Familism and the Hispanic Health Advantage: The Role of Immigrant Status

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Abstract

It is well known that Hispanic immigrants exhibit better physical and mental health than their U.S.-born counterparts. Scholars theorize that stronger orientations toward the family, also known as familism, could contribute to this immigrant advantage. Yet, little work directly tests whether familial attitudes may be responsible for the favorable health of foreign-born Hispanics. We investigate this possibility using biomarkers, anthropometrics, and mental health assessments from the Hispanic Community Health Study/ Study of Latinos (N = 4,078). Results demonstrate that the relationship between familial attitudes and health vary depending on the outcome assessed. While Hispanics with strong attitudes toward familial support have fewer symptoms of depression and anxiety, those who report high referent familism display worse mental health outcomes. We find little evidence that familism is linked to physical health or that immigrant generation moderates the relationship of interest. Our results challenge assumptions that familism is responsible for the comparably better health of foreign-born Hispanics.

Though Hispanics disproportionately reside in underprivileged neighborhoods, lack adequate health care, and accumulate limited financial resources, they experience more favorable health outcomes than non-Hispanics (Cunningham, Ruben, and Narayan 2008; Heron 2013; Markides and Eschbach 2005). Scholars argue that this advantage is driven by the comparably better health of Hispanic immigrants who settle in the United States (e.g., Hummer et al. 2000; Singh and Siahpush 2002). While some stress that data misreporting (Elo et al. 2004; Palloni and Morenoff 2001; Smith and Bradshaw 2006) and migrant selection (Palloni and Arias 2004; Riosmena, Wong, and Palloni 2013) can explain the advantageous health of the foreign-born, others posit that strong orientations toward the family—also known as familism— protect against threats to physical and mental well-being (Almeida et al. 2009; Cook et al. 2009).

Despite such claims, demographers and health scholars overlook the possibility that familism could be responsible for the Hispanic health advantage. Instead, family-oriented behaviors and attitudes are invoked as residual explanations to account for foreign-born Hispanics' relatively strong health profile. Moreover, discussions surrounding how to appropriately measure familism are notably absent or inconsistent in the health literature. This omission is particularly striking given claims that sociocultural practices likely play a nontrivial role in underlying health disparities (Abraído-Lanza, Chao, and Florez 2005; Akresh 2007; Franzini and Fernandez-Esquer 2004; Hummer et al. 2007). The present study tests

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whether family orientation is associated with Hispanic well-being and by doing so, seeks to advance a widely used but weakly scrutinized theory.

We rely on biomarker and anthropometric data collected by the Hispanic Community Health Study/Study of Latinos (HCHS/SOL) to investigate the relation between familism and physical health. We also assess the association between family orientation and two measures of mental health: depressive symptoms and anxiety. Following contemporary studies on familism (Esparza and Sanchez 2008; Rodriguez et al. 2007; Villarreal, Blozis, and Widaman 2005), we focus on familial *attitudes* as opposed to reported behaviors. Although attitudes are arguably more abstract, Hispanics encounter numerous barriers to physically interacting with immediate and extended family members—many of whom live across borders that are increasingly militarized (Dreby 2015; Slack et al. 2015). While it may be difficult for all individuals to physically engage with family members who reside in a foreign country, this is even more difficult for the nearly 12 million unauthorized immigrants living in the United States—the majority of whom fall underneath the Hispanic pan-ethnic umbrella (Baker 2018).

We then ask whether higher rates of familism could explain the health advantage of foreign-born Hispanics relative to their U.S.-born counterparts. We distinguish between the first and 1.5 generations to better understand variation in health and familistic attitudes. Our unique data source captures multiple dimensions of familial attitudes and allows us to control for cultural and socioeconomic attributes that likely confound the relationship of interest. Findings from this study thus inform ongoing theoretical and empirical developments in the medical and social sciences that center on familism and Hispanic well-being.

BACKGROUND

Hispanic Health and Well-Being

A large and growing body of work argues that foreign-born Hispanics exhibit more favorable health outcomes—including lower mortality rates (Lariscy, Hummer, and Hayward 2015; Palloni and Arias 2004), fewer chronic conditions (Bostean 2013; Rubalcava et al. 2008), and more positive self-assessed health (Acevedo-Garcia et al. 2010; Cunningham et al. 2008)—than their U.S.-born counterparts. This advantage is documented among infants (Acevedo-Garcia, Soobader, and Berkman 2005; Hummer et al. 2007), the elderly (Elo et al. 2004; Markides and Eschbach 2005), and across multiple socioeconomic backgrounds (Braveman et al. 2010; Kimbro et al. 2008). Given that Hispanic immigrants earn lower wages and obtain fewer years of schooling than non-Hispanic whites and that the link between health and socioeconomic status is pervasive across industrialized nations (Adler and Ostrove 1999; Buttenheim et al. 2010; Phelan, Link, and Tehranifar 2010), their advantageous health is largely deemed paradoxical (Abraido-Lanza et al. 1999).

Though fewer studies assess the mental health of Hispanics, the foreign-born may exhibit a lower risk for certain psychiatric disorders than their U.S.-born and white counterparts (Breslau et al. 2006; Vega et al. 1998). Alegría and colleagues (2006) argue that immigrants—Mexicans in particular—are less likely to experience depression, social phobia, and anxiety than U.S.-born Hispanics. Others posit that psychiatric differences are driven by confounders, such as English language ability and socioeconomic background, as the correlation between mental health and immigrant generation disappears after the inclusion of such characteristics (Cook et al. 2009). However, a wide range of mental health assessments have been employed over time and across studies (Perreira et al. 2005; Rogler, Cortes, and Malgady 1991), and estimates can vary widely. Nevertheless, the balance of evidence demonstrates that Hispanics' advantageous health also extends to mental well-being.

The Paradox Explained?

