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“For my safety and wellbeing, I always travel to seek health care in a distant facility”—the role of place and stigma in HIV testing decisions among GBMSM – BSGH 002

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ABSTRACT

Gays, bisexuals, and all other men who have sex with men (GBMSM) are heavily impacted by HIV in Ghana compared to the general population. In addition to HIV and same-sex intercourse stigma, barriers such as reduced privacy, lower-income status and limited health care facilities (HCF) affect HIV testing decisions among GBMSM. We employed a phenomenological research design to understand the role of place and stigma in HIV testing among GBMSM in slums. GBMSM (n = 12) from slums in Accra and Kumasi, Ghana, were recruited and engaged in face-to-face interviews. We used a multiple reviewer summative content analysis to analyze and organize our key findings. The HIV testing options we identified include 1. Government HCF, 2. NGO and community outreach 3. Peer-educated services. Factors influencing GBMSM to test for HIV at HCF outside their areas included 1. The location of HCF 2. HIV and sexual stigma from slum areas 3. Positive HCW attitudes at distant HCF. 4. Negative Healthcare worker (HCW) attitudes towards GBMSM. These findings highlighted how stigma from slums and HCW influence HIV testing decisions and the need for place-based interventions to address stigma among HCW in slums to improve testing among GBMSM.

The Human Immunodeficiency Virus (HIV) remains a significant public health issue globally. In sub-Saharan Africa (SSA), gay, bisexual, and other men who have sex with men (GBMSM) carry a higher burden of HIV and remain at higher risk of contracting HIV than heterosexual men (Lane et al., 2016; Sandfort et al., 2019; Wirtz et al., 2017). While most SSA countries have generalized HIV epidemic statistics, HIV prevalence among GBMSM is significantly higher, estimated at an 18% overall, with an odds ratio of 3.8 compared to the general adult population. (Beyrer et al., 2010, 2012). The range of HIV prevalence among GBMSM in SSA countries varies greatly, with rates as low as 7.8% in Khartoum, Sudan, and as high as 49.5% in Johannesburg, South Africa (Kunzweiler et al., 2017; Lane et al., 2011; Mmbaga et al., 2018; Sandfort et al., 2019; Wirtz et al., 2017). Ghana is not an exception; HIV prevalence among GBMSM is estimated at 17.5%, which is much higher compared to the 1.7% prevalence among the adult population (Ali et al., 2019).

Additionally, there are regional disparities in Ghana, with the highest rates of HIV among GBMSM found in the Greater Accra region (34.3%) and the Ashanti Metropolitan region (13.7%) (Ghana AIDS Commission).

Despite significant efforts to end the HIV epidemic, many nations have difficulty meeting the United Nations' Millennium Development Goals to decrease the number of new HIV cases and deaths from acquired immunodeficiency syndrome (AIDS). One reason for this difficulty is the HIV testing target, which is a crucial part of HIV prevention and treatment plans, is not being met in many developing countries. HIV testing practices, especially among GBMSM, remain low, as they often experience additional obstacles in accessing HIV testing and care,

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including stigma and discrimination (Abubakari et al., 2021a; Abubakari et al., 2021b; Nelson et al., 2021). Existing social and legal barriers, such as criminalization, social isolation, and financial exclusion of GBMSM and persons living with HIV, intersect and negatively impact their physical and mental well-being (Abubakari et al., 2021c; Alessi et al., 2013; Nelson et al., 2022; Poku et al., 2005; Scheibe et al., 2014; Ulasi et al., 2009; Zahn et al., 2016). Such barriers also affect the ability of GBMSM to access and utilize sexual health services, such as those related to sexually transmitted infections and HIV (Fay et al., 2011; Schwartz et al., 2015; Semugoma et al., 2012). These adverse effects may manifest in various ways, including reluctance to seek testing and treatment, difficulty finding and trusting healthcare providers, and increased risk of physical harm (Abubakari et al., 2021c; Gu et al., 2021). These societal attitudes and actions can create significant barriers to achieving improved health outcomes for GBMSM (Gyamerah et al., 2020; Saalim et al., 2023).

