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Exploring the Perspectives of Healthcare Providers on Providing HIV Prevention and Treatment Services for Key Populations in Rwanda: A Qualitative Study

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Abstract

Background: The overall HIV prevalence and incidence in Rwanda have decreased significantly in the past decade. However, opposite trends are seen among key populations (KP). The HIV prevalence among sex workers is as high as 51% and continues to rise. While the HIV prevalence among KP remains high, their adherence to treatment is low. Healthcare providers play a vital role in KP's access and adherence to HIV treatment. This study aimed to explore the perspectives of healthcare providers on providing HIV services to key populations in Rwanda. **Methods:** An exploratory qualitative study was conducted with nurses, doctors, social workers, and psychologists who provide HIV services to KP in public health facilities in Rwanda. In-depth interviews were conducted using a semi-structured interview guide. All data were analyzed thematically using Dedoose. **Results:** Interviews were conducted with 18 healthcare providers. Three overarching themes emerged from the interviews: healthcare providers' intrinsic feelings affect the ways they provide HIV services to key populations, key populations face a multitude of challenges related to accessing treatment and preventing the spread of HIV, and a more comprehensive and sensitive approach should be used to improve HIV services for key populations. **Conclusion:** Healthcare providers expressed difficulties in providing services to key populations and identified a lack of adherence to treatment and prevention guidelines, structural barriers, KP's lack of trust in the healthcare system, and the discrimination and abuse KP face as challenges to effective HIV prevention and treatment. More comprehensive services including clinical, financial, and psychosocial support from trusted sources are needed. Some important policy changes are essential to facilitate access to HIV services for KP.

Keywords

HIV/AIDS, Key Populations, Sex Workers, Men Who Have Sex with Men, Health Services

1. Introduction

Rwanda has about 350,000 people living with HIV, translating to a 3% prevalence [1]. Since the first reported HIV case in 1983, the government of Rwanda has developed programs and policies to reduce new infections, including setting National HIV/AIDS targets, introducing voluntary testing centers, creating mother-to-child transmission prevention programs, voluntary medical male circumcision, behavior change communication, and nation-wide access to Antiretroviral Therapy [2] [3]. Consequently, the HIV prevalence and incidence among the general population have significantly decreased in the past decade [4].

However, opposite trends exist among the key populations (KP)—sex workers, men who have sex with men (MSM), prisoners, transgender individuals, and injection drug users. The HIV rates among these groups continue to rise and remain high globally and in Rwanda [5] [6]—with a country-wide HIV prevalence of 51% among commercial sex workers, 4.8% among MSM, and over 10% among prisoners, transgender women, and injection drug users [7] [8] [9] [10] [11].

While HIV/AIDS prevalence is generally high among KP, their access to prevention and treatment programs, and adherence to HIV treatment are low in many countries, including Rwanda [5] [15] [16]. This implies that more effective prevention and treatment efforts are needed for these communities [12] [13] [14]. The factors hindering access to treatment among KP in Rwanda, therefore, must be explored to design more effective programs and interventions.

In Rwanda, healthcare professionals (HCPs) work closely with individuals living with HIV and play a vital role in access to treatment, adherence, and program retention [17] [18]. Thus, their perspectives on barriers impeding treatment can inform viable policy and program design [19] [20]. Previous studies conducted in Rwanda have focused on the HIV prevalence and incidence and associated factors among specific KP groups [7] [8] [9] [21]; the perceptions of HCPs on the provision of HIV treatment and prevention services to KP have not been explored. Such information is crucial to develop context-specific interventions to reduce HIV transmission and increase service access amongst KP. This study, therefore, aimed to fill this knowledge gap.

2. Methods

Design

An exploratory qualitative study was conducted to understand the perspectives of HCPs working in HIV clinics in urban, suburban, and rural health centers in four districts of Rwanda: Gasabo, Kicukiro, Nyarugenge, and Gicumbi.

Sample and sampling

Purposive sampling was used to select nurses, social workers, psychologists, and doctors who provided HIV services at the study sites. Participants were sampled until no new information is emerging from participant responses (theoretical saturation). Based on participants' responses, we stopped data collection after interviewing 18 participants as the theories and ideas that were coming from the transcripts were the same. Only HCPs who had served at least one person from a KP group and had at least one year of work experience were included in the study.