In attempting to reconcile the Hispanic health advantage, scholars generally emphasize three explanations. The first possibility is that data inaccuracies—such as age and ethnic misclassifications (Palloni and Morenoff 2001) or the underreporting of chronic conditions—create an artificially advantageous health profile. Though results are mixed (Eschbach, Kuo, and Goodwin 2006; Smith and Bradshaw 2006), classification errors are unlikely to be solely responsible for the elevated health of Hispanic immigrants (Arias et al. 2010; Palloni and Arias 2004). And while limited access to medical professionals and health insurance prohibit Hispanic-origin immigrants from receiving diagnoses of underlying conditions, their attributes and biomarkers are more likely to fall within a normal range (e.g., blood pressure, body mass index [BMI]) than U.S.-born whites and nonwhites when surveyed by trained interviewers (Gordon-Larsen et al.

2003; Kaplan et al. 2004; Riosmena et al. 2013). Put differently: The Hispanic advantage persists in settings where underreporting is unlikely to pose a threat.

Another possibility is that health-related migration results in overly optimistic estimates of well-being. The healthy migrant hypothesis suggests that individuals who engage in migration are in better health than those who remain in their country of origin. Health may directly influence the probability of migration (Chiswick, Lee, and Miller 2008), or health may be associated with characteristics that predict U.S. migration—such as education or ability. The salmon bias hypothesis argues that foreign-born persons are rendered "statistically immortal" upon return migration (Pablos-Méndez 1994:1237); individuals may return as a direct result of poor health (Ceballos 2011), or return may be induced by factors correlated with declining health—such as limited employment opportunities (Diaz, Koning, and Martinez-Donate 2016). Both hypotheses stress that mortality and morbidity estimates are downwardly biased as individuals captured by surveys do not accurately reflect the Hispanic population. The extent to which selection affects estimates depends on when health is assessed as well as the measures examined (Rubalcava et al. 2008). Nevertheless, there is some indication that both the healthy migrant and salmon bias hypothesis contribute to the health advantage (Crimmins et al. 2005; Turra and Elo 2008).

A third possibility is that Hispanic-origin populations disproportionately engage in practices and norms that are protective against deleterious health conditions. Physical and mental health may be bolstered through the retention of cultural traditions that promote well-being (Portes and Rumbaut 2006), the material and social support of the co-ethnic community (Bjornstrom and Kuhl 2014; Kimbro 2009), and/or family ties (Fuller-Iglesias, Webster, and Antonucci 2015; Keeler, Siegel, Alvarado 2014; Mirowsky and Ross 2003; Pinquart and Sörensen 2007). Referred to as *familism*, scholars suppose that Hispanics are more likely to exhibit close relationships with extended family members than other racial/ethnic groups do (Perez and Cruess 2014). Though familism receives less attention than data misreporting or selection, scholars theorize that such attitudes could potentially explain the Hispanic immigrant health advantage (Valdivieso-Mora et al. 2016; Velasco-Mondragon et al. 2016). Before detailing the linkages between familism and health, it will be instructive to consider the multiple ways familism is measured.

Theories of Familism, Measurement Issues

Broadly defined, familism is a multidimensional construct that emphasizes the needs of the family over the needs of the individual. One of the earliest definitions argued that familism is made up of shared goals, family-based socioeconomic resources, and retention of the family unit (Burgess and Locke 1945). A multidimensional scale was later advanced to reflect five aspects of the nuclear family: belongingness, unconditional support, economic and social endowments, support during times of need, and exchange networks (Heller 1970).

However, Arce (1978) argued that existing scales were insufficient in reflecting the fundamental values and structure of the Hispanic family. He proposed three dimensions to more accurately capture familism among Hispanics: behavioral, which stresses active engagement with immediate and extended family; structural, which highlights attitudes concerning family cohesion; and demographic, which emphasizes family size and intactness. This conception continues to serve as the foundation for contemporary scholarship on familism as one of the most widely used constructs—which includes perceived support for the family, familial obligations, and referent familism (Sabogal et al. 1987)—draws extensively on Arce's assertions.

In recent years, scholars continue to refine definitions and scales, arguing for the incorporation of family conflict (Rodriguez et al. 2007), family interconnectedness (Lugo Steidel and Contreras 2003), and behavioral aspects of familism (Comeau 2012). Although debate persists, scholars uniformly agree that familism is a multidimensional construct that broadly represents a belief system; this system emphasizes family ties, family structure, as well as emotional, financial, and social support to the immediate and extended family (Almeida et al. 2009).

Familism and Physical Health

Most studies that examine familism–health relationships do not examine physical health directly and instead focus on health-related outcomes—such as disease management, substance use, and diet/exercise. Evidence suggests that perceived familial obligations and support decreases the risk for alcohol and drug use among youth (Castro, Stein, and Bentler 2009; Gil, Wagner, and Vega 2000), improves exercise and dietary habits (Mellin et al. 2004), and boosts the likelihood that Hispanic

adults adhere to a diabetes treatment plan (Rustveld et al. 2009).

However, the correlation between health behaviors and family orientation is sensitive to the type(s) of familism that Hispanics engage in, and this is especially true for women. On the one hand, perceived familial support decreases stress (Alferi et al. 2001) and depressive symptoms (Pistrang and Barker 1995) for women undergoing cancer treatment. On the other hand, familial ideals can inhibit disease management and personal care. For instance, Oomen, Owen, and Suggs (1999) argue that familial responsibilities prevent diabetic women from following recommended treatment plans. Similar studies suggest Hispanic women conceal cancer diagnoses or avoid medical care because treatment would interfere with family responsibilities (Ashing-Giwa et al. 2006). There is also some indication that women will not use household resources to meet their medical or dietary needs due to fears of financially burdening the family (Chesla et al., 2003; Horowitz, Goodman, and Reinhardt 2004).

