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**Barriers, Motivators, Facilitators related to Engagement in HIV
care among Ghanaian men who have sex with men (MSM) living
with HIV: A Qualitative Study**

By

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Submitted in partial fulfillment of the requirements for the degree of Master
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Abstract: In Ghana, men who have sex with men (MSM) bear a high burden of the HIV epidemic. To identify factors related to engagement in HIV care, we conducted an explorative qualitative research study with 30 HIV-positive Ghanaian MSM between May 2015 and July 2015. We sought to explore barriers, motivators, and facilitators to engagement in HIV care. Common barriers were fear of being seen in HIV-related health facility, financial difficulties, and other logistical issues. Major sources of motivators for engagement in care included social support, fear of mortality from HIV, and knowledge of effectiveness of HIV treatment. Care facilitators were enrollment in health insurance, prior relationship and familiarity with hospital personnel, and positive experience in healthcare setting. Our findings highlight the need for new and innovative care delivery mediums and increased access to health insurance.

Keywords: Ghana, HIV-positive, men who have sex with men, HIV medical care, engagement in care

Introduction

While Africa has consistently bore the highest burden of the HIV/AIDS epidemic, there are various subpopulations that have disproportionate prevalence of HIV compared to the general population. A comprehensive review of the epidemiology of HIV in men who have sex with men (MSM) in Sub-Saharan Africa showed a pooled HIV prevalence of 18% among MSM^{1,2}. Historically, there have been critical gaps in data on HIV and other sexually transmitted infections incidence and prevalence among most-at-risk populations which include sex workers, men who have sex with men, and people who inject drugs. The Ghana Men's Study, released in 2011, helped address this gap in the literature. The objective of the Ghana Men's Study was to estimate the incidence of HIV among MSM in Ghana and measure the prevalence of HIV, syphilis, hepatitis B, and herpes simplex virus type 2 and their associated risk behaviors. The study (n=1302) found a 17.5% HIV prevalence among MSM, with the highest rates in Greater Accra (34%) and the Ashanti region (14%)³.

There are various unique barriers that HIV-positive African MSM encounter while seeking HIV medical care and services. Prior studies have shown that African MSM experience high levels of stigma, social isolation and discrimination due to their HIV status^{4,5}. Additionally, same-sex sexual behavior is considered illegal in more than 30 African countries⁶. In Ghana, same-sex sexual practices are punishable by "imprisonment for a term of not less than five years and not more than twenty-five years" under the Criminal Code, 1960 (Act 29; Section 104. Unnatural Carnal Knowledge)⁶. The culmination of these factors may result in a hostile and unaccepting environment for Ghanaian MSM living with HIV. Previous work has shown that the combination of sexual stigma, gender

non-conformity stigma and HIV-related stigma negatively impact mental health outcomes in MSM communities⁷ In addition, these roadblocks may negatively influence health seeking behaviors, which might have detrimental effects on health outcomes for Ghanaian MSM living with HIV.

The HIV care continuum is a model of sequential steps of health services for people living with HIV, with the ultimate goal of achieving HIV viral load suppression (low levels of HIV virus in blood)⁸. The stages of the continuum include: HIV testing and diagnosis, linkage to HIV care, retention in HIV care, prescription of antiretroviral therapy, and viral load suppression⁸. Various barriers to health services along the HIV care continuum exists for MSM in global settings. A study conducted among MSM in Brazil identified health-services related barriers, psychosocial challenges, costs, and problems with antiretroviral treatment as major barriers to positive outcomes along the HIV care continuum⁹. Low and middle income countries have been shown to have low rates of outcomes across all indicators on the care continuum¹⁰. Little is known about the experiences and outcomes of HIV-positive African MSM as it relates to the HIV care continuum.

