Religiosity and Conversion Therapy is associated with Psychosocial Health Problems among Sexual Minority Men (SMM) in Nigeria

Abstract

We investigated the associations between social marginalization, psychosocial health, and religiosity among sexual minority men (SMM) in Nigeria (N=406). We conducted bivariate and multivariable logistic regression. Factors associated with reporting a history of conversion therapy at a religious institution were: being HIV positive, having depressive symptoms, reporting suicide thoughts, and reporting inability to access medical care. Factors associated with increased odds of agreeing that sex between two men was a sin were: residing in Plateau, being Muslim, and higher levels of internalized homophobia. Our findings support the need for LGBT-affirming religious doctrine, which has implications for the health of LGBT communities.

Keywords: Religiosity, Nigeria, Sexual minority men, Psychosocial health

Introduction

Mental health problems, such as anxiety, depression, and suicidality have been demonstrated to be high among African sexual minority men (SMM) (Ahaneku et al., 2016; Stahlman et al., 2016; Stoloff et al., 2013). In Nigeria, several studies have shown a heavy burden of negative psychological health among SMM. A quantitative study of SMM living in Lagos and Abuja, Nigeria found that 29% of participants reported a history of suicidality (Rodriguez-Hart et al., 2018). The same study also found a dose–response relationship between experiences of felt stigma, enacted stigma, and suicidality, with higher levels of stigma being associated with higher prevalence of suicidality (Rodriguez-Hart et al., 2018). A similar study found that compared to heterosexuals, Nigerian SMM were more likely to experience depressive symptoms, parental neglect and suicidality (Oginni et al., 2018). Lastly, a recently published study of SMM in Lagos, Nigeria found that 23% of the sample reported clinically significant depressive symptoms, 22% had a history of suicidality, 11% had attempted suicide in the past, and 14% had moderately severe or severe anxiety (Ogunbajo, Oginni, et al., 2020). All in all, various empirical studies have shown that SMM in Nigeria have high prevalence of psychosocial health problems and more work is needed to explore the possible root causes of these issues among this vulnerable population.

The minority stress model postulates that health disparities experienced by sexual minority communities is partially attributable to heightened levels of stress as a result of experiences of stigma, violence, heteronormativity and societal prejudice due to their actual or perceived sexual orientation (Meyer, 2003). Nigeria is a deeply religious country with 91% of its' population—of about 200 million—reporting attending religious services and 95% praying regularly (Chiluwa, 2008, 2012). According to a 2019 report from the World Factbook by the

Central Intelligence Agency, a breakdown of religious affiliation in Nigeria was 52% Muslim, 47% Christian, and 1% traditional religions (such as the worship of gods like Ogun, Osun, etc.). Religious affiliation in Nigeria is geographically concentrated, with Christianity being predominant in the southern region of the country and Islam being predominant in the northern region (Johnstone & Mandryk, 2001). Research has shown that religious affiliation and religiosity can strongly influences attitudes and views towards controversial societal issues such as homosexuality. A study, which utilized data from the Human Beliefs and Values surveys, explored attitudes towards homosexuality by religion of participants across 16 countries (including Nigeria, Ghana, Pakistan, Malaysia, and India) found that Catholics, Protestants, Muslims in Nigeria ranked in the second or third least tolerant of homosexuality among all the countries assessed (McGee, 2016). Another study found that the introduction and enactment of anti-homosexual legislation in Uganda and Nigeria were largely driven by increasing religious conservatism in these countries (Amusan et al., 2019). These findings suggest that religion plays a significant role in societal view on homosexuality, which has implications for how sexual minority communities are treated in a country such as Nigeria. Consistent with the minority stress model, exposure to negative religious about homosexuality might heighten experiences of stress and result in negative health outcomes among sexual minority communities. However, there is no published literature on religiosity and religious beliefs among sexual minority populations in sub-Saharan Africa.

