Measuring the Elusive Construct of *Personalismo* among Mexican American, Puerto Rican, and Cuban American Adults

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Abstract

Personalismo may have a broad influence on the well-being of U.S. Latinos by shaping social networks, and, in turn, access to information and resources. However, research on *personalismo* is currently constrained by the lack of a psychometrically sound measure of this cultural construct. This research used a mixed methods approach to develop a *personalismo* scale across three studies: a cognitive interviewing study with Mexican American adults (n=33); a cognitive interviewing study with non-Latino white, Mexican American, Puerto Rican, and Cuban American adults (n=61); and a psychometric telephone survey with Mexican American, Puerto Rican, and Cuban American adults (n=1,296). The final, 12-item scale had high internal consistency reliability and appears to be appropriate for use with Mexican American, Puerto Rican, and Cuban American adults. Significant differences emerged across Latino subgroups, with higher *personalismo* observed among Cuban Americans and female respondents, providing empirical evidence of cultural heterogeneity among U.S. Latino populations.

Keywords

Latino; culture; *personalismo*; scale development

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Introduction

Personalismo is a nuanced Latino cultural construct that refers to a value for interacting with persons with whom one has a warm, caring, and trusting personal relationship (Cuellar, Arnold, & Gonzalez, 1995; Mogro-Wilson, Rojas, & Haynes, 2016). Such relationships are characterized by sincerity and authenticity and based upon a reciprocal perception between two persons that each truly cares about the other and supports their well-being. Within the confines of such trust, *personalismo* creates a safe space for interpersonal exchanges of compliments, emotional expressions, information about one or one's family, confidences, loyalty, favors, and assistance. For these reasons, *personalismo* may be described as the prioritization of people and relationships over disagreements, personal benefit, timeliness, or other competing priorities.

Since *personalismo* is impacted by trust, it may be more easily established between individuals who perceive themselves as being from the same social ingroup, such as family members. However, *personalismo* may also develop in professional relationships (e.g., doctors and patients, business owners and customers). Professional relationships with *personalismo* may involve behaviors such as engaging in small talk, physical contact (e.g., hugging a child), sharing personal information, visiting a person's home, or attending family meals or parties (Barker, Cook, & Borrego, 2010; Gallardo, 2013; Torres, Crowther, & Brodsky, 2017). To persons who are unfamiliar with *personalismo*, such behaviors may produce discomfort, as these types of interactions may feel too intimate and cause concern that personal boundaries are being violated, particularly within professional relationships. However, from the vantage of someone who values *personalismo*, engaging in such behaviors may yield positive emotions as a result of building new friendships and social connections, as well as the ability to interact with professionals with a stronger sense of personal value and security.

Personalismo may have a broad influence on the well-being of U.S. Latinos. For example, it is often identified as a core Latino cultural value to be attended to in health care settings (Flores, 2000; The National Alliance for Hispanic Health, 2001; Juckett, 2013; Rothschild, 1998). Doctor-patient relationships characterized by *personalismo* may encourage Latino patients to disclose relevant medical information (Flores, 2000; Galanti, 2003), whereas health-related behaviors are thought to be adversely affected when *personalismo* is absent (Antshel, 2002; Flores, 2000; Galanti, 2003). *Personalismo* may also motivate Latino patients to follow their doctor to a new health care practice (The National Alliance for Hispanic Health, 2001) or continue to receive services from a doctor they know rather than visit a new doctor from a needed specialty (Warda, 2000). More broadly, *personalismo* may shape social networks, which, in turn, affect an individual's access to emotional support, information, and resources. For example, immigrant Latina women participating in a study of breast cancer survivors reported difficulty coping with their cancer as a result of being separated from their social networks in their countries of origin and finding it challenging to establish similar friendships in the U.S. (Lopez-Class et al., 2011). A sense of enhanced personal security obtained through *personalismo* may be particularly salient for members of more vulnerable or threatened communities. For instance, Latino immigrants fearing deportation may be reluctant to engage in social interactions until *personalismo* has been

established, even when strangers are attempting to provide assistance. Latinos who value *personalismo* may also feel generally uncertain how to navigate social interactions with non-Latinos who lack an understanding of *personalismo*, as such individuals may be perceived as disingenuous, mistrustful, uncaring, or rude. As a consequence, cultural divisions arising from expectations of *personalismo* may influence a range of social outcomes for Latino populations. Empirically driven research is needed to explore these outcomes and their associated influences on the well-being of U.S. Latinos.

