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Factorial Invariance of a Pan-Hispanic Familism Scale

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This article considers the validity and factorial invariance of an attitudinal measure of familism. Using a large, nationally representative sample of U.S. Hispanics, the validity and factorial invariance of the measure was tested across country of origin (United States, Mexico, and Latin America) and the language in which the survey was conducted (Spanish and English). Results support the invariance of the measure in both group comparisons, suggesting that the measure assesses a quality of familism that persists across country of origin and language preference. Further, the results also support equality in mean factor levels across these groups.

Keywords: *Hispanic culture; ethnicity; core cultural values; familism; factorial invariance*

A number of specific values have been identified as being core to Hispanic culture. These include, but are not limited to, familism, *simpatía*, *respeto* (respect), fatalism, and *machismo* (see Marin & Marin, 1991). Familism has been defined as "a cultural value that involves individuals' strong identification with and attachment to their nuclear and extended families, and strong feelings of loyalty, reciprocity, and solidarity among members of the same family" (p. 13). Simpatía has been defined as "a permanent personal quality where an individual is perceived as likable, attractive, fun to be with, and easy going" (Triandis, Marin, Lisansky, & Betancourt, 1984, p. 1363). Respeto refers to the personal quality of showing respect for others based on age, gender, and authority (Antshel, 2002). Fatalism is the belief that one has no con-

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trol over one's destiny (Unger et al., 2002). Machismo is reflected in the male qualities of "masculinity, male dominance, sexual prowess, physical strength, and honor" (Unger at al, 2002, p. 260).

With regard to simpatía, respeto, fatalism, and machismo, only a few studies have explored these values, with very little content overlap in the instruments used to measure them (e.g., Antshel, 2002; Cuellar, Arnold, & Gonzalez, 1995; Unger et al., 2002). The limited number of empirical studies and the use of different scales to measure these values raise the question of whether these particular values are core to Hispanic culture.

Conversely, familism has been studied extensively, with much empirical support for the contention that familism is core to Hispanic culture (Alvarez & Bean, 1976; Cohen, 1979; Cortes, 1995; Cuellar, Arnold, & Gonzalez, 1995; Fernandez-Marin, Maldonado-Sierra, & Trent, 1958; Ferrari, 2002; Fitzpatrick, 1971; Luna et al., 1996; Marin, 1993; Marin & Marin, 1991; Mindel, 1980; Montoro-Rodriguez & Kosloski, 1998; Moore, 1970; Pabon, 1998; Penalosa & McDonagh, 1966; Rogler & Cooney, 1984; Rogler & Hollingshead, 1985; Sabogal, Marin, Otero-Sabogal, & Marin, 1987; Steidel & Contreras, 2003; Szapocznik & Kurtines, 1980; Valenzuela & Dronbush, 1994). The sheer number and range of studies of familism, relative to the other value dimensions, support the argument that familism is an important, core value dimension for Hispanic culture.

Familism

According to Luna et al. (1996), the term *familism* was created about 60 years ago to characterize the normative commitment of individuals to their family and family relationships. Although the concept of family is universal, how a family is defined and how family obligations are viewed are culture specific (cf. Keefe, Padilla, & Carlos, 1979; Luna et al., 1996; Ng, Phillips, & Lee, 2002; Valenzuela & Dornbusch, 1994; Yeh & Bedford, 2003). For Hispanics, family includes nuclear, extended, and fictive family, where loyalty to the family is nurtured and individuals are raised to be dependent on the family (see Sabogal et al., 1987). For Anglos, family is more commonly defined in terms of the nuclear family, and individuals are raised to be independent of the family. For many Asian groups, family is commonly defined in terms of filial piety (Cowgill, 1986; Unger et al., 2002), which describes children's dutiful respect for their parents based on obligations of children to parents (Ng et al., 2002).