Data collection tool and method

A semi-structured interview guide with six open-ended questions, with probes, was used to guide data collection. Interview questions were related to the experiences of HCPs serving different KP, the challenges and facilitators they have encountered, and the resources and skills HCPs need to better serve KP. The interview questions were developed based on the study's objectives. A few of the questions were adapted from similar studies [22] [23], but were adjusted to fit our study's context. The interview guide was developed in English and translated to Kinyarwanda—the local language and was pre-tested with eight lay persons and five HIV healthcare providers working outside the sample sites.

Participants' recruitment took place between May and July 2020, at the study sites. The directors of the facilities provided the research team a list of HCPs at their HIV clinics. The research team contacted potential participants via telephone to schedule a time and location of the participants' choice to conduct the interviews.

Consent to conduct and record the interviews were sought after detailed explanation of the study was provided to the participants before the interview. All interviews were conducted in Kinyarwanda, as preferred by the participants, in a private space to ensure participants' privacy.

Each interview lasted for approximately 45 minutes. The principal investigator listened to the interviews and reviewed notes at the end of each data collection day to determine if saturation was reached. The study team also met twice a week during the data collection period to review the findings and revise the interview guide as needed.

Data analysis

All audio recordings were transcribed verbatim and translated into English. A codebook was developed after open reading of 6 transcripts. The investigators first coded all transcripts independently and then met to resolve any discrepancies. Transcripts were coded inductively and iteratively using Dedoose software (V.8.3.35), by the research team. The coded transcripts were grouped into themes and representative excerpts were included in the results.

3. Results

Participant characteristics

Eighteen healthcare providers from 4 urban, 1 suburban, and 1 rural health facilities were interviewed: 1 doctor (5.6%), 5 social workers (27.8%), and 12

nurses (66.7%). Fourteen (77.8%) participants were female, and four (22.2%) were male. On average, participants had 10 years of working experience in HIV service delivery and 11 (61%) of them had a bachelor's degree. All participants had worked with KP, especially sex workers and MSM, and all identified themselves as having religious beliefs (Table 1).

Three overarching themes emerged from the interviews:

Theme 1: HCPs' intrinsic feelings affect the ways they provide HIV services to KP.

Theme 2: KP face a multitude of challenges related to accessing treatment and preventing the spread of HIV.

Theme 3: A more comprehensive and sensitive approach should be used to improve HIV services for KP.

Theme 1. HCPs' intrinsic feelings affect the ways they provide HIV services to KP.

Respondents expressed that they experienced a wide range of feelings and emotions when treating KP patients—from seeing them as friends, to disapproving their lifestyles—that affected how they provide services to KP. Their views and feelings were influenced by their religious beliefs, their social up-bringing as well as the social and professional expectations imposed on them. Such intrinsic feelings inevitably affected their attitudes and behaviors when providing services to KP.

1) HCPs felt that it was their duty to serve KP

Several respondents said they had no problems providing healthcare services to KP; they viewed them as friends or expressed that their duty was to provide care and

Table 1. Demographic characteristics of study participants.

Characteristics		n (%)
Sample size		18
Sex	Female	14 (77.8%)
	Male	4 (22.2%)
Age (years)	Mean (range)	45.6 (36 - 64)
Work experience (years)	Mean (range)	10.7 (1 - 21)
Highest education level completed	Secondary and post-secondary diploma	7 (38.9%)
	Bachelor's degree	11 (61.1%)
Profession	Nurse	12 (66.7%)
	Social worker/psychologist	5 (27.8%)
	Doctor	1 (5.6%)
Location	Urban	12 (66.7%)
	Suburban and Rural	6 (33.3%)
Religious beliefs	Yes	18 (100%)

not to judge them. Although sometimes they were sad and discouraged, they strongly felt that services for KP must be continued. They believed that their positive attitude towards KP made these patients feel comfortable when they came for care—without the fear of being judged or treated differently. This friendly yet professional rapport was believed to increase KP's adherence and involvement in their own HIV care.

"*It doesn't make me feel bad in any way* [*serving sex workers*]. *Most of the times I see the sex workers who come here as my friends… You talk to them and show them that you are putting yourself in their shoes so that you manage to resemble them. I cannot stop doing that* [*giving them services*]." (*Female*, *social worker*, *0007*)

"*It is sometimes discouraging* [*treating KP as they continue to engage in activities that expose them to HIV*], *but we have to give them services no matter what. Refusing to give them service*, *means that they might transmit the disease to another person*, *who might in turn infect more people. We must give them healthcare services to stop the spread of the disease. Being discouraged to serve them is dangerous because it's like telling them: go and continue. Tomorrow they might infect my child*, *my sibling*, *and any other person… you might end up finding that the whole country is infected because we got discouraged and stopped caring.*" (*Male*, *nurse*, *0028*)