1. Why slum communities?

An estimated 37.4% of the Ghanaian population lives in slum communities, with a projected 5.5 million people living in urban slum communities (Abubakar and Kucukmehmetoglu, 2021) With this population steadily increasing over the years, it is imperative to understand how GBMSM living in slum communities are affected when seeking HIV-related care and what might inform their decisions to seek care outside their communities (Kabiru et al., 2011; Madise et al., 2012; Sclar et al., 2005; Swahn et al., 2016). Slums are informally planned settlements that remain associated with unfavorable factors, such as high crime, low income, poor housing, unsanitary conditions, and lack of proper health care and educational facilities (UN-Habitat, 2004; Amuyunzu-Nyamongo et al., 2007; Kabiru et al., 2011; Madise et al., 2012; Oti et al., 2013; Sclar et al., 2005). The conditions in slums significantly increase the risk of contracting HIV (Adedimeji et al., 2007; Greif and Dodoo, 2011; Madise et al., 2012). Poverty and lack of economic opportunities can push individuals into risky behaviors (e.g., transactional sex, sex without condoms), further increasing their vulnerability to HIV (Pellowski et al., 2013). In addition, people who live in slums have congested and intimate units affecting privacy (Mahabir et al., 2016; McDonald and Forte, 2022; Morgan, 2020). For vulnerable populations such as GBMSM, being unable to stay anonymous could affect various aspects of their lives, including HIV-related care and expression of sexual orientation or behavior, which leads them to seek HIV care elsewhere (Iott et al., 2022; Kutner et al., 2021). Stigma and discrimination against GBMSM are pervasive in slums, where these individuals often have limited social support and face discrimination from their communities (Riley et al., 2007).

2. The current study

Despite the HIV risk and difficulty in seeking care in slums, we did not find a study that examines the role of place and stigma in the HIV testing decisions of GBMSM. The limited studies that exist on HIV and GBMSM in Ghana focus on the general GBMSM population, but even for them, the physical and social environment plays an essential role in shaping HIV testing decisions (Nelson et al., 2021; Nyblade et al., 2022; Saalim et al., 2023). The research on health facilities in Ghana shows that the distribution and type of health facilities could significantly affect HIV-related treatment and care, especially in slum communities (Dako-Gyeke and Kofie, 2015; Nyblade et al., 2022; Saeed et al., 2016). Anticipated, experienced, and vicarious stigmas continue to deter GBMSM from seeking HIV testing services in HCFs near them (Nyblade et al., 2022). Therefore, this study aims to fill the gap in research around HIV testing among GBMSM in slums by examining how place and stigma influence HIV testing decisions among GBMSM living in Ghanaian slums. The findings provide insights into GBMSM experiences with HIV testing and challenges associated with testing in slums, thereby paving the way for the development of interventions to address HIV testing in slums in Ghana and elsewhere.

3. Design and methods

3.1. Research design

The study employed a qualitative phenomenological research design to understand the lived experiences of GBMSM around HIV testing in slum communities and to understand if their location impacts testing decisions. This design is best for collecting first-hand information on the lived experiences of individuals regarding a particular phenomenon (e.g., stigma experiences, testing experiences).

3.2. Sampling and recruitment procedure

Research assistants from two GBMSM-led community organizations in Kumasi—Priorities on Rights and Sexual Health (PORSH) and Youth Alliance on Health and Human Rights (YAHR)—sampled participants through a time-location sampling technique in the cities of Accra and Kumasi. All participants were engaged in an in-depth interview during one of the organizations' activities. PORSH and YAHR have a long history of working with GBMSM in these study locations, ensuring that sampled participants were the appropriate fit for the study. The study initially targeted 19 GBMSM for interview sessions. However, research assistants in charge of interview sessions reached saturation in responses by the eighth interview. To ensure complete saturation, research assistants continued interviewing an additional 4 GBMSM, totaling 12 participants.

3.3. Inclusion criteria

All participants included in the study had attained the age of 18 years and lived in a slum community within the Greater Accra Metropolitan Area and Kumasi Metropolitan Area. These cities, which are the most populated in Ghana, also have the highest prevalence of HIV among GBMSM. All participants self-identified as cisgender and members of a GBMSM category (gay, bisexual, or have sex with other cisgender men for reasons other than sexual orientation). Participants were expected to be sexually active and have had sexual intercourse with another cisgender man in the year preceding this study.