A nascent body of work does investigate the relation between familism and physical health among Hispanics. Some assert that familial support is not associated with chronic health conditions, activity limitations (Bostean 2010), or self-rated health after the inclusion of important confounders (Alegría, Sribney, and Mulvaney 2007). Yet, studies exclusively rely on self-reported assessments that are likely to misstate underlying health, and few capture multidimensional familistic values that supposedly explain Hispanic well-being (Ruiz, Campos, and Garcia 2016). It is also possible that less positive aspects of family life—such as family conflict—are associated with health outcomes. Indeed, Hispanic respondents are more likely to report chronic health conditions when exposed to negative family interactions (Bostean 2010; Priest and Woods 2015). For these reasons, it is imperative to account for both positive and negative aspects of family dynamics.

Familism and Mental Health

Studies that assess the link between familism and mental health often emphasize depressive symptoms and suicidality. Some demonstrate that family-oriented attitudes reduce the risk of depressive symptoms for Hispanic immigrants (Ornelas and Perreira 2011) and adolescents (Stein et al. 2015; Zeiders et al. 2013). When families report high cohesion and low conflict, for instance, the risk of suicidality for Hispanic girls steeply declines (Baumann, Kuhlberg, and Zayas 2010). Yet, others find that familism has no effect on mental health (Garza and Pettit 2010; Zayas et al. 2009). And in some cases, high rates of family orientation may *increase* the risk for depressive symptoms and suicidality (Baumann et al. 2010)—particularly among those who provide medical care for a sick family member (Losada et al. 2006). Although familism could generate positive mental health outcomes, individuals who report especially high levels of family orientation may feel pressure to put the needs of the family ahead of their own well-being.

Study Contribution

To reconcile the seemingly paradoxical relationship between health and socioeconomic disadvantage, scholars argue that exceptionally high levels of family-orientated beliefs and attitudes (e.g., familism) may bolster the health of Hispanic populations. Though the foreign-born exhibit relatively low rates of mortality and morbidity, second- and third-generation Hispanics (Antecol and Bedard 2006; Finch et al. 2009) report significantly *worse* health across a myriad of outcomes—including BMI (Gordon-Larsen et al. 2003), smoking/alcohol use (Acevedo-Garcia, Pan, et al. 2005), mental distress (Alderete et al. 2000; Escobar, Nervi, and Gara 2000), consumption of saturated fats and refined sugar (Akresh 2007; Creighton et al. 2012), and birthweight (Acevedo-Garcia, Soobader, and Berkman 2007).

There are two scenarios whereby familism could remain a plausible explanation for the immigrant health advantage. First, we should observe *declines* in family orientation across generations as well as a positive relationship between familism and health. Alternatively, the effect of familism on health could grow weaker (less positive) across generations. This scenario posits that familism has interactive effects with resources and/or opportunities that vary across generations and results in dissimilar health outcomes—even in the absence of generational declines in family orientation. We investigate both scenarios by asking whether familism is associated with a more positive health profile and testing whether this correlation varies across immigrant generation.

DATA AND METHODS

Data were obtained from the HCHS/SOL parent study and the Sociocultural Ancillary Study (SCAS). The HCHS/SOL, which was conducted

during the 2008 to 2011 period, assessed chronic conditions, disease, and associated risk factors among Hispanics who lived in urban areas throughout the United States. Approximately 16,000 Hispanic/Latino origin persons—including Cuban, Puerto Rican, Mexican, and South/Central Americans—who resided in the Bronx (New York), Chicago (Illinois), Miami (Florida), and San Diego (California) were selected to participate.

The HCHS/SOL employed a two-stage sampling approach: First, a stratified-random sample of block groups was selected within census tracts across each location. Households nested within each block group were then chosen at random, and all individuals deemed eligible for participation were selected for enumeration. Detailed information pertaining to migration history, generational status, and sociodemographics was collected, making these data ideal for our purposes. Most importantly, the HCHS/SOL conducted on-site medical assessments of health as well as key biomarkers from blood and urine samples. Relying on measures obtained from trained interviewers and medical professionals allows us to rule out reporting errors that may be especially common among Hispanics (Sorlie et al. 2010).

The SCAS represents a target sample of 5,313 respondents from the HCHS/SOL study; approximately 88 percent of this subsample completed questionnaires within nine months of the initial baseline interview (Gallo et al. 2014). Respondents, who were distributed evenly across the four field sites, completed a battery of questions pertaining to mental health, language acculturation, and orientation toward family life. Interviews were administered in English or Spanish depending on the respondent's stated preference.

Outcome Variables

To reduce concerns related to health misreporting and inaccuracies, we relied on biomarkers and anthropometrics gathered by trained interviewers. Elevated levels of C-reactive protein, defined as a concentration greater than 3.0 mg/L by the American Heart Association, were used to identify respondents suffering from inflammation and heightened cardiovascular risk (Heffner et al. 2011). To further assess the likelihood of heart disease, we created a cardiac risk ratio by dividing total cholesterol by high-density lipoprotein cholesterol. We also assessed BMI (kg/m^2) as recorded at the time of survey. A dichotomous measure was then created to signal individuals had diabetes; respondents were

considered diabetic if: (a) fasting glucose was greater than 126 mg/dL, (b) the oral glucose tolerance test was greater than 200 mg/dL, or (3) A1C levels were greater than 6.5 percent.

For mental health, we included two indicators that capture depressive symptoms and anxiety. Depressive symptoms were measured using the Center for Epidemiologic Studies Depression Scale (CES-D 10), which is based on 10 items that ask respondents about depressive symptoms experienced in the past week (e.g., "I was bothered by things that usually don't bother me," "I felt lonely"). Response categories ranged from 0 (rarely or none of the time) to 3 (all of the time); items were then summed to obtain a total depression score. Our anxiety measure was derived from the 10-item Spielberger Trait Anxiety Inventory (STAI). This scale consists of such questions as "I feel nervous and restless," "I feel like a failure," and "I worry too much over something that really doesn't matter." Participants were asked to report their general feeling/sentiment and choose from answer categories that ranged from 1 (almost never) to 4 (always); values were summed so that higher scores represent a greater risk for anxiety disorders. Internal reliability was calculated as .83 for the CES-D and .81 for the STAI.

