Examining the association between religiosity and medical mistrust among churchgoing Latinos in Long Beach, CA

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Abstract

Medical mistrust among racial/ethnic minorities has been associated with decreases in health care utilization, whereas religiosity has been separately linked with increases in this behavior. However, very few studies have examined the relationship between religiosity and medical mistrust among Latinos, a group with strong religious connections and potentially high mistrust. In-person, self-administered surveys were collected among 767 adult Latinos attending three Latino churches (one Catholic and two Pentecostal) in Long Beach, CA. Measures included a previously validated 12-item medical mistrust scale, religiosity (religious denomination, length and frequency of attendance, and number of groups or ministries involved in), health care access, and sociodemographic factors. Medical mistrust score was 2.47 (standard deviation [*SD*] = 0.77; range 1–5). Almost two-thirds of participants (62%) attended religious services frequently (once a week or more), and the majority attended a Catholic church (80%). About half of the participants had attended their church for ≥5 years (50%) and participated in one to two church groups or ministries (53%). Multivariable analyses show that Pentecostal church congregation and those identifying as Mexican/Chicano were negatively associated with medical mistrust. On the contrary, participating in church groups or ministries and having an immigrant parent were positively associated with medical mistrust. Our findings suggest that church-based health initiatives should consider church denomination, length of attendance, participation in groups or ministries, and ethnic differences to address medical mistrust issues among Latino congregants.

Keywords

Religiosity, Medical mistrust, Faith-based health interventions, Latinos

INTRODUCTION

Medical mistrust is a relevant public health issue with potentially harmful effects on health care utilization behaviors, particularly among racial/ethnic minorities and other marginalized populations. Previous research shows that medical mistrust can lead to underutilization of health care services [1], such as cancer screening [2–4], routine checkups, blood pressure or cholesterol screenings [5], poorer treatment adherence [6], and lower satisfaction with health care services [7–9]. As the seminal Institute of Medicine's *Unequal Treatment* report points out, mistrust in health care providers and organizations can contribute to racial and ethnic health care disparities [10].

Implications

Practice: Church-based health initiatives should consider denominational differences and working more closely with church groups and ministries to tackle medical mistrust among Latinos.

Policy: Policymakers interested in addressing health care disparities among Latinos should consider the role of religiosity and engage churches in crafting policies to build trust between Latinos and the health care system.

Research: Religiosity is associated with medical mistrust among Latinos, but its effects differ depending on other factors (e.g., denomination, length of attendance, and participation in groups or ministries). Future research should explore other dimensions of faith, such as spirituality and fatalism.

Research shows that experiencing discrimination and perceptions of racism in the health care system contributes to medical mistrust [11,12]. In a context of structural racism, groups experiencing discrimination likely turn to their faith to cope with these social stressors [13]. However, little evidence exists regarding the relationship between religiosity and medical mistrust among racial/ethnic minorities and other marginalized populations. Religiosity is a relevant construct to study, given the importance of religion as a social institution in the USA. Many churches, particularly those serving minoritized/marginalized communities, provide both spiritual and social support and advocate for social justice [14,15]. Hence, they are uniquely positioned to reach and deliver health and health care programming among marginalized populations, in part, because they have a physical and social presence in almost every community [14,16,17]. A recent Pew Research Center survey found that U.S. adults pray more often and are more likely to attend weekly religious services than adults in other high-income countries [18]. A related Pew effort, the *Religious Landscape Study,* shows

that Latinos make up 34% of Catholics and 11% of Evangelical Protestants in the USA. Among Latinos, 48% identified as Catholic and 19% Evangelical Protestant (7% Pentecostal). Although Pew points out a decline in Catholic membership among Latinos in the past decade, Latino Catholics constitute a large share of all Catholics as the Latino population has increased significantly during the same time period [19]. In turn, the Latino Protestant population has continuously increased, and they were most likely to report attending services weekly and consider religion a very important part of their lives. In Los Angeles (LA) County, Martinez (2012) points out that the religious profile is somewhat similar to the national picture, with 68% of Latinos identifying as Catholics and 20% as Protestant. Although Central Americans constituted about 14% of the population of LA County, they accounted for 25% of Latino Protestants (in contrast, Mexicans were 75% of the population but only 6% of Protestants) [20].

