Familism and the Hispanic Health Advantage: The role of generational status and age at arrival in the U.S.

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Background

A large literature argues that Hispanics who migrate to the U.S. exhibit more favorable health outcomes—including lower mortality rates (Hummer et al. 2004; Lariscy et al. 2015; Palloni and Arias 2004), fewer chronic conditions (Bostean 2013; Rubalcava et al. 2008), and self-assess their health more positively (Acevedo-Garcia et al. 2010; Cunningham et al. 2008)—than their native-born counterparts. Because Hispanic immigrants earn lower wages and fewer years of education than US-born residents, this pattern is largely deemed paradoxical (e.g. Abraido-Lanza et al. 1999). Scholars who attempt to reconcile the apparent Hispanic advantage suggest that data inaccuracies (Palloni and Morenoff 2001; Rosenberg et al. 1999) or processes of health-related selection (Chiswick et al. 2008; Diaz et al. 2017; Jasso et al. 2004; Rubalcava et al. 2008) result in overly optimistic estimates of immigrant well-being.

Although less frequently highlighted, a third possibility is that cultural practices and strong family orientations are imported by the foreign-born population (e.g. Alegria et al. 2007; Franzini and Fernandez-Esquer 2004). Familism—which can be defined as a unique collection of attitudes, behaviors, and social ties—is hypothesized as having a positive influence on child and adult well-being (Desmond and Turley 2009; Sarkisian et al. 2006; Valenzuela and Dornbusch 1994). Because such feelings of cohesion are supposedly stronger among Hispanic populations (Sabogal et al. 1987), some argue that familism is a non-trivial contributor to Hispanic socioeconomic mobility (Valenzuela and Dornbusch 1994), psychological well-being (Suarez-Orozco and Suarez-Orozco 1995), and health status (Perez and Cruess 2014).

Although familism is frequently invoked as a potential mechanism of the Hispanic health advantage, it is often treated as a residual explanation with surprisingly little theoretical or empirical consideration (see Ro and Bostean 2015 as an exception). Because the second-

generation exhibits health profiles that more closely resemble those of native-born minorities (Abraido-Lanza et al. 2005; Antecol and Bedard 2006; Gordon-Larsen et al. 2003), existing work would have to first observe a correlation between familism and multiple indications of health among Hispanics. And if familism is even partially responsible for the comparably better health of foreign-born Hispanics, one would also anticipate *declines* in family orientation/cohesion across generations.

Our project asks the following questions:

1. Are family-orientated beliefs and attitudes (e.g. familism) associated with a more positive health profile among Hispanics?
2. Does familism decline with increasing time in the U.S. or across generations? Could such declines potentially explain the relatively poorer health status among later generation Hispanics?

Data and Methods

Data

To answer these questions, we use data from the Hispanic Community Health Study/Study of Latinos (HCHS/SOL) parent study and the Socio-Cultural Ancillary (SCAS) Study. The HCHS/SOL consists of a series of surveys and medical examinations administered to approximately 16,000 Hispanic/Latino origin persons—including those of Cuban, Puerto Rican, Dominican, Mexican, and South/Central American ancestry. Adult respondents living in the Bronx, Chicago, Miami, and San Diego during the 2008-11 period were recruited to participate. The HCHS employs a two-stage sampling approach: first, a stratified-random sample of block groups are selected within census tracts across each urban location. Households nested within each block group are then chosen at random—all individuals deemed eligible for participation are selected for enumeration. Detailed information pertaining to migration history, generational status, acculturation, and sociodemographic characteristics are collected, making these data ideal for our purposes.

Most importantly, the HCHS/SOL contains individual self-assessments of health status and behaviors, records from clinical exams, as well as key biomarkers obtained from blood and urine samples. Relying on medical reports and biomarkers allow us to rule out misreporting

errors that are supposedly common among the Hispanic population (Sorlie et al., 2010). The SCAS represents a subsample of 5,313 respondents from the HCHS/SOL parent study that highlights familism, psychosocial, and sociocultural factors. SCAS interviews were conducted within 9 months of the initial baseline interviews, and were distributed evenly across the four field sites (Gallo et al., 2014).

Measures

Our primary interest is whether individuals who report higher levels of pro-family sentiments are more likely to exhibit better health, and whether this relation persists across generations. Following past work on health and social support (e.g. Gallo et al. 2009; Ro and Bostean 2015), we rely on the following outcomes: a 5-category measure of self-reported health, body mass index (BMI, kg/m^2 obtained from medical assessments), binary indicators that signal respondents have been diagnosed with hypertension or diabetes, as well as a continuous measure of C-reactive protein.

Length of residence in the U.S. and nativity is measured using age of arrival in the U.S. and respondent's country of birth. For the purposes of this study, we classify respondents as first-generation if they are foreign-born and arrived to the U.S. at age 13 years or older. The 1.5 generation consists of those who are foreign-born but entered when they were younger than 13 years of age. Finally, "U.S.-born" respondents consist of second-, third-, and later-generation respondents; data limitations preclude a more thorough examination of generational status.