Family-related values in Hispanic culture usually concentrate on familism, but familism can have various forms or manifestations. Many researchers have discussed familism as having two primary manifestations:

attitudinal and behavioral (Marin, 1993; Montoro-Rodriguez & Kosloski, 1998). Sabogal et al. (1987) stated that "failure to differentiate the two aspects of Familism may lead to some counter-intuitive findings such as first generation Hispanics showing lower levels of Familism than second and third generations" (p. 399). Attitudinal familism refers to feelings and beliefs concerning family and feelings of loyalty, solidarity, and reciprocity, whereas behavioral familism concerns specific behaviors that might be based on attitudes about family, such as helping monetarily or with child rearing. Some researchers (e.g., Arce, 1978; Luna et al., 1996) have also distinguished a third manifestation of familism—demographic familism—which includes measures of family size and intactness. However, the two domains of attitudinal and behavioral familism capture the more fundamental, psychological aspects of familism.

Of these two basic domains of familism, research strongly suggests that attitudinal familism is more stable over generations, across language preference, acculturation level, and country of origin (Rueschenberg & Buriel, 1995; Sabogal et al., 1987). Behavioral familism, in contrast, may be less stable. First, although some aspects of behavioral familism, such as frequency of visitation with family members, may be important, acting on them may not be possible, especially in cases where families do not live in close proximity. Second, some behavioral aspects, such as the exchange of material assistance, may simply change as a function of length of time in the United States (Rueschenberg & Buriel, 1995; Sabogal et al., 1987).

Familism has also been characterized by qualities that concern the boundaries and proximity of family members (Luna et al., 1996). Boundaries discriminate between who is and is not considered family. For example, Mexican Americans and Hispanics in general tend to be more inclusive than Anglos in defining family (e.g., distant relatives, such as second or third cousins, aunts, uncles, and fictive relatives such as godparents, are considered family by Hispanics). Proximity places importance of living close to relatives and having a high frequency of interactions, and Mexican Americans and Hispanics, more generally, place greater importance than Anglos on living near and being in close contact with family.

Despite the suggested universality of the concept of family, research suggests that familism is a more central or important cultural value for Hispanics than for members of other cultural groups. Hispanics have been shown to differ from Anglos on measures of familism, with Hispanics reporting elevated levels (Cuellar et al., 1995; Ferrari, 2002; Luna et al., 1996; Ramirez et al., 2004; Valenzuela & Dornbusch, 1994). Differences between Hispanics and Asians, however, have not been well studied. Despite this, it may be reasonable to posit differences between Asians and Hispanics because family-related values for Asians are founded primarily on filial piety rather than familism.

Hispanic Familism

Two primary issues arise when considering previous research on Hispanics and familism. One issue is the inconsistency with which familism has been measured (Luna et al., 1996). Despite variation in how the construct has been measured, however, studies consistently find that Hispanics score higher than non-Hispanics on measures of both forms of familism, attitudinal and behavioral. For example, Ferrari (2002) reported higher familism levels for U.S. Hispanics when compared to those for African Americans and Anglos. Ramirez et al. (2004) found similar results with elevated levels for Hispanics compared to Anglos. Within Hispanic subgroups or across acculturation levels, differences in familism levels are apparent for behavioral measures but not attitudinal. These findings support familism as being core to Hispanic values and, with regard to the attitudinal domain, as potentially unaffected by Hispanic subgroup membership (e.g., Cuban versus Mexican) and acculturation level.

The second issue concerns the characteristics of the samples used in the various studies. In terms of sample characteristics in previous studies, most researchers have employed either samples of convenience (e.g., Montoro-Rodriguez & Kosloski, 1998; Sabogal et al., 1987; Steidel & Contreras, 2003) or student samples (e.g., Cuellar et al., 1995; Ferrari, 2002; Gil, Wagner, & Vega, 2000; Ramirez et al., 2004; Unger et al., 2002; Valenzuela & Dornbusch, 1994), neither of which may be representative of the Hispanic population. As in the case of variation in measures used, even these studies on less-than-optimal samples still provide support for familism as central to Hispanic culture.