In the USA, religious beliefs and practices have been linked with reduced mortality among women [21] and increased use of preventive care among adults [22] and the elderly [23] and play a beneficial role in the prevention of mental and physical illness [24]. The beneficial health effects of religiosity have also been documented for African-American women [25], men [8], and older adults [26]. Among Latino populations, a number of studies suggest that religiosity may have health-protective effects, including physical [27] and mental health [28,29], smoking [30], cancer screening [31], and preventive care use [32]. Similarly, researchers point to religion as a source of resilience, and a coping mechanism when facing adversity [33,34]. Hence, church-based efforts appear to be effective toward improving Latinos' health and health care outcomes [35−37].

However, little is known about the influence of religiosity on medical mistrust. To our knowledge, only one previous study has tested this association empirically. Using a nationally representative sample of adults in the USA, investigators found that religious involvement positively influenced trust in health care providers [38]. However, this study did not find significant differences in trust by racial groups (White, Black, and Other), and did not explore differences by Latino ethnicity as a category. Latinos are the largest racial/ethnic minority group in the USA [39] and the second most religious racial/ethnic group (only behind African Americans). In a 2014 survey, 59% of U.S. Latino adults said that religion was very important, and 39% reported attending religious services at least once a week [40]. Despite the relevance of religion among Latinos, no previous study has explored its association with medical mistrust. Hence, the present study examined the association between religiosity and medical mistrust in a sample of Latino adults attending Catholic and Pentecostal churches in Long Beach, CA.

METHODS

Study design and participants

The present study uses secondary data from the Latino subsample of the Facilitating Awareness to Increase Testing for HIV (FAITH) study. FAITH was a multicomponent, church-based intervention aimed at reducing HIV stigma and mistrust among African-American and Latino adults. FAITH was developed through a community-based participatory research (CBPR) approach and extensive qualitative and case study research [41,42] and was guided by a community advisory board consisting of local leaders of both religious and public health communities throughout all phases of the study [43]. A more detailed description of study and survey methodology can be found elsewhere [36,44]. In short, FAITH conducted self-administered baseline and follow-up health surveys regarding participants' attitudes and behaviors related to health, including HIV risk factors, medical mistrust, and attitudes toward homosexuality, drug addiction, and people living with HIV. Five churches were purposively selected to represent a range of churches in terms of race ethnicity (African American, Latino), size, and congregation.

Church leaders helped to promote the survey in their respective congregations. Survey administrators carried out English and Spanish survey sessions during ministry meetings or after religious services. The survey questionnaire and procedures in English and Spanish were pilot tested with 68 congregants from two congregations similar to those in the present study. Their feedback was incorporated into the survey development and implementation. In addition, the community advisory board, church pastors, and church coordinators of the participant congregations vetted and approved the survey contents.

The current study uses data from the baseline assessment among Latino churchgoers only. The convenience sample included attendees at three Latino churches (one Catholic and two Pentecostal) in Long Beach, CA. In-person, self-administered surveys were collected among 767 adult Latinos in their language of choice (74.2% in Spanish and 25.8% in English). The response rate (70.8%) was calculated from the number of adult respondents and the estimated number of adult congregants (age ≥18 years) who were attending services on average at the time the baseline surveys were conducted (per church leaders). Survey sessions were carried out during times when congregants came to church (e.g., weekday evenings and weekends), usually after worship services or during scheduled ministry meetings or church events. All sessions were managed by trained project staff.

Due to the sensitivity of some questions (e.g., sexual behavior and HIV status), church staff were not involved in the distribution and collection of

the surveys. Project staff placed completed surveys in lock boxes immediately after each survey session and delivered the surveys to the research office at the end of each day. At the Latino Catholic church, it appeared that noncongregant community members (demographically different from the mostly Latino parish) attended one afternoon session and indicated on their surveys that they had not attended the church in the past year. Therefore, they were excluded from the current analyses. The RAND Human Subjects Protection Committee approved the study protocol. All study participants provided informed consent before answering the survey.

