# Social Determinants of HIV-Related Stigma in Faith-Based Organizations

## Jason D. Coleman, PhD, MSPH, Allan D. Tate, MPH, Bambi Gaddist, DrPH, and Jacob White, MD

*Objectives.* To examine the association between social factors in faith-based settings (including religiosity and proximity to people living with HIV/AIDS) and HIV stigma.

*Methods.* A total of 1747 congregants from primarily African American faith-based organizations of Project FAITH (Fostering AIDS Initiatives That Heal), a South Carolina statewide initiative to address HIV-related stigma, completed a survey.

*Results.* Female gender (P=.001), higher education (P<.001), knowing someone with HIV/AIDS (P=.01), and knowing someone who is gay (P<.001), but not religiosity, were associated with lower levels of stigma and with lower odds of stigmatizing attitudes (P<.05).

*Conclusions*. Opportunities for connection with people living with HIV/AIDS tailored to the social characteristics of faith-based organizations may address HIV stigma in African American communities. (*Am J Public Health*. 2016;106:492–496. doi:10.2105/AJPH.2015.302985)

C ince the earliest reported cases, HIV has disproportionately affected minority populations in the United States, resulting in pronounced health disparities for certain populations, including African Americans. Though HIV was initially reported as a homosexual disease in the early 1980s,<sup>1</sup> the number of infected African Americans rose considerably in the 1990s. Since that time, African Americans have been disproportionately burdened by HIV infection compared with all other racial and ethnic groups in the United States. According to the Centers for Disease Control and Prevention, the rate of HIV infection among Black or African Americans was 60.4 in 2011, which represented nearly a 9-fold greater rate compared with Whites (7.0).<sup>2</sup> Similarly, the South reported the highest HIV infection rate in the same year (20.9) compared with other regions in the continental United States. In South Carolina, approximately 73% of HIV infections were among African Americans in  $2013.^{3}$ 

HIV-related stigma continues to present a substantial challenge to HIV prevention, testing, and treatment efforts.<sup>4–11</sup> Stigma has been defined as an undesirable or discrediting attribute that reduces an individual's societal status,<sup>12</sup> and it is further characterized as a "dynamic process that arises from the perception that there has been a violation of a set of shared attitudes, beliefs, or values."<sup>13(p50)</sup> The association of HIV/AIDS with marginalized populations perpetuates stigmatizing attitudes toward AIDS.<sup>14</sup> Among African Americans, HIV-related stigma is layered with preexisting stigma.<sup>15</sup> Herek et al. found that between 1990 and 1999, the manifestation of stigma among African Americans shifted from public stigma (i.e., punitive policies) to more covert forms (i.e., avoidance of people living with HIV).<sup>16</sup>

Age, education, HIV knowledge, income, and religiosity have been previously associated with HIV-related stigma.<sup>17–20</sup> Furthermore, persons with greater religious intensity have reported negative attitudes toward and unwillingness to interact with people living with HIV, likely because of the association of the disease with marginalized persons, particularly homosexuals.<sup>18,21</sup> Contact with people living with HIV has been suggested as a critical component for interventions to reduce HIV-related stigma.<sup>13,22,23</sup> Direct and indirect contact with people living with HIV prompts people to focus on the infected individual's perspective, thus promoting empathy.<sup>24</sup> Institutionally supported contact, particularly between individuals of equal status, is the most effective type of contact.<sup>25</sup>

African American churches have traditionally served as centers for spiritual growth and development, political and civic activity, and health promotion and disease prevention.<sup>26</sup> Churches have played a significant role in the development of Black communities since the time of slavery, and further serve as centers of social cohesion and organization.<sup>27</sup> Compared with other racial groups in the United States, African Americans are more likely to report formal religious affiliation (88% of African Americans vs 78% of Whites). Even among African Americans who are unaffiliated with formal religions, 72% report that religion is somewhat important in their lives, and 45% report that religion is very important in their lives.<sup>28</sup> Given the strong role of the African American church and religiosity among African Americans, faith- and church-based programs have been developed over the past decade to address HIV/AIDS, 19,29-35 and a framework for HIV prevention in African American churches has been presented.<sup>36</sup> HIV-related stigma has been identified as a salient barrier to HIV/AIDS ministries and programs in African American faith-based organizations (FBOs) and the reduction

## **ABOUT THE AUTHORS**

Jason D. Coleman is with School of Health, Physical Education, and Recreation, University of Nebraska at Omaha. Allan D. Tate is with Division of Epidemiology and Community Health, School of Public Health, University of Minnesota, Minneapolis. Bambi Gaddist and Jacob White are with South Carolina HIV/AIDS Council, Columbia.