It is widely acknowledged that Latinos are culturally heterogeneous; thus, tools for assessing individual cultural heterogeneity are needed to better understand the influence of cultural diversity on social science outcomes, as well as to better serve Latino populations through the provision of culturally appropriate materials and services. However, empirically based social science research on *personalismo* has been practically nonexistent due to the dearth of measurement options for this cultural construct. To our knowledge, only one *personalismo* measure has been developed (Cuellar et al., 1995), but it has demonstrated low internal consistency reliability (α=.47-.51) in at least two studies (Cuellar et al., 1995; Ramos-Sanchez & Atkinson, 2009). Thus, there is a need for an improved *personalismo* scale. The current research addresses this need by developing and testing a *personalismo* scale, which was conducted using a mixed-methods approach across three sequential studies: a cognitive interviewing study with Mexican American adults (Study 1; n=33); a cognitive interviewing study with non-Latino white (NLW), Mexican American, Puerto Rican, and Cuban American adults (Study 2; n=61); and a telephone survey with Mexican American, Puerto Rican, and Cuban American adults (Study 3; n=1,296). These studies will be presented in turn.

Study 1: Cognitive Interviewing

Methods

Participants.—Data were collected through cognitive interviews conducted in 2011 as part of a pilot study examining cultural influences on type 2 diabetes management among Mexican American adults. Cognitive interviewing is a methodology for pretesting survey items and is believed to be particularly effective in identifying potential problems (Beatty & Willis, 2007). A convenience sample of 33 Mexican American adults with type 2 diabetes was recruited from a primary care clinic population using flyers, letters, and telephone calls to Mexican American patients associated with medical clinics and a diabetes intervention trial in the Chicago area. Participants had a diagnosis of type 2 diabetes for at least one year, were between ages 20 and 75, were not pregnant, spoke Spanish or English, and were of Mexican heritage. Descriptive statistics for participants in all three studies are provided in Table 1.

Data Collection.—Eligibility screening was conducted over the telephone. Participants who were found to be eligible and agreed to participate in the study were scheduled to complete an approximately 90-minute, in-person cognitive interview, which occurred in a private room in a medical clinic or participants' homes. Interview language was guided by participants' initial language use and confirmed by a bilingual interviewer. Data collection

materials were first developed in English, translated into Spanish by a company specializing in Spanish dialects, and reviewed and adjusted, as needed, by two bilingual members of the study team. Throughout this process, the English text was adjusted to enhance consistency in meaning across the two languages. All interviews were audio recorded. Participants received a $25 gift card as a thank-you gift and, as applicable, money to cover transportation expenses. This study was approved by two university-affiliated Institutional Review Boards.

Measures.—Nineteen *personalismo* items were pretested. All items were formatted as statements and created by the study team based on literature reviews and the team's experience with Latino populations. Participants were asked to rate each statement on a scale of 1 ("Strongly disagree") to 10 ("Strongly agree"). Two of the 19 items were administered only to male ("I would feel comfortable placing my hand on a friend's back or shoulder while walking with him") or female participants ("When greeting a female friend, it would seem natural to touch her on the arm or shoulder"), respectively, to query gender-specific norms for physical contact. Probing was used to explore participants' comprehension, answer formation, and response selection processes (Beatty & Willis, 2007). Pre-scripted probes explored issues that the study team anticipated to be potential sources of error (Willis, 2005), while unscripted probes were used to explore problems that emerged during the interviews. Selected sociodemographic variables were also assessed: age, gender, nativity, and the number of years lived in the U.S. (foreign born only).

Data Analysis.—The audio recordings were transcribed and translated into English by a professional translation company. A bilingual member of the study team then reviewed the translations for accuracy and inserted edits and comments in the transcripts, as needed, when additional clarification might be needed (e.g., documenting laughter or clarifying Spanish idioms requiring additional explanation in English). The transcripts were then de-identified and imported into NVivo (Version 10, copyright © 2012, QSR International Pty Ltd), which was used by the first author to view, organize, and assign codes to the data after reading the transcripts line-by-line. As consistent with text summary analysis of cognitive interviewing data (Willis, 2015), the first author generated reports to view all comments from all 33 interviews by item, which made it easier to identify potential problems with each item.

