

Provision of Healthcare Services to Men Who Have Sex with Men in Nigeria: Students' Attitudes Following the Passage of the Same-Sex Marriage Prohibition Law

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Attitudes of Undergraduate Students in Lagos, Nigeria towards Provision of Healthcare Services to Men who Have Sex with Men

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Abstract

Purpose: Media reports after signing of the Same Sex Marriage (Prohibition) Act 2013 in Nigeria portray widespread societal intolerance towards the Lesbian, Gay and Bisexual population. This study was conducted to assess the attitudes of university undergraduates in Lagos state, Nigeria towards provision of healthcare services for Men who have Sex with Men (MSM) because the 2014 same-sex prohibition law stipulates a jail sentence for organizations providing services to MSM.

Methods: A cross-sectional descriptive study was conducted using self-administered questionnaires to collect information including homophobic attitudes and views on access to healthcare from 4000 undergraduates in ten randomly selected faculties in two universities. During analysis inter-university and inter-faculty comparison was carried out between medical and non-medical students.

Results: Outright denial of healthcare services to MSM was supported by 37.6% of the 3537 undergraduates who responded while denial of HIV prevention services was supported by 32.5%. However, compared to 38.7% and 34.1% of undergraduates from other faculties, 23.7% and 18.2% of medical students agreed that healthcare providers should not provide services to MSM and that MSM should not have access to HIV prevention services respectively ($p=0.000$). Although a significant proportion of the medical students supported the statement that doctors and other healthcare workers should be compelled to give priority to other groups before MSM (29.4% of medical vs 47.2% of students from other faculties), a statistically significant difference was observed between the two groups of students. The homophobic statement with the highest

support was that doctors and healthcare workers should be compelled to report MSM who come to access treatment (48.1% of medical vs 57.4% of students from other faculties).

Conclusion: A very high proportion of the undergraduate students had a negative attitude towards provision of healthcare services to MSM in Nigeria; the medical students were, however, less homophobic than their non-medical counterparts. If attitudes translate to lack of healthcare service provision to MSM, with the high burden of HIV among MSM in Nigeria, it is unlikely that the country will achieve the UNAIDS 90-90-90 target of 90% of the population knowing their HIV status, 90% of people living with HIV receiving sustained antiretroviral medication, and 90% of those receiving antiretroviral medication having viral suppression by 2020.

Introduction

Evidence exists that groups of people referred to as “minority populations” (racial/ethnic,¹ gender,² sexual³) lack adequate access to quality healthcare services. This can be due to the lack of policies protecting the right to healthcare and programs responsive to the particular needs of these population groups.⁴⁻⁶ For example, following the signing of the anti-homosexuality act in Senegal in 2008, male health workers providing HIV prevention services to men who have sex with men (MSM) were arrested and imprisoned. This resulted in the suspension of HIV prevention service provision.⁷

Studies carried out in the United States of America (USA) showed that many Lesbian, Gay and Bisexual (LGB) clients seeking healthcare do not disclose their sexual orientation or identity to their healthcare provider because of anticipated stigma.^{8,9} Less than ten percent of the departments in public health schools surveyed in the USA offered courses that covered specific health issues of LGB people, apart from those related to HIV and AIDS,¹⁰ leaving their graduates inadequately trained to provide culturally competent services to sexual minorities.¹⁰

There is a dearth of data on health related experiences of LGB people in many countries. However, globally and in regions where surveillance data exist, higher prevalence and incidence of HIV were recorded among MSM in 2014 compared to any other population group.¹¹⁻¹⁶ Apart from female sex workers and people who inject drugs, MSM have been identified as one of the key populations affected by the HIV epidemic.¹¹ In the United Kingdom¹⁴ and in Nigeria,¹⁶ a high prevalence of HIV was recorded among MSM compared to the general population. Evidence from the USA showed that LGB youths were more likely to report negative health indicators ranging from mental health disorder, unsafe sexual practices, substance abuse and

victimization.¹⁷ Public attitude towards LGB people over the years has shifted positively in more affluent and secular countries. For example, in 2010 only about 27% of people interviewed during the Scottish social attitudes survey felt that sexual relationships between two adults of the same sex were always or mostly wrong compared to 48% a decade earlier.¹⁸ A number of countries have made same sex marriage (or partnerships) legal including, most recently, Ireland in May 2015 with a referendum and the USA in June 2015 with the Supreme Court ruling. On the other hand, the enactment of discriminatory laws in some African countries prescribing jail sentences, beatings or even death for LGB people has created homophobic and unsafe environments for sexual minorities.¹⁹ Even in countries with anti-discriminatory laws such as South Africa, a 2013 study showed that only about a third of the populace was of the opinion that homosexuality should be accepted by society.¹⁹