This article was accepted November 7, 2015.

doi: 10.2105/AJPH.2015.302985

Correspondence should be sent to Jason D. Coleman, PhD, MSPH, School of Health, Physical Education, and Recreation, University of Nebraska at Omaha, 6001 Dodge St, Omaha, NE 68182 (e-mail: jdcoleman@unomaha.edu). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints" link.

thereof as an area of emphasis in faith-based HIV/AIDS programs.<sup>4,19,24,36–40</sup> Furthermore, the National HIV/AIDS Strategy calls for increased integration of faith-based initiatives in addressing the HIV/AIDS epidemic in the United States.<sup>41</sup>

The aims of this study were to examine how religiosity, contact with people living with HIV/AIDS, and demographic characteristics were associated with stigmatizing attitudes related to HIV/AIDS. This study was part of Project FAITH (Fostering AIDS Initiatives That Heal), which was a statewide initiative to address HIV-related stigma in South Carolina and has been described elsewhere.<sup>17,36,42</sup> Understanding the relationship between religiosity and stigma in faith-based settings may inform future intervention development for the reduction of HIV-related stigma in African American churches and FBOs.

# **METHODS**

The 34 FBOs from which this sample was taken enrolled in Project FAITH between 2008 and 2009. The FBOs completed an application to participate in Project FAITH, and were selected on the basis of their previous experience with HIV/AIDS-related programming and their locally created goals and objectives for addressing HIV in their communities. The FBOs represented multiple faith communities, including Baptist (41%), nondenominational (20%), Missionary Baptist (16%), African Methodist Episcopal (14%), Pentecostal (3%), Islamic (3%), United Methodist (2%), and Christian Methodist Episcopal (1%), and all were current participants in Project FAITH. In 2009, congregants from these 34 FBOs completed a crosssectional survey designed to examine how HIV stigma was associated with social factors in African American FBOs, including demographic characteristics, religiosity, and proximity to people living with HIV/AIDS. Of the 2158 participants in the survey, 411 congregants (19% of the total participants) did not fully complete the survey and were excluded from analysis; 1747 congregants were available in the analytic sample.

We modified 6 items from the AIDS Attitude Scale, Generic Version (AAS-G) for a faith-based population and collected responses to measure levels of stigma among survey participants.43 Participants were asked to respond if they "agree" (2), "not sure" (1), or "disagree" (0) with the questions that expressed avoidance. For questions that indicated empathy, answers were reverse-coded "agree" (0), "not sure" (1), or "disagree" (2) to represent presence of stigma. We summed individual responses to the 6 AAS-G attitudes questions to create a composite stigma score that ranged from 0 to 12, in which an individual score of zero indicated the absence of stigma and a score of 12 indicated the maximum stigmatizing response. The standardized  $\alpha$  for the 6-item scale was 0.64 indicating moderate reliability of the scale measure. Reflecting a view that even small amounts of stigma may have harmful effects for public health and to account for the levels of measured stigma in this sample, we evaluated a second stigma outcome representation by using a dichotomous presence or absence format. Presence of stigma was indicator categorized "1" when a congregant responded on the composite AAS-G scale with a value greater than zero.

We assessed the degree to which a respondent maintained relationships with people that they knew were living with HIV/ AIDS with 3 survey questions: (1) "I have/ had a family member that lived with HIV/ AIDS," (2) "I know or have known personally someone with HIV/AIDS," and (3) "I know someone who is homosexual (gay)." Respondents could answer "yes," "no," or "not sure" to each question. Congregants were also asked to describe their religiosity as "very religious," "somewhat religious," or "not very religious." The measure of religiosity was dichotomized by combining the "not very religious" group with the "somewhat religious" group because of small cell counts ("not very religious" n = 52).