The purpose of this article is to study the psychometric properties of a scale designed to measure attitudinal familism (attitudes about the importance of family) using a large, nationally representative sample of U.S. Hispanics. Confirmatory factor analysis was used to evaluate the validity and invariance of the scale across individuals from different countries of origin (i.e., United States, Mexico, and Latin America[1]) and language preference for the study interview (Spanish and English). Factorial invariance implies that a measure is on a comparable scale for all groups under consideration (Drasgow, 1984, 1987; Meredith, 1993).[2] Using confirmatory factor analysis, support for factorial invariance may be established by demonstrating that certain characteristics of the factor structure (e.g., factor loadings) are the same across different populations (Widaman & Reise, 1997). With regard to familism, whether specific properties of the factor structure are the same for different Hispanic subgroups, such as those characterized by country of origin or the language in which the survey was conducted, is an important issue, as cross-group comparisons in mean levels are only interpretable if factorial invariance has been established. Evidence for factorial invariance would support the conjecture that the construct is defined in essentially the same manner for Hispanic individuals regardless of country of origin and language preference. Assuming the necessary level of factorial invariance across groups, mean differences in familism were compared across Hispanic subgroups to test whether mean levels of familism varied across countries of origin and language preference groups.

Method

Participants

Study participants were 762 men and women between the ages of 18 and 65 years recruited by telephone from a list of phone numbers randomly generated from low to high Hispanic density neighborhoods across the nine U.S. Census Regions (excluding Alaska and Hawaii). Those agreeing to participate (80%) were selected for inclusion in the study if they (a) self-identified as Hispanic/Latino, (b) possessed a Spanish-language country of origin (e.g., Mexico or Cuba), or (c) had at least one parent of Hispanic/Latino descent. Of those qualified to participate, 89% completed the survey in its entirety. In two studies with Hispanics residing in San Francisco, Marin, Vanoss Marin, Perez-Stable, and Vanoss (1990) reported comparable response rates of 88.6% and 88.4% using random digit dialing procedures, suggesting that telephone interviewing of Hispanics is a useful method.

As part of a larger survey, data were collected by means of an approximately 40-minute telephone interview in the study participants' preferred languages (Spanish or English) by professional bilingual interviewers employed by a Hispanic marketing research firm over a 3-week period. Participants were not offered any incentive to participate. The sample is reflective of the U.S. Hispanic adult population, representing a mix of Spanish-language-country-of-origin ancestry groups (e.g., Mexico-origin, Cuba-origin), gender, geography, and a full range of acculturation levels (i.e., from minimally acculturated Hispanics to highly acculturated Hispanics). Approximately 62% of the study participants preferred Spanish as the language in which to conduct the interview. The geographic dispersion of the

Table 1. Sample Frequencies by Census Region

Census Region	Frequency	%	U.S. Census Data[a] (%)
New England	20	2.6	2.5
Middle Atlantic	98	12.9	12.4
East North Central	52	6.8	7.0
West North Central	16	2.1	1.8
South Atlantic	91	11.9	12.0
East South Central	8	1.0	.9
West South Central	150	19.7	20.0
Mountain	76	10.0	10.0
Pacific	251	32.9	33.4
Total	762	100.0	100.0

a. Values are based on U.S. Census Bureau (2003).

study participants mirrored the distribution of Hispanics in the continental United States (see Table 1).

Familism Scale

Five items were selected from two scales designed to measure familism. These scales appear in Gaines et al. (1997) and Gil et al. (2000). Items selected for study were those reflecting ideological beliefs about family and were not behavioral in nature. Some items were modified slightly to improve clarity of presentation (i.e., all items were presented in first person); the five items are shown in Table 2. A 5-point response set was used to assess each item: 1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *strongly agree*. Internal consistency for this sample as measured by coefficient alpha was .82.

Results

Scale Validation

A one-factor confirmatory model that also included means on the measured variables was fitted to the familism item responses. Because the data were not likely to follow a multivariate normal distribution, robust maximum likelihood (RML) estimation was used, carried out with LISREL version 8.54. The estimated factor loadings, intercepts for the measured variables, and the corresponding unique factor variances are given in Table 2. All estimates were large relative to their standard errors ($p < .001$).