Human sexuality is a topic that is not discussed openly in a traditional Nigerian setting.²⁰ The norms governing sexual behavior are grounded in traditional and religious beliefs. In this instance there is a common belief that only heterosexual relationships are permitted. Nigeria's penal code and the criminal code describe a same-sex sexual relationship as an unnatural offence with penalties for people sentenced for such behavior.^{21,22} The main focus is on gay men/MSM; lesbian relationships are not recognized. People who are gay, lesbian, or bisexual have generally lived secret lives. However, in 2006 the first media report emerged of a gay reverend who was conducting regular Sunday services at his church in Lagos. This generated criticism and condemnation from the public. The church members were physically attacked, ejected from the premises and the reverend had to escape from the country.²³ After this incident, many homophobic acts were reported by members of the LGB community.²⁴ In 2014, the president of Nigeria signed into law the Same Sex Marriage (Prohibition) Act.²⁵ This fuelled a renewed wave

of discrimination, rejection, violence and persecution targeted at LGBT people, forcing them to conceal their sexual orientation to avoid victimization and arrest.^{26,27}

This socio-political context has far reaching implications for the healthcare of LGB people in Nigeria. In particular, it has implications for MSM who have a high risk of contracting the HIV virus,¹⁶ many of whom may have difficulty accessing HIV-related services. Further exacerbating the problem, government sponsored HIV services for MSM are not available.²⁸ Two developmental agencies in Nigeria partnering with the government in providing HIV-related services, namely UNAIDS and Global Fund, expressed concern that the law could serve as a deterrent to organizations providing HIV-related services to LGB people in the country.²⁹ This article reports findings from a study that was carried out to assess the attitudes of university undergraduates in Lagos state towards provision of healthcare services for MSM. This study population was chosen because previous studies carried out among MSM in Nigeria showed that the majority of self-reported MSM were below thirty years of age.³⁰⁻³² It is hoped that the findings from this research will contribute to filling the gap in knowledge available on this topic. This article focuses particularly on our analysis of the differences between medical and non-medical students. The medical students were considered particularly important to study because of their role in the delivery of care and we hypothesized that medical students might have an ethical framework that encompasses a belief in fairness and equality among individuals. These are features of justice, which is one of the four principles of biomedical ethics put forward by Beauchamp and Childress.³³

Methods

The only two existing Universities in Lagos state were the settings used for the study. The University of Lagos (UNILAG), one of the Federal Universities in Nigeria, has twelve faculties and eighty five departments offering a total of 73 undergraduate programs. In the 2013/2014 academic session, over twenty two thousand students registered for undergraduate programs.³⁴ Lagos State University (LASU), a state owned institution with eleven faculties, had over twelve thousand students in various undergraduate programs during the same academic session.³⁵ Both universities have medical colleges.

A cross-sectional descriptive study was carried out among undergraduates of the University of Lagos and Lagos State University to assess attitudes towards provision of healthcare services for MSM. The minimum sample size of 400 per faculty was determined using the formula³⁶ for descriptive studies $n = pq/d^2$ (power of 80% and p being the proportion of students likely to have the attribute of interest from previous studies. In the absence of local data, 50% was used which ensures maximum variability. $Q=1-p$ at 95% confidence interval).

Faculties were assigned a sequential number and then five faculties were randomly selected from each institution using random number selection. The faculties of Engineering, Science, Education, Business Administration and Social sciences from UNILAG and faculties of Law, College of Medicine, Arts, Management sciences and School of Communication were picked from LASU. In the selected faculties students were approached in the lecture auditoriums while waiting for lectures to start, immediately after the lectures and between lecture free periods to complete questionnaires. Four hundred questionnaires were distributed to students who were willing to participate in each faculty (4000 total). The questionnaire was pretested to improve reliability; the questions in it were not based entirely on previously validated questionnaires alone but also on statements made by people that had been interviewed on this topic in Nigeria.

Information was collected from each student using anonymous self-report questionnaires which were distributed and collected back by four trained research assistants. The students filled the questionnaires independently. The class representatives who are fellow students responsible for coordinating effective running of the class assisted in informing the students in the selected faculties about the research.

The questionnaire deployed was divided into three distinct sections.

Section A collected information on socio-demographic characteristics of the respondents. Section B contained fourteen questions geared towards assessing general knowledge regarding the same sex marriage prohibition law. Section C consisted of a fourteen item scale assessing the extent of homophobic attitudes toward MSM and a four item scale relating to provision of healthcare services for MSM. Responses were scored using a 4 point likert scale from zero to 3; higher scores on the scale represent a higher level of tolerance for LGB people. The maximum score for attitude towards MSM was 42, and the maximum score for attitude towards provision of healthcare services for MSM was 12. The statements in the attitudes section were derived from the existing national law and from frequent opinions expressed in the Nigerian media.

