

HIV-Related Stigma Among Spanish-speaking Latinos in an Emerging Immigrant Receiving City

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Abstract HIV-related stigma has been associated with a reluctance to test for HIV among Latinos. This study assessed community HIV-related stigma within an emerging Latino immigrant receiving city. We conducted a brief survey among a convenience sample of 312 Spanish-speaking Latinos in Baltimore, Maryland. HIV-related stigma was assessed through six items. Associations between stigma items, socio-demographic characteristics, and HIV testing history were considered. Gender, education, and religiosity were significantly associated with stigmatizing HIV-related beliefs. For example, men were 3.4 times more likely to hold more than three stigmatizing beliefs than women, and were also twice as likely as women to report feeling hesitant to test for HIV for fear of people's reaction if the test is positive. These findings can help inform future stigma interventions in this community. In particular, we were able to distinguish between drivers of stigma such as fear and moralistic attitudes, highlighting specific actionable items.

Keywords HIV/AIDS · HIV-related stigma · Latino · Immigrants

Introduction

Despite representing 17% of the U.S. population, Latinos accounted for approximately 25% of new HIV infections in 2013, nearly three times the rate of non-Hispanic whites [1–3]. Moreover, U.S. Latinos present to health care services with more advanced disease than their non-Hispanic counterparts, with undocumented foreign-born men being at the highest risk for delayed diagnosis and presentation to care [4–7]. The majority of new infections occur in urban residents (86%) and Latinos born outside the U.S. (54%) [8]. According to CDC data, Latinos born in Mexico and Central America have more than twice the risk for delayed diagnosis compared to U.S.-born Latinos [7].

Many Latino immigrants are moving to areas in the U.S. without established Latino communities, often referred to as new receiving communities. As a result these communities experience rapid demographic changes, primarily due to the influx of young, male, foreign-born Latinos of low socioeconomic status. This can create a lag time between the arrival of new immigrants and the development of culturally and linguistically appropriate healthcare, social services, and outreach programs. Delay of necessary services can exacerbate existing disparities in health conditions, including HIV.

Baltimore, Maryland is a new receiving community with a recent dramatic influx of foreign-born Latinos; in the past decade the Latino population has increased by 135% to 26,019 in 2010 (although this is likely an underestimation of the true population) [9, 10]. Corresponding, Baltimore has experienced an increased impact of HIV/AIDS

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on the Latino community. Baltimore City Health Department (BCHD) surveillance data shows that Latinos in Baltimore are diagnosed with HIV later than any other racial/ethnic groups [11]. Delayed entry into HIV care worsens HIV-associated morbidity and mortality and can increase transmission in the community [12]. Additionally, the late presentation of Latinos to HIV care suggests that a large proportion of HIV-infected Latinos in Baltimore have not been diagnosed.

To improve HIV testing services for the growing Latino population, BCHD established a culturally-competent HIV outreach program in 2008 staffed by bilingual Latino *promotoras/es*. Despite successes, such as more prevalent HIV testing and exceptional linkage and retention in care among HIV-infected individuals, in 2010 55.6% of Latinos in Baltimore were still diagnosed late, often during hospital admission for an opportunistic infection, compared to 34.0% of non-Hispanic Whites and 34.4% of non-Hispanic Blacks/African Americans [11]. This suggests that overcoming language and cost barriers may not be enough to engage Latino immigrants most vulnerable to HIV infection.

HIV stigma has been associated with reluctance to be HIV tested among Latinos, and produces a barrier to HIV education and linkage to care [13–16]. In a survey of 391 newly diagnosed HIV patients attending a public AIDS program in California, Latino immigrants presented with lower CD4 counts at diagnosis than U.S.-born patients, and in-depth interviews revealed that HIV stigma emerged as an important influence in delayed HIV testing [16]. Other research, including our work in Baltimore, has shown that a lack of knowledge of HIV transmission and treatment as well as associating HIV with “immoral” behaviors (particularly same-sex relations) create fear of a rejection by family and/or peers (a “social death”) in addition to fear of physical death [14, 15].