Measures

Medical mistrust

Medical mistrust was measured using the Group-Based Medical Mistrust Scale (GBMMS), a 12-item scale that has been fielded with African-American and Latino populations [4,7,9,45,46]. The GBMSS measures suspicion of health care systems, health professionals, and treatment that individuals from respondent's racial/ethnic group receive. The GBMSS is a 5-point Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Examples of the items included "Doctors and health care workers sometimes hide information from patients who belong to my ethnic group," "People of my ethnic group cannot trust doctors and health care workers," "Doctors and health care workers do not take the medical complaints of people of my ethnic group seriously." Following previous studies, a mean GBMMS score was calculated for all participants. Scoring consists of calculating the mean answer across the 12 GBMMS items. Higher scores (ranging from 1 to 5) would indicate higher medical mistrust. In our study, the internal consistency of the GBMMS was relatively high (Cronbach's alpha = .80).

Religiosity

Religiosity was measured using four questions: (a) church congregation (assigned to participants based on participating churches, either Latino Catholic or Latino Pentecostal); (b) length of attendance (How long have you attended services or activities at this church? Less than a year, at least 1 year but less than 5 years, or 5 years or more); (c) frequency of attendance (Over the past year, how often did you attend a worship service or activity at this church? Rarely, infrequent [one or two times per month], or frequent [once per week or more]; and (d) number of groups or ministries (Over the past year, how many groups or ministries at this church did you participate in? Include choir, women's or men's group, Bible study or prayer group, social service or justice ministry, or any other group that you participate in at this church). Given the right-skewed distribution of the variable, we recoded it into three categories (none, one to two groups or ministries, three or more groups or ministries).

Other covariates

Based on previous related studies addressing medical mistrust among Latino populations [7,9,46], we included relevant health care (health insurance status and usual source of care) and sociodemographic factors (age, sex, Latino background group, immigration, English language proficiency, education, marital status, and income). The Latino background group variable included the following categories: (a) Mexican, Mexican American, and Chicano; (b) Central American (Salvadoran, Guatemalan, Honduran, Nicaraguan, Panamanian, Costa Rican, and Belizean); and (c) Another Latino or Hispanic Origin. Less than 4% of participants selected the third category (n = 29) and were consequently merged with the Central American category for multivariable analyses.

Data analysis

Missing data rates had a mean of 3.6 % (ranging from 1.1 to 6.4 %). We used the Sequential Regression Imputation Method to avoid dropping cases with missing data, using IVEware in SAS 9.2 [47]. Summary statistics were calculated for all study variables. A two-step hierarchical, multivariable linear regression approach was conducted to examine the association between religiosity and medical mistrust, adjusting for church clustering. First, Model 1 included only the four religiosity variables. Then, Model 2 added health care and sociodemographic factors that were significantly associated with medical mistrust (p < .10). R-squared is reported to examine the percentage of the outcome variable variation that each linear model explains. Stata SE 14.2 (College Station, TX) was used for all data analyses.

RESULTS

Summary statistics are shown on Table 1. The mean medical mistrust score was 2.47 (standard deviation [SD] = 0.77; range 1−5), which was similar to previous studies among African Americans and Latinos [7,45,46]. A majority of participants were Catholic (79.9%) and almost two-thirds (62.2%) attended religious services frequently (once a week or more). About half of participants had been attending with their church for ≥5 years (50.1%) and participated in one to two church groups or ministries (53.2%). Although nearly half were uninsured (44.7%), very few reported not having a usual source of care (14.7%). Mean age was 38.7 (SD = 14.08; range: 18−96). Almost two-thirds of participants were women (61.2%), while a majority identified as Mexican/Mexican American/Chicano (80.2%), foreign born (74.7%), or with both foreign-born parents (83.7%). About half of participants spoke English well or very well (49.5%), had less than high school education (45.5%), and had household incomes under $20,000 (43%). Two-thirds of participants were married or living with a partner (62.5%).