Previous studies on MSM in Ghana have been epidemiological studies designed to measure the incidence and prevalence of HIV and other sexually transmitted infections³. A few qualitative studies have been conducted but the sample were predominantly HIV non-infected MSM and were focused on factors that influence sexual risk, HIV knowledge , HIV stigma, and condom use¹¹⁻¹³. Identifying and thoroughly understanding motivators, barriers and facilitators to engagement in HIV care among adult Ghanaian MSM living with HIV is critical to devising novel interventions and strengthening existing programs aimed at increasing HIV status awareness, HIV diagnosis, access to care and treatment and

improvements in health status among those living with HIV. Consequently, we conducted an explorative, qualitative study to understand factors that influence engagement in HIV care among adult Ghanaian MSM living with HIV. The main research questions were: 1) what factors motivated initial HIV-related medical care seeking behavior? 2) what barriers exists in seeking and staying engaged in HIV-related care? and 3) what are the major facilitators of engagement in HIV-related care?

Methods

Study Context

This study was conducted on an ethnically diverse, HIV-positive MSM in Accra, Ghana. The project was carried out in Accra because it has the highest prevalence of HIV among MSM (34% vs. 5-14% in other regions of Ghana)³ and has the highest population of MSM in Ghana¹⁴. The study was conducted between May 2015 and July 2015. It was designed as an explorative study to investigate the personal experiences of MSM living with HIV in Ghana across various domains.

Research Team

The qualitative interviews and data analysis was led by a male, master's level researcher with five years experience conducting qualitative research on HIV prevention and treatment among gay men and other sexual minority communities (AO)¹⁵⁻¹⁷. Assisting with recruitment and interviewing was a male, research assistant from Ghana, who had previous experience conducting qualitative interviews with Ghanaian MSM (NDWA). Prior to the start of the project, AO and NDWA reviewed the interview guide for clarity and interviewed each other for practice and uniformity. Each participant was screened by one

of the two interviewers (AO or NDWA) and provided with the option of conducting their interview either in English-only (AO) or English and/or non-English language (NDWA).

Participants and Eligibility

A total of 30 HIV-positive MSM were enrolled in the study. All participants were recruited through referral from three key informants within the community and through snowball sampling due to the highly stigmatized nature of MSM and HIV status in Ghana¹⁸. The three key informants were identified and vetted by the executive director (FB) of a community based organization that provides social services to this community in Accra, Ghana. Public spaces where MSM socialize openly are sparse in Accra, thereby making conventional recruitment strategies not appropriate in this setting. Eligibility criteria for the study were: (1) birth-assigned male sex, (2) aged 18 years or older, (3) self-reported HIV-positive serostatus, and (4) any history of oral or anal sex with another male. Written informed consent was obtained from all participants at the time of the interview. All participants were assigned unique identifier numbers to maintain confidentiality and no identifying information was collected throughout the study.

Procedures

Participants completed a face-to-face, semi-structured interview, which was followed by a brief demographic questionnaire. All interviews were conducted in a private office at a local community based organization in Accra, Ghana and were digitally recorded. Interviews were conducted either entirely in English and Non-English (Ga or Twi). Providing participants with a non-English language option allowed for narration of certain experiences that could only be effectively described in the respective native language. On average, each interview lasted between 45 minutes to one hour. All study protocol and

materials were approved by both Yale University IRB and a local community IRB in Accra, Ghana. After the interview, participants completed a brief demographic survey and received 80 Ghana cedis (equivalent of U.S. \$20 in summer 2015) for their time and participation. Participants were also provided with refreshments during the interview.

Interview Guide

The interview guide contained open-ended questions across 6 main domains: 1) Narrative around time of HIV diagnosis, 2) Engagement in HIV care, 3) HIV medication, 4) Patient-provider relationship, 5) Clinical experiences, and 6) Stigma (HIV and MSM-status related). This manuscript focuses on questions asked in the engagement in HIV care domain. Sample questions are provided in Table 2.

Thematic Analysis

All interviews were translated (if applicable) and transcribed verbatim by one interviewer (NRDA) and qualitative analysis software (NVIVO 10, Version 10.2.1 QSR International, 2012) was utilized for organizing data and facilitating retrieval (AO). We utilized Strauss and Corbin's grounded theory and constant comparison techniques to inform our data analysis procedures¹⁹. An inductive codebook with 119 different codes or sub-codes were developed based on iterations of independent analysis from two coders (AO and TK). Emergent findings were discussed with two other authors, experts in the field of HIV/AIDS and sexuality research (LEN and FB). Disagreements on codes were discussed until consensus was reached. To ensure systematic application of qualitative methods, analysis and presentation of study findings, we utilized the COREQ checklist²⁰

Results

The demographic characteristics of the sample are presented in Table 1. The average age of participants was 29 years (standard deviation (S.D.) = 7.7). More than half (n=16, 53%) of participants self-identified as gay or homosexual and about two-thirds (n=20, 67%) had a secondary education or higher. A majority of participants were single (n= 21, 70%) and were currently unemployed (n=22, 73%). The average number of years participants had been living with HIV was 4.7 years (S.D.= 3.6). Several themes emerged on barriers, motivators, and facilitators related to seeking and being engaged in HIV care among Ghanaian MSM.