Stigma is a powerful discrediting social label that dramatically impacts how individuals view themselves and are viewed by others. Cultural meanings given to stigmatized attributes, such as HIV infection, are reproduced through social interactions and boundaries [17, 18]. Thus, stigmatization is a *social process* linked to the actions of groups of people within specific contexts of culture, power, and inequality [17]. Despite the impact of community-wide stigma to attitudes about HIV, most studies on HIV-related stigma measure perceived stigma among persons living with HIV/AIDS (PLHA) and as a result there is limited data on the nature and the degree of HIV-related stigma in urban Latino immigrant communities. Understanding and combating stigma in the community is crucial to improving HIV prevention and outcomes. This study aims to measure and characterize stigma surrounding HIV among members of the Latino immigrant community in Baltimore. Assessing existing HIV stigma in our community is the first step to effectively combating it through targeted interventions.

Methods

Study Design and Sample

From September 2014 to August 2015, we conducted a cross sectional study to characterize HIV-related stigma among a convenience sample of Spanish-speaking Latino adults in Baltimore, Maryland. Trained research assistants recruited respondents at selected street- and community-based venues frequented by foreign-born Latinos, as informed by our prior work mapping and assessing locations for sampling the Latino immigrant population in Baltimore [19]. Participants were recruited at community-based organizations serving Latino immigrants (26.3%), street locations including open air day laborer markets (24.6%), a large city park (6.7%), a Baltimore City Health Department clinic (6.4%), and community events such as Latino Fest (17.0%).

Participants were eligible for inclusion if they were over 18 years of age, self-identified as Latino, and were able to understand Spanish. Since the goal was to explore HIV-related stigma in the local and social community of Latino immigrants, U.S. born Latinos interacting with Latino immigrants in these spaces were also able to participate if they met the eligibility requirements. Research assistants approached individuals at each venue to describe the survey details (including content of questions, confidentiality, risks of participation, time required for participation, and incentive for participation) and assess eligibility. Survey data was collected in Spanish on a tablet using audio computer-assisted self-interview (ACASI) software at the recruitment site at the time of recruitment. Before beginning the survey, participants read and listened to the following statement: Your completion of this survey or questionnaire will serve as your consent to be in the research study (*Al completar este cuestionario usted está dando su consentimiento para participar en este estudio de investigación*). The survey took approximately 5 min to complete and participants received \$5 compensation upon completion of the survey. The Institutional Review Board of the Johns Hopkins University School of Medicine approved the study.

Measures

The survey included questions regarding socio-demographic characteristics and HIV test history, as well as six items to assess HIV-related stigma. We utilized validated items recommended by the UNAIDS-funded HIV Stigma Network, selected to incorporate multiple stigma domains: fear of transmission and disease, anticipated stigma, association with shame, blame, and judgment, and support for discriminatory actions or policies against PLHA [20]. The latter 3 domains address personal attitudes as well as perceived community responses towards PLHA. The items

and domains were selected to allow differentiation between specific drivers and causes of HIV stigma, such as fear of infection due to lack of knowledge about transmission and moralistic attitudes and beliefs surrounding PLHA. The domains and stigma items are provided in Table 1. Response choices included “Agree” and “Disagree,” or “Yes,” “No,” and “Depends” depending on the phrasing of the item (as a statement or question). All items also had the response choices “I don’t know/No opinion” and “I prefer not to respond.”

Analysis

Univariate, bivariate, and multivariate analyses were conducted with SPSS Software Version 23.0. The following factors were considered: age, country of origin, education, religion, importance of religion, time in the U.S., knowing someone infected with or thought to be infected with HIV, ever being tested for HIV, and time since last test (if ever tested). Dichotomization of the explanatory variables was guided by the literature and our previous research. Education was dichotomized as completing secondary school (grade 12) or lower. Importance of religion was dichotomized between important or very important and somewhat important or not important. Time in the U.S. was dichotomized as 5 or more years and less than 5 years. Time since last test was dichotomized as within the past year and never or over 1 year ago.

Chronbach’s alpha was calculated on the six stigma items to test internal consistency. Chronbach’s alpha was 0.58 and thus all items were analyzed individually. Logistic regression models examining the associations between each stigma item and gender, education, and importance of religion were constructed for each stigma item. Variables

included in regression models were based on statistical significance (p -value less than or equal to 0.05) in the bivariate analyses for one or more stigma items. None of the models violated the Hosmer–Lemeshow goodness of fit test.

Results

Socio-Demographic Characteristics of the Participants

Of the 312 survey respondents, 139 (44.6%) were male and 173 (55.4%) were female, with a mean age of 36.3 (SD=11.4) and 34.7 (SD=9.8), respectively. The majority reported their country of origin as Mexico (32.4%), Honduras (22.4%), El Salvador (15.7%), or Guatemala (8.3%). Thirteen participants (4.2%) were born in the U.S. The majority of Latinos surveyed had less than a 12th grade education (61.2%), reported that their religion was important or very important to them (76.3%), and had lived in the U.S. for over 5 years (69.0%). No significant socio-demographic differences were found between the male and female participants (Table 2).