Religiosity and proximity reflect complexity of the social fabric of African American FBOs. We used bivariate and adjusted models to evaluate the presence of confounding bias according to epidemiological convention (i.e., 10% change in point estimate). All demographic, religiosity, and proximity covariates met this criterion and were included in the adjusted model. We used crude and adjusted general linear models with Tukey posthoc tests to identify mean differences in stigmatizing responses. We performed crude and adjusted logistic regressions with Tukey posthoc tests to assess differences in the odds of stigmatizing attitudes. The primary analytical tools were PROC GLM and PROC LOGISTIC performed in SAS version 9.4 (SAS Institute Inc, Cary, NC).

# RESULTS

Characteristics of this sample of 1747 congregants attending southeastern, primarily African American FBOs are presented in Table 1. Most participants were female and had completed education beyond high school. About half of participants were aged 45 years or older and married.

Table 1 also describes the crude and adjusted analyses of mean stigma scores assessed on the adapted AAS-G composite scale. In the crude analyses, each sample characteristic explained a significant portion of the total variance in the population (P < .05). In the adjusted analysis, we found gender (F statistic: 12.4; 1 df; P = .001) and educational attainment (F statistic: 13.8; 4 df; P < .001) each to be associated with mean stigma score after we controlled for all other covariates in the model. When we accounted for multiple comparisons, there was statistical evidence that the adjusted, within-group mean stigma scores were higher for men than for women and substantially higher for those with the least educational attainment compared with the highest levels of educational attainment.

Table 2 characterizes the relationship between proximity and stigma score. In the adjusted analyses, we found that personally knowing someone with HIV/AIDS (F statistic: 4.42; 2 df; P = .01), and knowing someone who is gay (F statistic: 15.2; 2 df; P < .001) were associated with mean stigma score after we controlled for all other covariates in the model. We found that having a family member who was living with HIV/AIDS was not statistically associated with HIV stigma level compared with congregants who were unsure or who responded that they did not have a family member that was living with HIV/AIDS. After we accounted for multiple comparisons, stigma was statistically lowest among those who knew someone who was gay.

Of the sample population, 40% scored at least 1 on the adapted AAS-G stigma scale,

TABLE 1—Association of Participants' Characteristics and Mean AIDS Attitude Scale, Generic Version, Stigma Scores in a Sample of South Carolina Faith-Based Organizations: 2008–2009

Characteristic	No. (%)	Crude Models		Adjusted Model	
		Mean (SE)	Р	Mean (SE)	Р
Gender			<.001		.001
Male	513 (29.4)	1.50ª (0.054)		2.04 <sup>a</sup> (0.097)	
Female	1234 (70.6)	1.05 <sup>b</sup> (0.084)		1.69 <sup>b</sup> (0.118)	
Age, y			.001		.51
18-25	187 (10.7)	1.40ª (1.128)		2.02ª (0.181)	
26-34	253 (14.5)	1.00 <sup>ª</sup> (0.765)		1.75ª (0.150)	
35–44	402 (23.0)	0.99ª (0.804)		1.75ª (0.131)	
45–54	381 (21.8)	1.16ª (0.969)		1.88ª (0.130)	
55-64	349 (20.0)	1.17ª (0.966)		1.80ª (0.129)	
≥65	175 (10.0)	1.71 <sup>b</sup> (1.432)		1.98ª (0.155)	
Educational attainment			<.001		<.001
Grades 1–11	154 (8.8)	2.05° (0.150)		2.46 <sup>a</sup> (0.166)	
Grade 12 or GED	453 (25.9)	1.63° (0.088)		2.19ª (0.117)	
Some college	577 (33.0)	0.95 <sup>b</sup> (0.078)		1.60 <sup>b</sup> (0.113)	
College graduate	347 (19.9)	0.76 <sup>b</sup> (0.100)		1.48 <sup>b</sup> (0.135)	
Graduate school	216 (12.4)	0.91 <sup>b</sup> (0.127)		1.60 <sup>b</sup> (0.156)	
Marital status			.005		.27
Single	576 (33.0)	1.16ª (0.079)		1.79ª (0.109)	
Married	862 (49.4)	1.16ª (0.065)		1.79ª (0.099)	
Divorced	201 (11.5)	1.00ª (0.134)		1.73ª (0.155)	
Widowed	108 (6.1)	1.79 <sup>b</sup> (0.183)		2.16ª (0.201)	
Religiosity			.03		.16
High	1183 (67.7)	1.11ª (0.056)		1.82ª (0.102)	
Low	564 (32.3)	1.32 <sup>b</sup> (0.080)		1.96ª (0.115)	