Several studies have demonstrated the importance of religion among sexual minority men (SMM), particularly African Americans, who are more likely than other racial groups to report a strong affiliation with religious institutions (Balaji et al., 2012; Dangerfield et al., 2019). According to Dangerfield et al., 2019, cognitive dissonance and intersectionality are relevant

frameworks to explore the impact of religion on the lived experiences of African American SMM. Historically, Christianity has been an integral institution within the African American community, and relationships with fellow churchgoers could serve as a source of social support and belongingness for African American SMM. Research has shown that many African American SMM use religious and spiritual practices to cope with daily social stressors (Dangerfield et al., 2019). This protective effect has been demonstrated among Nigerian SMM whereby religiosity was associated with better quality of life and, along with other adaptive coping strategies, attenuated the association between internalized homophobia and quality of life (Oginni et al., 2020). However, many SMM struggle with balancing their religious/spiritual beliefs with their same-sex attractions, sexual orientation, and sexual practices. Specifically, (Dangerfield et al., 2019) found that African American SMM reported struggling with feelings of internalized homonegativity due to being raised in the church and being constantly confronted with negative messages about same-gender attractions. This demonstrates the complexities and complications that comes with balancing one's religious identity with being part of a sexual minority group. Internalized homophobia and other minority stress factors (stressful experiences due to sexual minority status e.g., discrimination, concealment and anticipation of rejection) are in turn associated with psychological distress (Feinstein et al., 2020; Meyer, 2003). This raises the possibility that while religiosity may facilitate well-being in the general population (including SMM) by helping to cope with adversity, it may also increase psychological distress among SMM which can worsen mental health.

Prior studies have explored the influences of religiosity on psychosocial health—mainly among heterosexual populations—and have generally found mixed results. Some research has shown religiosity to be associated with positive psychosocial health outcomes in the general

population including positive affect, higher quality of life, and greater life satisfaction (Abu-Raiya, 2013; Shah et al., 2011). Other studies have shown religiosity to be linked to poorer mental health outcomes (Jonathan M Lassiter et al., 2019; Olson et al., 2012). In line with the minority stress model, the potential negative psychosocial health effects of religiosity may be exacerbated among SMM due to the potential internalization of negative messages and sentiments related to same-sex attraction propagated that might be propagated by religious leaders and community members, specifically in religious institutions that are unaccepting of sexual minority communities. Prior studies have shown homonegative religious experiences to be associated with internalized homophobia, lower self-esteem, and higher stress over same-gender attractions among sexual minority populations (Barnes & Meyer, 2012; Hamblin & Gross, 2014; Lassiter & Parsons, 2016; Shilo & Savaya, 2012; Sowe et al., 2014). A study that explored the associations between disclosure of sexual orientation and homonegative religious messages among SMM in the United States found that disclosing one's sexual orientation to church members was significantly associated with being exposed to homonegative religious messages (Jonathan Mathias Lassiter et al., 2019). Another study found that religious coping was associated with higher levels of depressive symptoms and lower levels of resilience and social support (Jonathan M Lassiter et al., 2019). These findings demonstrate the duality in the impact of religion—both positive and negative—on mental health outcomes of SMM. Additionally, sexual orientation conversion therapy— any of several dangerous and discredited practices aimed at changing an individual's sexual orientation or gender identity—has been perpetrated by various religious institutions (Haldeman, 1994, 1996) and demonstrated to have adverse effects on the mental health of SMM (Higbee et al., 2020; Johnston & Jenkins, 2006; S. Meanley et al., 2020).

While several studies have investigated the effects of religiosity on the psychosocial health of SMM, a vast majority of this work has been conducted in Western countries, especially in the United States. Considering high levels of religiosity in sub-Saharan Africa and specifically Nigeria, it is significant that no known research study has explored the associations between religiosity, religious beliefs related to same-sex attraction, and psychosocial health outcomes among SMM in Africa. To fill this research gap, the current study investigated the associations between sociodemographic characteristics, social marginalization, psychosocial health, minority stress, healthcare access, religiosity and religious beliefs related to same-sex sexual attractions among SMM in Nigeria. Based on the minority stress model (Meyer, 2003) and prior literature (Jonathan M Lassiter et al., 2019), we hypothesized that higher levels of religious service attendance, a history of religious conversion therapy (defined as practices aimed at changing an individual's sexual orientation or gender identity), and endorsement of negative religious beliefs related to same-sex sexual attraction will be associated with poorer psychosocial health outcomes among SMM in Nigeria.

