysis was performed, using all 15 value subscales to find the best linear combination of variables that would maximize discrimination between EAs and MAs, to summarize the overall results in the psychological dimension.[29] The 15 subscales were entered to predict EA and MA group membership. Critical F-to-enter was set at P=.01 to reduce Type 1 error. Prior probability of correct classification for both groups was 50%. The discriminant score was calculated from the weighted sum of the series of predictors.[23] Each of the 45 items were worded in a positive direction and ran-

domly ordered in the questionnaire.

Regarding preferred lifestyle questions, most participants indicated no particular preference. The only exception was preference to celebrate special occasions (weddings, birthdays) following an American or a Mexican tradition; 31.4% indicated a preference for Mexican style celebrations. This assembly of items was therefore not included in further analyses.

Statistical Analyses

Internal Consistency

Internal consistencies were examined on the 15 psychological subscales as well as in the behavioral data using Cronbach's alpha. Internal consistency on the behavioral acculturation scale was estimated on the principal components analysis' derived items. In the psychological dimension, each participant's responses for each sub-scale item were added to form a new variable with the name of the sub-scale, which represented the average score for all three items in the sub-scale. Each of the 15 sub-scales (3 variations x 5 orientations) was treated as independent sub-scales. Respondents with missing data were excluded. Internal consistency estimates for each subscale were examined using Cronbach's alpha; .5 was used as the decision for acceptable internal consistency.

Construct Validity

Construct validity was assessed by determining participants' level of acculturation through examination of hypothesized associations with

sociodemographic and migration variables that have been reported to change concurrently or as modifiers of the process of acculturation. Six sociodemographic and six migration variables were used as independent variables to classify individuals according to their acculturation scores. These variables included contextual socio economic factors (eg, income and level of education); relationship behaviors (eg, marriage, membership in various cultural groups or organizations), and other immigration and emigration contexts as modifiers of the acculturation experience (eg, area of origin).[12] It also incorporated ecological contextual factors,[8] such as place of residence, cultural features, and ethnic enclaves.

Directions of the measures connoting increased acculturation can be found in the Results section; significant effects were examined by one-way analysis of variance (ANOVA). To further explore and interpret the behavioral and psychological scores a significant ANOVA was followed by post-hoc tests (Tukey's Honestly Significant Differences), to determine which groups were different within each acculturation score on each of the independent variables examined. Level of significance was set at the one-tailed P-value of .05. Analyses were carried out using SPSS 20.0 (Endicott, NY, USA).

RESULTS

Participant Description

In 2012-2013, a total of 505 respondents (mean age 45.2 ± 14.1; 56% female) completed the P-BAS

instruments (Table 1); 250 participants filled out EA questionnaires (51.6±14.6 years, 54% female), and 255 filled out MA questionnaires (38.5±9.6 years, 58% female).

Behavioral Acculturation Scale

A principal component analysis was used to identify the underlying dimension that accounted for most of the measured variance shared by the 15 items. The maximum number of factors with eigenvalues >1.0 among the unrotated were 3. Items that did not load on the first unrotated factor were dropped, and extracted the first principal component items to estimate the behavioral score (Table 2).

The first unrotated derived score was correlated with the score obtained from summing up all 15 behavioral items. A correlation of r=.97 was obtained, indicating the behavioral scale could be reduced to 10 items without loss of information.

Each participant's responses for these remaining 10 items first unrotated factor were added up in a new variable. Total scores ranged from 1.20 to 4.88, with 1 indicating minimum behavioral acculturation and five indicating maximum behavioral acculturation. Mean score was 2.53 (±.77). The internal consistency for the behavioral scale had alpha=.71.