Table 2. Scale Items and Estimated Factor Loadings (Λ), Intercepts for Measured Variables (τ), Unique Factor Variances (Θ_ε), and Communalities (h^2)

Item in English/Spanish	λ	τ	θ_ε	h^2
My family is always there for me in times of need./*Mi familia siempre está ahí cuando los necesito.*	.654(.035)	4.32(.030)	.272(.030)	.611
I am proud of my family./*Estoy orgulloso de mi familia.*	.515(.039)	4.50(.025)	.204(.031)	.565
I cherish the time I spend with my family./*Valoro el tiempo que paso con mi familia.*	.510(.035)	4.44(.025)	.213(.023)	.550
I know my family has my best interests in mind./*Sé que mi familia tiene en mente los mejores intereses para mi.*	.504(.036)	4.36(.026)	.266(.026)	.488
My family members and I share similar values and beliefs./*Los miembros de mi familia y yo compartimos valores y creencias similares.*	.537(.040)	4.15(.033)	.536(.050)	.350

NOTE: Estimates are unstandardized, maximum likelihood. Robust standard errors are in parentheses.

Three indices were used to evaluate the fit of the model: the Satorra-Bentler scaled chi-square statistic (S-Bχ^2; Satorra & Bentler, 1988), the root mean square error of approximation (RMSEA), and the Tucker-Lewis Index (TLI; Tucker & Lewis, 1973). The S-Bχ^2 was developed for cases in which data are nonnormal. The statistic is the usual normal-theory chi-square statistic divided by a scaling correction value, yielding an improved approximate chi-square value when data are nonnormal. The chi-square test is typically used to test the hypothesis that a model fits the data perfectly in the population.

The chi-square test of perfect fit is often considered unreasonable because, more generally, a model is not likely to fit population data perfectly (MacCallum, 2003). As an alternative, the RMSEA was used to test the null hypothesis that the model fits closely in the population (Browne & Cudeck, 1992; Steiger, 1990; Steiger & Lind, 1980). Browne (1990) suggested that models with RMSEA values of .05 or lower indicate a close fit to the data. In addition, the TLI (also commonly referred to as the nonnormed fit index, NNFI; Bentler & Bonnett, 1980) was used as a measure of the proportion of covariation among the observed variables accounted for by the imposed structure relative to a null model of independence among the measured variables.[3] Values of the TLI close to 1.0 suggest a good fit.

For the one-factor model, the S-Bχ^2 was not statistically significant, S-Bχ^2(5, N = 762) = 5.58, p = .349, suggesting a good fit to the data. In addition, the RMSEA of .009 and the TLI of .999 also suggest that the model provides a very good fit to the data.

Factorial Invariance

Different levels of factorial invariance have been described in the literature. The first and most basic form is referred to as configural invariance (Horn, McArdle, & Mason, 1983). Configural invariance holds when the pattern of fixed and free factor loadings (zero and non-zero values, respectively) are the same across groups, with no other restrictions on model parameters. Although useful in assessing agreement in the factor patterns across groups, configural invariance at best implies that the group factors are similar but gives no indication that they possess measurement equivalence necessarily equivalent. This is problematic when one wishes to compare the factor means, variances, and covariances across groups because these parameters are not necessarily invariant.

A second type of invariance, metric invariance, concerns the invariance of model parameters across groups. Widaman and Reise (1997) provide an extended discussion of three types of metric invariance: weak, strong, and strict[4] (cf. Meredith, 1993). Readers are referred to Widaman and Reise for an extended discussion of the three types of metric invariance. Briefly, weak factorial invariance concerns the invariance of factor loadings across groups, implying that the relationships between the factors and their indictors are the same across groups. Under weak factorial invariance, group comparisons concerning the factor variances and covariances, but not means, are meaningful. Strong factorial invariance concerns the invariance of the factor loadings in addition to the intercepts of the measured variables. With the addition of the equality constraint on the intercepts of the measured variables, group comparisons among factor means are meaningful, in addition to those for the factor variances and covariances. Strict factorial invariance assumes the constraints of a model with strong invariance but with the additional constraint that the variances of the unique factors are equal across groups. Comparisons of the factor means, variances, and covariances are naturally appropriate under strict invariance.