Methods

Participants and Study Procedures

Between March and June 2019, we recruited SMM from Abuja (n=107), Delta (n=102), Lagos (n=112), and Plateau (n=85), through partner community-based organizations (CBOs). Staff from each CBO disseminated information about the study—including the study phone number and email address—to potential participants during community outreach events. Interested individuals were screened for eligibility. Eligibility criteria were: 1) being 18 years of age or older; 2) current residence in 1 of 4 states (Abuja, Delta, Lagos or Plateau); 3) self-identify as a cisgender male (assigned male sex at birth and currently identify as male); and 4)

self-reported history of sex (oral or anal) with another male. Verbal informed consent was obtained from all participants prior to enrollment.

For the current study, we utilized a socioecological framework (Tudge et al., 2009) to inform the development of the quantitative questionnaire and data analysis. The socioecological framework posits that the individual exists within larger systems and these higher level systems directly influence individual-level attitudes, beliefs, and behavior. More specifically, we narrow down to use the mental stress model, to help in understanding the experiences of sexual minority men within Nigeria as it relates to their mental health outcomes. In this study, we developed a research instruments that would assess for predictors of religiosity and religious beliefs on the following levels of the socioecological framework: individual, interpersonal, community, and structural and the minority stress model.

Data collection occurred in the private offices of each CBO. Each participant completed the quantitative survey with the help of a trained research assistant. The survey took between 1 to 1.5 hours to complete. Participants were compensated with 4,000 Naira (equivalent to 10 US dollars) for their time. Additional details about study procedures and findings from other analyses on this data have been published elsewhere (Ogunbajo, Abubakari, et al., 2020; Ogunbajo et al., 2019; Ogunbajo, Iwuagwu, et al., 2020; Ogunbajo, Oginni, et al., 2020; Ogunbajo, Restar, et al., 2020) (Ogunbajo et al., 2019; Ogunbajo, Iwuagwu, et al., 2020; Ogunbajo, Oginni, et al., 2020; Ogunbajo, Restar, et al., 2020).

Measures

Demographics

We assessed age (categorized into 18-24 years, 25-29 years, or 30+ years), relationship status (single or not single), educational attainment (senior secondary school or lower, some

university or vocational school, university degree or higher, or other), sexual orientation (gay/homosexual, bisexual, straight/heterosexual, questioning, or other), religious affiliation (Christian, Muslim, or other), and HIV status (positive, negative, or unknown).

Social Marginalization

We assessed monthly income in Naira (₦0-₦10,000, ₦10,000-₦30,000, ₦30,000-₦50,000, ₦50,000-₦100,000, or ₦100,000 or more), employment status (employed or unemployed), Financial hardship was assessed by asking participants: "How difficult is it for you to meet monthly payment on bills (rent, electricity, transportation, food, etc.)?" and dichotomized into high financial hardship ('somewhat difficult,' 'very difficult,' 'extremely difficult') or low financial hardship ('not at all difficult,' 'not very difficult') (Tucker-Seeley et al., 2015).

Psychosocial Health

Depressive symptoms were assessed using the Center for Epidemiologic Studies Depression Scale (CES-D) (Eaton et al., 2004), a 20-item scale used to screen for clinically significant depressive symptoms (α=0.93 in the present study) (Ogunbajo, Iwuagwu, et al., 2020). The items were scored on a 4-point scale from 0-3, with higher scores indicating more severe depressive symptoms. Scores were summed, responses were dichotomized into depressive symptoms (16 or higher) and no depressive symptoms (15 or lower).