HIV-Related Experiences

Female participants reported ever being tested for HIV significantly more than men ($p=0.006$); however, the majority of participants had been previously tested for HIV, with 61.0% of men and 75.6% of women having received an HIV test in their life (Table 2). Half (51.2%) of these participants who had ever tested for HIV received their HIV test in the past year. In total, only 35.8% of all participants had tested for HIV in the past year. Few participants (7.7%) knew someone living with or thought to be living with HIV/AIDS.

HIV-Related Stigma Beliefs and Behaviors

Agreement with each stigma item is presented in Table 3. Fifty-eight respondents refused to answer one or more stigma questions. Among those who answered all 6 stigma questions, 9 (3.5%) held no stigmatizing beliefs, 24 (9.4%) held one, 64 (25.2%) held 2, 80 (31.5%) held 3, 51 (20.1%) held 4, 23 (9.1%) held 5, and 3 (1.2%) held 6 (mean 2.9, SD=1.27). Agreement with each stigma item is presented in Table 3. Controlling for education and importance of religion, male respondents were 3.4 times more likely than women to report 4 or more stigmatizing beliefs (AOR = 3.41, 95% CI: 1.94, 5.99, $p<0.001$).

The results of the bivariate and multivariate analyses are presented in Table 4. In the multivariate model, males, respondents with less than a 12th grade education, and respondents reporting that religion was important or very

Table 1 Domains and items included in the brief HIV-related stigma survey

Domain	Item
Anticipated stigma	I feel hesitant to take an HIV test due to fear of people’s reaction if the test result is positive for HIV
Fear of infection	Do you fear that you could contract HIV if you come into contact with the saliva of a person living with HIV?
Discrimination inside legal purview	Do you think children living with HIV should be able to attend school with children who are HIV negative?
Shame, blame, and judgment	I would be ashamed if someone in my family had HIV Do people living with or thought to be living with HIV lose respect or standing? People get HIV because they engage in irresponsible behavior

Table 2 Socio-demographic characteristics of survey respondents (n=312)

	Male n (%)	Female n (%)	Total n (%)	p value
Age (mean, SD)	36.3 (11.4)	34.7 (9.8)	35.4 (10.6)	0.191
Country of origin				0.127
El Salvador	25 (18.0)	24 (13.9)	49 (15.7)	
Guatemala	16 (11.5)	10 (5.8)	26 (8.3)	
Honduras	32 (23.0)	38 (22.0)	70 (22.4)	
Mexico	36 (25.9)	65 (37.6)	101 (32.4)	
United States	1 (0.7)	12 (6.9)	13 (4.2)	
Other	20 (14.4)	24 (13.9)	44 (14.1)	
Education				0.251
Less than grade 12	90 (64.7)	101 (58.4)	191 (61.2)	
Grade 12 or higher	49 (35.3)	72 (41.6)	121 (38.8)	
Religion				
Catholic	87 (62.6)	106 (61.3)	193 (61.9)	
Evangelic/protestant	26 (18.7)	34 (19.7)	60 (19.2)	
Other	13 (9.4)	19 (11.0)	32 (10.3)	
No religion	13 (9.4)	14 (8.1)	27 (8.7)	
Importance of religion				0.993
Important or very important	106 (76.3)	132 (76.3)	238 (76.3)	
Somewhat important or not important	33 (23.7)	41 (23.7)	74 (23.7)	
Time in the U.S.				0.292
Less than 5 years	47 (34.1)	49 (28.5)	96 (31.0)	
5 years or more	91 (65.9)	123 (71.5)	214 (69.0)	
HIV testing history				0.006
Previously tested	83 (61.0)	130 (75.6)	213 (69.2)	
Never tested	53 (39.0)	42 (24.4)	95 (30.8)	
Time since last test ^a				0.324
Less than 1 year ago	47 (56.6)	62 (47.7)	109 (51.2)	
More than 1 year ago	33 (39.8)	65 (50.0)	98 (46.0)	
Unsure	3 (3.6)	3 (2.3)	6 (2.8)	
Know someone living with HIV				0.576
Yes	12 (8.6)	12 (6.9)	24 (7.7)	
No/unsure	127 (91.4)	161 (93.1)	288 (92.3)	