Results

The interviews revealed substantial problems for ten items and minor issues for the remaining nine items. Participants often did not interpret question meanings as intended. Participants had comprehension difficulties with specific words (e.g., "compliments") and abstract terms (e.g., "effort"). Items containing negated wording (e.g., "avoid") caused comprehension and response option mapping problems for multiple participants, with respondents sometimes choosing ratings that were on the opposite side of the response scale than indicated by their other comments (e.g., choosing a 1 when they clearly agreed with an item). Participants' responses to items about social behaviors were often dependent on the type of person involved in the indicated interactions. For example, participants volunteered that they would generally only share information about their families, give compliments, or engage in physical contact (e.g., kissing on the cheek) with people with whom they felt substantial "closeness" or "trust," such as family members or close friends. These comments

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indicated a need to identify the social context involved in items assessing behaviors. In total, findings from Study 1 suggested that ten items be deleted and nine items be revised.

Study 2: Cognitive Interviewing

Methods

Participants.—Data were collected in 2014 as part of a larger study using cognitive interviewing to pretest measures of cultural constructs with a convenience sample of 61 Mexican American, Puerto Rican, Cuban American, and NLW adults. Participants were recruited from the Chicago metropolitan area using several recruitment methods, including online message boards, flyers, and snowball sampling. Participants self-identified as being from one of the four targeted ethnic/racial groups, were between the ages of 18–70, and spoke Spanish or English.

Data Collection.—Each participant completed a brief telephone survey and an in-person cognitive interview at a university-affiliated survey research center. The interviews were audio recorded and lasted approximately 90 minutes. Language preference was determined by the language respondents used and subsequently verified via a single item administered during eligibility screening. Translation procedures were identical to those described for Study 1. This study was approved and monitored by two university-affiliated Institutional Review Boards. Each participant who completed the study received $50 and, as applicable, a parking voucher.

Measures.—The 20 items pretested in Study 2 included the nine revised items from Study 1 and eleven new items created by the study team. All items queried the importance of a belief, attitude, or behavior. When relevant, the social context of social interactions was specified (e.g., family, strangers). In an effort to reduce response difficulties from Study 1, the response scale was changed to a unipolar, fully labeled, four-point scale ("Is this not important, not very important, somewhat important, or very important?"). Several additional variables were also assessed: age, gender, education, income, Latino subgroup (Latinos only), nativity, years lived in the U.S. (foreign born only), and acculturation (Latinos only). Acculturation was measured using an adapted version of the Acculturation Rating Scale for Mexican Americans II (ARSMA-II; Cuellar, Arnold, & Maldonado, 1995), which contained two subscales: (1) a Latino orientation subscale exploring Spanish use and engagement with each participant's Latino subgroup (15 items; α=.90); and (2) a NLW orientation subscale exploring participants' English use and engagement with NLWs (12 items; α=.90). In addition to these data, the interviewers documented their impressions of potential item problems on a form during and after completing each interview. These notes were reviewed and discussed in weekly meetings with their supervisor during fielding. During this time, four coders listened to and coded the interview recordings for evidence of item problems (details below). Two of the authors, the coders, and the interviewing supervisor met weekly during the field period to discuss potential item problems, and problematic items were revised during fielding, as needed, to improve the items.

Data Analysis.—The study team developed an *a priori* coding scheme to document interviewer and respondent behaviors considered to be indicators of item problems. This coding scheme was revised during fielding to capture emerging problems of interest. The final scheme included 12 codes: (1) five interviewer behaviors (misreading an item stem, probe, or response option or skipping a question or probe); and (2) seven respondent behaviors (pausing before answering, not understanding an item, comprehending an item differently than intended, triggering the interviewer to repeat an item, forgetting response options, or other problems with item stems or response options). The coders achieved consistency by double-coding subsets of interviews and discussing discrepancies until consensus was reached. Each code had two potential values: 1 if the problem was observed, and 0 if the problem was not observed. These values were entered into a database for all 20 items across all 61 respondents, yielding 14,640 code entries. The coders also entered comments to provide additional information, as needed, such as indicating a particular word that was misunderstood. These data were imported into SAS (Version 9.4 of the SAS System for Windows, copyright © 2013, SAS Institute Inc., Cary, NC), which was used to compute the frequency that each problem was observed for each item.

