



HHS Public Access

Author manuscript

AIDS Care. Author manuscript; available in PMC 2021 August 01.

Published in final edited form as:

AIDS Care. 2020 August ; 32(8): 1036–1044. doi:10.1080/09540121.2020.1757020.

Stigma, discrimination, violence, and HIV testing among men who have sex with men in four major cities in Ghana

Akua O. Gyamerah¹, Kelly D. Taylor¹, Kyeremeh Atuahene², John Anarfi³, Michelle Fletcher⁴, Henry F. Raymond^{1,5}, Willi McFarland⁶, F. Nii-Amoo Dodoo^{7,3}

¹University of California San Francisco, San Francisco, California, USA

²Ghana AIDS Commission, Accra, Ghana

³University of Ghana, Legon, Accra, Ghana

⁴Rollins School of Public Health, Emory University, Atlanta, GA, USA

⁵School of Public Health, Rutgers University, Piscataway, New Jersey, USA

⁶San Francisco Department of Public Health, San Francisco, California, USA

⁷The Pennsylvania State University, University Park, Pennsylvania, USA

Abstract

LGBTQ populations experience human rights abuses worldwide; data need to document the health impact of these experiences in Africa. In Ghana, we measured events of sexuality-based stigma, discrimination, and violence among men who have sex with men (MSM) and the impact on HIV testing behavior. Data are from respondent-driven sampling surveillance surveys in Accra/Tema, Kumasi, Cape Coast/Takoradi, and Koforidua. Discrimination was common among MSM: 6.2%–30.6% were refused services, 29.0%–48.9% experienced verbal/symbolic violence, 2.8%–12.8% experienced physical violence, 12.3%–30.0% experienced sexual violence due to their sexuality in the preceding year. MSM who experienced sexual violence in their first male sexual encounter were less likely to ever test for HIV in Accra/Tema and Cape Coast/Takoradi. Further studies are needed to examine the impact of stigma and violence on MSM's HIV health-seeking behavior in Ghana. Structural interventions are needed to mitigate the consequences of stigma and discrimination on MSM health and well-being.

Keywords

HIV/AIDS; stigma/discrimination; violence; MSM; Africa

Corresponding author: Akua O. Gyamerah, Center for AIDS Prevention Studies, University of California San Francisco, 550 16th Street, Mission Hall, 3rd Floor, San Francisco, CA, USA 94158; Phone: (415) 502-1000x14611; Fax: (415)-476-5348, akua.gyamerah@ucsf.edu.

Disclosure Statement: All authors declare that they have no conflict of interest.

COMPLIANCE WITH ETHICAL STANDARDS

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.

Introduction

Same-sex sexual behaviors are criminalized in Ghana (Government of Ghana, 2003). Men found guilty of consensual unnatural carnal knowledge face up to three years in prison. Against the backdrop of this legal context, men who have sex with men (MSM) commonly experience social stigma, discrimination, and violence (Banks, 2013; Gyamerah, 2017; Human Rights Watch, 2018).

Studies indicate that African MSM experience verbal, physical, and sexual violence due to their sexual identity and gender expression (Makofane, Beck, & Ayala, 2014; Zahn et al., 2016). Moreover, violence, criminalization of, and stigma against homosexuality affects MSM's physical and mental health (Alessi, Martin, Gyamerah, & Meyer, 2013; Meyer, Frost, & Nezhad, 2015), and their health-seeking behavior, such as whether and how they access STI and HIV services (Fay et al., 2011; Poteat et al., 2011; Schwartz et al., 2015; Semugoma, Beyrer, & Baral, 2012).

Prior stigma studies in Ghana have focused on PLHIV's experiences of HIV-stigma (Mumin, Gyasi, Segbefia, Forkuor, & Ganle, 2018; Tenkorang & Owusu, 2013) and its impact on testing and preventive behavior (Koku, 2011; Nelson et al., 2015). Fewer studies have examined MSM's experiences in Ghana. Existing literature indicates that HIV and anti-gay stigma and MSM's fear of maltreatment in clinics are barriers to seeking HIV services (Kushwaha et al., 2017; Ogunbajo et al., 2017; Sabin et al., 2013).

Our paper contributes to this literature by quantifying and distinguishing different events of stigma, discrimination, and violence experienced by MSM in Ghana. The study includes community-based samples of MSM in the capital Accra and three large metropolitan areas. We explore the profile of MSM more likely to have adverse experiences and whether HIV test-seeking is associated with such experiences.

Methods

Overall study design

This is a secondary analysis of cross-sectional surveys collected among MSM in Accra/Tema, Cape Coast/Takoradi, Kumasi, and Koforidua from 2010 to 2011 using respondent driven sampling (RDS) for recruitment. The primary objectives of the parent surveys were to measure HIV prevalence, related risk and preventive behaviors, and to estimate the population size of MSM. A comprehensive report (Ghana AIDS Commission, RIPS, NMIMR, UCSF, & CDC, 2012), prior publication (Quaye et al., 2015), and conference presentation (Aberle-Grasse, McFarland, & El-Adas, 2013) provide key findings related to these primary objectives. We examine responses concerning experiences with stigma, discrimination, and interpersonal violence in Ghana due to their male same-sex sexualities. We report the prevalence of these experiences and explore their associations, including with seeking HIV testing. Details of the methods can be found in previous reports (Aberle-Grasse et al., 2013; Quaye et al., 2015), and summarized here.

Study population

MSM were surveyed regardless of sexual identity and eligible if they reported oral or anal sex with another man within the last 12 months, were 18 years or older, resided in Ghana, had a valid recruitment coupon from a peer acquaintance, had not participated already, and provided verbal informed consent. Persons assigned male sex at birth, transmen, and transwomen were eligible.

Procedures

Recruitment used RDS (Gile & Handcock, 2010; Heckathorn, 1997; Salganik & Heckathorn, 2004; Volz & Heckathorn, 2008). A formative phase was done to build stakeholder buy-in, understand different social networks of MSM, and identify “seeds” to start chains of peer referrals. Seeds were purposively selected to be enthusiastic about the study, connected to different social networks of MSM, willing to recruit peers, and eligible. Five seeds were chosen in Accra/Tema, seven in Cape Coast/Takoradi, five in Kumasi, and three in Koforidua. Seeds underwent eligibility screening, an interview, HIV counseling, and HIV/STI testing. Seeds were then given three coupons and instructed to recruit three other eligible MSM from their social networks. Enrolment ranged from 6 to 12 weeks. Approximately 3,107 coupons were distributed, with return rates of 38.2% to 48.8% across the cities. Participants received the cash equivalent of \$10 USD for participation and \$5 USD per eligible recruit referred. Recruitment chains underwent four to six waves of referrals on average.