Barriers to HIV Care

The main themes that emerged on barriers to engagement in HIV care were: (1) fear of being seen in HIV-related healthcare setting; (2) financial difficulties; and (3) logistical issues.

Fear of being seen in HIV-related healthcare setting

Participants who expressed having difficulties receiving HIV care cited the uneasiness and stigma associated with been seen and identified at a HIV-related healthcare setting as a major barrier. Many described that HIV is highly stigmatized in Ghana and being seen getting medical care or filling prescription medication at a known HIV clinic dissuaded them from being engaged in care. This 22-year-old participant described it this way:

“You will go for your drugs maybe you don’t want someone to see you at that hospital somewhere like the Poly clinic there are so many places there they have the unit care, so many places so if you are going there some coming for this check-up, you are also going for your ART you need to make sure no one see you because of the stigma people

are having against HIV which you will not be able to clear it. That why I said I was asking myself all these question before getting my treatment."

This quote demonstrates how stigma was a key concern for this participant prior to getting engaged in HIV care.

Another participant describes delaying engagement in HIV care for two months after diagnosis due to the fear of encountering someone he knew while visiting the HIV clinic:

"Before I was feeling shy and I was just thinking what if I went there I saw someone who knows me? What am I coming to do here and that place is known as HIV treatment so what if I go there and I meet someone who knows me what am I going to tell the person? That's why it kept me like about two months before I went I start going to the treatment." -29 y/o bisexual male

Lastly, the fear of being seen at a HIV clinic and that information being relayed to friends and family was common among participants. This participant relays such a scenario but describes how advice from a friend helped him overcome initial apprehension and seek care:

"I was thinking if I go to see her [doctor], she has an STI clinic. So if I go there, won't people say I am positive? Won't I see people who are also positive, wont they spread the news? If they see me outside, won't they point fingers to relatives and friends? I discussed with my friend and he was like 'who cares, your life depends on it [HIV treatment] let them say what they will say. I don't care what they say about me, it's my life and my life depends on going there. So I just forget about the whole scene and just did it" -26 y/o bisexual male

Financial difficulties

Participants described inability to afford HIV medication, laboratory fees, hospital visit fees, and other treatment related expenses as a major barrier to engagement in care. This participant describes having no money for medical expenses and having to delay seeing a doctor as a result:

“Actually I didn’t have money at that time, it wasn’t in my plans to see a doctor ever again so I was like I wanted to wait for some time before seeing the doctor because I didn’t have money” - 25 y/o bisexual male

Additionally, high unemployment rates in this sample (73%) contributed to limited finances. A 29 year-old, bisexual participant describes financial difficulties as a result of loss of employment and not being currently engaged in care due to inability to afford transportation and medication costs.

“I was once working so I didn’t see it as a problem when I had to pay for my transport and drugs because I knew my life was important. I’m not working now so it’s difficult for me to pay for my transportation and drugs.”

Logistical Issues

Participants described logistical barriers as additional obstacles to receiving HIV care. These barriers included long wait times for HIV medication, physician negligence, and work conflict.

One participant detailed having to wait in long lines for an extended period of time to get HIV medication:

“Like coming for my medication and then I have to join a queue sometimes I have to spend like one hour, sometimes even two hours at the hospital just coming for medicine” -29 y/o bisexual male

These long wait times for medication coupled with far distance of healthcare facilities make health visits a day long commitment, which might impact continued engagement in care for participants with jobs and other responsibilities.