Familism is constructed using a 14-item multidimensional scale that reflects attitudes concerning family obligations, family support, and family as referents (see Sabogal et al. 1987). The *family obligations* subscale includes 6-items that assess the extent to which respondents agree with the following: make sacrifices to guarantee a good education their children; help economically support younger siblings; help relatives if they have financial difficulties; hope to live long enough to watch grandchildren grow up; believe aging parents should live with relatives; and believe family should share home with other family members. We also draw on three items that assess *family support*, which focus on attitudes concerning familial support when problems arise (e.g. "when one has problems, one can count on the help of relatives). The final subscale, *family as referents*, includes five items that assess whether children should please their parents; whether family should be consulted in important decisions; embarrassment concerning

sibling's choices; living with parents until marriage; and having children as the penultimate life goal. Although some argue that this scale represents a 1 factor solution (Burrow-Sanchez and Wrona 2012; Losada et al. 2006), results from our confirmatory factor analysis (CFA) signal that the 1-factor model represents a mediocre fit (RMSEA>.10); a subsequent CFA finds the 3-factor model fit the data reasonably well (RMSEA=.05). We create averages for each subscale, with larger values corresponding to a higher degree of familism.

We also control for the following confounders: age and age^2, gender, marital status (married/cohabiting, single, other), educational attainment (primary, some high school, high school completion/equivalent, some college or more), household income, ethnic background, language acculturation, and physical activity levels. We plan to estimate a series of linear (BMI, C-reactive protein, inflammation), ordinal logit (self-reported health) and binary logit (hypertension, diabetes) regressions to estimate the correlations of interest. In final specifications, we will use multiple imputation with chained equations to impute missing items when participants do not respond to a questionnaire item (m=25); cases with missing outcome data will be excluded from analysis upon imputation.

Preliminary Results

Descriptive statistics indicate that first-generation respondents appear to have less favorable health profiles than their 1.5 and second-generation counterparts. Specifically, a greater percentage of immigrants who entered the U.S. at later ages suffer from diabetes, hypertension, and report being in fair/poor health. However, these patterns are likely explained by the older age distribution of first-generation respondents. Turning to our measures of familism, we observe remarkably similar patterns across generational status. However, we do find some differences for *family as referents* and *obligations* subscales; the first-generation report having a greater orientation for exhibiting familial closeness and responsibility than their U.S.-born counterparts.

We briefly report preliminary findings from an ordinal logistic regression that predicts self-reported health using generational status, an indicator for each familism construct, and a set of covariates. Estimates suggest that first-generation Hispanics exhibit significantly greater odds of reporting positive health than the U.S.-born, though there does not appear to be a relation between any of the familism subscales and self-assessed health (Model 1, covariates not shown).

Given the limitations associated with interpreting the magnitude and size of interaction terms in such regression models (Allison 1999; Williams 2009; Winship and Mare 1984), we will generate predicted probabilities for final results. Here, we simply present results using odds ratios. Results from interactions (see Models 2-4) provide evidence that the first-generation exhibits higher odds of good health when they have stronger beliefs about supporting family members. It is also striking that the 1.5 generation is predicted to be in significantly worse health if they report stronger beliefs toward family responsibilities; this could signal that established residents are faced with multiple obligations that ultimately lower one's health. Although results are preliminary, we find little systematic indication that familism declines across generations. Our complete set of findings will shed further light on the puzzle surrounding health selection and migrant well-being.

Table 1. Selected Descriptive Statistics

	1st Gen Mean or %	*1.5 Gen* Mean or %	*U.S.-born* Mean or %
Self-reported health			
excellent	7.28	10.90	7.69
very good	13.40	24.68	22.12
good	49.52	39.10	44.39
fair	24.99	19.87	21.79
poor	4.81	5.45	4.01
Diabetes	20.25	16.03	12.66
Hypertension	31.61	28.85	17.63
BMI	29.2 (5.0)	29.8 (6.1)	29.4 (6.0)
C-Reactive protein (logged)	0.57 (0.6)	0.60 (0.9)	0.42 (1.0)
Familism subscales			
Obligations	4.24 (0.5)	4.19 (0.5)	4.18 (0.5)
Support	3.94 (0.6)	3.91 (0.7)	3.92 (0.7)
Referents	3.38 (0.8)	3.09 (0.7)	2.93 (0.7)
Age	49.7 (11.7)	41.7 (15.6)	36.9 (14.0)
N	2,597	312	624

Note: Standard deviation in parentheses. Selected descriptive statistics and sample size shown using listwise deletion.

Table 2. Estimates for Ordinal Logistic Models Predicted Self-Rated Health

	Model 1		Model 2		Model 3		Model 4	
Generation	OR	se	OR	se	OR	se	OR	se
(1st generation)								
1.5 generation	0.983	(0.197)	2.629	(4.042)	20.7***	(17.851)	1.965	(1.439)
U.S.-born	0.586***	(0.118)	0.163	(0.186)	0.601	(0.449)	0.390	(0.228)
Familism								
Obligations	1.078	(0.133)	1.069	(0.136)				
Support	1.113	(0.105)			1.207*	(0.100)		
Referents	0.921	(0.657)					0.973	(0.079)
1.5 gen * obligations			0.787	(0.297)				
U.S. * obligations			1.349	(0.359)				
1.5 gen * support					0.461**	(0.105)		
U.S. * support					0.995	(0.183)		
1.5 gen * referents							0.796	(0.178)
U.S. * referents							1.150	(0.212)

Notes: †p< .10, *p< .05, ** p< .01, *** p<.001.
Note: All models control for gender, language acculturation, education, marital status, household income, employment status, physical activity levels, age, age2, and health insurance status.

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