Constructing Familism

Because conflating attitudinal and behavioral dimensions of familism can misrepresent family dynamics, we relied on a 14-item multidimensional scale to capture attitudes surrounding family obligations, family support, and referent familism (Sabogal et al. 1987). The *family obligations* (α = .71) subscale included six items that assessed the extent to which respondents agreed with the following: one should make sacrifices to guarantee a good education for 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 their home. We also used three items to capture attitudes toward *family support* (α = .65), which included providing help in difficult times (e.g., "when one has problems, one can count on the help of relatives"). *Referent familism* (α = .68) consisted of five items that asked respondents the extent to which they agreed with the following: having children should be a major life goal, children should please their parents, family should be consulted in important decisions, children should

live with parents until marriage, and one should be embarrassed by sibling's poor choices; response values ranged from 1 (disagree a lot) to 5 (agree a lot).

Results from a confirmatory factor analysis (CFA) signaled that a one-factor model was a mediocre fit (root mean square error of approximation [RMSEA] > .10); a subsequent CFA found the three-factor model fit the data reasonably well (RMSEA = .05). Our findings thus align with assertions that familism consists of multiple and distinctive beliefs about family life (Lugo Steidel and Contreras 2003; Sabogal et al. 1987). We calculated averages for each subscale, with larger values corresponding to a higher degree of familism. Factor correlations ranged between .30 and .51, suggesting collinearity between subscales was unlikely to pose an issue.[1]

Generational Status

We defined generational status using respondent's country of birth and their age of arrival in the United States. For the purposes of this study, we classified respondents as first generation if they were foreign-born and arrived to the United States at age 13 years or older. The 1.5 generation consisted of those who were foreign-born but entered when they were younger than 13 years of age (Rumbaut 2004). Both the first and 1.5 generations must have had parents who were born outside of the United States, whereas the "U.S.-born" consisted of second-, third-, and later-generation respondents. Unfortunately, sample size constraints precluded a more thorough examination of those born in the United States.

Covariates

It is essential to adjust for measures that confound the relation between health and familism. We thus controlled for age, gender, marital status (married/cohabiting, single, other), and number of children (zero, one or two, three or more). We included a quadradic term for age to capture potential nonlinearities in the association of interest (Zeiders et al. 2013). We adjusted for socioeconomic attributes, such as educational attainment (less than high school, high school completion/equivalent, some college or more), household income (less than $10k, $10k–$20k, $20k–$30k, $30k–$50k, more than $50k), and employment status (full-time employment, part-time employment, retired, unemployed). Both ethnic background (Central/South American, Cuban, Mexican, Puerto Rican, other) and English language fluency (higher values indicate greater fluency) were also included as controls.[2] We then created a dichotomous indicator to signal whether respondents had health insurance at the time of survey. Finally, we included a dummy measure to capture whether the respondent was aware of any family conflicts occurring within the past three months.

Analytic Approach

We began by simply asking if familism declines across generations. We then assessed whether familism is correlated with physical and mental health. While logistic regression was used to evaluate the likelihood of elevated C-reactive protein and diabetes, linear regression predicted cardiac risk and BMI. Diagnostic tests indicated that our measures of depression and anxiety exhibited overdispersion and violated key assumptions of linear regression. To avoid model misspecification and artificially small standard errors, we used negative binominal regression. Next, we interacted generational status with each familism subcategory to test whether the influence of familism on health became weaker across immigrant generation. In combination, these efforts allowed us to evaluate two possible scenarios that would support the notion that familism contributes to the Hispanic health advantage.

Given that approximately 9 percent of all cases were missing, we employed listwise deletion to obtain our final sample size (N = 4,078). As a sensitivity check, multiple imputation with chained equations was used to impute missing items (m = 25); interactions and higher order terms were included in the imputation model, and models were separately estimated across immigrant generation. Results, which are available on request, are similar in direction, magnitude, and statistical significance. We applied appropriate sampling weights and also accounted for the complex design of the HCHS/SOL. When weighted, data were representative of Hispanics residing in urban cities across the United States.

RESULTS

Descriptive Statistics

Table 1 contains weighted descriptives with age-standardized health outcomes to account for dissimilar age distributions across immigrant generations. First-generation Hispanics report significantly fewer symptoms of depression and anxiety than the 1.5 generation and the U.S.-born, and they also exhibit lower BMI. Fewer first-generation Hispanics also

Table 1. Weighted Descriptive Statistics by Generation.