History of suicide thoughts was assessed by asking: "Have you ever thought about ending your life or committing suicide?" with response options "yes" vs. "no". History of suicide attempt was assessed by asking: "Have you ever attempted to end your life?" with response options "yes" vs. "no".

Anxiety was assessed using the Generalized Anxiety Disorder 7-item (GAD-7) scale (Spitzer et al., 2006), a 7-item validated scale that measures recent symptoms of generalized anxiety disorder scored on a 4-point Likert scale. Scores were classified into mild (0–5), moderate (6–10), and moderately severe/severe (10 and above).

Loneliness was assessed using the UCLA Loneliness Scale (Hays & DiMatteo, 1987), an 8-item validated scale which measures various aspects of loneliness on a 4-point Likert scale ranging from 1-4. Scores were summed and higher scores indicated greater perceived loneliness

Self-esteem was assessed using the Rosenberg Self-Esteem Scale (Rosenberg, 2015), a 10-item validated scale that measures both negative and positive feelings about one's self. It is scored on a 4-point Likert scale, with a higher score indicating higher levels of self-esteem.

Minority Stress

Internalized homophobia was assessed using 3 items and scored on a 5-point Likert scale ranging from 1 "Strongly Disagree to 5 "Strongly Agree" with a higher score indicating higher levels of internalized homophobia. A sample question was: "If I could change from being LGBT to be straight, I would." The items had adequate internal consistency and were utilized as a composite score, with a higher score indicating higher levels of internalized homophobia.

Perceived social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988), a 12-item validated scale to measure perceived social support from friends, family, and significant other. Each of the items are scored on a 7-point Likert scale. Scores were summed, and higher scores indicated greater perceived social support.

Community connectedness, rejection anticipation, and identity concealment were assessed using a modified LGBT Minority Stress Measure (Ogunbajo, Iwuagwu, et al., 2020;

Outland, 2016), a 50-item validated scale to measure minority stress experiences among LGBT individuals. The community connectedness subscale contained five items which were each scored on a 5-point Likert scale with a higher score indicating higher levels of community connectedness. The rejection anticipation subscale contained four items which were scored on a 5-point Likert scale with a higher score indicating higher levels of rejection anticipation. The identity concealment subscale contained four items which were each scored on a 5-point Likert scale with a higher score indicating higher levels of identity concealment.

Healthcare Access

Participants were asked whether or not they had a current primary care provider, health insurance, and whether they had been unable to access healthcare in the last year due to costs. Responses to all questions were "yes"/ "no".

Religiosity, Conversion Therapy, and negative religious beliefs related to same-sex sexual attraction

To assess religiosity, we asked participants about frequency of religious service attendance: "How often to you attend religious services (church, mosque, etc.)? Responses were categorized into "once a month or less", "once a week", or "more than once a week". To assess experience of conversion therapy in a religious setting we asked: "I have been forced to participate in a prayer service or traditional ceremony to turn me straight?' with response options "yes", "no", or "not sure".

To assess endorsement of negative religious beliefs related to same-sex sexual attraction, we asked participants two questions. We asked: "I believe sex between two men is a sin." Response were categorized into "Strongly Disagree/Disagree", "Neither Disagree nor agree", or

"Strongly Agree/Agree". We also asked: "I pray to God to make me straight" with response options "yes" vs. "no".

Statistical Analysis

We assessed the distribution (percentages) of all variables by the different domains of religiosity, conversion therapy, and religious beliefs related to sexuality. Next, bivariate logistic regression (binary and ordinal) analyses were used to examine associations between sociodemographic characteristics, social marginalization, psychosocial health, minority stress, healthcare asses and religiosity factors. Variables that were significant at $p<0.05$ in the bivariate models were retained in the multivariable model assessing these outcomes. Data were analyzed using SAS version 9.4 (Cary, NC).