Ethical approval was obtained from the Health, Research and Ethics Committee of Lagos University Teaching Hospital (LUTH –ADM/DCST/HREC/APP/1887). Permission was also obtained from the Dean of Student Affairs, UNILAG and LASU. Participation in the study was voluntary and written informed consent was obtained from each student after explaining the nature and purpose of the study. Respondents were assured of the confidentiality of the information provided.

Data analysis

Four thousand questionnaires were distributed (400 per faculty) of which 3,537 were completed (88.4% response rate). Data entry and analysis was carried out using Epi info version 3.5.3 (Centers for Disease Control and Prevention, Atlanta, GA, USA) and IBM SPSS version 20 computer software (Released 2011. IBM SPSS Statistics for Windows, Version 20.0. IBM Corp.: Armonk, NY). Frequency tables were generated for categorical variables. Knowledge was reported as the proportion of responders who knew various components of the law. Bivariate analysis was carried out to explore associations between variables using Chi-square, with statistical significance set at $p < 0.05$. Medical and non-medical students' attitudes towards MSM and provision of healthcare services for the population group were compared.

Results

Characteristics of the sample

Table 1 displays the characteristics of the samples from the two universities and compares medical students with other students at the State University. Overall slightly more than half of the respondents in both universities were male (51.6%). A slightly higher proportion of the undergraduates in the State University were female (49%) compared to those in the Federal University (47.0%). More than three quarters of the respondents were young undergraduates less than twenty five years of age (79.1%). The State University, however, had a significantly lower proportion of respondents in the 15-24 year age bracket compared to the Federal University (77.7% vs 84.0%, $p = 0.000$). Both universities were comprised essentially of unmarried young people. The state university had a higher population of Muslims compared to the federal university (39.6% vs 22.3%, $p < 0.001$). Only the state university had students in the sixth year of study representing about 1.4% of the total respondents. The study took place in the southwestern

part of Nigeria, home to the Yoruba ethnic group. It is, therefore, not surprising that over three quarters of the respondents are from this group. However, because of the quota system used in federal institutions, the federal university had a significantly higher proportion of other tribes (27.3% vs 17.4%, $p < 0.001$).

Medical students were only surveyed at the state university and represented 20% of responders from that institution. A statistically significant proportion of the medical students in this institution were males (57.7% vs 49.3%, $p = 0.004$) compared to respondents from other faculties. Compared to their medical counterparts, a higher proportion of the non-medical students were less than twenty five years of age (81.6% vs 61.4%). However, a statistically significant higher proportion of the medical students were from the Yoruba ethnic group (92.5% vs 80.2%, $p < 0.001$) and in the sixth year of study (9.9% vs 0.8%, $p < 0.001$). In terms of religion and marital status there was no statistically significant difference between the medical and non-medical students in the state university. (table 1)

Knowledge of the Same-sex marriage prohibition law

All of the respondents were aware of the anti-same-sex marriage prohibition law. With regards to specific components of the law, about ninety percent knew that civil unions cannot be solemnized in a church, mosque or any other place of worship. The same proportion of respondents knew the legal ramifications for individuals. These individuals face prison sentences of 14 or more years. A lower proportion (57.9%) knew that anybody who supports the registration, operation and sustenance of LGB organizations in Nigeria, if convicted, faces the penalty of incarceration for 10 or more years. However (48.0%) had the misconception that the

law states that any healthcare service provider found guilty of providing health-related services or medical information to LGB individuals or community will go to prison for ten or more years.

Attitudes towards healthcare provision for MSM

The majority of the undergraduate students (56.8%) were of the opinion that doctors and other health workers should be compelled to report homosexuals who come in for treatment. 45.7% felt that doctors and other health workers should be compelled to give priority to other groups before homosexuals if resources (drugs) are insufficient. Outright denial of healthcare services was supported by 37.6% while denial of HIV prevention services was supported by 32.5%.