	First Generation	1.5 Generation	U.S.-Born
	N = 2,983	N = 361	N = 734
	Mean or % (SD)	Mean or % (SD)	Mean or % (SD)
Age standardized health outcomes			
Depression (range: 0–30)	7.02 (9.13)[a,b]	9.17 (19.19)	8.33 (12.41)
Anxiety (range: 10–40)	16.77 (8.21)[a,b]	18.57 (16.49)	18.28 (10.85)
Cardiac risk ratio	4.41 (2.01)[a]	4.10 (1.71)	4.62 (7.59)
Elevated C-reactive protein	37.23[a]	43.15	37.75
Body mass index	29.40 (7.44)[a,b]	31.54 (13.55)	30.55 (9.39)
Diabetes	15.87	12.39	16.32
Family obligations (range: 1–5)	4.26 (.68)[b]	4.25 (.62)[c]	4.18 (.61)
Family support (range: 1–5)	3.96 (.96)	3.95 (.88)	3.95 (.88)
Family as referents (range: 1–5)	3.40 (1.45)[a,b]	3.07 (1.09)[c]	2.89 (.93)
Family conflict	19.31[a,b]	32.66	42.86
Currently has health insurance	46.98[a,b]	66.65	65.29
Marital status			
Single	22.09[a,b]	51.64	56.78
Married/cohabiting	57.35[a,b]	29.57	34.02
Other	20.56[b]	18.78[c]	9.20
Country of origin			
Mexican	34.88[a,b]	29.69[c]	42.43
Puerto Rican	8.03[a,b]	32.06	33.08
Cuban	26.59[a,b]	12.40[c]	4.81
Other	14.82	16.48	15.56
South/Central American	15.68[a,b]	9.37[c]	4.12
Age	46.86 (22.84)[a,b]	38.09 (33.48)[c]	32.42 (17.71)
Male	46.36	47.86	51.44
Number of children			
0	13.79[a,b]	30.40[c]	46.59
1–2	45.06[b]	45.60[c]	31.14
3 or more	41.15[a,b]	24.00	22.27
Employment			
Full-time	30.66[a,b]	17.95	22.81
Part-time	17.74[a]	22.66	19.89
Retired	11.31[b]	11.96[c]	4.02
Unemployed	40.29[a,b]	47.43	53.28
English acculturation	1.36 (.91)[a,b]	3.02 (1.08)[c]	3.49 (1.32)
Education			
Less than high school	35.52[a,b]	27.06[c]	21.51
High school	26.67[b]	25.47[c]	31.96
Some college or more	37.81[a,b]	47.47	46.53
Household income			
< $10k	19.77[a,b]	10.33[c]	15.45
$10k–$20k	36.37[b]	31.31	25.70
$20k–$30k	19.30	19.84	16.42
$30k–$50k	17.08[a,b]	24.20	24.57
> $50k	7.48[a,b]	14.32	17.86

Source: Hispanic Community Health Study/Study of Latinos Parent and Sociocultural Ancillary Study, 2008–2011.
Note: Data weighted to account for complex sampling design. Mean/percentages listed for each generation, standard deviations in parentheses. Tests for differences are explained in the following notes.
[a]First generation significantly different from 1.5 generation.
[b]First generation significantly different from U.S.-born.
[c]The 1.5 generation significantly different from U.S.-born.

have elevated levels of C-reactive protein (37 percent) than those who arrived to the United States at younger ages (43 percent). Yet, the first generation exhibits a higher cardiac risk ratio than their 1.5-generation counterparts, and there is no indication that diabetes varies across immigrant generation. Though the health advantage appears to persist for some but not all of these indicators, patterns are consistent with prior work that uses biomarkers to assess Hispanic health (Barcellos, Goldman, and Smith 2012; Peek et al. 2010).

First-generation respondents are also significantly older and are more likely to be employed full-time, have three or more children, and be involved in a romantic union than the 1.5-generation or U.S.-born respondents. English language fluency steeply increases across generations, with the highest levels reported by those born in the United States. Over 46 percent of 1.5-generation and U.S-born Hispanics attend college or earn a higher level of attainment; these adults are also more likely to have health insurance and reside in households that earn more than $50,000 (our specified top income category). It is worth noting that reports of family conflict increase across generations; these individuals may have more complete information regarding family dynamics, or conflict could be especially common in intergenerational families (Kwak 2003).

Familism Patterns

Evidence also suggests that attitudes toward family obligations are stronger among foreign-born Hispanics than the U.S.-born. And while referent familism significantly declines across generations, attitudes toward familial support remain relatively stable (Table 1). To test whether such descriptive patterns persist with the inclusion of confounders, we estimate a series of linear regressions; immigrant generation is used to predict each familism subscale (see Table A1 in the online version of the article). After the inclusion of demographic, socioeconomic, and cultural characteristics, however, generational status does not exhibit an independent association with familial attitudes. We thus find little evidence that familism systematically declines across immigrant generation.

Is There a Link between Familism and Health?

Table 2, Panel A contains estimates that assess generational differences in health as well as the relation between familial attitudes and health. We focus on four measures of physical health (cardiac risk ratio, BMI, diabetes, C-reactive protein) and two indicators of mental health (depressive symptoms and anxiety). Coefficients are obtained from separate regressions that control for sociodemographic characteristics, family conflict, English fluency, health insurance coverage, and country of origin. Table A2, which can be found in the online version of the article, contains a complete list of covariates from all specifications.

After adjusting for key confounders, results provide modest evidence of generational declines in health. Compared to first-generation Hispanics, the U.S.-born have significantly higher BMI ($\beta = 1.73$) and are more likely to suffer from elevated levels of C-reactive protein (odds ratio [OR] = 1.55). And while the 1.5 generation also exhibits greater BMI ($\beta = 1.62$) than their first-generation counterparts, they have significantly lower odds of diabetes (OR = .51). Wald tests allow us to generate further comparisons across generations, though there is little indication that native-born Hispanics are in worse health than those who arrived to the United States at younger ages. The one exception is that the U.S.-born have nearly twice the probability of suffering from diabetes than the 1.5 generation (10 percent vs. 5 percent, predicted probabilities obtained via logistic regression). That we observe such patterns when relying on data collected by medical professionals suggests that these health differences are unlikely driven by data inaccuracies or underreported chronic conditions.

With respect to the link between familism and health, findings are more complex. We find no evidence of a substantively large or statistically significant correlation between family obligations and physical or mental health. However, Hispanics who report stronger orientations toward familial support have significantly fewer depressive (incidence rate ratio [IRR] = .94) and anxiety symptoms (IRR = .97) than those less inclined to agree with such sentiments. And with the exception of cardiac risk and diabetes, familial support is associated with *worse* physical health; however, it must be stressed that the only significant outcome observed is BMI ($\beta = .48$). Estimates also suggest that respondents who report stronger referent familism exhibit a significantly elevated risk for depression (IRR = 1.13) and anxiety (IRR = 1.04).

It is worth highlighting a few key patterns that emerge from covariates (see Table A2 in the online version of the article). Hispanic men report lower BMI ($\beta = -1.27$), fewer depressive symptoms

282

Table 2. Predicting Health Using Familism, Immigrant Generation, and Interactions.