Measures

Face-to-face interviews collected demographic characteristics, sexual behaviors, HIV testing ever and in the last 12 months, STI testing, and measures of stigma and discrimination, verbal, symbolic, and physical violence, and rape/sexual violence. Stigma and discrimination experiences were defined as the respondent’s perception that they were refused services because someone believed they had sex with men. Respondents were asked about experiences in health care, employment, education, church/religious service, restaurant/bar service, housing, police assistance, and other services. For each setting, they were asked the number of times they were stigmatized or discriminated against, including “None”, “Don’t know”, or “Yes, but not sure if it was because I was MSM”. A verbal or symbolic violence experience was defined as whether a respondent had been insulted, sworn at, blackmailed, or threatened verbally in the preceding year because someone believed they were MSM. Physical violence experiences included moderate physical violence (i.e., spat on, pushed, shoved, or had something thrown at them) and severe physical violence (i.e., slapped, hit, kicked, or beaten up). They were asked about rape/sexual violence experiences in their first male sexual encounter (i.e., “During your first sexual encounter with another man, were you forced or coerced to have sex with this male partner?”) and in the preceding year (i.e., “In the past 12 months, how many times did anyone force you to have sex with them by sexually assaulting or raping you?”).

Analysis

Given heterogeneity of responses, statistics are presented separately for each city/metropolitan area. Associations of experiences of stigma, discrimination, and violence were assessed in logistic regression models using each experience as a separate outcome, with demographic characteristics and sexual identity as predictors. We also tested whether experiences were associated with HIV testing. Variables associated in bivariate analyses at $p < 0.1$ were included in multivariable models; associations at $p < 0.05$ were considered significant. With 0% to 8% missing data across all variables, we did not conduct imputation or correction of sample estimates. Additionally, we did not include bias corrections (adjustments) typically used for RDS surveys for several reasons. First, RDS adjustments have changed several times since the surveys were conducted with continued uncertainty and debate (Bastos et al., 2018; Burt, Tinsley, & Glick, 2017; Gile & Handcock, 2010; Li et al., 2018; Salganik & Heckathorn, 2004; Volz & Heckathorn, 2008). Second, low prevalence of some key measures resulted in the inability to calculate adjustments (i.e., insufficient cross-recruitments between groups by experiences in stigma or violence). Third, our analysis explores associations between variables within the samples. Results are presented as sample means and unweighted measures of association, as in other studies using RDS (Burt et al., 2017; Center for Disease Control and Prevention, 2020; Okeke, McFarland, & Raymond, 2017). Analysis was conducted in STATA 15.0.

Ethical considerations

The study was approved by the Noguchi Memorial Institute for Medical Research Institutional Review Board in Accra, Ghana; the Committee on Human Research of the University of California, San Francisco, USA; and the Associate Director for Science of the US Centers for Disease Control and Prevention in Atlanta, USA. Participants provided verbal informed consent to avoid collecting any information linking them to the study.

Results

Sample characteristics

A total of 1,382 MSM were recruited: 493 from Accra/Tema, 397 from Cape Coast/Takoradi, 331 from Kumasi, and 161 from Koforidua. Table 1 presents sociodemographic characteristics, sexual identity, and HIV testing history. The majority were between 18 and 24 years old for all four sites. Most identified as “gay, homosexual, or MSM” (ranging from 42.7%–58.9%) or “bisexual” (34.3%–54.6%). Less than half reported ever testing for HIV, ranging from 37.3% in Cape Coast/Takoradi to 46.0% in Accra/Tema. Approximately one-third tested in the previous year in all sites (28.5%–35.9%).

Experiences of stigma and discrimination

Experiences of stigma and discrimination, defined as being refused services or benefits because someone believed they were MSM, are shown in Table 2. The proportion of participants reporting being refused any service or benefit due to their sexuality ranged from 6.3% to 29.9% across the four sites. Leading types of discrimination were in housing, restaurants, employment, education, and religious services.

Experiences of verbal/symbolic, physical, and sexual violence

Table 3 shows the proportions of MSM experiencing verbal/symbolic, physical, and sexual violence because of their sexuality in the preceding year. Notably, 48.9% of MSM in Accra/Tema and about one-third in the other cities reported verbal/symbolic violence experiences. The perpetrators of verbal, symbolic, and physical violence were usually described as social acquaintances, friends, strangers, family members, neighbors, or sexual partners. Less commonly, perpetrators were neighbors/community members, schoolmates, and other MSM.

High proportions of MSM reported forced/coerced sex in their first sexual experience with a male, ranging from 22.2% in Koforidua to 29.4% in Accra/Tema. Similarly, high proportions reported sexual violence in the previous year, from 12.3% in Cape Coast/Takoradi to 30.0% in Accra/Tema. In Accra/Tema, 15.0% of the men had been raped two times or more over the past year. In Cape Coast/Takoradi, Kumasi, and Koforidua it was 6.0%, 10.3%, and 9.0% respectively. The most frequently reported perpetrators of sexual violence were friends, social acquaintances, sexual partners, strangers, school mates/staff, and neighbors.

Associations of verbal/symbolic, physical, and sexual violence

Factors associated with MSM's experiences of several forms of sexuality-based stigma, discrimination, and violence varied across the four cities. Table 4 presents the independent associations of each of these experiences for each city.