3.4. Data collection procedure

3.4.1. Procedure

Due to the phenomenological nature of this study, researchers employed a face-to-face interview technique to collect data from participants. Before data collection, qualified participants were presented with consent forms, which they were required to sign. Research assistants provided further clarification and reminders about the key elements of the consent documents during the data collection process. The researchers overseeing the data collection ensured that participants' full consent was obtained through the signed forms. All interviews were held in secured locations of the community partners (PORSH and YAHR). Four out of eight interviews were conducted in Twi (a local Ghanaian language) because some participants indicated they could only express themselves effectively in Twi instead of English.

3.4.2. Nature of questions

Researchers were trained in qualitative interviews using a checklist. The study's checklist allowed participants to express themselves freely and encouraged a free and open conversation style rather than solely relying on a question-and-respond format. The interviewers asked participants to describe their experiences with HIV testing within their communities, stigma experiences, gender relations, coping strategies, and sexual behavior. Participants were also asked about factors that

contribute to their decision to test or not for HIV.

3.5. Analytical strategy

Data collected from participants were audio recorded and transcribed verbatim by research assistants. The interviews conducted in Twi were translated into English by more experienced research assistants who had translated such transcripts in our previous study (Saalim et al., 2023). Transcribing audio records involved de-identifying information to ensure that vital information that could be used to link participants to the data was removed. Analyzing participants' responses involved multiple reviewers in a summative content analysis process. Each transcript was shared with two reviewers who identified the salient factors raised by the participants and reported them using 100 to 200 words. The lead author organized these reports into a summarized and organized data spreadsheet and identified clusters frequently appearing in the transcripts. We successfully used this process in our previous study (Abubakari et al., 2021b).

3.6. Ethical considerations

Approval from the Institutional Review Board Committee at Yale University, Connecticut, USA (approval number: IRES IRB #RNI00002010) and the Ghana Health Service Ethics Committee, Ghana (approval number: GHS-ERC 001/10/21) was obtained before the implementation of the study. The interviewers in this study ensured all participants fully understood the content in the informed consent form and received written approval before conducting interviews.

4. Results

4.1. Description of participants

Twelve participants, 18 years and above, from slum communities within the Accra and Kumasi cities in Ghana participated in the study. Six participants indicated they belonged to the Christian religion, four belonged to the Muslim religion, and two practiced both. The education levels of participants ranged from junior high school (JHS) to tertiary education. The education levels of participants ranged from junior high school (JHS) to tertiary education. Five participants had attained tertiary-level education. Six had a senior high school education, and one had completed junior high school.

4.2. Description of significant findings

External factors beyond the control of GBMSM and other personal decisions contributed to their HIV testing experiences and influenced GBMSM's choice to test for HIV within the slum area or at other facilities. Under HIV testing options, we identified three main categories: 1. Government HIV testing sites, 2. NGO activities and community outreach, and 3. Peer-education services. Factors influencing GBMSM to test for HIV at other HIV testing facilities outside their slum areas were as follows: 1. Location of HIV testing facility, 2. HIV and sexual stigma from slum areas, 3. Positive Healthcare worker (HCW) attitudes at distant HIV testing facilities, and 4. Negative HCW Attitudes and Experiences in testing facilities in the slum area.

4.3. Options for HIV testing among GBMSM living in slum communities

4.3.1. Government HIV testing facilities

GBMSM acknowledged that there were limited HIV testing facilities within the slum communities. However, those who expressed the need to get tested highlighted various HIV testing options within slum areas. Government HIV testing facilities were among the most utilized by GBMSM in the slum areas. Some explained that the location of these facilities presented an accessible option for HIV testing to GBMSM in slum areas.

Sample participant quotes:

> "I visit any available government hospital for HIV testing." (GBMSM Participant)

> "I go to [NAME] polyclinic for HIV testing." (GBMSM Participant)

4.3.2. NGO activities and community outreach

GBMSM reported using community outreach programs and other NGO facilities for HIV testing and other medical care. Some GBMSM indicated having their first HIV test in an NGO facility. Community outreaches from NGOs provided GBMSM with a convenient opportunity and space to get tested for HIV. Periodic community outreaches enabled GBMSM who could not access HIV testing facilities in their slum areas to get an HIV test.

Sample participant quotes:

> "I had my first test at an NGO's office in Kumasi, and that was a few months ago when I tested at their facility." (GBMSM participant)

> "We have community outreaches where we normally go for HIV testing." (GBMSM participant).