^aIncludes only those who have ever tested for HIV

important were significantly more likely to fear that they could contract HIV through coming in contact with the saliva of a person living with HIV. Respondents with less than a 12th grade education were twice as likely to respond that children living with HIV should not be able to attend school with children who are HIV negative when controlling for gender and importance of religion (AOR=2.30, 95% CI: 1.39, 3.81, $p=0.001$). When controlling for the education and importance of religion, men were twice as likely as women to believe that people become infected with HIV because they engage in irresponsible behavior (AOR=2.24, 95% CI: 1.28, 3.91, $p=0.006$), and almost twice as likely than women to feel hesitant to test for HIV for fear of people's reaction if positive (AOR=1.83, 95% CI: 1.04, 3.23, $p=0.035$). Neither having ever tested for HIV nor having tested for HIV in the past year was significantly

associated with the stigma beliefs in the bivariate or multivariate analyses.

Discussion

Most studies on HIV stigma measure perceived stigma among PLHA. However, stigmatizing or discriminatory attitudes towards PLHA within a community can be a major barrier for individuals seeking HIV testing, and can prevent or delay access to prevention and care services [3–5]. Among Latino immigrants in the U.S., perceived community stigma, or the fear of rejection and discrimination if found to be HIV infected, is a strong deterrent to HIV education, testing, disclosure, and access to therapy [13–16].

Table 3 Agreement with stigma belief items

Stigma item	Male n (%)	Female n (%)	Total n (%)	p-value
I feel hesitant to take an HIV test due to fear of people's reaction if the test result is positive for HIV	35 (27.6)	28 (16.8)	63 (21.4)	0.025
Do you fear that you could contract HIV if you come into contact with the saliva of a person living with HIV?	102 (76.1)	75 (45.2)	177 (59.0)	<0.001
Do you think children living with HIV should be able to attend school with children who are HIV negative?	51 (37.5)	64 (38.6)	115 (38.1)	0.851
I would be ashamed if someone in my family had HIV	36 (27.9)	39 (24.2)	75 (25.9)	0.510
Do people living with or thought to be living with HIV lose respect or standing?	72 (55.0)	77 (46.7)	149 (50.0)	0.477
People get HIV because they engage in irresponsible behavior	109 (82.6)	112 (67.5)	221 (74.4)	0.003

Agreement with the stigma belief items were based on “Yes/Agree,” “Depends,” and “I don't know” responses, except for the item related to children with HIV attending school with children who are HIV negative. For this item, agreement was based on the response of “No” and “I don't know.”

Thus, in this study, we measured HIV-related stigma among Spanish-speaking, mostly foreign-born Latinos living in an emergent Latino urban community using six items selected from validated questions recommended by the UNAIDS Stigma HIV Network for use in the general population [20]. We found a high prevalence of stigmatizing beliefs, particularly with regards to fear of infection due to an inaccurate understanding of HIV transmission and association with blame, shame, and judgment about people infected with HIV. Compared to women, men reported higher rates of stigmatizing beliefs, even after accounting for education and religiosity. The results of this study provide a baseline with which to measure the effectiveness of future interventions to reduce HIV-related stigma in the Latino immigrant community and provide guidance on messaging priorities for such campaigns.

Our findings revealed several attitudes and beliefs that likely propagate HIV-related stigma in the Latino immigrant community. For example, more than half of respondents did not know that HIV is not transmitted through contact with the saliva of an infected individual, only 60% supported integrated school attendance for children with and without HIV, and more than half blamed PLHA for their infection. These findings are comparable to those found in a U.S. national phone survey conducted in 1997, where half of respondents believed that HIV could be transmitted by sharing a drink from a glass with a PLHA and a third expressed discomfort if a child infected with HIV attended school [21]. While the respondents were primarily white and of higher educational status than our study participants, it is notable that this survey was carried almost three decades ago and stigmatizing attitudes have likely evolved, especially in light of highly effective antiretroviral therapy and dramatically improved

clinical outcomes among PLHA. A more recent telephone survey conducted in 2003 among minority residents of Florida found that approximately one-fourth of Hispanic respondents felt that “people who got AIDS through sex or drug use have gotten what they deserve” and 42% were uncomfortable with HIV-infected children attending school [22]. In this study, foreign-born Latinos, particularly those from Mexico and those with limited English proficiency, were more likely to report two or more stigmatizing attitudes than U.S. born Latinos. This is not surprising given the high rates of HIV-related stigma and discrimination reported from Latin American countries [23, 24]. In a study of barriers to HIV care for women conducted in 27 countries, Latin America and China scored highest in community stigma as a barrier to care [24]. A recent community-based study in Nicaragua reported extremely high levels of stigma in the general population. Over 90% of respondents feared HIV infection from contact with saliva or casual contact with an HIV-infected child, with similarly high rates of blame (i.e., “female prostitutes are the ones who spread HIV in the community”) and judgment (i.e., “HIV is punishment for bad behavior”) against PLHA [25].