"*Yes*, *I have beliefs*, *but I am not a slave to religion… All I do is to give services as I have learned—without distinction. I will never say* '*I will only serve others and not MSM*' *and yet he is sick and needs medical care*, *no. Refusing services to MSM would be*, *I think*, *committing a graver sin.*" (*Female*, *social worker*, *0049*)

2) *HCPs had internal conflicts when treating KP*

Not all HCPs shared the same undivided devotion towards KP. Some expressed internal conflicts when treating KP, stemming from their cultural and religious views on gender and sexuality. Homosexuality and sex work, according to their cultural and religious beliefs, are seen as abominations. These negative perceptions, generally, were stronger against MSM than towards sex workers. Although HCPs believed that KP's lifestyles went against biblical teachings, they maintained that their religious beliefs called on them to help the marginalized with love and compassion. Some also felt it was their professional and social responsibilities as HCPs to treat KP to prevent the spread of HIV.

"*There are things they* [*MSM*] *do that are not right in my beliefs… I believe that God created man and woman to reconcile their union. I do not believe that a woman should have sex with a woman*, *or a man have sex with a man. But we are in an evolving world*, *these things have been normalized… The real sin is*, *there is a term that we call* '*breastfeeding sin*' [*roughly translates to* "*the sin that one commits by indirectly encouraging the sin of another*"]. *When you feel that doing something is not a problem*, *it doesn't mean anything to you*, *but before God we have sinned. But what I also believe*, *on the other hand*, *is that a human being has undisputable rights.*" (*Female*, *social worker*, *0013*)

"*In the real Christian faith*, *fornication is a sin. Homosexuality is another sin*;

in the Bible, you find that Sodom and Gomorrah were destroyed because their homosexuality made God angry. In fact, I receive them, but it's like a job. In reality, I don't support those things. But you give them counseling so that they may handle the situation… At first, I refused to do it [*give them treatment*]. *I was wondering about the things I've been required to do yet I don't agree with it, but I calmed down. There was no other choice. I did it.*" (*Female, nurse, 0040*)

3) *Some HCPs held negative perceptions towards MSM and refused to receive them*

Religious beliefs had a huge influence on the attitudes of HCPs toward KP. Some respondents believed the KP's lifestyles were against their religious beliefs, so providing treatment for KP would be encouraging sin. Consequently, some HCPs refused to provide treatment to KP, especially MSM.

"*Those things* [*men sleeping with men*] *are not in line with the word of God. This means that I consider that to be another illness, they are abnormal things. If it were better, the person would luckily heal and do what God has planned for us to do… In the context of mental illness, it* [*being MSM*] *is also an illness.*" (*Female, nurse, 0037*)

"*Based on my beliefs, accepting MSM is a challenge. Things regarding homosexuality are usually found in urban areas, not in rural areas. They are unusual things. But I don't even wish to work with them… It is not supposed to be a thing that we take as normal because it* [*being a MSM*] *is a trendy behavior.*" (*Female, nurse, 0052*)

Overall, all our respondents expressed having religious beliefs. While some could overlook the conflict and dedicate themselves to providing services to KP, many had internal struggles. And a few just plainly saw homosexuality as a sin and did not want to provide services to MSM.

Theme 2. HCPs faced a multitude of challenges in providing HIV services to KP

HCPs faced some challenges when providing HIV services to KP. Many KP patients delayed seeking care and did not adhere to the treatment protocol. While these challenges also happened in the general population, different root causes, stemming from personal, work, social, and financial issues, were identified among KP and impacted their access, retention, and adherence to treatment.

1) *KP work schedules and lifestyles affected their involvement in HIV services*

HCPs expressed how logistical challenges including sex workers' schedules and the frequent relocations of KP contributed to a high attrition rate in HIV services and poor adherence to prevention and treatment. Many sex workers worked during the night and often struggled to attend follow up appointments during the day or take medication at the prescribed time. Some KP, especially sex workers, were reported to sometimes not to take the HIV medication, as they could not bear its side effects. Feeling nauseous and low in energy were said to have been affecting sex workers' ability to find clients and generate income. Furthermore, they often moved to different towns or cities unexpectedly, due to a lack of job stability, and HCPs often could not follow up with them, contribut-

ing to poor treatment outcomes.