4.3.3. Peer educators services

GBMSM who were unable to find HIV testing facilities within slum areas were greatly assisted by peer educators. Peer educators and some friends of GBMSM referred them to GBMSM-friendly HIV testing facilities, which were located outside their slum area. Peer educators also encouraged GBMSM in slum areas to regularly test for HIV and sometimes also offered HIV testing services. This encouraged some of them to continuously test for HIV, as they got more comfortable with the HIV testing facilities they were referred to.

Sample participant quotes:

> "I had my first test at the [NAME] hospital, and I was referred by a friend. I have been testing since, and I've made it my habit to test frequently" (GBMSM participant)

> "It's tough in our area because I've never seen a place to go and test for HIV. When I even go to the pharmacy, I don't get the test. I have to call a friend who lives in Accra to take me somewhere. I've been to [NAME] to test. And I've also been to [NAME] to test. These places are all far from my home." (GBMSM participant)

> "I always visit the [NAME] hospital for HIV testing, or I sometimes have my test through peer educators. And the last time I tested was in August last year." (GBMSM participant)

Factors influencing GBMSM's choice of HIV testing facilities outside of slum areas they reside in.

4.3.4. Location of HIV testing facility informed utilization among GBMSM in slum areas

The proximity of HIV testing facilities to the slum communities of GBMSM discouraged their utilization. The participants explained that the need to keep their sexuality and outcomes of HIV tests confidential informed their decision to test at distant HIV testing facilities. They had reduced instances of encountering familiar persons at distant HIV testing facilities compared to facilities in the slum areas they resided in; such experiences made them feel uncomfortable and unsafe.

Sample participant quotes:

> "I don't use health facilities that are just around me because I don't want to meet a person who knows me. I don't want to face any kind of discrimination. Because I know a lot of people talk. Even when they don't know why you are there. Maybe they will say, 'I found this person here, and he is like this and that, and he has this thing,' when it's not even the truth. Maybe even the person saying that is also

facing the same thing but will be like, 'I saw this person here; I think he has HIV,' even though he has it himself, and he will be the one to spread the news. So, I don't go to facilities in my immediate surroundings." (GBMSM participant)

"I will have my HIV test at any available government hospital. But not in my community. The reason why I don't want to test in my community is because maybe I will go and meet someone in the facility who knows me. So, I will like to go far away to go and check it." (GBMSM participant)

"My experience at the HIV testing facility in my community wasn't good because I never liked the atmosphere. I didn't like how people would be staring at me in an awkward manner." (GBMSM participant)

"It is not safe for men who have sex with men (MSM) to access health care in my community, but they will be safe at the place where I receive health care which is [NAME] hospital outside my community." (GBMSM participant)

4.3.5. HIV and sexual stigma from slum communities discouraged the use of HIV testing facilities within slums by GBMSM

The participants indicated that the stigma experiences and stereotypical conversations about GBMSM and persons living with HIV discouraged the use of HIV testing facilities within slum areas. Thus, they shy away from seeking HIV testing in their community facilities as they anticipate stigma around HIV and same-sex sexual behaviors. To avoid stigma, some of them preferred to seek HIV testing services at a distant location where the impact of stigma was likely to be lessened due to the reduced chance of encountering familiar individuals. In addition to stigma from the slum communities, GBMSM also had safety concerns. They were scared of being discriminated against because of HIV or physically attacked by slum dwellers because of their sexuality or same-sex sexual behaviors. To secure their safety and well-being in their communities, they preferred to take HIV testing services in facilities outside their slum areas.

Sample participant quotes:

"I have never seen anyone living with HIV being treated badly in my community, but comments about HIV and its related topics from my community people prove that they will not treat you well if they should find out that you have the virus." (GBMSM participant)

"My community members think people living with HIV have a lot of sex, and they are sex addicts. Because if you don't have sex, you won't get infected. And married people usually don't get infected in my community. It's mostly a religious area with Muslims; they always think you should get married before you have sex. So, if you are infected and someone gets to know you are infected, you are going to be mocked or treated badly in the area." (GBMSM participant)