Results

Aside from two isolated instances of questions being misread, the coding revealed no evidence of interviewer behavior problems. More evidence was observed for respondent behavior problems, with problem frequencies ranging between 0% and 23.0%. However, the frequencies for most problems were low (0–1.6%), indicating relatively few item problems. Most problems were item-specific, such as not understanding a particular term (e.g., "personal space"); however, participants seemed to have difficulty distinguishing among the Spanish response option labels. For example, respondents seemed to struggle to distinguish between "Not very important" and "Somewhat important" in Spanish, whereas these labels seemed to be distinct in English. The response options were therefore changed in both languages to "Not important," "A little important," "Important," and "Extremely important" during fielding, which appeared to reduce response difficulty. However, several Spanish-speaking participants used the word "Very" when choosing the last response option instead of "Extremely," suggesting that "Very important" might be preferred. Altogether, findings from Study 2 indicated that eight items be deleted, nine items be revised, and three items be retained without revision.

Study 3: Telephone Survey

Methods

Participants.—Data were obtained from a telephone survey of 1,296 Mexican American, Cuban American, and Puerto Rican adults that was conducted in 2016 as part of a study of culture and survey responding among U.S. Latinos. Participants were randomly selected from a list of landline and cellular telephone numbers for individuals in the U.S. or Puerto Rico with no more than 12 years of education and a household income of $25,000 or less. Eligible respondents were aged 18 to 90, spoke English or Spanish, and self-identified as Mexican American, Cuban American, or Puerto Rican. As required by the parent study, participants were also stratified by their responses to a 20-item acquiescence screener. The

survey response rate was 21.3% (American Association for Public Opinion Research, 2017; Response Rate 3).

Data Collection.—Three items adapted from the National Latino and Asian American Study were administered during eligibility screening to identify each respondent's preferred language (Center for Multicultural Mental Health Research, 2002), which was subsequently confirmed with the respondent to determine interview language selection. Translation of data collection materials followed procedures described for Study 1. Participants who completed the approximately 35-minute survey were mailed a $20 gift card as a thank-you gift. All study procedures were approved by a university-affiliated Institutional Review Board.

Measures.—Thirteen *personalismo* items were included in the questionnaire. One item was newly created by the study team, while 12 items were retained and revised, as needed, from Study 2. Two items were only administered to female (Q12a) or male (Q12b) participants, respectively. Thus, 12 items were administered to each respondent. To improve response processing, the items were divided into two sets to better pair the items with cognitively congruent response scale labels. The first set consisted of eight items paired with a response scale querying importance ("Not important, a little important, important, very important"), while the second set consisted of five items paired with a response scale assessing likelihood ("Not likely, a little likely, likely, and very likely"). Sociodemographic variables were identical to those described for Study 2, with the ARSMA-II subscales demonstrating high internal consistency reliability (Latino orientation subscale α=.86; NLW orientation subscale α=.89).

Data Analysis.—Several types of analyses were conducted, with results from each informing subsequent analyses: descriptive statistics; exploratory factor analysis (EFA) to inform the allocation of items with reasonable discrimination to similar factors; item response theory (IRT) analyses to examine item discrimination; confirmatory factor analysis (CFA) to test models informed by EFA; multi-group CFA (MGCFA) to assess measurement invariance across Latino subgroups; and a general linear model to examine predictors of responses to the final *personalismo* scale. Since the female-only (Q12a) and male-only (Q12b) items measured similar but gendered forms of physical contact, responses to these items were combined to form a single variable (Q12) for most analyses to reduce missing data. Convergent validity was explored by examining the relationship between the final *personalismo* scale and the Latino orientation subscale. No relationships were predicted between *personalismo* and the NLW orientation subscale, since *personalismo* was not believed to have an association with NLW culture.

Results

EFA indicated that two factors explained a larger percentage of the total variance than a single factor (31.8% vs. 24.9%, Table 2). In the 2-factor model, 8 items (Q1, Q2, Q3, Q4, Q5, Q6, Q7, and Q8) were associated with Factor 1, and 5 items (Q9, Q10, Q11, and Q12, which was the combined version of Q12a and Q12b) were associated with Factor 2. These item groupings corresponded with the division of items by response scales, as Factor 1 items were paired with the importance response scale and Factor 2 items were paired with the

likelihood response scale. Factor 1 was therefore labeled as the Importance Subscale, while Factor 2 was termed the Likelihood Subscale. Initial estimates of internal consistency reliability indicated an alpha of 0.76 for the Importance Subscale and a more moderate alpha of 0.68 for the Likelihood Subscale.