"*When you see that* [*medication*] *is not having an impact, you must think that this person may not be taking the medication. Because if a person is engaged in sex work, she often spends the night on the street.*" (*Female, nurse, 0043*)

"*The main challenge is that KP are mobile. For instance, sex workers… you give her an appointment and she doesn't show up. We call her, and she tells us she has moved to another place because in our area, she could no longer find customers… That is a serious challenge when you cannot continue to follow up; it is difficult to know if she seeks health services elsewhere.*" (*Male, nurse, 0028*)

2) *KP fear attending HIV clinics*

Another major challenge identified by providers was fear. HCPs mentioned that KP, especially MSM, were fearful of attending HIV services because of social, cultural, and legal factors. From their experience, many HCPs stated that MSM patients' previous experiences of being mocked or shunned in health facilities have left them fearful, resulting in delays in seeking HIV care. Consequently, HCPs reported that the majority of MSM patients had to be referred to tertiary hospitals for more advanced care. Further, providers expressed that when MSM patients came for HIV services, many didn't want to interact with HCPs.

"*MSM are in fear. One MSM told me, 'There are many* [*MSM*] *in the villages but they would not come to see the doctor. They suffer from sexually transmitted infections and are ashamed of* [*showing up for*] *treatment.' These are the ones who need to be cared for, to be treated, and to be courageous. I have noticed that they hardly go for treatment.*" (*Female, nurse, 0043*)

"*Most of them have encountered that challenge* [*hostility*]. *When I ask them, they tell me 'Yes, I was sick, but I was afraid to come to seek medical care…' and, because of those delays in seeking care, we refer them to* [*district*] *hospitals for advanced care. We have a serious challenge because many of the MSM cases we receive, we have to transfer them. And then, when we transfer them to let's say to* [*redacted*] *hospital, they sometimes refuse to go. They say, 'they don't know us there' and so they sometimes end up not accepting the transfer.*" (*Female, social worker, 0049*)

The fear of incarceration was another reported challenge for KP patients, contributing to delay or refusal to seek HIV services. There were incidences where law enforcement officers targeted and jailed KP when they presented themselves to health facilities, causing KP to distrust HCPs.

"*I realized these people are confronted by the law enforcement more than they receive healthcare services. They take them from the streets and put them in jail and it affects our work. For instance, we once invited new sex workers to get healthcare services but only a few showed up on the first day because they were afraid that the intention was to put them in jail… It is difficult for us to meet sex workers and people who inject drugs because they fear that the agenda is judicial, not medical… They think we are trying to trick them so they would be taken into custody.*" (*Female, nurse, 0004*)

3) Financial challenges impact KP's ability to seek care

Financial barriers and the lack of health insurance were other identified treatment barriers. Although HIV services are free for all in Rwanda, treatment for HIV comorbidities such as diabetes is not. HCPs mentioned that when most of their KP patients did not have health insurance, they either had to pay out of pocket or were unable to access care. The structural barriers within the community-based insurance system, coupled with negative perceptions towards KP were believed to contribute to KP's inability to purchase health insurance. The community-based health insurance system in Rwanda is directly linked to the socio-economic categories of households. These categories are used to determine how much premium individuals should pay for health insurance. Categories are only given to households, not to single individuals. Respondents reported that some KP had been disowned by their families, and their names removed from the household list. Without being listed under a household, they could not claim the socio-economic category, and in turn, could not get health insurance. Providers mentioned that there were instances when KP went to government facilities asking to be registered for socio-economic categories but were mocked and discriminated when government officials found out these individuals were sex workers or MSM.

"*The challenge is when we find him/her with diseases which require insurance, and yet they cannot afford medical insurance. They cannot afford care for other diseases that require further treatment, without medical insurance.*" (*Male, nurse, 0031*)

"*Sex workers and MSM do not have ubudehe categories* [*socio-economic categories*] *like other Rwandan citizens… It is difficult for MSM and sex workers to get socio-economic categories from local authorities. When MSM and sex workers go to ask for categories, the local authorities put them to shame in public. The official can say 'You, prostitute, are also here to look for a social category? And you guy who transformed yourself into a woman, you also want a social category?'*" (*Female, social worker, 0049*)

4) Professional hazards associated with sex work hinder HIV services

Sex workers were reported to be at high risk physical and mental abuse and contracting HIV; their clients are often extremely violent and abusive. When sex workers' clients offered a relatively large amount of money for unprotected sex, they were left with no choice but to accept. Providers expressed that such traumatic experiences, stemming from the nature of their work, often caused sex workers to become withdrawn and resulted in distrusting people, including HCPs. Consequently, they eventually stopped coming for treatment.