Table 1 | Sample characteristics of study participants (*n* = 767)

	Mean (*SD*)	*n* (%)
Medical mistrust		
Medical mistrust scale (range: 1 – 5)	2.47 (0.77)	
Religiosity		
Church congregation		
Latino Catholic		613 (79.9)
Latino Pentecostal		154 (20.1)
Length of attendance		
Less than 1 year		184 (24.0)
At least 1 year but less than 5 years		199 (25.9)
Five years or more		384 (50.1)
Frequency of attendance		
Rarely		128 (16.7)
Infrequent (once or twice per month)		162 (21.1)
Frequent (once per week or more)		477 (62.2)
Number of groups or ministries		
None		152 (19.8)
One or two groups or ministries		408 (53.2)
Three or more groups or ministries		207 (27.0)
Health care factors		
Health insurance		
Uninsured		343 (44.7)
Usual source of care		
No usual source of care		113 (14.7)
Sociodemographic factors		
Age (in years, range: 18–96)	38.73 (14.08)	
Sex		
Female		469 (61.2)
Male		298 (38.8)
Latino background group		
Central American, Other		152 (19.8)
Mexican/Mexican American/Chicano		615 (80.2)
Immigration status		
Foreign born		573 (74.7)
U.S. born		194 (25.3)
English language proficiency		
Not well/not at all		387 (50.5)
Very well/well		380 (49.5)
Immigrant parents		
None		92 (12.0)
One parent		33 (4.3)
Both parents		642 (83.7)
Married/living with a partner		479 (62.5)
Educational status		
Less than high school		349 (45.5)
High school/GED		234 (30.5)
More than high school		184 (24.0)
Household income		
$19,999 or less		330 (43.0)
$20,000–$39,999		272 (35.5)
$40,000 or more		165 (21.5)

Multivariable linear regression was used to model the influence of religiosity variables on medical mistrust (Table 2). Model 1 shows that the number of groups or ministries that individuals were involved in was positively associated with medical mistrust (one or two groups: β = 0.244, *p* = .009; more than three groups: β = 0.474, *p* = .033; vs. none). Model 2 adjusted for health care and sociodemographic factors that were significantly associated with medical mistrust in bivariate analyses (at *p* < .10). It shows that attending a Pentecostal congregation (β = −0.140, *p* = .015; vs. Catholic) and identifying as Mexican/Chicano (β = −0.231, *p* = .029; vs. other Latino) were negatively associated with medical mistrust. On the contrary, participating in church groups or ministries (one or two groups: β = 0.232, *p* = .019; more than three groups: β = 0.453, *p* = .033; vs. none) and having one immigrant parent (β = 0.283, *p* = .037; vs. none) were positively associated with medical mistrust. All covariates in the final model had variance inflation factor (VIF) values less than 3; hence, multicollinearity was not an issue. Sensitivity analyses explored interactions between church congregation × Latino background group and number of groups or ministries × Latino background group. However, we found no significant interactions and, therefore, did not pursue further stratified analyses.

DISCUSSION

To our knowledge, this is the first study to examine the association between religiosity and medical mistrust among churchgoing Latinos. Our findings suggest that attending a Pentecostal church congregation and those identifying as Mexican/Chicano were associated with lower levels of medical mistrust, while participating in church groups or ministries and having an immigrant parent were associated with higher levels of medical mistrust, even after adjusting for other religiosity variables and sociodemographic and health care covariates.

Our findings regarding Pentecostal affiliation are particularly salient given that a recent national survey found that among Latinos who switched from Catholicism to Protestantism, over a quarter (28%) identified as Pentecostal [40]. A potential explanation for this association between Pentecostal affiliation and lower medical mistrust may lie in the differential conceptions and approaches to health and well-being between Pentecostal and Catholic traditions. While Catholic teaching may consider physical and mental suffering as an opportunity for sharing in Christ's sacrifice and purification for the afterlife [48], Pentecostal teaching promotes a more pragmatic stance toward individual and community well-being and economic prosperity, including broader opportunities for women ministerial leadership [49,50]. Women in ministerial leadership may be better positioned to serve as bridges between their congregants and the health care system, in