Psychological Acculturation Scale

There were statistically significant differences between MAs and EAs regarding values in 11 of 15 subscales

Table 2. Variables pertaining to behavioral aspects rated in the scale

	Component	
	1	**2**
What kind of TV, music and radio programs do you usually watch and listen?	.811	
In what language are the newspapers, magazines or books you read?	.791	
What language do you use when seeking information on general health? (from the internet and any other source of information, such as books from a public library)	-.785	
How difficult is it for you to understand English?	.779	-.346
How difficult is it for you to make yourself understood by others in English?	.764	-.316
What languages do you use with your children?	.670	
What languages do you use with your spouse / partner?	.593	
What languages do you use at work?	.536	
Are your friends and acquaintances? (Ranging from only American to only Mexican)	.456	.654
What kind of clubs/social groups, etc. do you attend? (Ranging from only American to only Mexican)	.464	.609

Table 3. Kluckhohn and Strodtbeck's value orientations model with alternative variations,[26] Cronbach's alpha for the 15 value orientation sub-scales; means and standard deviations for EAs and MAs

Value orientation	Variation	Cronbach's alpha	EA	MA
Human nature: What is the character of human nature?	Good	.56	2.35(.62)	2.25 (.64)
	Mixed	.61	2.64 (.60)	3.50 (.66) [a]
	Bad	.74	3.56 (.75)	4.30 (.53) [a]
People/nature: What is the relation of people to nature?	Mastery over nature	.56	2.91 (.66)	3.07 (.78)
	Harmony with nature	.79	2.04(.62)	2.90 (.75) [a]
	Subjugation to nature	.29	2.77 (.69)	3.07 (.62) [a]
Time: What is the temporary focus of human life?	Future	.58	2.00 (.65)	2.09 (.55)
	Past	.66	2.77 (.68)	3.32 (.65) [a]
	Present	.81	2.76 (.86)	3.79 (.67) [a]
Activity: What is the modality of human activity?	Being	.83	2.68 (.79)	3.94 (.69) [a]
	Being in becoming	.60	2.91 (.66)	3.07 (.78)
	Doing	.43	2.04(.62)	2.90 (.75) [a]
Relational: What is the modality of human's relationship to other humans?	Individual	.77	2.77 (.69)	3.07 (.62) [a]
	Collateral	.56	2.21 (.67)	2.08 (.59) [a]
	Lineal	.68	2.89 (.81)	3.56 (.59) [a]

a. *P*<.0001

(Table 3; lower scores indicate agreement with the value). Most internal consistencies ranged from .56 to .83 for the various sub-scales. Only *Subjugation to Nature*, and *Doing Orientation* had estimated internal consistencies <.50 (Table 3). Nonetheless, combining the scales resulted in quite powerful discrimination between groups, overcoming to some extent the limitations imposed by the moderate internal consistencies. The 13 subscales, plus the separate items of the *Subjugation to Nature* and *Doing Orientation* subscales, were used to determine which items, if any, predicted ethnic group membership. Using discriminant function analysis, the analysis found six subscales to be insufficiently sensitive. However, nine value subscales maximized the discrimination between ethnic groups (coefficients in Table 4). This discriminant function produced a significant separation of groups (chi sq(9) = 479.10 *P*<.00001). Thus, it appears unlikely that EA (score 1.28 [1.02] and MA -1.26 [0.98]) had the same mean on the discriminant function. The power of the model was evident: 88% of the cases were correctly classified. Finally, the score was standardized to facilitate interpreting the psychological acculturation results: the mean of the EA score would be 0 with a standard deviation of 1.0. The standardized mean of MA score was -2.49 (±.96, range -5.11 to .60).

Construct Validity (Table 1)

Proportion of Life in the United States and Length of Contact

Assumptions: The longer the years of exposure to the mainstream culture, the higher the person's acculturation. However, as length of residence varies according to participant's age, an index made up of the respondent's length of residence and actual age[30] was also used. Findings: Those with a higher proportion of their life in the United States showed a higher behavioral acculturation compared with those with a smaller proportion *(P*<.0001). This trend was also observed for psychological acculturation, but was not statistically significant.

Age, and Age at Arrival to the United States

Assumptions: A positive correlation of acculturation with age. For the specific situation in which older age at migration would make it less likely that a person would adapt as readily to the new environment, we used the variables proportion of life spent in the United States, and age at arrival.[30] Findings: Both age of the participant and age at arrival were negatively related with behavioral acculturation: the older the participant and the older he/she arrived in the United States, the lower the behavioral acculturation *(P*<.0001). Those variables were not significant in the psychological acculturation.