"*For instance, one* [*a sex worker*] *told me 'I use condom but sometimes a client comes and finds me hungry and deprived and tells me, I have so much money to give you and so we won't use condom, and I accept!' Why do they accept it? Because she didn't eat the previous night and wants what to give to her children; the situation pushes her to the limit. She wants to use a condom, but her client doesn't and is paying extra.*" (*Female, nurse, 0004*)

"*Their clients oblige dangerous and extraordinary practices clients that put them at very high risk… Sex workers sometimes come with wounds because a client has beaten them or broken their arm… and this violence perpetuated upon them creates a defensive character; they do not have a sense of love… It then requires us to use extra energy* [*to treat them*] *since they also do not respond to medical visits. We have many cases of them who no longer come to take medicine* [*for that reason*]." (*Female, social worker, 0049*)

Many HCPs mentioned that because of these traumatic experiences, sex workers sometimes had negative behaviors and attitudes towards HCPs, such as being impatient, aggressive, and disrespectful. Providers explained how these perceived behaviors were often a major challenge they faced when providing HIV services to this group. They often had to overlook this to help them adhere to prescribed treatment. Other respondents also mentioned that these behaviors made them uncomfortable when providing services to sex workers.

"*Often, you realize those engaged in prostitution have bad behaviors like insulting and daring to confront a doctor. We really must try to be patient* [*when handling their cases*]." (*Female, nurse, 0001*)

"*Sex workers are not patient; they are aggressive with their words, are disrespectful, and say hurtful things. Only a few are respectful. But for many of them, it is difficult to cooperate* [*with them*] *and sometimes this makes me uncomfortable.*" (*Male, nurse, 0010*)

Overall, respondents reported that there are a myriad of challenges hindering KP's access to HIV services including the mobility of KP, fear of discrimination and incarceration, financial challenges and lack of health insurance, challenges associated with sex work, and HCPs' perceived aggressiveness of sex workers. These factors, alone or together, were said to contribute to low treatment adherence and high attrition of KP in HIV clinics.

Theme 3. More comprehensive and sensitive approach should be used to improve HIV services for KP

Respondents provided recommendations resources needed to facilitate KP to access HIV services. Since some of the challenges KP faced were unique, HCPs suggested that the solutions be multi-prong and sensitive to their needs.

1) Trust is an important factor when facilitating KP's access to HIV services

Channeling services through sources that KP trust, encourages them to utilize HIV services. KP tend to trust their peers, group leaders, people from their treatment groups, and other KP. When HCPs reached out to KP through these trusted mediums, more were willing to adhere to medical advice. HCPs also stated that partnering with NGOs that support KP improved their access to HIV services. These NGOs provided HIV services free of charge and identified KP from communities and connected them to health facilities for testing and care.

"*It* [*having team leaders*] *helps us and makes it easier for us. When we look for them* [*KP*] *in their workplaces or in their community, they don't listen to us. You can tell that they freak out because they don't trust us. But when look for them through team leaders, many of them come because they are sure that the*

services we provided to their friends will also be provided to them. That helps us with the follow up because they believe that what we do will be of help to them" (*Female*, *nurse*, *0052*).

"*There are organizations we work with*, *who partner with us to facilitate access to health services for KP. There is one called HDI* [*Health Development Initiative*], *that works with MSM*, *and SFH* [*Society for Family Heath*], *that follows up with girls who do sex work. Often*, *they are the ones who give us these people because we have a partnership. They bring them in*, *we receive them*, *we either do the regular follow up*, *or start them on medication.*" (*Female*, *nurse*, *0040*)

"*Sex workers have an organization* [*Project San Francisco*] *paying for their HIV services. They get medicine for free and others who are HIV negative*, *they get preventative medicine. We provide the services*, *make a bill*, *give it to the project and the* [*organization*] *pays for it.*" (*Female*, *nurse*, *0004*)

2) *KP need more specialized health services*

More tailored and specialized services are needed to address the unique challenges faced by KP. Home visits, individual counselling, and education were reported to facilitate access to HIV services. All HCPs expressed that counselling was an effective way to promote behavioral change among KP as it encouraged them take preventive measures more seriously. Counselling also gave KP opportunities to open up about the problems they face. In facilities where counseling services are available, retention and treatment adherence rates among KP were generally higher. Home visits were also identified to facilitate HIV treatment for KP, as they gave HCPs the opportunity to identify and address social and environmental factors that KP patients face.