Testing Factorial Invariance Across Countries of Origin

Confirmatory factor analysis was used to test the factorial invariance of the one-factor model across groups defined by country of origin: United States, Mexico, and Latin America. Four models were fitted to the data, and indices of fit for each were compared. As a reference, a baseline model (Model 1) assumed configural invariance across countries of origin. Here, this meant that a one-factor model without equality constraints on the factor loadings, intercepts of the measured variables, or measurement error variances was assumed to hold across the three groups.

Following Reise, Widaman, and Pugh (1993; also see Widaman & Reise, 1997), we specified the mean and covariance structures corresponding to the three country-of-origin groups as follows: (a) The factor variance for the latent measure of familism for those born in the United States was fixed at 1.0 to identify the item parameter scales, (b) the factor variances were estimated in the remaining two groups, (c) the first factor loading on the latent variable was constrained to be invariant across groups, (d) the factor mean was set equal to zero in the first group, (e) the factor means were estimated in the remaining two groups, and (f) the intercept of the first measured variable was constrained to be invariant across groups. In this model specification, the mean and variance of the latent variable for the first group was based on a z-score metric, with mean 0 and variance 1.0. This parameterization made it convenient to test group differences with regard to the means of the latent variables. The baseline model had a total of 45 parameters. The S-Bχ^2 was 15.3 (15 *df*, $p = .432$), the RMSEA was .009 with the 90% confidence interval (CI) bounds of (0, .061), and the TLI value was .999, with all tests and fit indices suggesting that the model provides a reasonable fit.

Three nested models were then considered, each representing increasing equality constraints across groups. The first of the three comparison models (Model 2) representing weak factorial invariance assumed equality of the factor loadings across groups. The second (Model 3) represented strong factorial invariance by assuming, in addition to invariant factor loadings, that the measurement intercepts corresponding to the manifest variables were equal across groups. The third (Model 4) represented strict factorial invariance with the additional constraint of equality of the unique factor variances across groups.

Indices of model fit for the set of models are given in Table 3. In addition to using the S-Bχ^2 to test the hypothesis that a model fits perfectly in the popula-

Table 3. Indices of Model Fit for Varying Levels of Factorial Invariance Across Country of Origin

Model	S-Bχ^2 (*df*)	ΔS-Bχ^2 (Δ*df*)	RMSEA	90% CI for RMSEA	TLI
1. Configural	15.3 (15)		.009	(0, .061)	.999
2. Weak	25.1 (23)	10.2 (8)	.019	(0, .057)	.997
3. Strong	33.7 (31)	8.65 (8)	.019	(0, .028)	.997
4. Strict	61.8 (41)	26.8 (10)	.045	(.019, .067)	.981
5. Model 3 + invariant factor means	39.0 (33)	9.04 (2)	.027	(0, .056)	.993

NOTE: S-Bχ^2 (*df*) and ΔS-Bχ^2 (Δ*df*) are the Satorra-Bentler chi-square and the chi-square difference test for the Satorra-Bentler scaled chi-square, respectively. RMSEA = root mean square error of approximation; CI = confidence interval; TLI = Tucker-Lewis Index.

tion, the statistic was also used to evaluate the relative fits of the nested models. The difference in the scaled chi-square statistics for two nested models is not, however, distributed as chi-square, as is the case for the usual chi-square statistic. For this reason, differences in scaled chi-square values were calculated using steps outlined in Satorra (2000). Estimates of the RMSEA, its 90% CI, and the TLI are also provided.