Associations of HIV testing

Table 5 reports significant associations of stigma and violence with HIV testing. Among demographic characteristics, increasing age was associated with ever testing for HIV in Accra/Tema (AOR per decade 1.9; 95% CI 1.4–2.6) and Cape Coast/Takoradi (AOR per decade 1.6; 95% CI 1.2–2.3), as was being age 35 years and over in Kumasi (AOR 4.1, 95% CI 1.1–15.5). MSM who had senior secondary school education or higher had greater odds of ever of testing in Cape Coast/Takoradi (AOR 2.0; 95% CI 1.3–3.2) and Koforidua (AOR 2.5; 95% CI 1.2–5.2); those with tertiary education or higher in Kumasi had higher odds (AOR 2.8; 95% CI 1.4–5.8) of testing than those with lower education. Verbal/symbolic violence in Cape Coast/Takoradi (AOR 1.7; 95% CI 1.1–2.7) and Koforidua (AOR 2.1, 95% CI 1.0–4.5), and moderate physical violence in Accra/Tema (AOR 2.3; 95% CI 1.3–4.1) were positively associated with HIV testing. MSM experiencing rape in the first male sexual encounter were less likely to have tested in Accra/Tema (AOR 0.6; 95% CI 0.4–1.0) and Cape Coast/Takoradi (AOR 0.5; 95% CI 0.3–0.9).

In Accra/Tema, MSM under 35 years (AOR 1.6; 95% CI 1.1–2.4) and those who experienced moderate physical violence (AOR 1.9; 95% CI 1.1–3.3) had greater odds of testing for HIV in the previous year. In Cape Coast/Takoradi, MSM who were older (AOR per decade 2.1; 95% CI 1.4–3.0), had secondary education and higher (AOR 2.0; 95% CI 1.3–3.2), and experienced verbal/symbolic violence (AOR 2.1; 95% CI 1.3–3.4) had greater odds of testing in the preceding year. Those who had experienced rape/sexual violence in their first male sexual encounter had lower odds of testing for HIV in the preceding year (AOR 0.5; 95% CI 0.3–0.9). In Kumasi, those with primary school education or lower had higher odds of testing in the preceding year (AOR 3.3; 95% CI 1.3–8.7). In Koforidua, those

with secondary education and higher (AOR 2.1; 95% CI 1.0–4.3), were employed (AOR 2.2; 95% CI 1.1–4.6), and were protestant (AOR 2.5; 95% CI 1.0–6.4) had greater odds of testing in the preceding year.

Discussion

Our surveys of MSM in four urban areas of Ghana found high prevalence of stigma, discrimination, and violence. Experiences ranged from refusal of services to severe physical violence and rape. Our study offers critical information on MSM's experiences of stigma and discrimination, verbal, physical, and sexual violence in sub-Saharan Africa and their impact on HIV testing. Such data contribute to addressing the gap in the literature on HIV prevention needs of MSM in Africa caused by the delayed inclusion of African MSM in HIV policies and research.

MSM in all sites commonly experienced verbal/symbolic violence; MSM in Accra/Tema frequently experienced physical violence due to their sexuality. Those who identified as gay had a greater risk of physical violence in Accra/Tema and Kumasi and of verbal violence in Accra/Tema and Cape Coast/Takoradi. Existing literature suggests that gay-identified men may be more vulnerable to physical and verbal/symbolic violence because they are more likely to be open about their sexuality (Lane et al., 2011; Millett et al., 2012). Similarly, MSM who lived with a man were more likely to experience physical violence in Koforidua, which might be because living with a man may signal to others that a person is MSM.

Sexual violence was the second most common type of violence with one-quarter to one-third reporting this experience in their first male sexual encounter. Our findings are comparable to those for MSM in Senegal (Niang et al., 2003), South Africa (University of California San Francisco, 2015), and higher than for MSM in Malawi, Namibia, and Botswana (Baral et al., 2009). However, our study's rates were higher than Ghana's recent estimates of sexual violence in the general populations of men (9.5%) and women (10.6%) (Institute of Development Studies & Ghana Statistical Services and Associates, 2016). This might be because of MSM's higher vulnerability due to their social position as a stigmatized and criminalized group. Perpetrators were commonly friends, intimate partners, and social acquaintances, consistent with findings from studies on intimate partner violence among male same-sex couples (Finneran & Stephenson, 2013; Stephenson, Hast, Finneran, & Sineath, 2014). Perpetrators of other types of violence were also usually friends, social acquaintances, family members, and neighbors, suggesting that MSM are more likely to be abused by persons they know. Because social networks may also be sexual networks (Maina et al., 2018), finding support against abuse may be difficult. This, along with the criminalization of homosexuality, may complicate whether MSM report these incidents of violence.

Another key finding is that younger age may be associated with sexual violence in first male sexual encounter. The experience of sexual violence may be more recent for younger MSM, and they are therefore more likely to remember and/or feel more comfortable reporting this experience than older MSM. Relatedly, being a student in Accra/Tema was associated with being raped in the previous year, suggesting that schools may place young MSM at risk of

sexual violence (Brink, 2017; Krug, Mercy, Dahlberg, & Zwi, 2002). Given the high frequency of rape, school administrations should reconsider their zero-tolerance approach towards homosexuality (XFM, 2011), which may discourage MSM from reporting incidents.

We found HIV testing was low among MSM, with less than half ever testing and only one-third testing in the preceding year. These estimates were, however, higher than the national rates for key populations in a 12-month period (19.0%) (Ghana AIDS Commission, 2014). We also found older age and more formal education predict testing behavior. MSM who experienced sexual violence in their first male sexual encounter in Accra and Cape Coast/Takoradi were less likely to have ever tested for HIV and, in Cape Coast/Takoradi, less likely to test for HIV in the preceding year. These findings warrant exploration given that sexual violence in childhood or adulthood places African MSM at risk of HIV acquisition (Millett et al., 2012).

We recognize limitations of our data. First, the cross-sectional design and context of responses limit interpretation. For example, experiencing violence due to being outed while obtaining HIV testing may account for the positive association between the two – a reversal of cause and effect. Second, it is not possible to verify how representative the data are of all MSM, even within the four study areas. RDS was chosen as the recruitment method for its purported ability to increase representativeness (Heckathorn, 1997; Salganik & Heckathorn, 2004; Volz & Heckathorn, 2008). However, we acknowledge this is not proven (Bastos et al., 2018; Gile & Handcock, 2010). We hold that the use of long chains of peer referrals diversified our sample beyond the MSM who are openly gay and access services catering to MSM. Third, the confidence interval for some associations were wide due to small numbers of observations for those variables. Fourth, our data may under-estimate the true prevalence of experiences of stigma, discrimination, violence, and especially sexual violence due to social desirability response bias. Lastly, this study is a secondary analysis of existing data from Ghana's behavioral surveillance exercise and not designed to answer specific questions or hypotheses on stigma. As such, instruments did not employ scales to measure complex attitudes and mental health factors. The purpose of the stigma questions was to serve as brief indicators of experiences related to enacted stigma that may help inform policies, particularly around services.