*Note.* GED = general equivalency diploma. Adjusted model is adjusted for age group, educational attainment, marital status, religiosity, having a family member with HIV/AIDS, having personally known someone with HIV/AIDS, and knowing someone who is gay. Pairwise comparisons that do not share a superscript letter are significant at P<.05.

representing the presence of a stigmatizing attitude. Appendix A (available as a supplement to the online version of this article at http://www.ajph.org) presents the results from the crude and the adjusted analyses for the presence of a stigmatizing attitude. Crude analyses provide evidence that the following variables were each associated with a stigmatizing response: (1) gender (Wald  $\chi^2$ : 12.3; 1 df; P < .001), (2) age (Wald  $\chi^2$ : 14.6; 5 df; P = .01), (3) educational attainment (Wald  $\chi^2$ : 47.8; 4 *df*; *P*<.001), (4) knowing someone with HIV/AIDS (Wald  $\chi^2$ : 18.6; 2 df; P<.001), and (5) knowing someone who is gay (Wald  $\chi^2$ : 27.4; 2 *df*; *P*<.001). Religiosity, marital status, and having a family member with HIV/AIDS in these crude analyses were not associated with a stigmatizing response (P > .05).

In the adjusted analyses, gender, educational attainment, knowing someone with HIV/AIDS, and knowing someone who is gay were each independently associated with a stigmatizing response after we controlled for all variables in the model (P < .05). In the subgroup analysis, the adjusted odds of a stigmatizing response was 35% higher for men compared with women (P = .01) and twice the odds for those with less than a high-school education compared with those with graduate-level education (P < .001). Those with a high-school education had 60% greater odds of a stigmatizing response compared with the highest education level after we controlled for all other covariates (P = .001). Of the proximity measures, 82%

(n = 1423) knew someone who is gay, 11% (n = 199) did not know someone who is gay, and 7% (n = 125) were unsure. Knowing someone who is gay reduced the adjusted odds of a stigmatizing response by 39% compared with those that did not have an acquaintance who is gay (95% confidence interval = 0.44, 0.84; P < .001). All subgroup analyses are presented in Appendix A (available as a supplement to the online version of this article at http://www.ajph.org), and categories that do not share a letter were significantly different (P < .05) after we adjusted for multiple comparisons. Age group, marital status, religiosity, and having a family member who had HIV/AIDS were each not found to be associated with a stigmatizing response in the adjusted model.

# DISCUSSION

HIV/AIDS continues to be a substantial, disproportionate burden for minority communities in the United States. This study contributes to a greater understanding of underlying factors associated with HIVrelated stigma in African American faithbased or church communities. Several findings from this study were consistent with the present literature, including higher HIVrelated stigma among men than women, and among those persons with lower edu-cational attainment.<sup>17,44,45</sup> The highest levels of HIV-related stigma were reported by persons with the lowest educational attainment. One explanation for this finding is that persons with lower educational attainment may have less exposure to diverse groups of people, and higher education may lead to the development of critical thinking skills that foster a greater understanding of HIV and of factors associated with HIV including modes of transmission and disease management.