In our study, we found that men were most likely to express stigmatizing attitudes and beliefs. Specifically, men were 4 times as likely as women to be afraid of getting HIV from contact with saliva from a PLHA and twice as likely to attribute HIV infection to irresponsible behavior. This differs from the findings in Nicaragua, where women were more likely than men to report stigmatizing beliefs. A study of a community health worker intervention to reduce HIV-related stigma in the Southwestern U.S. also found greater baseline HIV stigma scores among women, as well as a greater reduction in stigma after the intervention [26]. Our results may

Table 4 Odds ratios (OR) and adjusted odds ratios (AOR) for stigma belief items

	OR (95% CI)	AOR (95% CI) ^a
Fear of contracting HIV if come into contact with the saliva of a person living with HIV		
Male	3.87 (2.34, 6.38) ^b	3.94 (2.34, 6.64) ^b
Less than grade 12	2.55 (1.58, 4.11) ^b	2.60 (1.56, 4.31) ^b
Religion is important or very important	1.88 (1.10, 3.21) ^d	2.02 (1.13, 3.59) ^d
Would be ashamed if someone in family had HIV		
Male	1.21 (0.72, 20.5)	1.18 (0.69, 2.00)
Less than grade 12	1.53 (0.88, 2.67)	1.51 (0.86, 2.63)
Religion is important or very important	1.28 (0.67, 2.44)	1.26 (0.66, 2.41)
People living with or thought to be living with HIV lose respect of standing		
Male	1.40 (0.88, 2.21)	1.39 (0.87, 2.21)
Less than grade 12	1.21 (0.76, 1.93)	1.19 (0.74, 1.90)
Religion is important or very important	0.73 (0.43, 1.25)	0.72 (0.42, 1.23)
Children living with HIV should not be able to attend school with children who are HIV negative		
Male	0.96 (0.60, 1.53)	0.88 (0.54, 1.42)
Less than grade 12	2.26 (1.37, 3.72) ^b	2.30 (1.39, 3.81) ^b
Religion is important or very important	1.68 (0.95, 2.98)	1.70 (0.95, 3.05)
People become infected with HIV because they engage in irresponsible behavior		
Male	2.26 (1.31, 3.98) ^c	2.24 (1.28, 3.91) ^c
Less than grade 12	1.57 (0.93, 2.65)	1.51 (0.89, 2.57)
Religion is important or very important	1.44 (0.80, 2.60)	1.44 (0.79, 2.62)
I feel hesitant to test for HIV for fear of people’s reaction if the test is positive		
Male	1.89 (1.08, 3.31) ^d	1.83 (1.04, 3.23) ^d
Less than grade 12	1.53 (0.85, 2.76)	1.45 (0.80, 2.64)
Religion is important or very important	1.39 (0.69, 2.79)	1.38 (0.68, 2.78)
Four or more stigma beliefs		
Male	3.52 (2.01, 6.17) ^b	3.41 (1.94, 5.99) ^b
Less than grade 12	1.69 (0.97, 2.96)	1.55 (0.87, 2.76)
Religion is important or very important	1.27 (0.68, 2.40)	1.26 (0.65, 2.44)

^aDependent variables included in the multivariate model (gender, education, and religion) are based on statistical significance ($p \leq 0.05$) in bivariate analyses for one or more stigma items

^b $p < 0.001$

^c $p \leq 0.01$

^d $p \leq 0.05$

reflect the specific social situation of the immigrant men who participated in our study. Our prior work has shown high levels of social isolation and perceived discrimination of PLHA among foreign-born Latino men in Baltimore, many of whom migrate alone and live in crowded conditions with other men. Within these social networks, men report high levels of stigma against PLHA or behaviors associated with HIV, particularly homosexuality, and in focus groups men have described situations of roommates being forced out of the house as a result of being identified (real or perceived) as infected with HIV. Thus, in these vulnerable living conditions, there is a profound fear of social isolation and exclusion tied to HIV and behaviors associated with HIV [15]. This may partially explain the significantly higher expression of stigmatizing beliefs by males in this study.