Compared to undergraduates from other faculties, a significantly lower proportion of the medical students exhibited intolerance towards provision of healthcare services for MSM. Less than a quarter (23.7%) agreed with the statement that healthcare providers should not provide services to MSM and 18.2% of medical students agreed that MSM should not have access to HIV prevention services compared to 38.7% and 34.1% of students from other faculties respectively ($p < 0.001$). Table 2

A lower proportion of the medical students supported the statement that doctors and other healthcare workers should be compelled to give priority to other groups before MSM (29.4% of medical vs 47.2% of students from other faculties), and a statistically significant difference was observed between the two groups of students ($p < 0.001$). The medical students were less homophobic in attitude. The homophobic statement with the highest support across both medical and non-medical students was that doctors and healthcare workers should be compelled to report MSM who come to access treatment (48.1% of medical vs 57.4% of students from other faculties, $p < 0.001$). Table 2

Attitudes towards MSM

The majority of the undergraduates agreed with the homophobic statements that homosexual acts are unnatural and should be prevented (79.7%) and that public show of love between persons of the same sex is unpleasant (77.9%). They also held the opinion that homosexuality is alien to Nigerian culture and so should not be accepted (84.6%) and that MSM should go for 'correctional' therapy (69.8%). Table 3

With regards to violence and social exclusion of MSM, less than a third agreed that MSM should be sexually (23.4%), psychologically (29.3%), or physically abused (24.0%). A quarter of the students were in support of rejection by friends and family members on the basis of sexual orientation (25.9%). Exclusion of MSM from the workplace was supported by a high proportion of respondents (40.9%). A low proportion (19.9%) were in support of MSM being denied accommodation and, thereby, being excluded from communities. Table 3

Support for human rights violation of MSM was indicated by a substantial proportion of the students; 27.7% of the respondents supported the statement that gays should either be sacked or not employed at all. About a third of the students agreed that MSM should be expelled from school based on social orientation (33.9%) and they should be treated with less priority than their heterosexual counterparts (32.4%). Another 18.5% supported the ejection of MSM from their residence. Table 3

Discussion

Acts of abuse including murder, rape, physical attacks, torture and arbitrary detention against MSM sexual minorities have been recorded in Nigeria.^{23,37} This escalated following the passage of the same sex marriage prohibition law. Media reports in Nigeria including live interviews and

written stories in newspapers have portrayed a very homophobic environment not only for same sex marriage but any form of same sex relationship. About a quarter of the undergraduates in our study support acts of abuse and human rights violation of MSM. In view of this, the environment can be unsafe for members of a sexual minority group. Evidence exists linking homophobia to hate crimes in the USA.³⁸

Reports from human rights organizations and organizations providing HIV-related services to MSM from various states in Nigeria described increased physical violence and other acts of aggression (stripped naked) including mob actions against LGB individuals by communities who claim they were “cleaning” their neighborhood of “gays” following the passage of the Same sex marriage prohibition law.³⁹ The chairman of a Sharia Islamic court in one of the northern states admitted in a media interview that eleven men were arrested on account of being members of a gay organization. Some states in the northern part of Nigeria enforce the Sharia Islamic law.⁴⁰ In statements released from leaders of LGB organizations, men suspected to be gay or belonging to gay organizations recount acts of torture and human rights violation.⁴¹

Our survey shows that not all members of this (educated and young) population hold homophobic beliefs. The negative attitude of a large proportion of the medical students in this study towards provision of healthcare services to MSM could lead to unethical practices, for example, reporting patients who come to access healthcare to law enforcement agents, which is a breach of doctor-patient confidentiality. This could, however, be due to the misconception by this group of educated populace that the law stipulates a jail sentence for healthcare workers who provide such services. Our study showed that a higher proportion of medical students support provision of services to the LGB population. However, a significant minority agreed that the services should not be provided to MSM (23.7%) and 18.2% agreed that MSM should not have

access to HIV prevention services. If these attitudes translate to healthcare service provision, then it is unlikely that Nigeria will be able to achieve the UNAIDS target of 90-90-90 (90% of people who have HIV knowing their status, 90% of those with HIV receiving sustained anti-retroviral therapy, and 90% receiving anti-retroviral therapy having viral suppression).⁴² Within the prevailing homophobic culture of Nigeria, it is difficult to identify a solution to address the homophobic attitudes of some medical students. In some countries applicants to medicine are assessed on a number of criteria including ethics.⁴³ Medical students are taught ethics, but the effectiveness in changing attitudes is not established.⁴⁴

The implication of promulgating laws against sexual minorities on access and utilization of healthcare services has been identified and raised in the past. Doctors and organizations wrote an open letter to the president of Uganda highlighting the implications of a bill which proposes life imprisonment for gays in 2014. One of the issues raised is that the bill conflicts with a health worker's basic ethical obligation not to discriminate in the provision of medical services and would create a culture of fear of arrest and imprisonment among service providers.^{45,46} Even in countries that have laws protecting the rights of the LGB population, namely Britain, USA and South Africa, reports of negative experiences in interactions with healthcare providers when accessing healthcare services have been documented.^{8,47-49}