All items were included in IRT analyses, which were conducted separately for each subscale. Results from these analyses indicated that when using the four-point importance and likelihood response scales, the second category (P2="A little important/likely") was indistinguishable from the third category (P3="Important/likely") for seven of the items (Q1-Q4, Q8-Q9, and Q12). The second and third response categories were therefore combined into a single response category. IRT analyses using these recoded response categories indicated improved item discrimination for all but one item, Q1, which had poor estimated discrimination (a=0.572). Hence, Q1 was removed from the Importance Subscale and the three-category response scale was retained in subsequent analyses.

Using revised items based on the IRT results, a CFA of the 2-factor model from the EFA indicated that both factors loaded onto the respective items well (Table 3). This model had good fit parameters (CFI=0.984; TLI=0.979; RMSEA=0.028 [90% CI: 0.019–0.037]; SRMR=0.026). Further, when testing the comparability of this factor structure across the three Latino subgroups (Mexican Americans, Puerto Ricans, and Cuban Americans) and between males and females through MGCFA, our analysis indicated metric measurement invariance: on Latino subgroup MGCFA, configural invariance model [χ^2=195; df=129; CFI=0.974; RMSEA=0.036] vs. metric invariance model [χ^2=210; df=147; CFI=0.975; RMSEA=0.033]; χ^2=15; df=18; p=0.663; and on gender MGCFA, configural invariance model [χ^2=154; df=86; CFI=0.974; RMSEA=0.036] vs. metric invariance model [χ^2=168; df=95; CFI=0.972; RMSEA=0.036]; χ^2=14; df=9; p=0.119. This means that the same factor structure held across the three Latino groups with similar factor loadings, although intercepts and error variances were not invariant. The same holds between males and females.

Although the two-factor model was supported by the CFA results, subsequent analyses utilized participants' mean scores on all items as a single variable because *personalismo* was conceptualized as a single, bi-dimensional construct. The two subscales had a moderate correlation (r=.43). The final *personalismo* scale contained 12 items, two of which were gender-specific, yielding 11 responses per respondent. The final scale had high internal consistency reliability for the full sample (Table 4, α=.81), as well as for each of the Latino subgroups (α=.78-.83). The subscale alphas were comparable among the Latino subgroups, ranging from 0.77–0.80 for the Importance Subscale and from 0.69–0.73 for the Likelihood Subscale.

Personalismo was positively correlated with the Latino orientation subscale (*r*=.23, p<.0001), suggesting that *personalismo* increased as engagement with one's Latino subgroup increased. *Personalismo* was not correlated with the NLW orientation subscale (*r*=.02, p=.59).

Mean *personalismo* scores were significantly different across the three Latino subgroups (p<.0001). Mexican American participants had the lowest *personalismo* scores ($\bar{x}$=2.45, s=0.34), followed by Puerto Ricans ($\bar{x}$=2.50, s=0.33) and Cuban Americans ($\bar{x}$=2.56, s=0.30). In multivariate analysis controlling for acculturation and other covariates (Table 5), *personalismo* scores were higher among Cuban Americans than among Mexican Americans (p=.001) but did not significantly differ between Puerto Ricans and Mexican Americans. *Personalismo* was positively associated with the Latino (p<.0001) and NLW (p<.0001) orientation subscale scores, with a larger effect observed for the Latino orientation subscale. Female gender was also associated with higher *personalismo* (p<.0001). No support was found for an interaction between Latino ethnicity and gender (data not shown). A post-hoc comparison of mean item responses by gender suggested that gender differences in the overall *personalismo* scale resulted from higher endorsement by female respondents of the five items querying physical contact with others (items Q7, Q10, Q11, Q12a, and Q12b; data not shown). No significant relationships were observed between *personalismo* and age or education. Item wording for the final *personalismo* scale is provided in Table 6.