Conclusions

Our findings can inform policy, practice, and clinical services to address how stigma/discrimination and violence experiences may be shaping the HIV health-seeking behaviors of MSM. Stakeholders in the country's national HIV response should implement structural interventions to mitigate the consequences of stigma and discrimination on MSM health and well-being. First, we recommend that healthcare providers receive sensitization training on the experiences and healthcare needs of MSM. While the government has implemented sensitization trainings with healthcare staff and providers in select healthcare settings to improve key population-friendly HIV services (The U.S. President's Emergency Plan for AIDS Relief, 2017), these trainings need to be broadened to more clinics, institutionalized for refresher trainings, and integrated into medical school training. Second, the government and other stakeholders should decriminalize same-sex sex. The criminalization of male

same-sex sexualities places MSM in a vulnerable position in society, whereby they can be abused and blackmailed without legal recourse. Finally, with such a high prevalence of sexual violence and HIV among MSM and low levels of HIV testing, especially among those who have experienced rape, we recommend that HIV stakeholders in Ghana take steps to make pre-exposure prophylaxis (PrEP) available, affordable, and accessible to MSM.

ACKNOWLEDGEMENTS

We would like to thank the following. The Ghana AIDS Commission (GAC) for leading the charge for this important work. The Regional Institute for Population Studies (RIPS) and the Noguchi Memorial Institute for Medical Research (NMIMR), both affiliated with the University of Ghana, Legon, for partnering with the GAC in carrying out the survey. The West Africa Project to Combat AIDS and STIs (WAPCAS), Maritime Life Precious Foundation (MARITIME), Centre for Popular Education and Human Rights, Ghana (CEPEHRG) and MICDAK for their support provided for community entry and mobilization. This research has been supported by the President's Emergency Plan for AIDS Relief (PEPFAR) through the U.S. Centers for Disease Control and Prevention (CDC) Ghana Country Office under the terms of Cooperative Agreement Number 5U2GPS001469-03. Dr. Gyamerah was supported by the National Institutes of Health (T32 MH19105).

Funding: This research was supported by the President's Emergency Plan for AIDS Relief (PEPFAR) through the US Centers for Disease Control and Prevention (CDC) Ghana Country Office under the terms of Cooperative Agreement Number 5U2GPS001469-03. The first author was supported by the National Institutes of Health (T32 MH19105).

REFERENCES

- Aberle-Grasse J, McFarland W, & El-Adas A (2013). HIV prevalence and correlates of infection among MSM: 4 areas in Ghana, the Ghana Men's Health Study 2010–2011 (Abstract X-175). In The 20th Conference on Retroviral and Opportunistic Infections (CROI) Atlanta, USA.
- Banks W (2013). Queering Ghana: sexuality, community, and the struggle for cultural belonging in an African nation. Wayne State University Dissertations Wayne State University. Retrieved from http://digitalcommons.wayne.edu/oa_dissertations/748
- Baral S, Trapence G, Motimedi F, Umar E, Ipinge S, Dausab F, & Beyrer C (2009). HIV prevalence, risks for HIV infection, and human rights among men who have sex with men (MSM) in Malawi, Namibia, and Botswana. *PloS One*, 4(3), e4997. [PubMed: 19325707]
- Bastos FI, Bastos LS, Coutinho C, Toledo L, Mota JC, Velasco-de-Castro CA, ... "Divas Research Group." (2018). HIV, HCV, HBV, and syphilis among transgender women from Brazil: assessing different methods to adjust infection rates of a hard-to-reach, sparse population. *Medicine*, 97(1S Suppl 1), S16–S24. 10.1097/MD.0000000000009447 [PubMed: 29794601]
- Brink JG (2017). Considerations for South African higher education: A 'National student men who have sex with men' sexual behaviour survey. *South African Journal of Higher Education*, 31(4), 184–207.
- Burt RD, Tinsley J, & Glick SN (2017). A decline in HIV testing among persons who inject drugs in the Seattle area, 2004–2015. *JAIDS Journal of Acquired Immune Deficiency Syndromes*, 75, S346–S351. 10.1097/QAI.0000000000001409 [PubMed: 28604437]
- Center for Disease Control and Prevention. (2020). HIV Infection Risk, Prevention, and Testing Behaviors among Persons Who Inject Drugs—National HIV Behavioral Surveillance: Injection Drug Use, 23 U.S. Cities, 2018. HIV Surveillance Special Report 24. Retrieved from <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>
- Fay H, Baral SD, Trapence G, Motimedi F, Umar E, Ipinge S, ... Beyrer C (2011). Stigma, health care access, and HIV knowledge among men who have sex with men in Malawi, Namibia, and Botswana. *AIDS and Behavior*, 15(6), 1088–1097. 10.1007/s10461-010-9861-2 [PubMed: 21153432]
- Finneran C, & Stephenson R (2013). Intimate partner violence among men who have sex with men. *Trauma, Violence, & Abuse*, 14(2), 168–185. 10.1177/1524838012470034