	Cardiac Risk β (SE)	BMI β (SE)	Diabetes OR [95% CI]	C-Reactive Protein OR [95% CI]	Depression IRR [95% CI]	Anxiety IRR [95% CI]
Panel A						
Immigrant generation (First generation)						
1.5 generation	.06 (.15)	1.62** (.58)	.51* [.29, .93]	1.41 [.89, 2.22]	1.00 [.85, 1.18]	1.02 [.95, 1.09]
U.S.-born	.28 (.17)	1.73*** (.50)	1.03 [.66, 1.61]	1.55* [1.03, 2.33]	1.09 [.94, 1.26]	1.03 [.97, 1.10]
Familism						
Obligations	.13 (.08)	−.10 (.36)	.90 [.66, 1.23]	.89 [.71, 1.12]	.96 [.89, 1.05]	1.01 [.97, 1.04]
Support	−.03 (.07)	.48* (.23)	.99 [.80, 1.23]	1.19 [.99, 1.43]	.94* [.88, .99]	.97* [.94, .99]
Referents	−.07 (.05)	−.35 (.23)	1.22* [1.01, 1.47]	1.03 [.89, 1.19]	1.13*** [1.07, 1.19]	1.04*** [1.02, 1.07]
Constant	1.58** (.51)	20.80** (1.85)	.00*** [.00, .01]	.13** [.03, .47]	3.61*** [2.14, 6.08]	11.97*** [9.86, 14.54]
Panel B						
Immigrant generation (First generation)						
1.5 generation	−.16 (.81)	1.21 (4.15)	.02 [.00, 1.41]	1.91 [.06, 58.02]	.91 [.33, 2.53]	.97 [.64, 1.46]
U.S.-born	1.73 (1.19)	−.95 (3.37)	.38 [.01, 13.43]	.64 [.07, 6.17]	1.04 [.51, 2.13]	1.26 [.90, 1.76]
Familism						
Obligations	.13 (.08)	−.25 (.38)	.86 [.61, 1.21]	.96 [.72, 1.28]	.90* [.82, 1.00]	.99 [.94, 1.03]
Support	−.02 (.06)	.31 (.25)	.90 [.70, 1.16]	1.07 [.85, 1.34]	.98 [.91, 1.05]	1.00 [.97, 1.03]
Referents	−.01 (.05)	−.19 (.23)	1.26* [1.02, 1.57]	1.02 [.86, 1.22]	1.15*** [1.08, 1.23]	1.05*** [1.02, 1.07]
Interactions						
1.5 generation × Obligations	−.19 (.26)	−.55 (1.15)	1.04 [.27, 4.04]	.63 [.23, 1.74]	1.19 [.83, 1.69]	1.13 [.96, 1.33]
U.S.-born × Obligations	.05 (.20)	.75 (1.13)	1.25 [.51, 3.04]	.93 [.47, 1.82]	1.20 [.99, 1.45]	1.02 [.92, 1.14]
1.5 generation × Support	.25 (.24)	1.53 (.80)	1.82 [.75, 4.42]	2.00 [.96, 4.19]	.87 [.71, 1.07]	.91 [.82, 1.01]
U.S.-born × Support	−.15 (.22)	.03 (.82)	1.24 [.71, 2.18]	1.15 [.71, 1.86]	.89 [.77, 1.02]	.93 [.86, 1.00]
1.5 generation × Referents	.01 (.15)	−1.08 (.75)	1.33 [.69, 2.59]	.70 [.44, 1.11]	.98 [.81, 1.18]	.97 [.91, 1.04]
U.S.-born × Referents	−.36* (.14)	−.19 (.58)	.77 [.45, 1.34]	1.24 [.84, 1.82]	.92 [.82, 1.04]	1.00 [.95, 1.06]
Constant	1.27*** (.49)	21.40*** (1.86)	.00*** [.00, .02]	.15** [.04, .60]	3.74*** [2.11, 6.64]	11.72*** [9.50, 14.45]
N	4,078	4,078	4,078	4,078	4,078	4,078

Source: Hispanic Community Health Study/Study of Latinos Parent and Sociocultural Ancillary Study, 2008–2011.

Note: β = unstandardized coefficient; BMI = body mass index; CI = confidence interval; IRR = incidence rate ratio; OR = odds ratio; SE = standard error.

*p < .05, **p < .01, ***p < .001.

(IRR = .77), and less anxiety (IRR = .93) but exhibit a greater cardiac risk (β = .70) than women. Employed individuals as well as those with higher levels of income and educational attainment exhibit a lower risk of poor mental health than their less advantaged counterparts, and we find striking health differences by country of origin. Relative to Mexican-origin respondents, Cubans, Central/South Americans, and Hispanics from other origin countries are less likely to have diabetes (β = .55, β = .67, β = .61) but more likely to suffer from elevated levels of C-reactive protein (OR = 1.60, OR = 1.33, OR = 1.60). And Central/South Americans report less anxiety than their Mexican counterparts (IRR = .96), perhaps because many emigrated from particularly stressful and violent contexts (Menjivar and Abrego 2012). Supplemental analyses support this assertion as over half of Central/South Americans arrived to the United States during periods characterized by internal conflict and increased drug cartel violence (United Nations Office on Drugs and Crime 2017). Finally, knowledge of a recent family conflict appears to significantly heighten the risk for depressive symptoms and anxiety (IRR = 1.35, IRR = 1.11).

Do Familial Attitudes and Health Differ across Generations?

It would appear that familism does not decline across immigrant generation, nor is familism associated with physical health. The few consistent patterns we observe are for mental health as results for physical well-being are null or inconsistent. However, it could still be the case that the relationship between familism and health systematically differs across generation. Table 2, Panel B provides estimates evaluating the potential moderating influence of immigrant generation on the associations of interest; see Table A3 (available in the online version of the article) for further details. We rely on figures that illustrate results in the form of predicted values and probabilities by generational status and familism (Figure 1). Each row contains a specific health outcome, and each column represents a given dimension of familism. All *y*-axes correspond to predicted values or probabilities, *x*-axes represent specified levels of familial attitudes, and shaded prediction lines represent three categories of immigrant generation.