Discussion

This mixed methods research developed and tested a new, 12-item measure of *personalismo* for use with ethnically diverse Latino adults. *Personalismo* may have a broad influence on how U.S. Latinos form and interact with their social networks, which, in turn, is likely to have further implications for shaping their access to social support and other resources. However, hypotheses involving *personalismo* have been heretofore untestable, as the only pre-existing *personalismo* measure has demonstrated insufficient reliability (Cuellar et al., 1995; Ramos-Sanchez & Atkinson, 2009). The final *personalismo* scale developed in this research was found to have strong reliability, as indicated by high internal consistency reliability for the whole telephone sample (α=.81) and within the Mexican American, Puerto Rican, and Cuban American subsamples (α=.78-.83). Results of confirmatory factor analysis imply that the final scale performs similarly across these three Latino subgroups, suggesting that this measure is appropriate for use with Mexican American, Puerto Rican, and Cuban American adults.

Convergent validity was examined by comparing responses to the final *personalismo* scale and the Latino orientation subscale, which yielded a positive correlation between *personalismo* and Latino orientation. As *personalismo* is believed to be generally associated with Latino culture (Cuellar et al., 1995), this result provided support for the convergent validity of the scale. The magnitude of this correlation was weak, however, which suggests at least two possibilities: (1) the validity of the *personalismo* scale was modest; or (2) the Latino orientation subscale was a weak choice for examining convergent validity. Some evidence exists in support of the latter possibility in research conducted by Lugo Steidel and Contreras (2003), who found similarly modest magnitudes (ranging from .00 to .23) for correlations between another Latino cultural construct, familism, and the Latino and NLW orientation ARSMA-II subscales. These findings indicate that while individuals may broadly identify with the language and people associated with a particular ethnic group, such identification does not guarantee endorsement of specific cultural constructs associated with that group. As such, acculturation may be a poor proxy for endorsement of specific, cultural

constructs. Future research should examine relationships with acculturation and continue to explore the validity of the *personalismo* scale.

This research used data from ethnically diverse Latino populations, which yielded empirical support for cultural heterogeneity among Latino ethnic subgroups. Since endorsement of *personalismo* was relatively high among all three Latino subgroups in the telephone survey and positively associated with the Latino acculturation subscale, *personalismo* appears to be a broadly endorsed Latino cultural value. However, significant differences emerged across Latino subgroups in a model controlling for acculturation, age, gender, and education, with higher *personalismo* observed among Cuban Americans and lower *personalismo* observed among Mexican Americans. These differences may be attributable to the unique histories, migration patterns, and geographic dispersion patterns among these Latino subgroups (Cauce & Domenech-Rodríguez, 2002), which have likely produced variation in subgroup cultural norms. For example, Cuban Americans are the most geographically concentrated U.S. Latino subgroup (López, 2015), which, combined with their unique identity as political exiles, may have fostered the development of stronger social ties within Cuban American communities than among Mexican Americans or Puerto Ricans.

Female respondents were also more likely to endorse *personalismo* in our sample, regardless of age or ethnicity. As indicated by our post-hoc analyses, these gender differences appeared to be primarily attributable to higher endorsement by female respondents than male respondents of items assessing physical contact. This interpretation is supported by comments elicited during the cognitive interviewing studies, in which several male participants said that they refrained from physical contact for fear that such actions might be misinterpreted by or cause upset to the other person. As one male Study 1 participant noted, "I think that (touching someone on the arm or shoulder while talking to them) can be misunderstood ... We must be very careful. If you are going to touch a lady or someone (a man) … they could think that yoúre either gay or abusive. We must be very careful with that ..." Given that five of the 12 items in the final scale assessed physical contact, the *personalismo* scale developed in this research may be particularly useful when seeking to understand relationships between *personalismo* and other variables in settings in which physical contact is of interest – for example, research on nonverbal communication – as compared to research seeking to examine other aspects of *personalismo*.

Researchers seeking to use the *personalismo* scale presented here should also be mindful of several limitations of this research. The Study 3 sample was older, more female, more Spanish-speaking, and less likely to have been born in the mainland U.S. than the samples for Studies 1 and 3. The *personalismo* scale may therefore present different psychometric properties when used with populations who are younger, more male, English speaking, and more acculturated. The Study 1 sample also consisted entirely of Mexican Americans with type 2 diabetes, which may have influenced their responses, and the Study 2 sample had relatively few Cuban Americans. Thus, the *personalismo* scale may require additional further testing to ensure validity and reliability among Cuban Americans, as well as among respondents from other Latino populations not included in this research.