Another participant described an instance in which negligence, on the part of his physician, prevented him from being able to be excused from work to make his hospital appointments:

“Sometimes where I used to work, they wanted to know why I used to go to the hospital so they gave me a medical form to fill out. So I went to see a doctor and told him I attend hospital every month and my employers wanted to know what was wrong with me. The doctor wrote on the form that I was fit and nothing was wrong with me instead of writing I had to see a doctor every month.” -29 y/o bisexual male

Lastly, this participant described a culmination of issues, including work time conflict, distance of the healthcare facility, and financial hardship, that all contributed to his inability to be engaged in HIV:

“So the barriers are that the hospital was far, I didn’t have money to afford medication, hmmm I didn’t feel comfortable going to the hospital and I had a job and I had to take off work to go to the hospital or some of the things that sort of inhibit you to receive medical care “-26 y/o gay male

Motivators for HIV care

Major sources of motivators identified for engagement in HIV care include: (1) social support; (2) fear of mortality from HIV; and (3) knowledge of effectiveness of HIV treatment.

Social support

Participants identified individuals who motivated and encouraged them to seek treatment after HIV diagnosis and to continue with treatment regimen once engaged in care. These relationships were either long-standing relationships with family and friends prior to HIV diagnosis or relationships that materialized as a result of diagnosis. This 26-year-old participant describes how his mother initially motivated him to get tested for HIV and to seek treatment:

“My health has always been paramount to me but with nothing was really motivating or pushing me to get tested for HIV so I’ll say my mother motivated me to seek medical care. The whole thing happened as if God was telling my mom take your son to the ward, to the hospital. If I hadn’t gone to the hospital at all I wouldn’t have even known my status for now. The motivator I’ll say is my mom.”

In other cases, close friends served as the motivators for health seeking behavior. In these instances, friends provided participants with information about the benefits of HIV medications and possible detrimental outcomes, if treatment was not sought. One participant describes how a concerned friend stressed the need for him to seek treatment:

“My friend told me that I have to go for treatment early, because if I don’t take any medicine then the virus can be plenty then it can kill me. Then everyone will see that now I have got AIDS but if I go for my treatment no one will say that I have got AIDS because I’m

taking the medicine. The virus is going small small so I said that's fine, so I went to the woman[doctor] and got treated" -24 y/o gay male

While family and friends were common motivators for getting engaged in HIV care, medical professionals such as nurses and doctors also played a major role in encouraging care-seeking behavior. This participant expresses how a nurse motivated him to seek treatment and helped mitigate barriers to getting HIV medication:

"It was that nurse who encouraged me because she would call me often and we talk often and even if I am unable to go to the clinic, she'll collect the drug then I'll go to her house for it" -24 y/o bisexual male

Fear of Mortality

Some participants expressed that fear of dying motivated them to seek treatment. The fear of mortality was described in relation to witnessing the death of someone from HIV, and not wanting to disgrace one's family as a result of dying from HIV.

One participant narrated a scenario in which someone he knew died from HIV, which made death as a result of HIV a reality for him:

"If you are not on medicine you'll die because once in my hometown a lady felt very sick and didn't seek for any treatment. They were just going to churches and later on they found out it was HIV but by that time it was too late, she died. Instead of them seeking for treatment they never went to the hospital they were rather in churches and praying and the lady died." -20 y/o bisexual male

The knowledge that HIV can cause death resonated with this participant and as a result motivated care seeking behavior.

Additionally, participants expressed seeking HIV treatment in order to achieve their destiny, fulfill dreams, and leave a legacy to be remembered by. This 26-year-old bisexual participant describes this life goal:

“I didn’t want to die young. I was 25 when I was diagnosed. I don’t want to die at 25. I want to leave a legacy before I leave this world. That was one of the things I thought about that is why I wanted to get treatment because I wanted to leave a legacy I wanted to let people know yeah HIV is there and if you have HIV you can still live. I will be happy to tell people ‘Hello, I’m positive and I have been positive for 20 years’”

Lastly, premature death was tied with bringing shame to one’s family. Consequently, participants decided that being on treatment will help prolong their lifespan. This participant described it this way:

*“[I sought treatment because] after I was diagnosed, I did a lot of thinking. I talked to my family and I was like ‘I wont allow my self to die young and my family will be like what killed me and they will be going through all the stuffs to find out.’ I knew they will be very disappointed, my mum will be very sad so I’m like ok, cool I wouldn’t let my self go because am HIV positive. I will take care of my self and make sure I live long.” -
29 y/o gay male*