Results

Sample Demographics

Sample demographic characteristics are presented in Table 1. The average age was 29.2 years [(standard deviation (SD)=5.8; range (18-60)], majority (60%) identified as bisexual, and 63% were single. More than a quarter (27%) had a university degree or higher and one-fourth of the sample were HIV positive. While 80% of the sample reported being employed, 61% had high financial hardship.

Religiosity, Conversion Therapy, and negative religious beliefs related to same-sex sexual attraction

A majority (63%) of the sample identified as Christian, 29% were Muslim and 8% identified their religious affiliation as "other". More than half (52%) reported attending religious services more than once a week, 27% attended once a week, and 21% attended once a month or

less. Less than a quarter (17%) of participants reported a history of being forced to participate in conversion therapy at a religious institution.

Almost half (44%) of participants disagreed or strongly disagreed with the statement that sex between two men being a sin, 18% neither disagreed nor agreed, and 39% agreed or strongly agreed. More than half (52%) of participants reported praying to God to make them heterosexual.

Unadjusted associations with Religiosity, Conversion Therapy, and negative religious beliefs related to same-sex sexual attraction

Factors associated with increased odds of higher frequency of religious service attendance were: residing in Plateau state [odds ratio (OR) 8.63; 95% confidence interval (CI): 3.63 to 19.3] compared to residing in Abuja, being Muslim (OR 8.48; 95% CI: 4.85 to 14.84) compared to being Christian, higher levels of internalized homophobia (OR 1.12; 95% CI: 1.06 to 1.19), and social support (OR 1.02, 95% CI: 1.01 to 1.04). Factors associated with decreased odds of higher frequency of religious service attendance were: residing in Lagos state (OR 0.40; 95% CI: 0.24 to 0.67) compared to living in Abuja, having a university degree or higher (OR 0.48; 95% CI: 0.31 to 0.76) compared to a senior secondary school or lower educational attainment, reporting an income of ₦100,000 or more (OR 0.34; 95% CI: 0.18 to 0.64) compared to 0-₦10,000, reporting a history of suicide thoughts (OR 0.52; 95% CI: 0.33 to 0.81), and reporting a history of suicide attempt (OR 0.43; 95% CI: 0.24 to 0.78).

Factors associated with reporting a history of being forced to participate in conversion therapy at a religious institution were: identifying as gay/homosexual (OR 1.73; 95% CI 1.03 to 2.91) compared to identifying as bisexual, being HIV positive (OR 3.29; 95% CI 1.92 to 5.66) compared to being HIV negative, having depressive symptoms (OR 2.56; 95% CI: 1.48 to 4.42), reporting a history of suicide thoughts (OR 2.49; 95% CI: 1.42 to 4.36), reporting a history of

suicide attempt (OR 2.40; 95% CI: 1.18 to 4.89), higher levels of loneliness (OR 1.08; 95% CI: 1.01 to 1.14), higher levels of internalized homophobia (OR 1.08; 95% CI: 1.00 to 1.16), higher levels of rejection anticipation (OR 1.12; 95% CI: 1.05 to 1.19), reporting having a primary care provider (OR 1.73; 95% CI: 1.03 to 2.93), and reporting inability to access medical care due to cost (OR 2.79; 95% CI: 1.63 to 4.77).

Factor associated with increased odds of agreeing that sex between two men was a sin were: residing in Plateau state (OR 6.81; 95% CI: 3.72 to 12.5) compared to residing in Abuja, being Muslim (OR 3.86; 95% CI: 2.50 to 5.97) compared to being Christian, being employed (OR 1.79; 95% CI: 1.12 to 2.86), higher levels of internalized homophobia (OR 1.21; 95% CI: 1.14 to 1.28), and social support (OR 1.02, 95% CI: 1.01 to 1.04). Factors associated with decreased odds of agreeing that sex between two men was a sin were: being single (OR 0.65; 0.44 to 0.95), identifying as gay/homosexual (OR 0.56; 95% CI 0.39 to 0.82) compared to identifying as bisexual, reporting a history of suicide thoughts (OR 0.61; 95% CI: 0.38 to 0.96), and reporting a history of suicide attempt (OR 0.43; 95% CI: 0.23 to 0.81).