Knowing a person living with HIV reduced the odds of a stigmatizing response in this study. Proximity to someone who is living with HIV has been previously associated with greater empathy for people living with the virus.<sup>24</sup> In other studies, it has also been found to be associated with more accurate (i.e., less anecdotal) knowledge about the true risk factors for HIV infection.<sup>16,46,47</sup> Surprisingly, having a family member that was living with HIV/AIDS was not statistically associated with lower levels of stigma, which TABLE 2—Association of Participant Reported Proximity Characteristics With AIDS Attitude Scale, Generic Version, Stigma Score in a Sample of South Carolina Faith-Based Organizations: 2008–2009

		Crude Models		Adjusted Model	
Proximity	No. (%)	Mean (SE)	Р	Mean (SE)	Р
Family member with HIV/AIDS			.02		.46
Yes	595 (34.1)	1.02ª (0.078)		1.84ª (0.127)	
No	652 (37.3)	1.19ª (0.075)		1.86ª (0.113)	
Not sure	500 (28.6)	1.35 <sup>b</sup> (0.085)		1.97ª (0.113)	
Personally known someone with HIV/AIDS			<.001		.01
Yes	1238 (70.9)	1.05ª (0.054)		1.70ª (0.103)	
No	353 (20.2)	1.34 <sup>b</sup> (0.101)		1.78 <sup>a,b</sup> (0.126)	
Not sure	156 (8.9)	1.85 <sup>c</sup> (0.152)		2.19 <sup>b</sup> (0.165)	
Know someone who is gay			<.001		<.001
Yes	1423 (81.5)	1.02ª (0.050)		1.44ª (0.090)	
No	199 (11.3)	1.77 <sup>b</sup> (0.133)		2.01 <sup>b</sup> (0.149)	
Not sure	125 (7.2)	2.09 <sup>c</sup> (0.168)		2.22 <sup>b</sup> (0.177)	

*Note.* Adjusted model is adjusted for gender, age group, educational attainment, marital status, religiosity, having a family member with HIV/AIDS, having personally known someone with HIV/AIDS, and knowing someone who is gay. Within-group pairwise comparisons that do not share the same superscript letter <sup>a</sup> or <sup>b</sup> or <sup>c</sup> are significantly different at P<.05.

may suggest that the observed association between stigma and types of proximate relationships could depend on some other characteristics or experiences.

Congregants who reported knowing someone who is gay were less likely to indicate a stigmatizing response than were those who did not report knowing someone who is gay. The contextual association of HIV with gay men, particularly among African Americans, has been identified as a predictor of HIVrelated stigma in the literature.<sup>14,39</sup> Our finding provides more evidence that the trend toward acceptance of gay persons in the United States over the past decade has likely made it easier for gay people to live their lives openly and honestly, even in a religious setting. Findings from this study support the idea that knowing someone who is gay may have a destigmatizing effect on homosexuality, which translates into less HIV-related stigma. Furthermore, a substantial proportion of HIV-related education and intervention in the United States has focused on gay men. By proxy of knowing someone who is gay, an individual can be expected to have more accurate knowledge about HIV, and evidence shows that increased knowledge about HIV is a protective factor against HIV-related stigma. It is likely that gay men diffuse the knowledge they have gained with other people.

Contrary to existing evidence,<sup>18,20</sup> we did not find that religiosity was significantly associated with increased HIV-related stigma. In our study, religiosity did not appear to pose a barrier to addressing HIV-related stigma. It is plausible that the high prevalence of congregants who knew someone who is gay explains why we did not observe religiosity to be predictive of stigmatizing attitudes in our sample. Other explanations may be related to the presence of intervention activities in these FBOs, which have been described elsewhere,<sup>36,42</sup> and the role of FBO leadership in fostering environments of acceptance in their congregations. This study provides additional support for the use of structural-level interventions in public health, which have been shown to be an effective prevention strategy for HIV.<sup>48–50</sup> It is possible that our findings may be different in other FBO populations that have not been exposed to a structurallevel intervention or to attitudes held by faith leadership that promote lower levels of stigma overall in their congregations.