Discrimination and societal stigma, adding to individual level behaviors, have resulted in the LGB population having a disproportionately high burden of some diseases and health-related conditions.⁸ In spite of this high burden, the attitude among a high proportion of this study population is that healthcare services should be denied. This will further increase health inequity. Societal stigma enacted at the national, community, school, healthcare and interpersonal level,

apart from being a predisposing factor to health inequity for LGB individuals, also acts as a barrier sustaining the poor health status of this marginalized population.⁵⁰

Limitations

Our study has some limitations. Only two universities were used in this study and they were not randomly selected hence the findings cannot be generalized to the whole country. In particular, Lagos is less religiously conservative than other parts of the country. Even though the questionnaire was pretested to improve reliability, the questions in it were not based entirely on previously validated questionnaires alone but also on statements made by people that had been interviewed on this topic in Nigeria. Because of the sensitive nature of the research, respondents were recruited based on willingness to participate. This could have introduced bias into the selection of respondents. Even though the questionnaires were anonymous, they were completed in the presence of their peers, which may have led to some social acceptability bias in response. Though the original aim of the research was to explore attitudes of all students, we undertook a post-hoc analysis comparing the attitudes of non-medical with medical students. Ideally, for this purpose we would have surveyed medical student in both universities, but we believe that the reported analysis has value, and enhances the relevance of the study for health policy and planning.

Conclusion

A very high proportion of the undergraduate students had negative attitudes towards MSM and provision of healthcare services to MSM in Nigeria. Even though the findings from this study should be considered preliminary, we provide an insight into the homophobic campus environment in Lagos in 2014. The medical students in this study were less homophobic

compared to their non-medical counterparts, but a significant minority did report negative attitudes, which if translated into lack of service provision, will result in barriers to health care provision and uptake by MSM. The attitudes of the students cannot be explained by social class because the two public institutions used for this study are government funded and provide access to university education for all socioeconomic class and ethnic groups within the country. The ambiguity in the same sex marriage prohibition law with respect to the role of healthcare workers in providing services needs to be clarified urgently to prevent health inequity and worsening of the country's health indicators.

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References

1. Weech-Maldonado R, Elliott MN, Adams JL, et al.: Do racial/ethnic disparities in quality and patient experience within Medicare plans generalize across measures and racial/ethnic groups? *Health Serv Res* 2015;50:1829-1849.

2. Tapp C, Milloy MJ, Kerr T, et al.: Female gender predicts lower access and adherence to antiretroviral therapy in a setting of free healthcare. *BMC Infect Dis* 2011;11:86.
3. Elliott MN, Kanouse DE, Burkhart Q, et al.: Sexual minorities in England have poorer health and worse health care experiences: A national survey. *J Gen Intern Med* 2015;30:9-16.
4. Daulaire N: The importance of LGBT health on a global scale. *LGBT Health* 2014;1:8-9.
5. Amnesty International. Africa: Making love a crime: Criminalization of same-sex conduct in Sub-Saharan Africa. June 25, 2013. Available at <https://www.amnesty.org/en/documents/AFR01/001/2013/en/> Accessed February 22, 2015.
6. World Health Organization. Global Update on the Health Sector Response to HIV, 2014: Executive Summary. Available at www.who.int/hiv/pub/progressreports/update2014-executive-summary/en/ Accessed February 22, 2015
7. Poteat T, Diouf D, Drame FM, et al.: HIV risk among MSM in Senegal: A qualitative rapid assessment of the impact of enforcing laws that criminalize same sex practices. *PLOS One* 2011;6:e28760.
8. Trust for America's Health. Addressing the Social Determinants of Health Inequities Among Gay Men and Other Men Who Have Sex With Men in the United States. Issue report: December 2014. Available at <http://healthyamericans.org/assets/files/TFAH-2014-MSM-Report-final.pdf> Accessed March 9, 2015.
9. Eliason MJ, Schope RD: Does "don't ask, don't tell" apply to health care? Lesbian, gay and bisexual people's disclosure to health care providers. *J Gay Lesbian Med Assoc* 2001;5:125-134.