Factors associated with increased odds of participants reporting praying to God to make them heterosexual were: residing in Delta state (OR 2.69; 95% CI: 1.53 to 4.73), and Plateau state (OR 5.52; 95% CI: 2.92 to 10.42) compared to residing in Abuja, being Muslim (OR 1.96 95% CI: 1.25 to 3.07) compared to being Christian, having depressive symptoms (OR 1.60; 95% CI: 1.01 to 2.55), higher levels of loneliness (OR 1.05; 95% CI: 1.01 to 1.10), higher levels of internalized homophobia (OR 1.41; 95% CI: 1.31 to 1.53), higher levels of rejection anticipation (OR 1.07; 95% CI: 1.02 to 1.12), and reporting inability to access medical care due to cost (OR 1.60; 95% CI: 1.07 to 2.37). Factors associated with decreased odds of participants reporting praying to God to make them heterosexual were: identifying as gay/homosexual (OR 0.53; 95%

CI 0.35 to 0.79) compared to identifying as bisexual, reporting an income of ₦100,000 or more (OR 0.35; 95% CI: 0.17 to 0.71) compared to 0-₦10,000, and higher levels of self-esteem (OR 0.93; 95% CI: 0.88 to 0.98).

Adjusted associations with Religiosity, Conversion Therapy, and negative religious beliefs related to same-sex sexual attraction

In the multivariable model, factors associated with increased odds of higher frequency of religious service attendance were: residing in Plateau state (adjusted OR (AOR) 8.62; 95% CI: 3.61 to 20.58) compared to residing in Abuja and higher levels of internalized homophobia (AOR 1.08; 95% CI: 1.01 to 1.15). Factors associated with decreased odds of higher frequency of religious service attendance were: residing in Lagos state (AOR 0.45; 95% CI: 0.27 to 0.77) compared to living in Abuja and reporting a history of suicide thoughts (AOR 0.59; 95% CI: 0.36 to 0.97).

In the multivariable model, factors associated with reporting a history of being forced to participate in conversion therapy at a religious institution were: being HIV positive (AOR 3.18; 95% CI 1.80 to 5.61) compared to being HIV negative, having depressive symptoms (AOR 2.07; 95% CI: 1.16 to 3.72), reporting a history of suicide thoughts (AOR 1.48; 95% CI: 1.12 to 3.37) and reporting inability to access medical care due to cost (AOR 2.45; 95% CI: 1.39 to 4.32).

In the multivariable model, factors associated with increased odds of agreeing that sex between two men was a sin were: residing in Plateau state (AOR 3,46; 95% CI: 1.62 to 7.39) compared to residing in Abuja, being Muslim (AOR 3.55; 95% CI: 2.23 to 5.65) compared to being Christian, and higher levels of internalized homophobia (AOR 1.16; 95% CI: 1.09 to 1.23). In this model, identifying as gay/homosexual (AOR 0.57; 95% CI 0.37 to 0.87) compared to

identifying as bisexual was associated with decreased odds of agreeing that sex between two men was a sin.

In the multivariable model, factors associated with increased odds of participants reporting praying to God to make them heterosexual were: residing in Delta state (AOR 2.73; 95% CI: 1.41 to 5.29), and Plateau state (AOR 4.08; 95% CI: 1.69 to 9.83) compared to residing in Abuja and higher levels of internalized homophobia (AOR 1.38; 95% CI: 1.27 to 1.50).

Discussion

Drawing from the minority stress model, this study examined the associations between religious practices and religious beliefs about same-sex attraction, and sociodemographic characteristics, social marginalization, psychosocial health, minority stress, and healthcare access among SMM in Nigeria. To our knowledge, this is the first study to explore this topic among SMM in Sub-Saharan Africa, thus contributing to the growing body of scientific research on religiosity, minority stress, and psychosocial health among sexual minority groups. We found that more than half of participants (52%) reported attending religious services more than once a week, 17% had a history forced participation in conversion therapy at a religious institution, 39% agreed or strongly agreed that sex between two men was a sin, and 52% reported praying to God to make them heterosexual. These findings suggest that SMM in Nigeria have high levels of religiosity and experience minority stress by internalizing negative religious beliefs related to same-sex sexual attraction.