Faith- and church-based interventions show substantial promise for addressing HIV-related stigma in African American communities. Project FAITH, from which we drew these data, was among the first documented HIV/AIDS interventions in US churches and FBOs.<sup>17,36,42</sup> The National HIV/AIDS Strategy for the United States called for increased intervention within faith-based organizations,<sup>41</sup> and a number of faith-based HIV/AIDS related interventions have been documented in the literature.<sup>31–35</sup> In light of the national need for innovation in faith-based interventions, our findings provide information that can assist with the design and development of tailored interventions that address the HIV/AIDS epidemic in African American communities in the United States. An easing of the tension between homosexuality and religion may be an important factor in reducing HIV-related stigma.

This study had several limitations. Data were collected from congregants in FBOs that had received all or part of the Project FAITH intervention, which aimed to reduce HIVrelated stigma. Reliability of the scale measure was moderate, which may be attributable to the heterogeneity of congregant religious affiliation in this sample population. These data did not allow measurement of intervention activity in the FBO population, and we can only speculate about the effect of intervention components on the outcome measure. The FBO selection into the study may have resulted in a sample of congregants who are not representative of the general population. The support for HIV/AIDS interventions demonstrated by leaders of FBOs in this study may limit generalizability, as not all FBOs have leadership who support such types of interventions. However, FBO leadership is fundamental for structural-level HIV interventions, and these study findings will likely remain relevant for faith-based populations that could be enrolled and randomized to observational and experimental studies in the future.

This study offers new evidence that describes the social determinants of HIV stigma in faith-based settings, which is informative for intervention design in next-generation studies that aim to affect levels of HIV-related stigma. Faith-based interventions that tailor intervention components to the determinants of HIV-related stigma can be an effective tool to address HIV-related stigma in African American communities in the United States. Studies employing randomized intervention designs are needed to explain how changes in social determinants of HIV-related stigma promote health in faith-based settings. *A***IPH** 

## CONTRIBUTORS

J. D. Coleman conceptualized the article and served as the lead writer. A. D. Tate conducted the data analysis and contributed to the writing. B. Gaddist originated the study and revised the writing. J. White contributed to the conceptualization of the study and reviewed the writing.

#### ACKNOWLEDGMENTS

The parent project for this study was funded by the South Carolina General Assembly.

The authors would like to acknowledge Lisa L. Lindley, DrPH, MPH, for her contributions to the study.

#### **HUMAN PARTICIPANT PROTECTION**

This article is based on secondary data analysis conducted on evaluation data from the parent project.

#### REFERENCES

1. Centers for Disease Control and Prevention. Pneumocystis pneumonia—Los Angeles. *MMWR Morb Mortal Wkly Rep.* 1981;30(21):250–252.

2. Centers for Disease Control and Prevention. HIV Surveillance Report, 2011. 2013; Vol. 23. Available at: http://www.cdc.gov/hiv/pdf/statistics\_2011\_hiv\_ surveillance\_report\_vol\_23.pdf. Accessed June 22, 2014.

3. South Carolina Department of Health and Environmental Control. South Carolina's STD/HIV/AIDS data surveillance report. 2013. Available at: http://www. scdhec.gov/Health/docs/stdhiv/data/SR2013.pdf. Accessed June 22, 2014.

4. Beadle-Holder M. Black churches creating safe spaces to combat silence and stigma related to HIV/AIDS. *J Afr Am Stud.* 2011;15:248–267.

5. Foster PH. Use of stigma, fear, and denial in the development of a framework for prevention of HIV/AIDS in rural African American communities. *Fam Community Health.* 2007;30(4):318–327.

6. Kinsler JJ, Wong MD, Sayles JN, David C, Cunningham WE. The effect of perceived stigma from a health care provider on access to care among a lowincome HIV-positive population. *AIDS Patient Care STDS*. 2007;21(8):584–592.

 Bairan A, Taylor GA, Blake BJ, Akers T, Sowell R, Mendiola R II. A model of HIV disclosure: disclosure and types of social relationships. *J Am Acad Nurse Pract.* 2007; 19(5):242–250.