Test for weak factorial invariance. The hypothesis of weak factorial invariance was tested by using the baseline model with the additional constraint that the factor loadings were equivalent across groups (i.e., $\lambda_1 = \lambda_2 = \lambda_3$, where the subscripts denote the particular group: 1 = United States, 2 = Mexico, 3 = Latin America). In the baseline model, the first factor loading in each group was constrained to be invariant. In the model representing weak factorial invariance (Model 2), the remaining factor loadings were also constrained to be invariant. The scaled chi-square statistic for this model was 25.1 with 23 *df*. Using the method described in Satorra (2000), the difference in scaled chi-square values suggested that constraints made to the factor loading matrix did not significantly diminish model fit, $\Delta\text{S-B}\chi^2(8, N = 762) = 10.2$, $p > .10$. The changes in the RMSEA and the TLI were minor, and the 90% CI for the RMSEA improved slightly. The restricted model was provisionally accepted as the preferred model.

Test for strong factorial invariance. We tested the hypothesis of strong factorial invariance by using the model defined in the last step (Model 2) with the additional constraint that the intercepts relating to the measured variables were invariant (i.e., $\tau_1 = \tau_2 = \tau_3$). The scaled chi-square statistic for this model (Model 3) was 33.7 with 31 *df*. The additional constraints made to the intercepts of the measured variables resulted in a nonsignificant decrease in model fit, ΔS-Bχ^2(8, $N = 762$) = 8.65, $p > .10$. Slight improvements were evident for both the RMSEA and the TLI, and in particular the 90% CI for the RMSEA, suggesting that strong factorial invariance was reasonable. This model was therefore provisionally accepted as the best fitting model.

Test for strict factorial invariance. We tested the hypothesis of strict factorial invariance by adding to the previous model (Model 3) a constraint on the unique factor variances (i.e., $\theta_1 = \theta_2 = \theta_3$). The chi-square statistic for this model (Model 4) was 61.8 with 41 *df*. The additional constraints made to the unique factor variances resulted in a significant worsening of model fit, ΔS-Bχ^2(10, $N = 762$) = 26.8, $p < .01$. The point estimate of the RMSEA increased to .045, and the upper bound value of the 90% CI for the RMSEA exceeded .05. Although still quite high, the TLI decreased notably relative to the model that assumed strong factorial invariance. With conflicting results, we felt that the less restrictive model based on strong factorial invariance was preferable.

Testing Factorial Invariance Across Language Preference

A secondary question concerned the factorial invariance of responses to the familism scale between groups distinguished by the language in which the interview was conducted. The same patterns of factorial invariance used above were evaluated to test for equality in patterns between the two language preference groups. The results are summarized in Table 4. Unlike the results concerning differences among countries of origin, indices of fit and model test comparisons suggested that strict factorial invariance may be the most reasonable assumption. Although fairly consistent with the previous findings concerning factorial invariance among countries of origin, these results were not too surprising given that the language in which the interview was conducted was strongly related to a participant's country of origin, χ^2(2, $N = 762$) = 239.8, $p < .001$, such that those who preferred to conduct the interview in Spanish were predominantly from Mexico and Latin America.

Testing Invariance of Means on Latent Measures of Familism

Mean levels on the latent measure of familism were compared across groups defined by reported country of origin as well as the language in which

Table 4. Indices of Model Fit for Varying Levels of Factorial Invariance Across Language

Model	S-Bχ^2 (*df*)	ΔS-Bχ^2 (Δ*df*)	RMSEA	90% CI for RMSEA	TLI
1. Configural	7.73 (10)		0	(0, .046)	1.00
2. Weak	10.7 (14)	2.90 (4)	0	(0, .038)	1.00
3. Strong	17.6 (18)	6.50 (8)	0	(0, .045)	1.00
4. Strict	24.3 (23)	6.40 (5)	.012	(0, .045)	.998
5. Model 4 + invariant factor means	25.4 (24)	1.01 (1)	.012	(0, .044)	.988

Note: S-Bχ^2 (*df*) and ΔS-Bχ^2 (Δ*df*) are the Satorra-Bentler chi-square and the chi-square difference test for the Satorra-Bentler scaled chi-square, respectively. RMSEA = root mean square error of approximation; CI = confidence interval; TLI = Tucker-Lewis Index.