- Ghana AIDS Commission, RIPS, NMIMR, UCSF, & CDC. (2012). The Ghana Men's Study. Accra, Ghana.
- Ghana AIDS Commission. (2014). Ghana AIDS Commission 2014 status report. Ghana AIDS Commission. Retrieved from <http://www.ghanais.gov.gh/gac1/pubs/2014STATUSREPORT.pdf>
- Gile KJ, & Handcock MS (2010). Respondent-driven sampling: an assessment of current methodology. *Sociological Methodology*, 40(1), 285–327. 10.1111/j.1467-9531.2010.01223.x [PubMed: 22969167]
- Government of Ghana. Ghana criminal code, 1960 (Act 29) (2003). Ghana Retrieved from <http://www.wipo.int/edocs/lexdocs/laws/en/gh/gh010en.pdf>
- Gyamerah AO (2017). Unburying the ostrich's head and opening Pandora's box: a paradigm shift to address HIV among men who have sex with men in Ghana's national AIDS response. Columbia University Academic Commons Retrieved from <https://academiccommons.columbia.edu/catalog/ac:nzs7h44j2x>
- Heckathorn DD (1997). Respondent-driven sampling: a new approach to the study of hidden populations. *Social Problems*, 44(2), 174–199. 10.2307/3096941
- Human Rights Watch. (2018). Violence and discrimination against LGBT people in Ghana. Retrieved January 11, 2018, from https://www.hrw.org/report/2018/01/08/no-choice-deny-who-i-am/violence-and-discrimination-against-lgbt-people-ghana#_ftn119
- Institute of Development Studies, & Ghana Statistical Services and Associates. (2016). Domestic violence in Ghana: incidence, attitudes, determinants and consequences. Brighton, UK Retrieved from http://www.statsghana.gov.gh/docfiles/publications/DV_Ghana_Report_FINAL.pdf
- Koku EF (2011). Stigma, sexual risk and desire for HIV tests in Ghana. *Sexual Health*, 8(1), 110–119. 10.1071/SH09095 [PubMed: 21371393]
- Krug EG, Mercy JA, Dahlberg LL, & Zwi AB (2002). The world report on violence and health. *The Lancet*, 360(9339), 1083–1088.
- Kushwaha S, Lalani Y, Maina G, Ogunbajo A, Wilton L, Agyarko-Poku T, ... Nelson LE (2017). "But the moment they find out that you are MSM...": a qualitative investigation of HIV prevention experiences among men who have sex with men (MSM) in Ghana's health care system. *BMC Public Health*, 17(1), 770 10.1186/s12889-017-4799-1 [PubMed: 28974257]
- Lane T, Raymond HF, Dladla S, Rasethe J, Struthers H, McFarland W, & McIntyre J (2011). High HIV prevalence among men who have sex with men in Soweto, South Africa: results from the Soweto men's study. *AIDS and Behavior*, 15(3), 626–634. 10.1007/s10461-009-9598-y [PubMed: 19662523]
- Li J, Valente TW, Shin H-S, Weeks M, Zelenev A, Moorthi G, ... Obidoa C (2018). Overlooked Threats to Respondent Driven Sampling Estimators: Peer Recruitment Reality, Degree Measures, and Random Selection Assumption. *AIDS and Behavior*, 22(7), 2340–2359. <https://doi.org/doi:10.1007/s10461-017-1827-1> [PubMed: 28660381]
- Maina G, Strudwick G, Lalani Y, Boakye F, Wilton L, & Nelson LE (2018). Characterizing the Structure and Functions of Social Networks of Men Who Have Sex with Men in Ghana, West Africa: Implications for Peer-Based HIV Prevention. *Journal of the Association of Nurses in AIDS Care*, 29(1), 70–82. 10.1016/J.JANA.2017.07.005 [PubMed: 28784585]
- Makofane K, Beck J, & Ayala G (2014). MSM in sub-Saharan Africa: Health, access, and HIV findings from the Global Men's Health and Rights study. Oakland, CA.
- Millett GA, Jeffries IV WL, Peterson JL, Malebranche DJ, Lane T, Flores SA, ... Heilig CM (2012). Common roots: a contextual review of HIV epidemics in black men who have sex with men across the African diaspora. *The Lancet*, 380(9839), 411–423. 10.1016/S0140-6736(12)60722-3
- Mumin AA, Gyasi RM, Segbefia AY, Forkuor D, & Ganle JK (2018). Internalised and social experiences of HIV-induced stigma and discrimination in urban Ghana. *Global Social Welfare*, 5(2), 83–93. 10.1007/s40609-018-0111-2
- Nelson LE, Wilton L, Agyarko-Poku T, Zhang N, Aluoch M, Thach CT, ... Adu-Sarkodie Y (2015). The association of HIV stigma and HIV/STD knowledge with sexual risk behaviors among adolescent and adult men who have sex with men in Ghana, West Africa. *Research in Nursing & Health*, 38(3), 194–206. 10.1002/nur.21650 [PubMed: 25809638]