We found that participants who resided in Plateau state and those who were Muslim had higher frequency of religious service attendance. This finding might be explained by Plateau being located in the Northern region of Nigeria, which is majority Muslim and the fact that Muslims gather for communal prayer five times a day. Additionally, we found that higher frequency of religious service attendance was significantly associated with increasing levels of

internalized homophobia. Consistent with the minority tress model, SMM in Nigeria who frequently attend religious services were more likely to internalize negative messages related to their sexuality, which might be partly explained by intolerance of same-sex attraction by most religious institutions. This finding is consistent with a previous study that found religious affiliation was associated with internalized homonegativity among African American SMM (Jonathan Mathias Lassiter et al., 2019) Paradoxically, higher frequency of religious service attendance was significantly associated with lower odds of having a history of suicide thoughts in our sample. Possible explanations for this finding include the known protective effects of religious affiliation against suicidality (Lawrence et al., 2016). It is also possible that the social support and community belongingness facilitated by religious institutions might be a protective factor against suicide ideation. These mixed findings illuminate the complex relationship between religiosity and the psychosocial health of SMM, especially in Nigeria. On one hand, membership in a religious community might serve as a source of support and coping mechanism for SMM who might lack a support system. However, anti-homosexual sentiments merged with religious doctrine may reinforce psychological distress by propagating feelings of self-hate and worthlessness.

Participants who were living with HIV were three times more likely than those who were HIV-negative to report a history of forced participation in conversion therapy at a religious institution. This contrasts a previous finding where participation in gay conversion therapy did not differ significantly by HIV status among middle-aged SMM in the United States (S. P. Meanley et al., 2020). Considering that religiosity has been identified as coping strategy for Nigeria SMM (Oginni et al., 2020) and in the general population (Osundina et al., 2017), it is possible that SMM living with HIV in Nigeria may utilize participation in religious institutions

as a coping strategy for a HIV diagnosis. It is also plausible that the religious support network of SMM might be made aware of same-sex sexual attraction and their sexual orientation as part of HIV status disclosure and subsequently force them to undergo conversion. In exploratory analysis, we found that people living with HIV were more likely to report that members of their religious community knew about their same-sex attraction compared to participants who were HIV-negative, which further supports our stated hypothesis. It is possible that HIV-positive SMM—in disclosing their same-sex attraction to their religious community members—may experience admonishment for such behaviors, and persuaded to "pray the gay away". Further research is needed to elucidate the relationship between religiosity and its impact on people living with HIV, especially in the Nigerian context.

We found that reporting a history of forced participation in conversion therapy at a religious institution was associated with increased odds of experiencing depressive symptoms and reporting a history of suicide thoughts. These findings are in line with a study of lesbian, gay, bisexual, and transgender (LGBT) students in Nigeria which found that seeking religious conversion therapy contributed to depression and suicidal ideation (Okanlawon, 2020). Conversion therapy can be traumatizing for SMM and has the potential to contribute to long-term psychosocial health problems such as social withdrawal, depression, anxiety, posttraumatic stress disorder, suicidal thoughts and even suicide attempts (Haldeman, 2002). Conversion therapy has been shown to be largely ineffective in changing sexual orientation and has been demonstrated to pose a significant physical and psychological harm to LGBT people (Haldeman, 1994; Tozer & McClanahan, 1999). To that effect, conversion therapy has been discredited by reputable medical and mental health organizations (such as the American Psychological Association and American Medical Association). Consequently, it is important that Nigerian

medical association issue press statements and policy briefs condemning the practice of conversion therapy, based on the academic literature that has demonstrated it to be both ineffective and damaging (Tozer & McClanahan, 1999). It is also important that religious institutions, especially those in Nigeria, reconsider their practice of conversion therapy and the potential detrimental effects it may have on their LGBT congregants.