Table 2 | Multivariable analyses of the relationship between religiosity and medical mistrust

	Model 1[a]		Model 2[b]	
	β	p	β	p
Religiosity				
Church congregation				
Latino Catholic	1		1	
Latino Pentecostal	−0.109	.102	−0.140	.015
Length of attendance				
Less than 1 year	1		1	
At least 1 year but less than 5 years	−0.064	.459	−0.026	.750
5 years or more	0.042	.133	0.040	.125
Frequency of attendance				
Rarely	1		1	
Infrequent (once or twice /month)	0.019	.897	−0.006	.969
Frequent (once /week or more)	−0.146	.208	−0.157	.212
Number of groups or ministries				
None	1		1	
One or two groups or ministries	0.244	.009	0.232	.019
Three or more groups or ministries	0.474	.033	0.453	.033
Sociodemographic factors				
Age (in years, range: 18–96)			0.002	.221
Hispanic/Latino group				
Central American, Other			1	
Mexican/Mexican American/Chicano			−0.231	.029
English language proficiency				
Not well/not at all			1	
Very well/well			−0.100	.101
Immigrant parents				
None			1	
One parent			0.283	.037
Both parents			−0.145	.230
Educational status				
Less than high school			1	
High school/GED			−0.089	.124
More than high school			−0.124	.141

Sociodemographic factors were included in Model 2 only if they were significantly associated with medical mistrust in bivariate analyses ($p < .10$).
[a]$R^2 = .05$; R^2 (adjusted) $= .04$; $p < .001$.
[b]$R^2 = .09$; R^2 (adjusted) $= .08$; $p = .004$.

part, because women are more likely to seek health care services than men [51]. Another potential explanation may lie in the congregational characteristics of these particular churches and the types of congregants they attract. Overall, this finding seems to suggest that future efforts should consider differences across congregations and adapt their interventions accordingly.

Interestingly, we found that participating in groups or ministries was associated with higher medical mistrust (the higher the number of groups or ministries, the higher the mistrust), even after adjusting for other religiosity variables and health care and sociodemographic covariates. In other words, those that did not participate in any groups or ministries mistrusted the health care system less than those that participated at any level. It is possible

that greater church involvement (e.g., participating in more church activities, groups, or ministries) may be a response to mistrust in outside institutions, such as the health care system. It is possible that Latinos facing illness seek a closer engagement with their church as a coping mechanism, feeling safer at church and preferring to get support there, instead of facing potentially discriminatory health care and societal environments [33,52,53]. Such a phenomenon, (i.e., trust in church and mistrust in government agencies) has been widely documented among African-American communities [8,11,12,54] and may be applicable to other marginalized and stigmatized populations, such as Latinos. In our study, 76% of participants responded positively when asked if health screenings should be offered at their church. Recent research shows that anti-immigrant/

anti-Latino political discourse and immigration enforcement pushes even U.S.-born Latinos to exercise "cautious citizenship," that is, limiting engagement and sharing of information with health care providers [55].

In this context, engaging Latinos through their church groups or ministries may be a relevant path toward decreasing mistrust and increasing success in the implementation of health and health care initiatives [56]. Our research suggests that Latino church-based efforts should consider building trust via established groups and ministries, where a sense of partnership and mutual commitment by health care organizations can be nurtured to dissipate mistrust. Church-based interventions that build trust and enhance capacity have been suggested in the literature as relevant to reach underserved populations and influence multiple levels of change [16,17,57]. Recent research also suggests that collaborating with both formal and informal leaders of those groups/ministries may require enhancing the capacity of faith-based organizations to sustain health and health care equity initiatives over time [57].