- Niang CI, Tapsoba P, Weiss E, Diagne M, Niang Y, Moreau AM, ... Castle C (2003). 'It's raining stones': stigma, violence and HIV vulnerability among men who have sex with men in Dakar, Senegal. *Culture, Health & Sexuality*, 5(6), 499–512. 10.1080/1369105031000152715
- Ogunbajo A, Kershaw T, Kushwaha S, Boakye F, Wallace-Atiapah N-D, & Nelson LE (2017). Barriers, motivators, and facilitators to engagement in HIV care among HIV-infected Ghanaian men who have sex with men. *AIDS and Behavior*, 22(3), 829–839. 10.1007/s10461-017-1806-6
- Okeke N, McFarland W, & Raymond HF (2017). Closing the gap? The HIV continuum in care for African-American men who have sex with men, San Francisco, 2004–2014. *AIDS and Behavior*, 21(6), 1741–1744. 10.1007/s10461-016-1472-0 [PubMed: 27380391]
- Poteat T, Diouf D, Drame FM, Ndaw M, Traore C, Dhaliwal M, ... Baral S (2011). HIV risk among MSM in Senegal: a qualitative rapid assessment of the impact of enforcing laws that criminalize same sex practices. *PLoS One*, 6(12), e28760. [PubMed: 22194906]
- Quaye S, Fisher Raymond H, Atuahene K, Amenyah R, Aberle-Grasse J, McFarland W, & El-Adas A (2015). Critique and lessons learned from using multiple methods to estimate population size of men who have sex with men in Ghana. *AIDS and Behavior*, 19(1), 16–23. 10.1007/s10461-014-0943-4
- Sabin L, Bachman DeSilva M, Green K, Agyarko-Poku T, Akuoko K, Baffuor Opoku K, ... Ahmed Abdul Rahman Y (2013). Exploring the beliefs, attitudes, and behaviors of MSM engaged in substance use and transactional sex in Ghana. USAID Project SEARCH Retrieved from <https://open.bu.edu/handle/2144/28500>
- Salganik MJ, & Heckathorn DD (2004). Sampling and estimation in hidden populations using respondent-driven Sampling. *Sociological Methodology*, 34(1), 193–240. 10.1111/j.0081-1750.2004.00152.x
- Schwartz SR, Nowak RG, Orazulike I, Keshinro B, Ake J, Kennedy S, ... TRUST Study Group, on behalf of the T. S. (2015). The immediate effect of the Same-Sex Marriage Prohibition Act on stigma, discrimination, and engagement on HIV prevention and treatment services in men who have sex with men in Nigeria: analysis of prospective data from the TRUST cohort. *The Lancet HIV*, 2(7), e299–306. 10.1016/S2352-3018(15)00078-8 [PubMed: 26125047]
- Semugoma P, Beyrer C, & Baral S (2012). Assessing the effects of anti-homosexuality legislation in Uganda on HIV prevention, treatment, and care services. *SAHARA-J: Journal of Social Aspects of HIV/AIDS*, 9(3), 173–176. [PubMed: 23237074]
- Stephenson R, Hast M, Finneran C, & Sineath CR (2014). Intimate partner, familial and community violence among men who have sex with men in Namibia. *Culture, Health & Sexuality*, 1–15. 10.1080/13691058.2014.889753
- Tenkorang EY, & Owusu AY (2013). Examining HIV-related stigma and discrimination in Ghana: what are the major contributors? *Sexual Health*, 10(3), 253–262. 10.1071/SH12153 [PubMed: 23651649]
- The U.S. President's Emergency Plan for AIDS Relief. (2017). PEPFAR Ghana country operational plan 2017. Retrieved from <https://www.pepfar.gov/documents/organization/272013.pdf>
- University of California San Francisco. (2015). MSM in South Africa: Data triangulation project. San Francisco. Retrieved from <https://globalhealthsciences.ucsf.edu/sites/globalhealthsciences.ucsf.edu/files/pub/msm-triangulation-south-africa.pdf>
- Volz E, & Heckathorn DD (2008). Probability based estimation theory for respondent driven sampling. *Journal of Official Statistics*, 24(1), 79–97. Retrieved from <https://search.proquest.com/docview/1266794018?pq-origsite=gscholar>
- XFM. (2011). Ministry to check homosexuality in schools. Retrieved March 5, 2014, from <http://www.ghanaweb.com/GhanaHomePage/NewsArchive/artikel.php?ID=224704>
- Zahn R, Grosso A, Scheibe A, Bekker L-G, Ketende S, Dausab F, ... Baral S (2016). Human rights violations among men who have sex with men in southern Africa: comparisons between legal contexts. *Plos One*, 11(1), e0147156 10.1371/journal.pone.0147156 [PubMed: 26764467]

Table 1.

Sexual identity, demographic characteristics, and HIV testing history, men who have sex with men in four cities of Ghana, 2011 (N=1,382)

Variable	Accra/Tema N (%; [95% CI])	Cape Coast/Takoradi N (%; [95% CI])	Kumasi N (%; [95% CI])	Koforidua N (%; [95% CI])
Total*	493 (100)	397 (100)	331 (100)	161 (100)
Sexual identity				
Gay/homosexual/MSM	213 (46.9; [42.3–51.5])	234 (58.9; [54.0–63.7])	129 (42.7; [37.2–48.4])	73 (50.3; [42.2–58.5])
Bisexual	206 (45.4; [40.8–50.0])	136 (34.3; [29.7–39.1])	165 (54.6; [48.9–60.2])	53 (36.5; [29.0–44.8])
Heterosexual/straight	33 (7.3; [5.2–10.1])	27 (6.8; [4.7–9.8])	8 (2.7; [1.3–5.2])	16 (11.0; [6.8–17.3])
Transgender**	2 (0.4; [0.1–1.8])	0	0	1 (0.7; [0.09–4.8])
Other	0	0	0	2 (1.4; [0.3–5.4])
Nationality				
Ghanaian	445 (97.8; [96.0–98.8])	390 (98.2; [96.3–99.1])	298 (98.7; [96.5–99.5])	144 (99.3; [95.2–99.9])
Other	10 (2.2; [1.2–4.0])	7 (1.8; [0.8–3.7])	4 (1.3; [0.5–3.5])	1 (0.7; [0.09–4.8])
Educational Attainment				
Less than primary	24 (5.3; [3.6–7.8])	21 (5.3; [3.5–8.0])	10 (3.3; [1.8–6.1])	4 (2.8; [1.0–7.2])
Primary	39 (8.6; [6.3–11.5])	15 (3.8; [2.3–6.2])	10 (3.3; [1.8–6.1])	11 (7.6; [4.2–13.3])
Junior secondary school	167 (36.7; [32.4–41.3])	186 (46.8; [42.0–51.8])	94 (31.1; [26.1–36.6])	62 (42.7; [34.9–51.0])
Senior secondary school	170 (37.3; [33.0–41.9])	150 (37.8; [33.1–42.7])	149 (49.3; [43.7–55.0])	66 (45.5; [37.5–53.8])
Tertiary	45 (9.9; [7.5–13.0])	21 (5.3; [3.5–8.0])	39 (12.9; [9.6–17.2])	2 (1.4; [0.3–5.4])
Other	10 (2.2; [1.2–4.0])	4 (1.0; [0.4–2.7])	0	0
Employed				
Yes	308 (67.7; [63.2–71.8])	222 (55.9; [51.0–60.8])	169 (56.0; [50.3–61.5])	73 (50.3; [42.2–58.5])
No	147 (32.3; [28.2–36.8])	175 (44.1; [39.2–49.0])	133 (44.0; [38.5–49.7])	72 (49.7; [41.5–57.8])
Income (per month)				
None	70 (15.7; [12.6–19.4])	179 (45.2; [40.3–50.2])	119 (39.4; [34.0–45.1])	62 (42.7; [34.9–51.0])
Low income (1–299 cedis)	273 (61.4; [56.7–65.8])	175 (44.2; [39.4–49.1])	144 (47.7; [42.1–53.4])	61 (42.1; [34.2–50.3])
Middle income (300–999 cedis)	95 (21.3; [17.8–25.4])	37 (9.3; [6.8–12.6])	34 (11.3; [8.1–15.4])	21 (14.5; [9.5–21.3])
High income (1000 cedis)	7 (1.6; [0.7–3.2])	5 (1.3; [0.5–3.0])	5 (1.6; [0.7–3.9])	1 (0.7; [0.09–4.8])