the survey was conducted. Assuming strong factorial invariance across subgroups, a test of invariance was performed by fitting a model that assumed the factor means were invariant across groups defined by country of origin (Model 5). For reference, in Model 3, the factor mean for participants born in the United States was fixed at zero for identification purposes, and the means (with standard errors in parentheses) for participants born in Mexico and Latin America were –.221 (.617) and –.022 (.398), respectively. Indices of model fit are given in Table 3. The scaled chi-square difference between the model that assumed strong factorial invariance (Model 3) and a nested model that had the additional equality constraint on factor means across the three groups was statistically significant, ΔS-B$\chi^2(2, N = 762) = 9.04$, $p < .05$. Further, the RMSEA increased, the TLI dropped slightly in value, and the 90% CI for the RMSEA widened slightly, although overall these values were still indicative of a reasonably well-fitting model. We provisionally retained the model that assumed homogeneity in factor means across countries of origin, however, particularly given the rather small mean differences and large SEs for these mean differences reported above for Model 3. These findings are also consistent with previous studies that found no mean differences within Hispanic subgroups defined by country of origin (Sabogal et al., 1987).

Mean levels of the latent familism measure were then compared across groups defined by the language in which the survey was conducted. Assuming strict factorial invariance between the two groups, a test of invariance in factor means was performed by fitting a model that assumed the means were invariant across groups. Indices of model fit are given in Table 4. In Model 4, the mean for the English-speaking group was fixed at zero for identification, and the mean and (corresponding standard error) for the Spanish-speaking group was .097 (.350). The scaled chi-square difference between the model that assumed strict factorial invariance (Model 4) and a nested model that had the additional constraint between factor means (Model 5) was statistically nonsignificant, ΔS-Bχ^2(1, N = 762) = 1.01, p > .10. The RMSEA increased and the TLI decreased, although both slightly, but the 90% CI for the RMSEA remained essentially unchanged. Overall, the test of relative fit and the indices of model fit were indicative of a reasonably well-fitting model, further suggesting homogeneity in factor means between language preferences. These findings are consistent with previous studies that found no mean differences within Hispanic subgroups (Rueschenberg & Buriel, 1995).

Discussion

This article considered an ideologically based measure of a core Hispanic cultural value, familism. Using a large, nationally representative adult sample from the United States, the results suggest that the factor structure of the measure holds across three countries of origin: United States, Mexico, and Latin America. In addition, support for factorial invariance across the two languages in which the survey was conducted (Spanish and English) was also given. These findings suggest that the dimension of familism may be measured in much the same way across these particular countries of origin and language for the interview.

One implication of finding evidence for factorial invariance is that this particular type of familism is core to U.S. Hispanics and is stable regardless of one's country of origin or language preference. This finding also suggests that if language preference is a proxy measure of acculturation, acculturation at the level of core cultural values may not be occurring among U.S. Hispanics. A third implication is that this particular five-item measure of attitudinal familism is psychometrically sound. The sample on which the scale items were assessed is one of the most representative in the literature to date. This, in combination with the findings concerning factorial invariance, strongly supports the contention that familism is core to U.S. Hispanics and that this particular scale is a sound measure of the construct.

Although familism has been shown to be an important variable in research involving U.S. Hispanics, it is not the only cultural value identified for this group. Other values, including simpatía, respeto, fatalism, and machismo may also play an important role in Hispanic research. Much work is needed in the definition and measurement of these values before their role is fully understood. Until then, it is important to acknowledge that, although familism is an important value for U.S. Hispanics, familism alone may not fully capture a complex construct such as core cultural values for the Hispanic culture.

Notes

1. Latin American includes Central, South, and Caribbean American countries.
2. Factorial invariance may also concern scales measured on repeated occasions.
3. The null model was specified according to guidelines suggested by Widaman and Thompson (2003).
4. Widaman and Reise (1997) incorrectly attributed "weak" factorial invariance to Meredith (1993).

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