10. Corliss HL, Shackle MD, Moyer MB: Research, curricula, and resources related to lesbian, gay, bisexual and transgender health in US schools of public health *Am J Public Health* 2007;97:1023-1027.
11. UNAIDS: The Gap Report. 2014. Available at http://www.unaids.org/sites/default/files/media_asset/UNAIDS_Gap_report_en.pdf Accessed April 17, 2015.
12. HIV Scotland: Regional Statistics. 2014. Available at <http://www.hivscotland.com/info-centre/data-and-research/regional-statistics/> Accessed March 21, 2015.
13. Centers for Disease Control and Prevention. HIV Incidence. 2014. Available at <http://www.cdc.gov/hiv/statistics/surveillance/incidence.html> Accessed April 20, 2015.
14. Yin Z, Brown AE, Hughes G, et al.: HIV in the United Kingdom: 2014 Report. Published November 2014: Data to end December 2013. Public Health England: London, UK.
15. Joote S, Naidoo D, Simbayi LC, et al.: Three cities study: High levels of HIV infection found among men who have sex with men. The Human Sciences Research Council: Pretoria, South Africa, 2014.
16. Federal Ministry of Health (FMOH). Nigeria Integrated Biological and Behavioral Surveillance Survey (IBBSS) 2010. FMOH: Abuja, Nigeria, 2010:44-48.
17. Coker TR, Austin SB, Shuster MA: Health and healthcare for lesbian, gay, bisexual, and transgender youth: Reducing disparities through research, education, and practice *J Adolesc Health* 2009;45:213–215
18. The Scottish Government: Riaghaltas na h-Aba: Summary: Sexual Orientation. Available at <http://www.gov.scot/Topics/People/Equality/Equalities/DataGrid/SexualOrientation> Accessed March 30, 2015.

19. Pew Research Center: The Global Divide on Homosexuality: Greater Acceptance in More Secular and Affluent Countries. June 4, 2013; Updated May 27, 2014. Available at <http://www.pewglobal.org/files/2014/05/Pew-Global-Attitudes-Homosexuality-Report-REVISED-MAY-27-2014.pdf> Accessed March 30, 2015.
20. Dienye VU: The educational and social implications of sexuality and sex education in Nigerian schools. *African Journal of Social Sciences* 2011;1:11-19.
21. Penal Code Act Chapter 53 LFN (Abuja). Available at <https://jewngr.files.wordpress.com/2013/05/penal-code-act.pdf> Accessed February 2, 2015.
22. Nigeria Criminal Code Act. Available at www.refworld.org/pdfid/49997ade1a.pdf Accessed February 2, 2015.
23. Vanguard Newspaper. The faces of Nigerian gays. December 1, 2012. Available at <http://www.vanguardngr.com/2012/12/the-faces-of-nigerian-gays/> Accessed March 28, 2015.
24. Sekoni AO, Ayoola OO, Somefun EO: Experiences of social oppression among MSM in a cosmopolitan city in Nigeria. *HIV AIDS (Auckl)* 2014;7: 21-27.
25. National Assembly of the Federal Republic of Nigeria. Same Sex Marriage (Prohibition) Act, 2013. Available at [http://www.placng.org/new/laws/Same%20Sex%20Marriage%20\(Prohibition\)%20Act,%202013.pdf](http://www.placng.org/new/laws/Same%20Sex%20Marriage%20(Prohibition)%20Act,%202013.pdf) Accessed May 6, 2014.
26. Willams CJ: Nigerian anti-gay law prompts arrests, international condemnation. *Los Angeles Times*. January 14, 2014. Available at <http://www.latimes.com/world/worldnow/la-fg-wn-nigeria-anti-gay-law-20140114-story.html> Accessed September 9, 2015.
27. The Lawyers Chronicle: Anti-gay law in Nigeria. February 20, 2014. Available at <http://thelawyerschronicle.com/anti-gay-law-in-nigeria/> Accessed September 9, 2015.

28. Nowergian Council for Africa. The human security implications of anti-gay law on sexual minority in Nigeria. June 24, 2014. Available at <http://www.afrika.no/Detailed/25194.html> Accessed September 9, 2015.
29. Kmietowicz Z: Agencies condemn new Nigerian law that may deny gay people access to HIV services. *BMJ* 2014;348:g258.
30. Sheehya M, Tun W, Vu L, et al.: High levels of bisexual behavior and factors associated with bisexual behavior among men having sex with men (MSM) in Nigeria. *AIDS Care* 2014;26:116-122.
31. Adebajo SB, Eluwa GI, Allman D, et al.: Prevalence of internalized homophobia and HIV associated risks among men who have sex with men in Nigeria. *Afr J Reprod Health* 2012;16:21-28.
32. Vu L, Adebajo S, Tun W, et al.: High HIV prevalence among men who have sex with men in Nigeria: Implications for combination prevention *J Acquir Immune Defic Syndr* 2013;63:221-227.
33. Beauchamp TL, Childress JF: *Principles of biomedical ethics*. 5th edition. New York: Oxford University Press; 2001.
34. University of Lagos. "Welcome Address". Available at www.unilag.edu.ng/pages.php?page=welcoming-address Accessed March 30, 2014.
35. Lagos State University Homepage. Available at www.lasu.edu.ng Accessed March 30, 2014.
36. Araoye M: *Research methodology with statistics for health and social sciences*. Ilorin, Nigeria: Nathadex Publishers, 2003:119.