Variable	Accra/Tema N (%; [95% CI])	Cape Coast/Takoradi N (%; [95% CI])	Kumasi N (%; [95% CI])	Koforidua N (%; [95% CI])
Religion				
Christian	388 (85.7; [82.1–88.6])	331 (83.4; [79.4–86.7])	247 (81.7; [77.0–85.8])	123 (84.8; [77.9–89.8])
Muslim	31 (6.8; [4.8–9.6])	29 (7.3; [5.1–10.3])	29 (9.6; [6.7–13.5])	9 (6.2; [3.2–11.6])
Atheist/agnostic/no religion	28 (6.2; [4.3–8.8])	30 (7.6; [5.3–10.6])	22 (7.3; [4.8–10.8])	9 (6.2; [3.2–11.6])
Traditional	2 (0.4; [0.1–1.8])	5 (1.2; [0.5–3.0])	2 (7; [0.1–2.6])	0
Other	4 (0.9; [0.3–2.3])	2 (0.5; [0.1–2.0])	2 (7; [0.1–2.6])	4 (2.8; [1.0–7.2])
Marital Status				
Currently married	18 (4.0; [2.5–6.2])	6 (1.5; [0.6–3.3])	6 (2.0; [0.9–4.4])	1 (0.7; [0.09–4.8])
Previously married	10 (2.2; [1.2–4.1])	8 (2.0; [1.0–3.9])	3 (1.0; [0.3–3.1])	2 (1.4; [0.3–5.4])
Never married	426 (93.8; [91.2–95.7])	383 (96.5; [94.1–97.9])	293 (97.0; [94.3–98.4])	142 (97.9; [93.7–99.3])
Living Situation				
Alone	106 (23.3; [19.6–27.4])	110 (27.7; [23.5–32.3])	78 (25.8; [21.2–31.1])	32 (22.1; [16.0–29.6])
Female sex partner/wife	13 (2.9; [1.7–4.9])	8 (2.0; [1.0–4.0])	7 (2.3; [1.1–4.8])	1 (0.7; [0.09–4.8])
Male sex partner	18 (3.9; [2.5–6.2])	12 (3.0; [1.7–5.3])	8 (2.6; [1.3–5.2])	3 (2.1; [0.6–6.3])
Parents or siblings	221 (48.6; [44.0–53.2])	152 (38.3; [33.6–43.2])	133 (44.0; [38.5–49.7])	71 (48.9; [40.8–57.2])
Other relatives	56 (12.3; [9.6–15.7])	88 (22.2; [18.3–26.5])	71 (23.5; [19.0–28.7])	36 (24.8; [18.4–32.6])
Friends	40 (8.8; [6.5–11.8])	25 (6.3; [4.3–9.2])	4 (1.3; [0.5–3.5])	2 (1.4; [0.3–5.4])
Other	1 (0.2; [0.03–1.6])	2 (0.5; [0.1–2.0])	1 (0.3; [0.04–2.3])	0
Current Student				
Yes	92 (20.2; [16.8–24.2])	143 (36.0; [32.6–42.2])	83 (27.5; [22.7–32.8])	45 (31.0; [24.0–39.1])
No	363 (79.8; [75.8–83.2])	254 (64.0; [57.8–67.4])	219 (72.5; [67.2–77.3])	100 (69.0; [60.9–76.0])
Ever tested for HIV				
	227 (46.0; [41.7–58.3])	148 (37.3; [32.6–42.2])	137 (45.5; [39.9–51.2])	59 (40.7; [32.9–49.0])
Tested for HIV in past 12 months				
	156 (31.6; [27.7–35.9])	113 (28.5; [24.2–33.1])	108 (35.9; [30.6–41.5])	49 (33.8; [26.5–41.9])

* Percentages expressed of those with non-missing responses, categories may not add up to total.

** The survey instrument included transgender under sexual identity; however, we belatedly recognize that transgender should have been categorized as a gender identity and not a sexual identity.

Table 2. Experiences of stigma and discrimination among men who have sex with men in four cities of Ghana, 2011 (N=1,382)

Variable	Accra/Tema N (%; [95% CI])	Cape Coast/Takoradi N (%; [95% CI])	Kumasi N (%; [95% CI])	Koforidua N (%; [95% CI])
Total*	493 (100)	397 (100)	331 (100)	161 (100)
Refused any service or benefit because someone believed you have sex with other men				
Any service or benefit				
Housing	136 (29.9; [25.8–34.2])	25 (6.3; [4.3–9.2])	29 (9.6; [6.7–13.5])	42 (28.9; [22.1–36.9])
Restaurant	57 (12.5; [9.8–15.9])	14 (3.5; [2.1–5.9])	15 (5.0; [3.0–8.1])	21 (14.5; [9.6–21.3])
Employment	44 (9.7; [7.3–12.8])	7 (1.8; [0.8–3.7])	10 (3.3; [1.8–6.1])	10 (6.9; [3.7–12.4])
Education	36 (7.9; [5.8–10.8])	5 (1.3; [0.5–3.0])	8 (2.6; [1.3–5.2])	8 (5.5; [2.8–10.7])
Religious services	33 (7.3; [5.2–10.1])	8 (2.0; [1.0–4.0])	8 (2.6; [1.3–5.2])	5 (3.5; [1.4–8.1])
Police	22 (4.8; [3.2–7.2])	4 (1.0; [0.3–2.7])	2 (0.7; [0.2–2.6])	1 (0.7; [0.09–4.8])
Other	17 (3.7; [2.3–5.9])	3 (0.9; [0.2–2.7])	5 (1.7; [0.7–3.9])	1 (0.7; [0.09–4.8])
Health	17 (3.7; [2.3–5.9])	1 (0.3; [0.03–1.8])	1 (0.3; [0.04–2.3])	12 (8.3; [4.7–14.1])
	15 (3.3 [2.0–5.4])	1 (0.3; [0.03–1.8])	2 (0.7; [0.2–2.6])	1 (0.7; [0.09–4.8])

* Percentages expressed of those with non-missing responses, categories may not add up to total.

Table 3.