Contextual Socioeconomic Factors

Assumption: A positive correlation was assumed, as a proxy for higher socioeconomic position, using highest level of education reached in any country, and self-reported income.[14] Findings: Higher income reflected higher behavioral acculturation *(P*<.0001), but not psychological acculturation. Higher level of education was positively correlated with both behavioral and psychological acculturation *(P*<.0001).

Gender

Assumption: Although there is contradictory evidence, it was hypothesized that males would have higher levels of acculturation than females.[15] Finding: There was no effect of gender on either behavioral or psychological acculturation score.

Table 4. Variables scoring in discriminant function analysis to separate EA and MA samples

Variables	Coefficients[a]
Individual relation	.251
Collateral relation	-.286
Doing orientation	-.364
Being orientation	.610
Past time	.359
Present time	.337
Harmony over nature	.613
Good human nature orientation	-.394
Mixed human nature orientation	.557
(Constant)	-5.624

a. *P*<.00001

Ethnic Self-identification

Assumption: Respondents identifying as Mexican or more Mexican would have lower levels of acculturation than those identifying as American, or Mexican but more American. Finding: Although a trend in the psychological acculturation *(P<.07)*, ethnic self-identification was significant in the behavioral dimension *(P<.0001)* only.

Reason to Migrate

Assumption: Those who had more control over the decision to migrate (eg, for economic reasons or to seek educational opportunities) would be more highly acculturated than those who did not (eg, migrated for political reasons).[15] Finding: Variable was significant only in the behavioral dimension *(P<.0001)*. However, when those MA who were born in the United States or arrived as children were taken out of analyses, differences in both scores were not significant.

Religion and Religious Participation

Assumptions: Religion would influence traditional cultural values and level of acculturation.[28] Thus, highly acculturated migrants would be more likely to follow a Western religion (Protestant, Catholic, etc.) or would be agnostic. On a related variable, the frequency of participation in religious activities would provide a dimension of ethnic continuity,[31] predicting attachment to original identity and culture. Findings: Under the present recruitment approach, we had no variance for religion. Reli-

gious participation was significant in the psychological dimension *(P<.0001)*, but not in the behavioral dimension. Those with more frequent religious participation were more psychologically acculturated.

Spouse/partner Ethnicity

Assumption: MAs in long-term relationships with persons of a non-MA ethnic background would have higher level of acculturation. Finding: When those participants who were not in a relationship were eliminated, partner ethnicity correlated significantly in the behavioral dimension *(P<.0001)*. Although the relationship indicated the hypothesized direction for the psychological dimension, it was not significant.

Size of the Community of Origin

Assumption: MAs originating in larger urban settings would have a more Westernized way of life than people migrating from smaller, less 'modern' communities. Finding: For the behavioral acculturation score, the size of the community of origin was significant at *P<.001*. In the same manner, psychological acculturation was also significant *(P<.05)*. Interestingly, in both cases, those coming from midsize towns were less acculturated.

Relationship between Psychological and Behavioral Acculturation

Our dual framework assumes that behavioral and psychological acculturation are separate and largely independent dimensions of acculturation – a postulate supported by the finding that the two

scores were weakly but significantly correlated *(r=.32; P<.0001)*. Higher levels of behavioral acculturation were associated with higher levels of psychological acculturation.

DISCUSSION

Numerous investigators have defined, operationalized, and measured quantitatively the continuum of acculturation on various ethnic

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Our study outlines the theoretical base of the P-BAS and its validation to the US environment: from a scale and an approach developed in Australia, into a tool that addresses some criticisms of current acculturation scales used on Latinos in the United States.[8,9]

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groups, involving several different approaches. In the United States, main criticisms of current approaches include: lack of a multidimensional definition of acculturation and lack of a multidimensional instrument to measure; lack of inclusion of psychometric properties; and use of proxy measures of acculturation.