"*The counseling changed their* [*KP*] *mindsets*, *especially when it comes to the subject of HIV*/*AIDS. Especially*, *for MSM*, *they told us*, '*Before*, *I did not care about using condoms*, *I would only use lube because I had been told that I could not get infected when I use lube.*' *When we counsel them that condoms are important in prevention*, *many understand and take condoms home.*" (*Male*, *nurse*, *0028*)

"*Our team visits them* [*sex workers*] *at home*… *from that*, *we treat them from the root cause. From those home visits, we identify problems they face at home*, *from which we start providing counselling and social work.*" (*Male*, *doctor*, *0019*)

All HCPs expressed that having specialized HIV services for KP, provided by a select few trained HCPs could improve services and ensure that sufficient time is allocated to KP's cases. This would also enable HCPs to build a trusting relationship with KP. There were, however, mixed opinions about providing HIV services to KP in locations separated from the general population. HCPs who worked in such services said that it alleviated KP's anxiety, resulted in more KP coming for HIV services, and eased follow up. Some respondents, on the other hand, mentioned that this further isolates KP.

"[*Sex workers*] *need special treatment because they are in a specific situation.*

I think there should be people in charge of them specifically, so that they help them to be comfortable and confident enough when they seek health services. Even though I told you that we receive several them, there are others who don't show up, who hide. If a specific unit for them is created, it would help us to help them. A team trained to provide such services should be in place to support them, so that their lives are improved." (*Female, nurse, 0004*)

"*We have separate services for them* [*KP*], *the health center officials set up a schedule of providers who will receive them on that day. This was done because when they are mixed with the general population, it is not good, neither for them nor for us as providers. The reason for this is that, especially for sex workers, they are victims of STDs… that is where to focus* [*treatment*], *to know the cause and solve the problem. They are sex workers, and they have sex with who? With men, husbands from families, and this makes them bridges* [*of HIV*] *in the society. It is important to receive them separately for special care to counsel them and get all that information to reduce the spread of the disease.*" (*Female, social worker, 0046*)

All respondents mentioned that additional resources to facilitate HIV service provision to KP were needed. Participants expressed that they often felt uncomfortable receiving KP because they did not know how to manage their cases. HCPs said they needed to enhance their skills in counselling and other areas, to receive different KP. Some also expressed that such trainings should be extended to government officials and parents as KP also faced discrimination at outside the clinic, which impact their treatment seeking behaviors. One HCP also suggested creating a database to map out the locations of KP, so HCPs could go to their communities and encourage them to attend HIV prevention and treatment services.

"*We need training and advocacy* [*for KP*] *at all levels! Leaders, health officials… because mindsets are different. We all need to have the same understanding with regards to MSM because sometimes, parents traumatize their children. Many tell us, 'They* [*parents*] *often beat me because of this* [*being MSM*].'" (*Female, social worker, 0049*)

"*They have trained only a nurse and a social worker about healthcare services to KP. It would be better to also train all other staff, especially clinicians, heads of departments, and counsellors so that when patients come, they get the services from any professional who is available without having to call the trained person or waiting until a trained person will be available.*" (*Male, nurse, 0010*)

"*I think for people who planned this research, they should do a study or a mapping of those people* [*MSM*] *so that they are documented. Because I think for them, they have places where they meet, they have networks, they have associations, one way or another. It would be good for us to know 'if I need these people, I will meet them here or there.' It would be good to have their data.*" (*Female, nurse, 0022*)

3) *Other supportive services are needed to facilitate KP's access HIV services*

To ensure KP continue attending and adhering to HIV treatment, only providing clinical services is not sufficient. Respondents mentioned that economic empowerment, psychosocial and financial support, employment opportunities, and nutrition support are needed. Some HCPs stated how their HIV clinics providing transportation allowance to KP had encouraged more of them to seek care. Respondents suggested that these supportive services would not only facilitate treatment adherence but would also promote the well-being of KP.