"People in my slum community treat persons living with HIV very badly because there is this lady in my community who was sick, and rumors said she had HIV. They pointed fingers at her whenever she walked around. They even refused to even sell to her when she visited a shop to buy something. She was sacked from home, and they erected a wooden structure for her, and she was prohibited from coming back home." (GBMSM participant)

4.3.6. Positive HCW attitudes at distant HIV testing facilities encouraged GBMSM to test for HIV outside their slum areas

The HCWs at distant HIV testing facilities motivated most GBMSM interviewed to travel far to seek HIV testing. For some of them, getting an HIV test at other testing facilities beyond their slum communities did not come up as a major concern once they accessed services that were much more conducive and accommodating. Respondents highlighted that the availability of HIV testing facilities in slum areas did not necessarily guarantee its use by GBMSM in such communities due to stigma experiences and negative HCW attitudes toward them accessing HIV testing facilities located in slums. Some of the positive attitudes of HCWs highlighted by GBMSM in the study were as follows: non-discriminatory and non-stigmatizing attitudes, respect and empathy toward GBMSM, and friendliness and patience of HCWs. Pre-counseling and educative sessions received by GBMSM from HCWs before getting tested created a conducive environment for them. They explained that they felt their HIV test outcomes would be kept more confidential and safer at distant HIV testing facilities. They were encouraged to test for HIV regularly due to non-stigmatizing HCW attitudes at distant HIV testing facilities.

Sample participant quotes:

"I always visit the [NAME] hospital because the nurses are friendly and understand us (referring to GBMSM). Even though it is far from my community, I still travel to that facility because of their services." (GBMSM participant).

"The nurses are cool. There's this woman there, and she is very cool. I think her name is [NAME]. When I go there, she will ask me how I'm doing and give me condoms and lubricant. At the [NAME] hospital, there is a male nurse there who is cool. I go there for a check-up. Sometimes he will encourage me to get tested." (GBMSM participant)

"My experience at the HIV testing site was normal because the nurse in charge is a friendly nurse, and even though she knows about my sexuality, she doesn't stigmatize me or discriminate against me or any other MSM." (GBMSM participant)

"I will describe the [NAME] hospital as a perfect place for people like myself to get treatment or health care. I am saying that because of how I was treated when I visited the facility. I was informed that the health care providers there know our situation, so they treat us with care and respect." (GBMSM participant)

4.3.7. Negative HCW Attitudes and Experiences discourage HIV testing in slum areas

The negative experiences of GBMSM at HIV testing facilities in slum areas discouraged their use. Most participants indicated that their safety and ability to secure their anonymity within the slum areas when accessing HIV testing was paramount to them. They described feeling unsafe while getting tested for HIV in their communities and reported that HCWs did not maintain confidentiality. Ultimately, while government health facilities present a convenient option for HIV testing for GBMSM in slums, anticipated stigma and the likelihood of being attended to by familiar HCWs guided their choice to get tested outside of the slums. Participants reported experiencing negative attitudes from HCWs, such as disrespect toward GBMSM, which led to non-confidential services in slum areas. Some participants recounted personal experiences to illustrate this point.

Sample participant quotes:

"[NAME] hospital in my community, I know the workers there are not well-meaning. If you are MSM and go there, you won't be happy. If you have feminine mannerisms as well, it gets worse. They will talk a lot because the nurses there gossip a lot." (GBMSM participant)

"I always go to [NAME] hospital because the kind of treatment I will receive in my community health care unit will be different. I will always travel to different places for health care for my safety and well-being. It is very far, but I don't want to be treated differently because of my sexuality." (GBMSM participant)

"The health care facility in my community is not safe. Because if it's a straight health care center, you can't express yourself to tell them what's really wrong with you for them to understand your situation. You have to cover up with a bit of lie just for them to give you average care, but they can't go deep because you have to cover up

and hide your identity. Because I'm scared. The stigma is very high. The HCW might even sack you or won't attend to you." (GBMSM participant)

"I see that not every hospital is safe in my community. In some hospitals, the way they treat you is bad when you go there. I remembered that I had an … some time ago, and they took me to [NAME] in my community. I spent about a week there and saw the way the nurse treated my mum rudely, telling her to walk out. Had I not been sick, I would have dealt with her. Seeing someone like this, you know she can't keep her mouth shut for one to go there. I slept there for about one week and learned how these HCWs talk, gossip, and don't respect us. So, if you go to such a hospital for HIV testing, I don't think it will even be confidential." (GBMSM participant)