Knowledge of Effectiveness of HIV treatment

Knowledge of HIV treatment and its’ effectiveness motivated participants to seek care once they were diagnosed with HIV. This information convinced participants that they too could benefit from the high potency of HIV medication. Many described receiving HIV-related information from television interviews and print media. This 29-year-old

participant described a television ad that provided specific information about the importance of early engagement in HIV care once diagnosed:

"It's just because I have been seeing on advertisement that said if you have HIV, you have to go to the clinic to get your treatment. It would keep you strong as you are as a normal but not [taking] treatment [you] can just die at any moment. If you diagnose positive you have to be fast and start taking your drugs that is why and the encouragement of the woman and advised that she has been giving me."

These public messages motivated participants to seek out options for engagement in HIV care.

Another participant narrated watching a television interview about HIV and internalizing the messages he heard:

"I know if I take the medicine it would reduce the disease it would let the virus come down and I'll come back to my normal self. I have been watching interviews on TV you know this HIV ambassador. I have been watching them and I have been hearing them that if you take your medicine you are going to be fine you know so when I take my medicines I'll be like them, I'll come back to normal and live a normal life." -20 y/o bisexual male

This personification of messages concerning

Facilitators of HIV care

Major facilitators of engagement in HIV care were: (1) access to health insurance; (2) prior relationship and familiarity with hospital personnel; and (3) positive experience in healthcare settings.

Enrollment in National Health Insurance Scheme (NHIS)

Participants enrolled in the NHIS described insurance as a major facilitator to being engaged in HIV care. Under the NHIS, HIV medication and other health services are highly subsidized. This 27-year-old participant outlined how the NHIS covers both HIV medication costs and other labs required for people living with HIV:

“The doctor automatically registered me into the health insurance policy because he said the medication requires you to pay, said okay ill put you on it she is also into the national health registration thing so she gave me a letter and I went straight home and I did it I. it has been helpful, I get medication for free”

Prior relationship and/or familiarity with hospital personnel

Prior relationship with healthcare providers and hospital personnel was a common facilitator to being engaged in HIV care. These relationships helped provide certain perks such as avoiding long queues, waiving of medication and other service fees, and extension of normal clinic hours, all of which helped make care more accessible to Ghanaian MSM.

One participant described being able to skip long lines for medical attention, which prevented them from being late to work:

“Sometimes before I get to the hospital I call a nurse so I wouldn’t have to join a queue for medicine and it enables me to go to work early.” -29 y/o bisexual male

It was common for participants to describe utilizing relationships with medical personnel to facilitate quicker access to healthcare and defray costs.

This 20-year-old participant described instances in which he could not afford to pay for labs and the nurse waived the fee:

“Going to the hospital because I didn’t tell my parents and I did not have any money. The nurse that counseled me, she paid for some labs you know I’ll be having some labs before they put me on the medicine. The nurse that I went and see over there, you know she paid for my labs and she is the one who made everything easier for me”

In addition, there were instances of regular office hours being extended and personalized care being provided to accommodate participants busy schedule:

“I happen to have one of the nurses in my area so she [doctor] would give it [medication] to her and once in a while I would come to the hospital for another check up and maybe want to put you on scale to know my weight and see how the medication is treating me. Sometimes I go to see her alone during the weekend then she would take me through all the processes”

-26 y/o gay male

These accommodations, both monetary and logistical, provided mainly by nurses, helped facilitate engagement in care.

Positive experience in healthcare setting

The socially supportive and nonjudgmental atmosphere experienced by some participants in the hospital setting made the care process easy and accessible. One participant described:

“You know when you go to the hospital, how they would take care of you sometimes I even forgotten that I have such disease. When you go the hospital the way they would talk to you, they would welcome you is very very good. For that one I don’t have any problem with them. They would sometimes call you they are having a party for you people, they would send you out to eat, yeah they are very good” - 24 y/o gay male

Discussion

This is the first known study to explore barriers, motivators, facilitators to engagement in care among HIV-positive MSM in Ghana. Common barriers identified were: fear of being seen in HIV-related healthcare setting, financial difficulties, and other logistical issues. Major sources of motivators included specific people, fear of mortality from HIV, and knowledge of HIV treatment and care. Facilitators of engagement in HIV care were: enrollment in national health insurance, prior relationship with healthcare providers and hospital personnel, and positive experience in healthcare setting. This study adds to our limited knowledge of factors that affect the HIV care continuum as it relates to Ghanaian MSM living with HIV.