Low educational attainment and religious practices have been identified as important predictors of HIV stigma in other settings [22]. In our sample, low educational attainment was associated with fear of HIV transmission through saliva and support for discriminatory policies against school attendance for children infected with HIV. Religiosity was only significantly associated with fear of HIV transmission through saliva. There are several reasons that may have influenced these findings. First, *promotoras* with the health department and community-based organizations have had a highly visible presence in the community and have targeted areas frequented by lower educated immigrants, where they have provided informational talks and workshops. Second, several religious leaders in the local Latino churches are active in promoting HIV awareness, and openly support non-discriminatory

practices towards PLHA. It is possible that these activities have had a positive impact on these populations.

The relationship between stigma and HIV testing practices has been mixed. In the Florida study, respondents never been tested for HIV were more likely to have stigmatizing attitudes than those who had been tested at least once [22]. However, in the Southwestern U.S. HIV-related stigma intervention study, reduced HIV-related stigma after the intervention did not translate to increased willingness to get HIV tested [26]. In our study, there was no significant relation between HIV-related stigma and having been tested for HIV ever or in the previous year.

In our study, one-fifth reported hesitancy to get tested due to fear of people's reaction if positive, but this was not associated with a previous history of HIV testing. There are several possible explanations that may contribute to this finding. It is possible that individuals less worried about contracting HIV are more likely to participate in a survey about HIV. Therefore, the participants could have stigmatizing attitudes but test for HIV since they do not perceive themselves to be at risk. Additionally, HIV testing history may be inaccurately reported as a result of social desirability bias and/or a lack of understanding of when an HIV testing is done (i.e., at hospital visits). The lack of association between HIV-related stigma and HIV testing could also reflect the complexity of accessing HIV services. HIV-related stigma is an important, but not the only, barrier to HIV testing.

This underscores the importance of multi-level interventions for improving access to the continuum of HIV care. Structural and contextual factors, including accessibility of testing sites, may influence the impact of stigma on testing. For example, someone with strong stigma beliefs may be less likely to try to locate a testing site, but may be engaged by a health care worker that is present in the community. Multi-level interventions that address individual- and community-level factors (including, for example, intervention components related to improved access to testing, post-testing counseling, and community mobilization) demonstrate potential for simultaneously addressing stigma and promoting HIV prevention and testing [27–29].

There are several limitations to our study that should be noted. The cross-sectional design limits the ability to make causal associations. Because the study was primarily conducted in street venues, we selected previously validated HIV-related stigma items to develop a short questionnaire that could feasibly be administered in a brief period of time. We conducted the survey using ACASI software, which has been shown to improve response rates and increased reporting of certain behaviors, but there is always potential for social desirability bias. For this reason, the survey did not include measures of enacted stigma, such as asking respondents if they themselves engage in stigmatizing behavior towards others. Given that the target population does not

have a sampling frame, we were not able to calculate a traditional response rate. Additionally, this study aimed to measure and characterize stigma surrounding HIV among members of the Latino immigrant community in Baltimore and was not powered to assess associations with HIV testing. Finally, this survey was conducted primarily among foreign-born Latinos living in Baltimore, and our findings may not be generalizable to Latino populations in other areas. However, our results may be relevant to other urban areas with rapidly growing immigrant Latino communities.

This study measured the distribution and predictors of HIV-related stigma among foreign-born Latino immigrants in an emergent Latino settlement area. The results can help inform and evaluate future stigma interventions in this community. In particular, we were able to distinguish between fear and moralistic attitudes driving stigma and its consequences, elucidating specific actionable items. For example, our results indicate that a stigma intervention in this community should include clear information about HIV transmission (especially clarifying how HIV is not transmitted). Moralistic attitudes towards HIV could be addressed by demonstrating that HIV can affect anyone, not just specific groups. Currently, through a community-academic partnership, are finalizing a multilevel (individual and community level) intervention developed in Baltimore aiming to reduce community-wide stigma and promote HIV testing [30]. Increasingly, evidence supports the use of community-level interventions to address stigma and improve access to HIV prevention and services [31, 32]. Understanding community level HIV-related stigma is a first step to developing culturally sensitive interventions that address the needs of the growing Latino immigrant population in the U.S.

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