"*When they come for follow ups and sponsors give them transport fare… they come in large numbers. They even talk to each other. If someone who had stopped attending* [*HIV*] *services hears that they will be given transport fare, they come immediately.*" (*Female, nurse, 0043*)

"*Drug users don't have sponsors* [*they don't receive any other support*]*… they get medication, but their follow up is very difficult. They often miss appointments.*" (*Female, nurse, 0043*)

"*Those* [*sex workers*] *we meet tell me that it is because of hardships that they found themselves in sex work. Their problems need to be dealt with in a psychological, social and economic way for them and their families.*" (*Female, nurse, 0004*)

"*Most importantly, financially support the patients* [*sex workers*] *to afford good nutrition so that they can cope with* [*the side effects of*] *the medicine. This is important because patients were not taking medication due to economic deprivation* [*food insecurity*]*… when a patient can at least find something to eat, she regains hope and begins to respect medical visits.*" (*Male, doctor, 0019*)

Overall, HCPs suggested that assistance and referrals from a trusted source, separate services and HCPs for KP groups, capacity building programs at all levels, nutrition support and financial empowerment would facilitate and encourage KP's access, attendance, adherence to HIV services and improve their well-being.

4. Discussion

Our study results highlighted three themes that denoted the factors impacting HIV care for KP, and opportunities for developing context-specific HIV services that could address the needs of KP.

HCPs were torn between their professional duties and personal views

Medical professionals have the call of duty to serve communities. A core element of professionalism among healthcare workers, as stated by the American Board of Internal Medicine, is altruism—"the best interest of patients, not self-interest, is the rule" [24]. However, being obligated by their professional duties does not translate to them being void of their personal feelings. The cross-path between their professionalism and cultural and religious beliefs caused many HCPs to face some internal struggles. Some HCPs held negative attitudes towards KP—they were sinners and abnormal. This kind of culture-informed perception, however, is not unique to Rwanda. A study conducted

in Uganda, a neighboring country, showed that providers study were reluctant to receive KP [25]. HCPs in both studies show a stronger aversion towards MSM than sex workers, possibly because homosexuality is perceived to go against cultural norms and religious values surrounding sex and sexuality. In both contexts, homosexuality is viewed as culture imported from elsewhere; this is a concept that continues to alienate MSM in society and in health facilities, labeling them as "others".

Although Rwanda is one of the few countries in sub-Saharan Africa that does not criminalize homosexuality [26], the intrinsic feelings and biases of HCPs towards MSM pinpoint to a deeper and graver barrier to HIV services—not criminalizing homosexuality does not guarantee equal rights and equal access to health services for MSM. Hence, systems still need to be in place to ensure equitable access to health services, and to address HCPs' intrapersonal barriers that might drive KP away from these services. The internal struggles of HCPs also provide a glimpse into the severity of the stigma MSM face, as this might be more intensified within the general population [27]. Thus, programs and policies aiming to change negative perceptions about MSM in Rwanda and address the stigma they face are of utmost importance.

Studies in sub-Saharan Africa, including in Rwanda, have also shown how religion and culture-induced negative perceptions towards KP, especially MSM, could result in stigmatization and implicit bias against KP, contribute to KP patients losing trust in HCPs and in the healthcare system, and lead to reduced access to HIV services and increased risky sexual behaviors [28] [29]. Discrimination and stigma reported in this study, that drove KP away from HIV services, have been documented in various contexts in sub-Saharan Africa [29] [30] [31]. Therefore, these findings reiterate the need to research and understand how HIV programs in Rwanda can be responsive to the stigma and biases that KP face in society and within hospitals. It is essential that strategies and programs addressing the needs of KP prioritize the clinical environment where they seek care to encourage them to seek HIV services.

A unique finding in this study was that some respondents mentioned that some KP's behaviors and attitudes towards HCPs created a treatment barrier, suggesting that communication barriers on both sides impacted KP's health-seeking experiences and services received. The importance of developing communication strategies to improve care and promote the well-being of KP, therefore cannot not be underestimated [15]. These realities highlight a crucial need for HIV programs across Rwanda and East Africa to train HCPs on effective communication strategies to improve KP's experiences when seeking HIV services.

HIV services challenges and facilitators

Many challenges hindering HIV services for KP identified in our study such as poor adherence to treatment, low program retention, financial hardships, food insecurity, high mobility, legal and structural barriers, fear, and mistrust in the

healthcare system are similar to those identified in other contexts [32] [33] [34]. The need for comprehensive, holistic, and KP-friendly HIV services is clear. Such services would promote the physical and mental health, and social well-being of KP in Rwanda, as evidenced by successes from different countries [35]. Further, the high mobility of KP reported in this study highlights the impact of population mobility on the continuum of HIV services [36]. Therefore, designing more tailored treatment programs for KP is important for Rwanda to effectively make progress towards the 95-95-95 HIV targets.