The finding that being seen in an HIV-related medical setting was a major barrier to engagement is consistent with findings from previous studies^{9,21,22}. A study conducted among MSM in southern African countries found that fear of being blackmailed due to sexual orientation and history of being denied health services based on sexual orientation was significantly associated with higher odds of not seeking healthcare services²³. These findings underscore the need for privacy in delivery of healthcare services and confidentiality of HIV status. Consequently, it might be valuable to explore the feasibility and acceptability of mobile health technology (mHealth) for providing HIV services to Ghanaian MSM. A recent systematic review exploring the use of mobile technology for HIV/AIDS health services provided support for mHealth interventions being associated with better outcomes across the HIV treatment cascade²⁴. This study also noted a gap in the literature of use of this health innovation in key populations including MSM²⁴. More research is needed to show how adoption of mHealth in health delivery for MSM living with

HIV might help increase linkage to care, retention in care, and adherence to antiretroviral treatment, especially in low resource settings. In the meantime, the implementation of confidentiality training, that stresses the sensitivity of MSM and HIV-related issues, for all staff and employees in regards to patient records might help ease concerns about privacy.

Logistical issues such as long wait times both for physician services and accessing HIV medication were also identified as major barriers to being currently engaged in HIV care. Previous studies conducted in various sub-Saharan African countries have found long waiting times in clinical settings to be a barrier to antiretroviral adherence^{25,26}. A study conducted on HIV-positive women found that lack of problem with appointment time and shorter appointment waiting time were both significantly associated with high number of primary care visits²⁷. This suggests that hospital waiting time might impact health outcomes in people living with HIV. Physicians, pharmacists, nurses, and other allied-health professionals can play a major role in decreasing waiting time for patients seeking services at their facilities. One strategy to be considered is switching from a manual patient record system to a streamlined electronic system that allows automatic scheduling of patients and reminders for follow-up visits and care coordination. This type of scaling up HIV care and treatment services, which requires substantial financial investment, has been argued to increase efficiency and improve the overall strength of the health system²⁸. Better coordination of care, specifically cutting down on patient waiting time, might increase engagement in care and positively impact productivity of the health system.

Social support, fear of mortality from HIV, knowledge of effectiveness of HIV treatment were identified as motivators to engagement in HIV care and consistent with previous studies²⁹⁻³¹. These findings underscore the importance and need for social

connection, social support and affirmation for Ghanaian MSM living with HIV. Participants described how family members and friends motivated them to seek treatment. Instituting programs that debunk myths about HIV and humanize those affected might help reduce stigma and increase acceptance of people living with HIV and sexual minority communities. Additionally, public health campaigns that provide evidence-based and scientifically driven information on the effectiveness of HIV treatment might be beneficial both for people living with HIV and a more general public audience. These message could be distributed across public media outlets such as television, radios, and newspapers. They might help motivate those not currently engaged in care on its' benefits.

A major facilitator of engagement in HIV care was enrollment in a health insurance plan (NHIS). The National Health Insurance Scheme (NHIS) covers an estimated 95% of all health problems including hospital visits and lab fees but not antiretroviral therapy, which is subsidized by another government program (National AIDS Program)³². The latest annual report by the National Health Insurance Authority reported that only 38% of Ghanaian citizens was enrolled under the NHIS³³. New initiatives aimed at extending coverage to poor and vulnerable communities includes increased outreach to people living HIV. Streamlining enrollment in NHIS as part of routine protocol once a patient is diagnosed with HIV might help increase reduce personal financial burden due to health costs.