These efforts should also take into consideration within-group diversity of their Latino church-goers. We found that, while identifying as Mexican/Chicano was negatively associated with medical mistrust, having an immigrant parent was positively associated with medical mistrust. These findings are relevant as the Latino groups in our sample (Mexican/Chicano and Central Americans) are likely to have divergent histories of immigration and settlement in the USA, in general, and in Long Beach, CA, more specifically. A recent report shows that 84% of the 209,000 Latinos living in Long Beach are of Mexican origin, while only 12% are of Central American or South American origin [58]. In our sample 80% of participants identified as Mexican/Chicano. Latinos of Mexican origin are likely to have a longer history of living in the area and, consequently, more likely to have family and community support systems in place, unlike other more recent arrivals, such as Central Americans. In that sense, it is also salient that having an immigrant parent exacerbates medical mistrust, As pointed earlier, an anti-immigrant/anti-Latino environment may turn Latinos, particularly those with immigrant family members, to exercise more cautious engagement with health care and other social services [55].

There are some limitations to be considered. First, the cross-sectional nature of our data prevents us from determining cause−effect relationships. Second, we relied on self-reported measures, which may be prone to response (social desirability; recall) bias. However, it should be noted that medical mistrust was measured using a previously validated scale [4,45,46]. Third, religiosity was characterized using four items addressing church congregation, length and frequency of attendance, and number of

groups or ministries in which the participants were involved. Although it is better than using only one variable, the four items did not constitute a validated scale of religiosity. Future studies should consider using scales that have been validated among Latino populations, such as the Four Basic Dimensions of Religiousness Scale [59] or the God Locus of Health Control Scale [60], which can also tease out different aspects of Latino faith beyond religiosity, such as spirituality and fatalism [33,34]. Similarly, the question regarding participation in groups or ministries only asked for the number of such groups or ministries but not the kinds of ministries participants were involved in. It may be possible that group/ministry activities rather than overall engagement in church are associated with medical mistrust or, as suggested by previous research, that churches with health and/or social justice ministries may be more proactive in building bridges and sustaining health initatives [17,57]. Fourth, our secondary analysis was conducted in the context of a larger study, which aimed to examine and address HIV-related stigma among church congregants. Selection of participants in the parent study was not for the purpose of examining religiosity and medical mistrust. In addition, the sensitivity of the topic was a key consideration in how the study was developed and involved a lengthy collaborative effort with a community advisory board, the leaders of participating congregations, and experienced survey field staff, to design a culturally and organizationally responsive process. Future studies in this area should take this into consideration when engaging with religious organizations around potentially sensitive topics. Fifth, the parent study [36] was unable to recruit a matched-pair Catholic church during the short timeframe of the intervention pilot. Hence, it is possible that unique characteristics of the participating church (and of its study participants) may be reflected in the responses provided to the baseline survey. Finally, our sample was limited to Latino churchgoers attending one Catholic and two Pentecostal churches in Long Beach, CA, many of whom were foreign born (75%) and had immigrant parents (88%). The survey included only one question regarding English language proficiency but not other more robust measures of acculturation, such as years living in the USA or a validated acculturation scale. Hence, our findings cannot be generalized to other faith-based organizations or Latino populations more broadly.

Nevertheless, our study has some relevant implications for faith-based health and health care equity efforts. Our findings suggest that such initiatives with Latino churches need to consider the levels of mistrust of health care workers and the overall U.S. health care system and also take into account denominational and country of origin differences. In addition, church-based health and health care-related programming may need to work more closely with

pastoral groups and ministries to increase Latinos' trust in the U.S. health care system. At the same time, efforts to increase trust in the health care system should also consider the overall policy contexts and community experiences of discrimination that often lead to mistrust across health care and other social service agencies and work collaboratively with community stakeholders to address these issues.

Compliance with Ethical Standards

Conflicts of Interest: The authors declare that they have no conflicts of interest.

Authors' Contributions: Overall integrity of the work from inception to publication: D.F.L.-C. Design and acquisition of data: K.R.F. and K.P.D. Analysis and interpretation of the data: D.F.L.-C., K.R.F. and K.P.D. Preparation and review of manuscript for important intellectual content: D.F.L.-C, K.R.F. and K.P.D. Final approval of the version to be published: D.F.L.-C., K.R.F. and K.P.D.

Ethical Approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent: Informed consent was obtained from all individual participants included in the study.

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