5. Discussion

Despite the increased risk of HIV infection and the pervasiveness of stigma and challenges related to HIV testing and care services among GBMSM living in slum communities, there is a paucity of research on the role of place and stigma in HIV testing among GBMSM in the slums of Ghana and SSA (Abubakari et al., 2021c; Kushwaha et al., 2017; Nelson et al., 2021; Nyblade et al., 2022). Therefore, this study provides qualitative insights into how stigma and place influence decisions on where to test among GBMSM. Although participants mentioned the availability of local HIV testing options, several factors contributed to the non-utilization of HIV testing facilities in their slum communities and the subsequent preference for HIV testing facilities further away. Some of these factors were as follows: 1. Location of HIV testing facility, 2. HIV and sexual stigma, 3. Positive HCW attitudes at distant HIV testing facilities, and 4. Negative HCW attitudes at HIV testing facilities in slums.

Findings from previous studies have shown that living in slum or informal communities compromises the health of inhabitants due to limited HCFs and the general inability of residents to afford their basic healthcare needs (Aberese-Ako et al., 2022; Lungu et al., 2016; Nejad et al., 2021; Sverdlik, 2011). GBMSM, in the study, acknowledged that the slums have limited HIV testing sites. Nonetheless, despite the availability of HIV testing facilities within the local slum, their utilization by GBMSM was discouraged. Consistent with previous research (Phukan, 2014), our participants acknowledged that living in slums promotes familiarization but compromises privacy. As such, GBMSM who live in slums or poorer communities experiences a sense of insecurity and have a strong need to maintain anonymity regarding their sexuality or same-sex sexual behaviors; it is driven by their desire to avoid further social rejection and discrimination (Allman et al., 2007).

Stigma from the slum communities around HIV and their gender expression and sexual behavior was highlighted as a major push factor for GBMSM to seek HIV testing outside their slum areas. While previous studies have not examined the stigma toward GBMSM in slum communities in Ghana, our findings align with existing research on stigma and HIV testing outcomes among GBMSM; GBMSM in slums also face various forms of stigma from their slum communities, which in turn contributes to lower rates of HIV testing (Gyamerah et al., 2020; Kushwaha et al., 2017). Though very few respondents mentioned being able to use HIV testing facilities within slums, the majority of GBMSM acknowledged experiencing and anticipating stigma, which negatively impacts their ability to test for HIV in certain facilities. Highlighting the reasons for not testing for HIV within their slum communities, some GBMSM indicated that they live in a community with social norms and values that frown upon same-sex sexual behaviors. As such, GBMSM in slums live a closeted life and avoid instances or situations that may compromise their anonymity (Phukan, 2014). Findings from Abubakari et al. (2021a) also support our findings, which suggest that GBMSM in Ghana are faced with the intersection of HIV stigma, sexual stigma, and stigma toward gender non-conforming men, which negatively impacts HIV testing outcomes. Our study further highlights the inclusion of stigma for dwelling in slums as an additional barrier to HIV testing among GBMSM. The anticipation of HIV, gender, and sexual stigma was attributed to the stigma experiences of persons living with HIV in the slums as well as the high prevalence of myths and misconceptions among slum dwellers. This suggests that GBMSM avoided being seen at HIV-related service facilities to prevent identification by slum dwellers and avoid stigma from within the slums. The social discrimination and stigmatization of GBMSM pose a major risk for HIV infection and act as deterrents to prevention efforts, as many GBMSM may avoid seeking HIV testing and other related care services out of the fear of further stigmatization or social rejection (Babel et al., 2021).