Prior relationship and familiarity with healthcare providers and hospital personnel, and positive experience in healthcare setting were found to facilitate engagement in care. Studies have found that effective patient-provider relationships and affirming clinical spaces improve engagement in HIV care^{34,35}. Consequently, it is important that health providers and clinical staff are trained on how to effectively interact with Ghanaian MSM

within the healthcare setting. Emphasis should be placed on creating a safe and non-judgmental environment where patients feel comfortable and affirmed in their varied identities and self expression. Additionally, integrating LGBT-related content into the curriculum of health professional schools might help build a health workforce that is aware of the unique challenges vulnerable populations such as Ghanaian MSM face and how to tailor health services to meet their needs. Initiatives such as these have been shown to be effective in the past³⁶. Ultimately, special accommodations and acceptance of Ghanaian MSM living with HIV might help improve health outcomes.

This study has to be interpreted in light of several limitations. Firstly, all participants in the study were recruited by three key informants. Consequently, the findings of this study may not be generalizable to the entire community of Ghanaian MSM living with HIV. However, the sample was diverse across ethnic, sexual orientation, education level, and religious affiliation lines. Secondly, participants were younger in age (mean age=29 years) and had been living with HIV for an average of 4.7 years, which might exclude the experiences of older and newly diagnosed Ghanaian MSM. This might be pivotal to gaining a fuller picture of the experience of MSM living with HIV in Ghana. Thirdly, the HIV status of participants was not verified through an HIV test administered by the study. This could result in fabrication of information by participants due to financial incentive provided by the study or other motives. However, some participants provided documentation of HIV diagnosis. Additionally, it is important to note that with HIV and MSM- status being highly stigmatized in Ghana, it is highly unlikely that participants will falsely and voluntarily identify with these identities.

In spite of these limitations, this is the first known study to investigate factors related to engagement in HIV care among Adult Ghanaian MSM living with HIV. The results of this study has profound implication for policy change to improve health outcomes for Ghanaian MSM living with HIV.

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Table 1: Descriptive characteristics of participants (N=30)

Characteristic	N (%)
Age (in years)	
Mean (SD)	29.07 (7.7)
Ethnicity	
Ga	7 (23.3%)
Ewe	5 (16.7%)
Fante	5 (16.7%)
Ga-Adangbe	4 (13.3%)
Twi	3 (10.0%)
Mole-Dagbani	2 (6.7%)
Other Akan	2 (6.7%)
Other ethnicity	2 (6.7%)
Sexual Orientation	
Gay/homosexual	16 (53.3%)
Bisexual	12 (40.0%)
Straight/Heterosexual	1 (3.3%)
Don't know	1 (3.3%)
Highest Level of Education	
Primary School	2 (6.7%)
Middle School/ JSS	8 (26.7%)
Secondary School/ SSS	7 (23.3%)
University or higher	13 (43.3%)
Relationship Status	
Single	21 (70.0%)
Dating (Male)	3 (10.0%)
Dating (Female)	2 (6.7%)
Married	1 (3.3%)
Divorced	1 (3.3%)
Separated but still married	1 (3.3%)
Widowed	1 (3.3%)
Currently Employed	
No	22 (73.3%)
Yes	8 (26.7%)
Stable Housing	
No	11 (36.7%)
Yes (living with family)	12 (40.0%)
Yes (living alone)	7 (23.3%)
Number of years living with	

HIV	
Mean (SD)	4.66 (3.6)
Religious Affiliation	
Christian (Other)	11 (36.7%)
Christian (Pentecostal)	7 (23.3%)
Christian (Anglican)	5 (16.7%)
Christian (Catholic)	4 (13.3%)
Islam/Muslim	2 (6.7%)
None	1 (3.3%)

Table 2: In-depth interview sample questions

Domain	Questions
Engagement in HIV care	Are you currently receiving medical care for your HIV?
Participants engaged in HIV care	How soon after your HIV diagnosis did you see a medical provider? Depending on response, probe on length of time between diagnosis and treatment.
	Why did you decide to seek treatment for your HIV?
	Was there anything that made it hard for you to receive HIV medical care?
	What were the things that made it easy for you to get the treatment you needed?
	What factors/people motivated you to seek HIV medical care?
Participants not engaged in HIV care	Why are you currently not in HIV medical care?
	What, if anything, made it hard for you to receive HIV medical care?
	What were some barriers you faced when you were first diagnosed with HIV?

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