37. Nigeria News. Mob attacks people to rid their neighborhood of gay people. Available at <http://news2.onlinenigeria.com/headline/334986-mob-attacks-people-to-cleanse-their-neighborhood-of-gay-people.html> Accessed July 6, 2014.
38. FBI National Press Office. FBI Releases 2010 Hate Crime Statistics. November 14, 2011. Available at <http://www.fbi.gov/news/pressrel/press-releases/fbi-releases-2010-hate-crime-statistics> Accessed July 8, 2014.
39. Faul M: Why it's a crime to be gay in Nigeria. USA Today. January 14, 2014. Available at <http://www.usatoday.com/story/news/world/2014/01/14/dozens-arrested-for-being-gay-in-north-nigeria/4471391/> Accessed April 3, 2015.
40. Harnischfeger J: Democratization and Islamic Law: The Sharia Conflict in Nigeria. Frankfurt/New York: Campus Verlag, 2008.
41. Makanjuola O: The Initiative for Equality in Nigeria (TIERS). Available at <http://www.theinitiativeforequalrights.org/> Accessed May 3, 2015.
42. UNAIDS 90-90-90 report: an ambitious treatment target to end the AIDS epidemic available http://www.unaids.org/sites/default/files/media_asset/90-90-90_en_0.pdf Accessed May 3 2015
43. University of Birmingham. MBChB Application Guidance. Available at <http://www.birmingham.ac.uk/Documents/college-mds/course-flyers/Medicine-Brochure-2013-2014.pdf> Accessed September 28, 2015.
44. Asghari F, Samadi A, Dormohammadi T: Effectiveness of the course of medical ethics for undergraduate medical students. J Med Ethics Hist Med 2009;2:7.
45. Bhalerao R: The Uganda Anti-Homosexuality Act, 2014: A Political Spectacle. Leiden Law Blog. October 24, 2014. Available at <http://leidenlawblog.nl/articles/the-ugandan-anti-homosexuality-act-2014-a-political-spectacle>. Accessed May 3, 2015.

46. Barton A: Anti-homosexuality is a threat to public health, doctors tell Museveni in full page Uganda newspaper ad. Science Speaks. February 6, 2014. Available at <http://sciencespeaksblog.org/2014/02/06/anti-homosexuality-bill-is-a-threat-to-public-health-doctors-tell-museveni-in-full-page-uganda-newspaper-ad/> Accessed April 3, 2015.
47. Guasp A: Stonewall's Gay and Bisexual Men's Health Survey 2013. Available at https://www.stonewall.org.uk/sites/default/files/Gay_and_Bisexual_Men_s_Health_Survey_2013_.pdf Accessed May 6, 2015.
48. Rispel LC, Metcalf CA, Cloete A, et al.: You become afraid to tell them that you are gay: Health service utilization by men who have sex with men in South African cities. *J Public Health Policy* 2011;32:S137–S151.
49. Eliason MJ, Dibble SL, Patricia A, Robertson PA: Lesbian, Gay, Bisexual, and Transgender (LGBT) physicians' experiences in the workplace. *J Homosex* 2011;58:1355-1371.
50. Centers for Disease Control and Prevention: Gay and Bisexual Men's Health: Stigma and Discrimination. Available at <http://www.cdc.gov/msmhealth/stigma-and-discrimination.htm> Accessed May 15, 2015.

Table 1 – Socio demographic characteristics of undergraduates

Variable	State Frequency (%)	Federal Frequency (%)	State Medical students Frequency (%)	State Non- Medical students Frequency (%)
Sex (n=3517)				
Female	940 (49.1)	752 (47.0)	157 (42.3)	783 (50.7)
Male	976 (50.9)	849 (53.0)	214 (57.7)	762 (49.3)
Total	1916	1601	371	1545
	X ² =2.41, p=2.414		X ² =8.37, p=0.004	
Age (years) [n=3473]				
15-24	1479 (77.7)	1318 (84.0)	229 (61.4)	1250 (81.6)
≥25	425 (22.3)	251 (16.0)	144 (38.6)	281 (18.4)
Total	1904	1569	373	1531
	X ² =27.38, p<0.001		X ² =70.95, p<0.001	
Religion (n=3492)				
Christianity	1152 (60.4)	1233 (77.7)	214 (57.7)	938 (61.1)
Islam	754 (39.6)	353 (22.3)	157 (42.3)	597 (38.9)
Total	1906	1586	371	1535
	X ² =119.69, p<0.001		X ² =1.47, p=0.226	
Ethnicity (n=3397)				
Yoruba	1571 (82.6)	1086 (72.7)	335 (92.5)	1236 (80.2)
Others	332 (17.4)	408 (27.3)	27 (7.5)	305 (19.8)
Total	1903	1494	362	1541
	X ² =47.78, p<0.001		X ² =30.96, p<0.001	