Overall, results indicate that immigrant generation plays a relatively minor role in the familism-health relationship. Immigrant generation does not moderate the association between cardiac risk and attitudes toward familial obligations or support (row 1); despite apparent differences in magnitude, estimated slopes do not statistically differ from each other. There is some indication, however, that cardiac risk declines more steeply with increasing referential familism among U.S.-born respondents than among the first generation. Yet, we remain hesitant to emphasize this sole significant finding. We do not observe statistically significant or substantive differences between familism and BMI across generational status (Figure 1, row 2). Moreover, we observe little variation across immigrant generation and familism when estimating the likelihood of diabetes, and many of these estimated slopes are close to zero. Higher levels of referent familism do appear to be associated with increased diabetes risk among foreign-born Hispanics, but the magnitude of this association is quite trivial. And while stronger attitudes toward family obligations appear negatively correlated with elevated C-reactive protein, the reverse is true for those reporting higher levels of familial support. However, slopes are not statistically distinguishable from each other, and correlations are quite small. With respect to referent familism and elevated C-reactive protein, we observe significantly different patterning among the 1.5 generation (negative slope) and the U.S.-born (positive slope).

An assessment of depressive symptoms continues to suggest that immigrant generation is unlikely to moderate the relationship of interest (row 5). Though we observe a significant and positive relationship between depression and referent familism, there is no indication that this differs across generations. A negative correlation emerges for attitudes surrounding family support and depressive symptoms, but large confidence intervals suggest slopes are unlikely to differ from zero. There is also no evidence that generational differences exist between family obligations and depression. Moreover, we find remarkably similar patterns for anxiety across each dimension of familism: little evidence that slopes differ from each other (or zero) with respect to familial support and obligations, whereas those who report stronger levels of referent familism exhibit higher anxiety (row 4). Again, this relationship does not appear to vary by immigrant generation.

DISCUSSION

Although numerous studies employ the logic of cultural familism to reconcile patterns of health and well-being among Hispanics, it is generally invoked
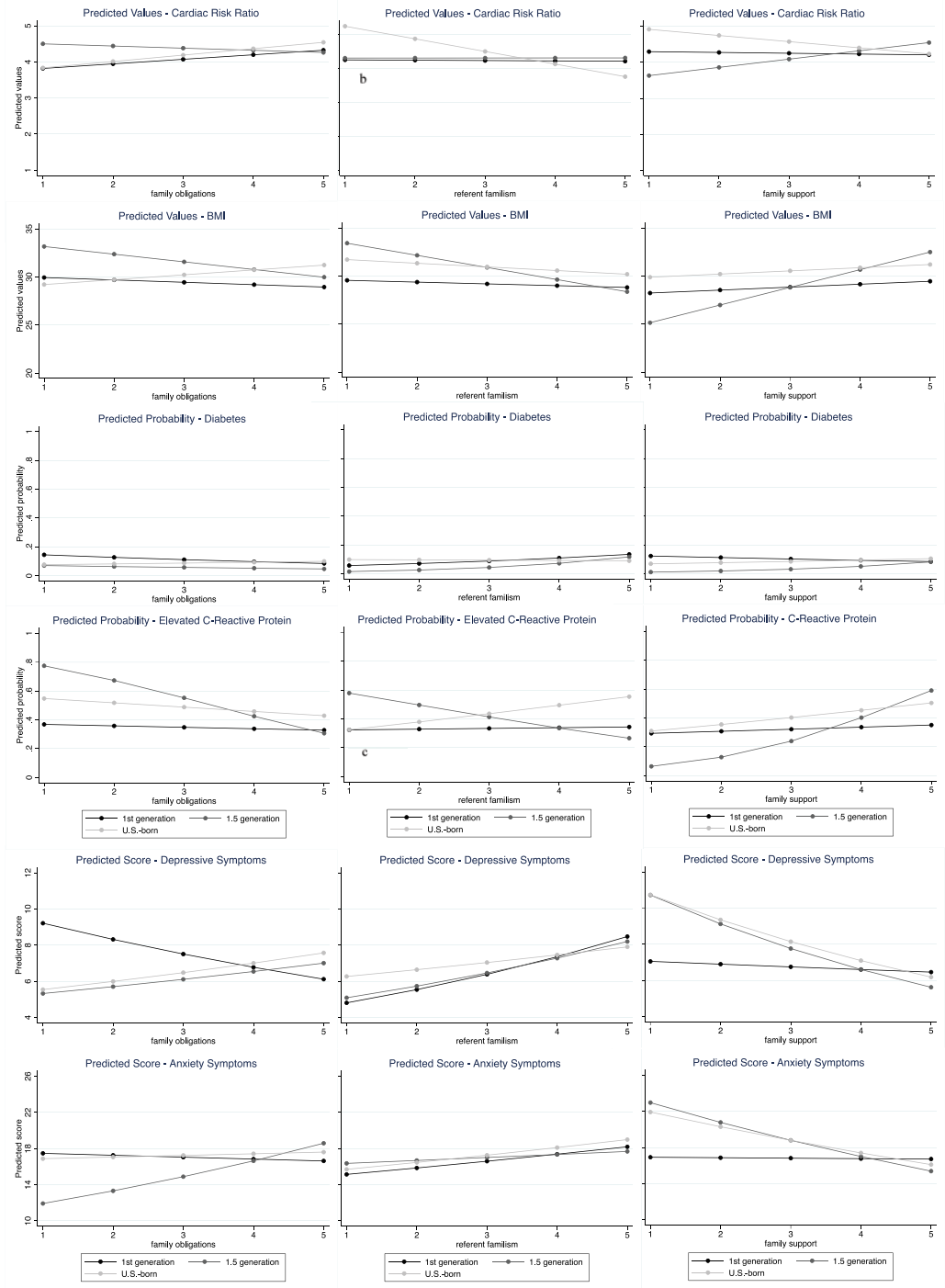
Figure 1. Predicted Values of Health Outcomes by Immigrant Generation and Familism.
Note: Confidence intervals not shown.
First generation significantly different from 1.5 generation.
First generation significantly different from U.S.-born.
The 1.5 generation significantly different from U.S.-born.