8. Abel E. Women with HIV and stigma. *Fam Community Health.* 2007;30(1, suppl):S104–S106.

9. Rao D, Kekwalestwe TC, Hosek S, Matinez J, Rodrigues F. Stigma and social barriers to medication adherence with urban youth living with HIV. *AIDS Care*. 2007;19(1):28–33.

10. Fortenberry JD, McFarlane M, Bleakley A, et al. Relationships of stigma and shame to gonorrhea and HIV screening. *Am J Public Health*. 2002;92(3):378–381.

11. Buseh AG, Stevens PE, McManus P, Addison RJ, Morgan S, Millon-Underwood S. Challenges and opportunities for HIV prevention and care: insights from focus groups of HIV-infected African American men. J Assoc Nurses AIDS Care. 2006;17(4):3–15.

12. Goffman E. Stigma: Notes on the Management of Spoiled Identity. New York, NY: Simon and Schuster; 1963.

13. Brown L, Macintyre K, Trujullo L. Interventions to reduce HIV/AIDS stigma: what have we learned? *AIDS Educ Prev.* 2003;15(1):49–69.

14. Skelton J. How negative are attitudes towards persons with AIDS? Examining the AIDS–leukemia paradigm. *Basic Appl Soc Psych.* 2006;28(3):251–261.

15. Herek GM, Glunt E. An epidemic of stigma. Am Psychol. 1988;43(11):886–891.

16. Herek G, Capitanio J, Widaman KF. HIV-related stigma and knowledge in the United States: prevalence and trends 1991–1999. *Am J Public Health*. 2002;92(3): 371–377.

17. Lindley LL, Coleman JD, Gaddist B, White J. Informing faith-based HIV/AIDS interventions: HIVrelated knowledge and stigmatizing attitudes at Project FAITH churches in South Carolina. *Public Health Rep.* 2010;125(suppl 1):12–20.

18. Harris A. Sex, stigma, and the holy ghost: the Black church and the construction of AIDS in New York City. *J Afr Am St.* 2010;(14):21–43.

19. Berkley-Patton JY, Moore E, Berman M, et al. Assessment of HIV-related stigma in a US faith-based education and testing intervention. *J Int AIDS Soc.* 2013;16 (suppl 2):18644.

20. Muturi N, Soontae A. HIV/AIDS stigma and religiosity among African American women. J Health Commun. 2010;15(4):388–401.

21. Greene K, Banerjee S. Disease related stigma: comparing predictors of AIDS and cancer stigma. *J Homosex*. 2006;50(4):185–209.

 Heijnders M, Van Der Meij S. The fight against stigma: an overview of stigma-reduction strategies and intervention. *Psychol Health Med.* 2006;11(3): 353–363.

23. Mahajan AP, Sayles JN, Patel VA, et al. Stigma in the HIV/AIDS epidemic: a review of the literature and recommendations for the way forward. *AIDS*. 2008;22 (suppl 2):S67–S79.

24. Derose KP, Bogart L, Kanouse D, et al. An intervention to reduce HIV-related stigma in partnership with African American and Latino churches. *AIDS Educ Prev.* 2014;26(1):28–42.

25. Pettigrew TF, Tropp LR. A meta-analytic test of intergroup contact theory. *J Pers Soc Psychol.* 2006;90(5): 751–783.

26. Coyne-Beasley T, Schoenbach V. The African American church: a potential forum for adolescent comprehensive sexuality education. *J Adolesc Health*. 2000;26(4):289–294.

27. McKinney R. The Black church: its developmental and present impact. *Harv Theol Rev.* 1971;64(4):452–481.

28. Pew Forum. US religious landscape survey. 2008. Available at: http://religions.pewforum.org/reports. Accessed August 10, 2014.

29. Agate LL, Cato-Watson D, Mullins JM, et al. Churches United to Stop HIV (CUSH): a faith-based HIV prevention initiative. *J Natl Med Assoc.* 2005;97(7, suppl):60S–63S.

30. Baldwin JA, Daley E, Brown EJ, et al. Knowledge and perception of STI/HIV risk among rural African American youth: lessons learned in a faith-based pilot program. *J HIV AIDS Prev Child Youth.* 2008;9(1):97–114.