Social scientists often point to culture as an influential determinant of attitudes, beliefs, and behaviors among Latinos. Yet, often in such scenarios, culture has either not been directly assessed or language or acculturation have been used as cultural proxies for constructs. There is a need for improved measures of cultural constructs (Kagawa-Singer, Dressler, George, & Elwood, 2015). To this end, this mixed methods research developed and tested a 12-item *personalismo* scale for use with Mexican American, Puerto Rican, and Cuban American adults, which provides an opportunity for researchers to examine how *personalismo* influences a range of social science outcomes affecting Latino health and well-being.

Acknowledgements

Biography

Rachel E. Davis completed her Ph.D. in health behavior and health education and a certificate in survey methodology at the University of Michigan. She is an assistant professor in the department of health promotion, education, and behavior at the University of South Carolina. Her research focuses on redressing health disparities by obtaining a greater understanding of the roles of culture, race, and ethnicity in survey responding and health communication.

Sunghee Lee completed a Ph.D. in survey methodology from University of Maryland. Currently, she is an associate research scientist at the Institute for Social Research at the University of Michigan. Her research focuses on measurement and sampling errors, particularly for surveying racial, ethnic, and/or linguistic minorities.

Timothy P. Johnson received his Ph.D. at the University of Kentucky and is currently a professor of public administration and the director of the Survey Research Laboratory at the University of Illinois at Chicago. He is also a past president of the American Association for Public Opinion Research. His research interests include cross-cultural sources of survey error and health behaviors among disadvantaged populations.

Steven Rothschild completed an M.D. at the University of Michigan. He is currently an associate professor in the department of preventive medicine and the associate chairperson for clinical programs in the department of family medicine at Rush University. His research interests include chronic illness self-management, community health workers, community-based interventions to reduce health disparities, and collaboration across interprofessional teams.

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Table 1:

Respondent characteristics across the three studies

	Study 1 (n=33)	Study 2 (n=61)	Study 3 (n=1296)
Mean age in years (SD=standard deviation)	56.7 (9.9)	39.5 (13.4)	59.5 (18.1)
Gender (% female)	60.6	52.5	75.5
Ethnicity (n):			
Mexican American	33	22	446
Cuban American	0	7	424
Puerto Rican	0	21	426
Non-Latino White	0	11	0
Born in the mainland U.S. (%)	21.2	70.0	16.4
Mean number of years in the U.S. among those not born in the mainland U.S. (SD)	34.0 (10.8)	26.6 (14.9)	33.3 (16.9)
Interview language (% Spanish)	60.6	23.0	84.2
Acculturation (Latino respondents only):			
Latino orientation subscale mean	N/A	3.9 (0.7)	3.3 (0.5)
NLW orientation subscale mean	N/A	3.7 (0.7)	2.2 (0.6)
Education (%):			
Less than 12th grade	N/A	15.0	17.8
12th grade or equivalent	N/A	28.3	44.3
Some college or technical/vocational school	N/A	31.7	18.7
4-year college degree	N/A	8.3	12.0
Graduate degree	N/A	16.7	7.2
Annual household income (%):			
Less than $20,000	N/A	29.8	58.0
$20,000-$39,999	N/A	33.3	25.0
$40,000-$59,999	N/A	19.3	9.2
$60,000 or greater	N/A	17.5	7.8

Table 2:

1-factor and 2-factor exploratory factor analysis (EFA) results (n=1296)

	1-Factor EFA Factor Loadings	2-Factor EFA Factor Loadings	
	Factor 1	Factor 1	Factor 2
Q1	0.362	0.319	
Q2	0.451	0.571	−0.120
Q3	0.549	0.551	
Q4	0.605	0.567	
Q5	0.571	0.571	
Q6	0.561	0.616	
Q7	0.511	0.436	0.113
Q8	0.542	0.618	
Q9	0.408		0.465
Q10	0.469		0.612
Q11	0.474		0.689
Q12	0.421		0.612
% Variance	24.9%	19.5%	12.4%
% Cumulative Variance	24.9%	31.8%	

Table 3:

2-factor model confirmatory factor analysis results (n=1215)