as a residual explanation with little consideration for key measurement issues. Moreover, attempts to empirically test the linkages between familism and physical health remain exceedingly sparse. This article makes significant contributions to the literature by drawing on a unique data source with information on familial attitudes, mental health, and biomarkers. We assessed the link between familism and health and asked whether this correlation is moderated by immigrant generation. If familism is associated with Hispanic well-being and also declines across generations—or if the effects of familism are weaker among the U.S.-born— familism could be a nontrivial contributor to the health advantage.

While there is some indication that physical and mental health declines across immigrant generation, this association weakens with the inclusion of relevant confounders—namely, socioeconomic and cultural characteristics. That we observe such patterns when relying on biomarkers and anthropometrics suggests that the advantageous health observed in the first generation is unlikely to be solely due to data misreporting or undiagnosed conditions. Recent work in medical sociology and public health identify similar patterns in both selected and nationally representative samples of Hispanic populations (e.g., Crimmins et al. 2007).

Results also suggest that familism is not associated with the physical health measures used in this study. We do, however, observe a moderately robust relationship between familism and mental health. On the one hand, respondents who report stronger attitudes toward referent familism exhibit heightened symptoms of depression and anxiety. On the other hand, those who hold stronger beliefs toward familial support appear to report better mental health outcomes. Given that perceptions of social support are linked to lower levels of depression among Hispanics and the overall population (Lin, Ye, and Ensel 1999; Russell and Taylor 2009), this pattern is not entirely surprising. And because reports of strong referent familism are associated with elevated anxiety and depression, familism may not consistently operate in a way that is favorable to individuals; numerous obligations and/or mounting pressure may be common among those who form especially strong attachments to relatives.

We also emphasize that each familism subscale exhibits a unique relation to health. In fact, referent familism and support operate in competing directions with respect to depression and anxiety. Future work must consider the implications of including a single item or a single dimension of familism in analyses—as opposed to including the entire construct. Although familial support receives substantial attention in the literature and is undoubtedly a key component of a family-oriented belief system, it is one piece of a larger construct that includes multiple dimensions of family life. To ensure appropriate conclusions are drawn, we urge scholars to engage in careful and nuanced consideration to the meaning and measurement of familism (e.g., not conflating social support with familism).

Finally, analyses suggest that the correlation between familism and health does not systematically differ across generations. If anything, associations are quite similar for the vast majority of outcomes. To sum: Results illustrate that familism boasts a weak relationship to health, familism does not systematically decline across generations, and the effects of familism on health do not weaken across immigrant generation. We thus believe that the logic of cultural familism is an unsatisfactory explanation for the relatively good health of foreign-born Hispanics. Although future work should continue to explore behaviors related to familism, it is also essential to focus on discrimination and other structural barriers that impede health and well-being.

Other Considerations

Given that patterns of health and family orientation may differ among men and women (Horowitz et al. 2004; Pistrang and Barker 1995), we investigate this possibility using the HCHS/SOL. Results, which are available on request, provide little indication that gender moderates the association between familism and health. Put differently: The direction and magnitude of estimates are similar for Hispanic men and women, and they are nearly identical to results presented here. Although findings seem to contradict past work, one explanation for this discrepancy could be our focus on familial *attitudes* as opposed to behaviors.

In addition, family conflict may alter the impact of familism on Hispanic well-being (Bostean 2010; Priest and Woods 2015). We thus consider whether recent family conflict moderates the association of interest. There is no evidence that familism and physical well-being systematically differ by the presence of conflict (see Table A4 in the online version of the article). However, conflict appears to moderate the relationship between mental health and certain dimensions of familism—namely, family obligations and referent familism. While a positive correlation emerges between poor mental health and family obligations among those

reporting a conflict, the correlation is negative when such conflicts are absent; these estimates, however, are accompanied by large confidence intervals. And while the estimated relation between depression and referent familism is minimal among those reporting conflict, a positive association emerges for those unaware of family conflict. Conflict thus appears to increase depressive symptoms among Hispanics who express particularly low levels of referent familism.

This study is not without limitations. First, we rely on cross-sectional data that make it difficult to ascertain the causal direction of interest. While we are unable to address such concerns with these data, the release of subsequent HCHS/SOL data will allow researchers to better evaluate issues surrounding causality and temporal ordering. Second, these data are representative of urban locations that have long histories of hosting immigrant and U.S.-born Hispanics. It is thus unlikely that findings generalize to Hispanics residing in rural/suburban areas, who may exhibit a different health profile as a result of unequal access to material and social resources (Derose, Escarce, and Lurie 2007). Despite these limitations, our study provides new insight on familism, immigrant generation, and Hispanic health. We provide a more nuanced understanding of familism and call into question assumptions that family-oriented beliefs and attitudes explain the immigrant health advantage.

SUPPLEMENTAL MATERIAL

Tables A1 through A4 are available in the online version of the article.

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AUTHORS' NOTE

Authors share equal authorship.

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NOTES

1. Correlations between factors, which are obtained after rotation, are as follows: $r_{support\_obligations} = .51$; $r_{support\_referent} = .42$; $r_{obligations\_referent} = .30$.
2. The scale was composed of six items: "In general, what language(s) do you read and speak?"; "What was the language(s) you used as a child?"; What language(s) do you usually speak at home?"; "In which language(s) do you usually think?"; "What language(s) do you usually speak with your friends?"; and "In general, what language(s) are the movies, TV, and radio programs you prefer to watch and listen to?" Response categories ranged from 1 (only Spanish) to 5 (only English).

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