Experiences of verbal, physical, and sexual violence among men who have sex with men, four cities of Ghana, 2011 (N=1,382)

Variable	Accra/Tema N (%; [95% CI])	Cape Coast/Takoradi N (%; [95% CI])	Kumasi N (%; [95% CI])	Koforidua N (%; [95% CI])
Total*	493	397	331	161
Experienced verbal or symbolic violence in the last year (e.g., insults, blackmail, threats) because someone thought you have sex with men or are gay/bisexual	222 (48.9; [44.3–53.5])	115 (29.0; [24.7–33.6])	109 (34.9; [29.7–40.4])	51 (35.2; [27.8–43.4])
Experienced physical violence in the last year because someone thought you have sex with men or are gay/bisexual:				
Spit on, pushed, shoved, or hit with object	58 (12.8; [9.9–16.2])	23 (5.8; [3.9–8.6])	9 (3.0; [1.6–5.7])	7 (4.8; [2.3–9.9])
Slapped, hit, kicked, or beaten	55 (12.1; [9.4–15.4])	23 (5.8; [3.9–8.6])	21 (7.0; [4.6–10.5])	3 (2.8; [1.0–7.2])
Experienced forced/coerced sex (e.g., sexual assault, rape):				
In first sexual experience with a male partner	134 (29.4; [25.4–33.8])	100 (25.3; [21.3–29.9])	70 (23.3; [18.9–28.5])	32 (22.2; [16.1–29.8])
In the last year	136 (30.0; [25.9–34.3])	49 (12.3; [9.4–16.0])	63 (20.9; [16.6–25.8])	24 (16.5; [11.3–23.6])

* Percentages expressed of those with non-missing responses, categories may not add up to total.

Correlates of stigma, discrimination, and violence among men who have sex with men, four cities of Ghana, 2011 (N=1,382)

Table 4.

Outcome variable	Predictor variables in multivariable logistic regression models: adjusted odds ratio (95% confidence interval) (Adjusted for other variables in cell; all variables shown are significant at p<0.05 unless specified otherwise)			
	Models for Accra/Tema	Models for Cape Coast/Takoradi	Models for Kumasi	Models for Koforidua
Any stigma or discrimination	Bisexual-identified: 0.5* (0.3–0.8) Any income: 2.5* (1.2–4.9) Professed any religion: 3.5 (1.0–12.3) Lives with a man: 2.0 (1.1–3.6) Junior secondary school education: 0.6 (0.4–1.0)	Heterosexual: 7.6** (2.8–20.6) No education: 8.7* (1.6–48.2)	Primary school or less: 5.1 (1.6–16.1) Other Christian: 5.2** (2.0–13.2) Lives with a man: 5.3* (1.7–20.8)	Older age (per decade): 2.4 (1.2–4.8) Gay/bisexual: 0.2 (0.08–0.7) Live with parents and/or siblings: 2.5 (1.1–5.7) Pentecostal/Charismatic: 0.3* (0.1–0.8)
Verbal and symbolic violence	Gay-identified: 1.8* (1.2–2.5) Age 35 years and older: 0.7* (0.5–0.9)	Gay-identified: 2.0* (1.3–3.2) Any income: 2.3** (1.4–3.6)	Employed: 1.6 (1.0–2.6)	Catholic: 4.4 (1.3–14.8) Any income: 4.3** (1.9–9.7)
Moderate physical violence	Professed any religion (positive correlation): P<0.001	Secondary school school and higher: 4.2* (1.6–11.0) Pentecostal/Charismatic: 2.5 (1.1–5.9)	Gay-identified: 4.9 (1.0–23.9)	Lives with a man: 18.0* (2.4–132.9)
Severe physical violence	Gay-identified: 2.0 (1.1–3.7) Primary school or less: 2.9* (1.5–5.6)	–	–	Lives with a man: 17.0 (2.4–229) Tertiary education and higher: 68.0* (3.1–1515)
Sexual violence in past 12 months	Older age (per decade) 0.6* (0.5–0.9) Student: 1.9* (1.2–3.1)	Employed: 2.0 (1.1–3.7)	Primary school: 6.7* (1.8–24.9) Catholic: 2.1 (1.1–4.2)	Any income: 4.6* (1.5–14.3)
Sexual violence in first male sexual encounter	Lives with other people: 1.8 (1.0–3.0) Junior secondary school education: 1.6 (1.1–2.4)	–	Age 18–24 years: 2.2 (1.2–4.1)	–

* P<0.01

** P<0.001

“–” Indicates there were no significant independent variables in the model

Correlates of HIV testing among men who have sex with men, four cities of Ghana, 2011 (N=1,382)

Table 5.

Outcome variable	Predictor variables in multivariable logistic regression models: adjusted odds ratio (95% confidence interval) (Adjusted for other variables in cell; all variables shown are significant at p<0.05 unless specified otherwise)			
	Models for Accra/Tema	Models for Cape Coast/Takoradi	Models for Kumasi	Models for Koforidua
Ever tested for HIV	Older age (per decade) 1.9 ^{**} (1.4–2.6) Moderate physical violence: 2.3 [*] (1.3–4.1) Sexual violence in first male sexual encounter: 0.6 (0.4–1.0)	Older age (per decade) 1.7 [*] (1.2–2.4) Senior secondary school and higher: 2.0 ^{**} (1.3–3.2) Living with Family/relatives: 0.5 [*] (0.3–0.8) Verbal/symbolic violence: 1.7 (1.1–2.7) Sexual violence in first male sexual encounter: 0.5 (0.3–0.9)	Age 35 years and older: 4.1 (1.1–15.5) Tertiary school and higher: 2.8 [*] (1.4–5.8)	Senior secondary school and higher: 2.5 (1.2–5.2) Employed: 2.4 (1.1–4.9) Verbal/symbolic violence: 2.1 (1.0–4.5)
Tested in past 12 months	Age 18–34 years: 1.6 (1.1–2.4) Moderate physical violence: 1.9 (1.1–3.3)	Older age (per decade): 2.1 ^{**} (1.4–3.0) Senior secondary school and higher: 2.0 [*] (1.3–3.2) Verbal/symbolic violence: 2.1 [*] (1.3–3.4) Sexual violence in first male sexual encounter: 0.5 (0.3–0.9)	Primary school or lower 3.3 (1.3–8.7)	Senior secondary school and higher: 2.1 [*] (1.0–4.3) Employed: 2.2 (1.1–4.6) Protestant: 2.5 (1.0–6.4)

* P<0.01

** P<0.001