As predicted by the minority stress model, individuals with higher levels of internalized homophobia were more likely to have negative religious beliefs related to homosexuality, including sex between men being a sin and wishing that God would make them straight. This finding is similar to those from other studies that have found non-affirming religions to be associated with higher internalized homophobia (Barnes & Meyer, 2012) and how negative religious messages resulted in self-hate, suppression of same-sex attraction, and internalized homophobia (Kubicek et al., 2009). Our findings provide further evidence about the possible bidirectional relationship between internalized homophobia and negative religious beliefs related to homosexuality, in which individuals who already internalize negative messages about homosexuality might be more likely to utilize religion has a justification to explain those negative beliefs. Inversely, individuals who have existing negative beliefs about homosexuality—that is grounded in religion—may subsequently personalize and internalize those negative messages.

We also found that individuals who believed sex between two men was a sin were less likely to report history of suicidal thoughts and attempts. These findings further emphasize the double-edged nature of the impact of religion on the psychosocial well-being of SMM in Nigeria. Similarly, we found that participants who reported higher levels of perceived social support were more likely to report believing that sex between men was a sin. A possible

explanation for this finding is that religious institutions may comprise a substantial component of the social network of many individuals (including SMM) in Nigeria as demonstrated by the significant positive association between frequency of religious attendance and perceived social support in the present sample. This link may in turn negatively influence cognitions about the acceptance of same-sex attraction, which might be internalized by SMM by virtue of participation in organized religious institutions and thereby increase stress levels.

A notable study finding was that Muslim participants had higher frequency of religious service attendance compared to Christian participants and endorsed more negative beliefs about same-sex attraction. This raises the possibility that Muslim SMM in Nigeria may be differentially affected by minority stress and have worse psychosocial health outcomes but further research is needed to investigate this possible phenomenon. It is important that religious institutions in Nigeria do not disparage or chastise congregants on the basis of their sexual orientation. Religious institutions should provide safe spaces for all who chose to engage in communal religious services and activities. Specifically, integrating queer liberation theology through the reconciliation of belief in a higher being and acceptance of one's sexual orientation may provide for an environment where LGBT folks can engage with faith in a safe and healthy way. Taking this approach has dire implications for the psychosocial health of SMM in Nigeria and across various countries where sexual minorities are prosecuted and often turn to religion as a place for reprieve and acceptance. An example of such an approach is the House of Rainbow, an LGBT-affirming church established in 2006 by Reverend Rowland Jide Macaulay, an openly gay Christian cleric, in Lagos, Nigeria, which now serves as an organization that supports LGBT people of faith. The House of Rainbow provided a safe space for queer Nigerians to unapologetically express themselves and its effects on congregants are immeasurable. While

physical spaces for communal religious fellowship is vital, it is important to consider the safety risk it might pose attendants, especially with large gathering of SMM being illegal in Nigeria. Consequently, it is important to explore the utilization of digital spaces for religious activities, which might provide a safe space for individuals who chose to engage.

There were some study limitations worth noting. The cross-sectional study design limits our ability to draw conclusions about causation. Also, participants were recruited through community based organizations that provide services to SMM in Nigeria, thereby limiting our ability to generalize our study findings to SMM who are not connected to these organizations. Additionally, a vast majority of our sample identified as either Christian or Muslim, which is not representative of other religious denominations within Nigeria. Also, we did not utilize comprehensive religiosity and spirituality scales due to concerns about the length of the survey and participant fatigue. Our study assessed factors related to religiosity only and did not explore insight about spirituality and spiritual practices.

Conclusion

This study represents the first to examine the role of religiosity and psychosocial health among SMM in Nigeria and broadly across Sub-Saharan Africa. Our findings support the need for LGBT-affirming religious doctrine and practices, which have implications for the psychosocial health of LGBT communities.

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