Our study outlines the theo-

retical base of the P-BAS and its validation to the US environment: from a scale and an approach developed in Australia, into a tool that addresses some criticisms of current acculturation scales used on Latinos in the United States.[8,9] P-BAS aligns with a more contemporary acculturation research paradigm in that it uses a multidimensional approach to acculturation.

Our assessment also included evidence of internal consistency and validity test in a sample of MAs living in Indiana. In this respect, findings indicate that, although some of the internal consistencies of the 15-value orientation measures were low, overall results were encouraging. First, we showed that a weighted combination of value orientation scores strongly discriminated between the two groups. This suggests that a culture-specific rule can be derived from a "universal" item set and that, in general, groups can be distinguished on the basis of value orientation. Second, within MAs, the pattern of relationships identified between acculturation scores and the validity contrasts supported the construct validity of the proposed dual framework. The trend was evident for most behavioral variables but less so for the psychological. This indicates that while the discriminant analyses minimized misclassification of cases, MAs were more homogeneous within the psychological domain. It can also be seen as evidence of a clear dissociation between behavioral and psychological aspects of acculturation. One example is that highly educated individuals, while able to adapt

their outward behavior (language, dress, or other observable features), feel less need to change their core values in response to acculturative pressures. Most importantly, the psychological acculturation measure showed a degree of independence from behavioral acculturation, confirming the tenet that these two major dimensions of acculturation are distinguishable from each other.

In this research, we followed recommendations to incorporate contextual factors to better describe the process of acculturation.[32] We have adapted and validated a tool that is more current with the historic evolution of migration trends.[33] Many of the measures commonly used to gauge the relationship between health status and gradients of acculturation were developed years ago, before the recent sociodemographic changes of Hispanic migration.[34] Because of changes in the waves of migrants in the past 30 years, studies relying primarily on language use may ignore nuances affecting acculturation.

Self-identification of Latino heritage may be affected by similar factors.[10] Latino populations are diverse in terms of where they started their acculturation process in the United States.[8] Complementarily, in the case of two societies as closely intertwined such as the United States and Mexico, there is substantial overlap of cultural backgrounds.[7] Examples of such intimate relationships are the expanding MA populations throughout the United States, return migration patterns,[35] links established through transnational com-

munities, and pervasive exchanges of cultural messages through media and internet networking.

Our study has strengths and weaknesses that must be considered against the findings. The sample had reasonable variation and fulfilled requirements for statistical analysis, including sufficient numbers of people at various levels of acculturation. We only collected data from largely Catholic churches. Other communities may be different in terms of position along the acculturation process of change. Our findings are directly relevant only to midwest United States population. The adapted P-BAS may not be useful in those MA groups distant from our set of assumptions, such as migrant agricultural workers, rural communities, or enclaves of aboriginals from Mexico. On the other hand, the present P-BAS version appears to be the only tool to measure acculturation adapted specifically for present-day urban-based MAs. Finally, we are not making claims about how much accurate or parsimonious the P-BAS is compared with other scales.

Conclusion

In conclusion, we presented a first step to adapting and validating an instrument to gauge acculturation of people of Mexican origin in the United States, striving to make more accurate measurements of where a person is in the acculturation process. The use of this scale will allow for the testing of specific hypotheses regarding acculturative change and better inform the

design of health-related interventions to reduce disparities that affect Latinos/Hispanics. Studies of health profiles[9,16,32,36] concur on the need to make health disparities research specific to the cultural milieu and the purposes of the inquiry.

AUTHOR CONTRIBUTIONS
Research concept and design: Maupomé, Mariño. Acquisition of data: Aguirre-Zero, Ohmit, Dai, Maupomé. Data analysis and interpretation: Mariño, Ohmit, Dai, Maupomé. Manuscript draft: Aguirre-Zero, Maupomé, Mariño. Statistical expertise: Mariño, Dai, Maupomé. Acquisition of funding: Maupomé. Administrative: Aguirre-Zero, Ohmit, Dai, Maupomé. Supervision: Maupomé

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