	Factor Loading (Standardized)		Error Variance (Standardized)	
	Est	SE	Est	SE
Factor 1 – Importance Subscale				
Q2	0.499	0.026	0.751	0.026
Q3	0.564	0.024	0.682	0.027
Q4	0.634	0.022	0.598	0.028
Q5	0.591	0.023	0.651	0.027
Q6	0.593	0.023	0.648	0.027
Q7	0.519	0.025	0.731	0.026
Q8	0.546	0.024	0.702	0.027
Factor 2 – Likelihood Subscale				
Q9	0.539	0.026	0.710	0.028
Q10	0.638	0.024	0.593	0.030
Q11	0.686	0.023	0.529	0.031
Q12	0.576	0.025	0.669	0.029
Importance Subscale ~ Likelihood Subscale	ρ=0.650 (SE: 0.035)			

Table 4:

Personalismo scale alphas by subgroup (n=1296)

	All Respondents	Mexican Americans	Puerto Ricans	Cuban Americans
Final scale (12 items)	0.81	0.81	0.83	0.78
Importance Subscale (7 items)	0.79	0.78	0.80	0.77
Likelihood Subscale (5 items)	0.71	0.71	0.73	0.69

Table 5:

Results of a general linear model estimating the influence of sociocultural variables on *personalismo* scale scores among U.S. Latinos (n=1255)

Latino subgroup (Mexican American = 0):	
Puerto Rican	0.01 (.02)
Cuban American	0.08 (.03) ***
Acculturation subscales:	
Latino orientation subscale	0.18 (.02) ****
NLW orientation subscale	0.07 (.02) ****
Age	−0.001 (.001)
Gender (male = 0)	0.09 (.02) ****
Education	0.001 (.01)
R^2	.09
Model p-value	<.0001

#
= $p < .10$

*
= $p < .05$

**
= $p < .01$

***
= $p < .001$

****
= $p < .0001$

Table 6:

Item wording for final *personalismo* scale (n=1296)

Item Numbers In Text	Item-Total Correlation
Q1. (Dropped from the scale)	
Q2. How important is it to you that an employee in a clothing store helps you to find what you need? *(¿Qué tan importante es para usted que un empleado en una tienda de ropa le ayude a encontrar lo que necesita?)*	0.426
Q3. How important is it to you to have long-lasting friendships? *(¿Qué tan importante es para usted tener amistades duraderas?)*	0.511
Q4. How important is it to you to tell a friend or family member when you think highly of them? *(¿Qué tan importante es para usted decirle a un amigo o familiar cuando tiene una muy buena opinión de él/ella?)*	0.562
Q5. How important is it to you to do favors for your friends? *(¿Qué tan importante es para usted hacerle favores a sus amigos?)*	0.503
Q6. How important is it to you to have friends and family who will help you in times of need? *(¿Qué tan importante es para usted tener amigos y familiares que le ayudarían en casos de necesidad?)*	0.487
Q7. How important is it to you to give your family hugs and kisses? *(¿Qué tan importante es para usted abrazar y besar a su familia?)*	0.477
Q8. How important is it to you that employees are friendly to you when you walk into a shop? *(¿Qué tan importante es para usted que los empleados sean amigables con usted cuando entra a una tienda?)*	0.504
Q9. How likely are you to ask a friend if their family is doing well? *(¿Qué tan probable es que le pregunte a un amigo si a su familia le va bien?)*	0.432
Q10. How likely are you to greet a female friend with a kiss on the cheek? *(¿Qué tan probable es que usted salude a una amiga con un beso en la mejilla?)*	0.444
Q11. How likely are you to greet close friends with a hug? *(¿Qué tan probable es que usted salude a sus amigos cercanos con un abrazo?)*	0.457
Q12. (Combined responses from Q12a and Q12b) 　Q12a. [FEMALE ONLY] How likely are you to touch a friend on the arm or shoulder when greeting her? *(¿Qué tan probable es que usted toque el brazo o el hombro de una amiga cuando la saluda?)* 　Q12b. [MALE ONLY] How likely are you to place your hand on a friend's back or shoulder while talking with him? *(¿Qué tan probable es que usted ponga su mano en la espalda o el hombro de un amigo cuando está hablando con él?)*	0.407

Importance Subscale Response Options (Q2-Q8): Is this not important, a little important, important, or very important? *(¿Esto no es importante, es un poco importante, es importante, o es muy importante?)*

Likelihood Subscale Response Options (Q9-Q12): Would you say not likely, a little likely, likely, or very likely? *(¿Diría que no es probable, que es un poco probable, que es probable o que es muy probable?)*

Note: Combine the middle two response options for analysis.