An important pull factor that encouraged HIV testing at distant facilities was the positive attitude of HCWs at HIV testing facilities outside slum communities. Findings from the study suggested that GBMSM in slums are encouraged to get tested for HIV regularly due to the non-stigmatizing attitudes of HCWs at distant HIV testing sites. Friendly nurses at distant HIV testing sites created a more comfortable and encouraging environment for GBMSM to get an HIV test regularly. As established in other studies, the friendly and respectful attitude of HCWs and their empathy toward GBMSM motivates the latter to get an HIV test (Kushwaha et al., 2017; Nyblade et al., 2022). Using distant HIV testing sites also enabled GBMSM to stay anonymous about their sexuality and HIV test outcomes. For instance, some participants reported going to distant HIV testing sites to avoid the likelihood of meeting familiar slum dwellers or HCWs to avoid compromising the confidentiality of their HIV test results and reduce the chances of being stigmatized by fellow slum dwellers who may identify them within HIV testing facilities. For some GBMSM, the proximity of HIV testing facility to their slum was not a barrier once they were assured stigma-free, confidential, and friendly HIV testing services at distant facilities. This highlights the importance and impact of HCW attitudes toward HIV testing decisions of GBMSM and the need to develop interventions that address and promote positive HCW attitudes toward GBMSM (Abubakari et al., 2021c; Nyblade et al., 2022).

Similar to stigma from the community, we established that negative HCW attitudes greatly discourage the use of HIV testing sites in slums among GBMSM. HCWs' stigmatizing attitudes toward GBMSM and gender-non-conforming men and their lack of respect for the confidentiality of their data compromised the sense of safety of GBMSM who seek HIV testing in the slum areas. This finding confirms that negative attitudes of HCWs contribute to low HIV testing rates among GBMSM in different settings (Sison et al., 2022). GBMSM in this study did not feel safe and could not trust HCWs with their HIV test outcomes. For instance, HCWs who continuously disrespected, stigmatized, and discriminated against GBMSM could not be trusted by them to be confidential about their HIV test outcomes (Ogunbajo et al., 2017). This implies that although there might be available HIV testing sites within the slums, there is no guarantee of its utilization by GBMSM due to negative HCW attitudes toward GBMSM. Hence, it is essential not just to provide HIV testing facilities in slums but also to ensure a conducive environment, including privacy for GBMSM, HCW professionalism, and a non-stigmatizing health care experience to ensure GBMSM are encouraged to take regular HIV tests (Matovu et al., 2019; van der Elst et al., 2013). This is especially critical as Ghana has considered passing one of the harshest anti-LGBTQ + laws in West Africa. As reported by Abubakari et al. (2021c) and Nyblade et al. (2022), this policy has the potential to increase stigma and discrimination among LGBT Q+ people and may negatively impact healthcare delivery by HCW. For GBMSMs in slum communities, this may pose a further barrier to seeking care in slum communities as they may feel unsafe.

5.1. *Limitations and future research*

The study's major limitations can be seen in the qualitative findings that are inherently subjective to the authors. The personal bias and idiosyncrasies of researchers could have affected data collection and

analysis in this study. Future research could explore other forms of research design, such as employing a quantitative or mixed approach to reduce the likelihood of bias in data collection and analysis. Researchers also realize a limitation connected to the sampling of 12 GBMSM in the study. Although in-depth interviews conducted by researchers reached a saturation in responses, the authors strongly believe expanding the study context to include GBMSM in other regions of Ghana could lead to new findings not realized in this study. The study also did not target a specific age group, as GBMSM had to be 18 years or older to qualify for the study. Future studies could target more specific age brackets, such as young adults, to better understand the dynamics of study outcomes.

6. Conclusion

The study results call for the need for stakeholders and scholars to employ a place-based approach to HIV research and intervention delivery, particularly regarding the availability of HCFs, improved HIV testing and care services, and sensitization campaigns targeted at reducing the stigma associated with HIV in slums. This study highlights the critical need to develop HCW interventions to sensitize and educate them on more appropriate service delivery to GBMSM living in slum communities to encourage HIV testing. The study also contributes to existing knowledge for stakeholders striving to achieve universal HIV/AIDs related targets, such as the United Nations Program on HIV/AIDS (UNAID) 90-90-90 treatment target to end the AIDS epidemic and the goals stipulated in the United States President's Emergency Plan for AIDS Relief (PEPFAR) (a United States government initiative program adopted in Ghana to achieve epidemic control). These targets aim to end the AIDS epidemic, increase HIV testing, ensure sustained antiretroviral treatment, and reduce new HIV infections in Ghana (Ali et al., 2019; Hagopian et al., 2017; Marum et al., 2012). Lastly, to achieve ending the HIV epidemic in Ghana, policies must support the health and wellness of all people including LGBTQ + populations.

Data availability

The authors confirm that the data supporting the findings of this study are available within the article

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