31. Griffith DM, Pichon L, Campbell B, Allen JO. Your blessed health: a faith-based CBPR approach to addressing HIV/AIDS among African Americans. *AIDS Educ Prev.* 2010;22(3):203–217.

32. MacMaster SA, Jones JL, Rasch RER, Crawford SL, Thompson S, Sanders EC. Evaluation of a faith-based culturally relevant program for African American substance users at risk for HIV in the southern United States. *Res Soc Work Pract.* 2007;17(2):229–238.

33. Marcus MT, Walker T, Swint JM, et al. Communitybased participatory research to prevent substance abuse and HIV/AIDS in African-American adolescents. *J Interprof Care.* 2004;18(4):347–359.

34. Tyrell CO, Klein SJ, Gieryic SM, Devore BS, Cooper JG, Tesoriero JM. Early results of a statewide initiative to involve faith communities in HIV prevention. *J Public Health Manag Pract.* 2008;14(5):429–436.

35. Wingood GM, Simpson-Robinson L, Braxton ND, Raiford JL. Design of a faith-based HIV intervention: successful collaboration between a university and a church. *Health Promot Pract.* 2011;12(6):823–831.

36. Coleman JD, Lindley LL, Annang L, Saunders R, Gaddist B. Development of a framework for HIV/AIDS prevention in African American churches. *AIDS Patient Care STDS*. 2012;26(2):116–124.

37. Stewart JM. Pastor and lay leader perceptions of barriers and supports to HIV ministry maintenance in an African American church. J Relig Health. 2014;53(2):317–325.

38. Moore D, Onsomu E, Timmons S, Abuya B, Moore C. Communicating HIV/AIDS through African American churches in North Carolina: implications and recommendations for HIV/AIDS faith-based programs. J Relig Health. 2012;51(3):865–878.

39. Bird JD, Voisin V. "You're an open target to be abused": a qualitative study of stigma and HIV self-disclosure among Black men who have sex with men. *Am J Public Health.* 2013;103(12):2193–2199.

40. Wilson PA, Wittlin N, Munoz-Laboy M, Parker P. Ideologies of Black churches in New York City and the public health crisis of HIV among Black men who have sex with men. *Glob Public Health.* 2011;6(suppl 2): S227–S242.

41. White House Office of National HIV/AIDS Policy. National HIV/AIDS Strategy for the United States. Available at: http://aids.gov/federal-resources/nationalhiv-aids-strategy/overview. Accessed August 11, 2014.

42. Abara W, Coleman JD, Fairchild A, Gaddist B, White J. A faith-based community partnership to address HIV/ AIDS in the Southern US: implementation, challenges, and lessons learned. *J Relig Health*. 2013;54(1):122–133.

43. Froman RD, Owen SV. Measuring attitudes toward persons with AIDS: the AAS-G as an alternate form of the AAS. *Sch Inq Nurs Pract.* 2001;15(2):161–174.

44. Galvan FH, Davis E, Banks D, Bing E. HIV stigma and social support among African Americans. *AIDS Patient Care STDS*. 2008;22(5):423–436.

45. Kerr JC, Valois RF, Diclemente RJ, et al. HIV-related stigma among African-American youth in the Northeast and Southeast US. AIDS Behav. 2014;18(6):1063–1067.

46. Herek GM, Capitanio JP. AIDS stigma and contact with persons with AIDS: effects of personal and vicarious contact. *J Appl Soc Psychol*. 1997;27(1):1–36.

47. Herek GM, Capitanio JP. Conspiracies, contagion, and compassion: trust and public reactions to AIDS. *AIDS Educ Prev.* 1994;6:365–375.

48. Hobfoll SE. Ecology, community, and AIDS prevention. Am J Community Psychol. 1998;26(1):133–144.

49. Blankenship KM, Bray S, Merson M. Structural interventions in public health. *AIDS*. 2000;14(suppl 1): S11–S21.

 Sumartojo E. Structural factors in HIV prevention: concepts, examples, and implications for research. *AIDS*. 2000;14(suppl 1):S3–S10.