Marital status (n=3501)				
Never Married	1763 (92.6)	1499 (93.9)	347 (94.0)	1416 (92.2)
Married/Separated/Divorced	141 (7.4)	98 (6.1)	22 (6.0)	119 (7.8)
Total	1904	1597	369	1535
	$X^2=2.20, p=0.138$		$X^2=1.39, p=0.238$	
Year of Study (n=3519)				
100 (1 st year)	361 (18.8)	264 (16.5)	14 (3.8)	347 (22.5)
200 (2 nd year)	295 (15.4)	493 (30.8)	58 (15.5)	237 (15.4)
300 (3 rd Year)	543 (28.3)	518 (32.2)	49 (13.1)	494 (32.0)
400 (4 th year)	479 (25.0)	247 (15.4)	64 (17.2)	415 (26.9)
500 (5 th year)	188 (9.8)	81 (5.1)	151 (40.5)	37 (2.4)
600 (6 th year)	50 (2.6)	0 (0.0)	37 (9.9)	13 (0.8)
Total	1916	1603	373	1543
	$X^2=205.88, p<0.001$		$X^2=644.01, p<0.001$	

Table 2 – Attitude of Medical and Non-Medical Faculties toward Provision of Healthcare Services to MSM

Variable	Agree Frequency (%)	Indifferent Frequency (%)	Disagree Frequency (%)	Total
MSM should not have access to HIV prevention services (n=3311)				
Other Faculties	1007 (34.1)	631 (21.4)	1315 (44.5)	2953
Medical students	65 (18.2)	58 (16.2)	235 (65.6)	358
$X^2=59.57, P<0.001$				
Doctors and other health workers should be compelled to give priority to other groups before MSM are considered if resources are insufficient (n=3304)				
Other Faculties	1390 (47.2)	675 (22.9)	882 (29.9)	2947
Medical students	105 (29.4)	100 (28.0)	152 (42.6)	357
$X^2=42.00, P<0.001$				
Doctors and other health workers should				

be compelled to report MSM who come in for treatment (n=3309)				
Other Faculties	1695 (57.4)	616 (20.9)	641 (21.7)	2952
Medical students	172 (48.1)	67 (18.8)	118 (33.1)	357
$X^2=23.35, P<0.001$				
Health care service providers should not provide services to MSM (n=3303)				
Other Faculties	1140 (38.7)	554 (18.8)	1254 (42.5)	2948
Medical students	84 (23.7)	61 (17.2)	210 (59.1)	355
$X^2=39.44, P<0.001$				
Overall Mean Attitude Score	7.73±2.55			
Mean Attitude Score Medical Undergraduates	8.78±2.42			
Mean Attitude Score Non-Medical Undergraduates	7.61±2.54			
t=174.642, p=0.000				

Table 3 – Attitude towards MSM

Variable	Agree Frequency (%)	Indifferent Frequency (%)	Disagree Frequency (%)
Homophobia			
Homosexuality is alien to our culture and so should not be accepted (n=3308)	2801 (84.6)	321 (9.8)	186 (5.6)
MSM should submit themselves for correctional therapy or rehabilitation (n=3306)	2306 (69.8)	524 (15.8)	476 (14.4)
Homosexual acts are unnatural and should be prevented (n=3311)	2639 (79.7)	417 (12.6)	255 (7.7)
A public show of love between persons of the same sex is unpleasant (n=3311)	2580 (77.9)	433 (13.1)	298 (9.0)
Abuse			
MSM should be raped to cure them of their homosexuality (n=3305)	776 (23.4)	567 (17.2)	1962 (59.4)
MSM should be abused verbally (n=3311)	970 (29.3)	581 (17.5)	1760 (53.2)
MSM should be abused physically (n=3311)	794 (24.0)	527 (15.9)	1990 (60.1)
Social exclusion			

MSM should be rejected by family and friends (n=3311)	856 (25.9)	657 (19.8)	1798 (54.3)
MSM should be denied accommodation (n=3295)	656 (19.9)	746 (22.6)	1893 (57.5)
Workplaces should not employ MSM (n=3291)	1348 (40.9)	714 (21.7)	1229 (37.4)
Human Right			
MSM should be sacked from work places (n=3301)	916 (27.7)	782 (23.7)	1603 (48.6)
MSM should be expelled from school (n=3307)	1121 (33.9)	593 (17.9)	1593 (48.2)
MSM should be ejected from their houses (n=3302)	609 (18.5)	691 (20.9)	2002 (60.6)
MSM should be treated with less priority than heterosexuals (n=3296)	1068 (32.4)	815 (24.7)	1413 (42.9)