Many of the suggestions to improve HIV services among KP in Rwanda such as counseling, financial support, nutrition support, home visits, peer educator programs, and providing special training to HCPs are consistent with suggestions from other studies as well as the WHO's guidelines on critical enablers for HIV services for KP [15] [37] [38] [39]. Although these suggestions were not new, this study was the first to present documented evidence in Rwanda to support these practices. Therefore, these suggestions should continue to be taken into consideration when designing programs for KP in HIV services country-wide.

Respondents in our study suggested creating separate and safe spaces for KP to facilitate their access to HIV services. Such suggestions are not new, but their execution has been met with mixed results. The WHO treatment guidelines for KP recommended health facilities to create safe environments for KP either through having separate entrances for them or relocating their services to a safe setting [15]. A study conducted in Uganda also showed that HIV patients faced more stigmas when attending integrated HIV services, as HCPs in integrated services were reluctant to serve them and patients felt that stand-alone services offered more privacy [40]. However, creating separate services for KP could be counterproductive as this could lead to KP facing further discrimination. There have been reported incidences of HIV patients entering stand-alone HIV clinics being the targeted [41] [42] [43]. A study from Ghana further suggested that stand-alone HIV clinics offered no confidentiality to HIV positive patients, as their HIV status were disclosed to others simply by showing up to these clinics [44]. Thus, further impact analysis is needed, with the considerations of the cultural and social contexts of Rwanda, to inform the decision on the implementation of this suggestion.

This study unearthed a system-based structural barrier which was not mentioned in other previous studies. Many KP could not purchase the national health insurance because they were not included in the Ubudehe system. In Rwanda, households are classified into high to low income categories [45] [46]. This categorization determines how much one should pay for the national health insurance [47]. Ubudehe, however, is not available to people who are not married and is tied to one's family [47]. KP who have been disowned by their families and removed from the household list won't have Ubudehe categories, and in turn, wouldn't be able to purchase health insurance. Ubudehe categories are revised every three years [48]. Thus, results of this study present an opportunity for the government to address gaps hindering the country from reaching uni-

versal health coverage and achieving the National HIV targets by identifying methods to provide the Ubudehe categories to sole individuals, to ensure that KP are not left behind.

Lack of data on injection drug users and transgender people

All our respondents mentioned providing services to MSM and commercial sex workers. However, none had worked with self-identified transgender people and Injection Drug Users (IDUs). The lack of information about these KP groups is concerning and points to a larger issue within the healthcare system. While curbing the HIV infections among MSM and sex workers are specifically mentioned, Rwanda's national HIV/AIDS targets do not make mention of transgender people and do not prioritize interventions among IDUs—because "injection drug use is not present or widely practiced in Rwanda" [5], despite recent studies showing that 10% of transgender women and 9.5% of IDUs in Kigali were HIV positive [10] [11].

For Rwanda to achieve its national HIV targets and continue making progress towards the 95-95-95 HIV targets, recognizing their presence and creating specific interventions and policies for them are necessary. To effectively curb HIV infections, inclusive strategies and policies for these KP groups, in line with international recommendations and best practices, are needed.

Limitations

This study was the first in Rwanda to gain the experiences from a diverse group of HCPs about providing HIV services to KP. However, the results must be viewed in light of its limitations. The study topic is sensitive by nature. Although some of our respondents had been explicit about their personal disapproval against MSM and commercial sex workers, it was possible that some respondents were not expressing their true perspectives, especially if their personal perceptions and attitudes towards KP were negative or discriminatory.

Our study did not include any private health facility; thus, the results may not be representative. However, the findings of our study highlighted some crucial information and suggestions to improve the HIV services for KP in Rwanda that were not discovered in previous literature.

5. Conclusion

HCPs expressed difficulties in providing services as they tend to not adhere to treatment and prevention guidelines. The situation was exacerbated by the structural barriers, their lack of trust in the system, and the discrimination and abuse they have faced. Effective treatment approaches should go beyond clinical interventions and include economic and psychosocial support. Some important policy changes are needed to improve health outcomes for KP in Rwanda. Incorporating more inclusive strategies in the national HIV plan and the Ubudehe system could contribute to improving access to HIV services for KP.

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Ethics Approval and Consent to Participate

This study was approved by the UGHE Institutional Review Board (Protocol #98). Informed consent was obtained from participants prior to data collection.

Availability of Data and Materials

The datasets generated and/or analyzed during the current study are not publicly available to protect participants' privacy and confidentiality but are available from the corresponding author on reasonable request.

Conflicts of Interest

The authors declare that they have no competing interests.

Authors' Contributions

Gloria Igihozo, Junious Mabo Sichali, Sandip Medhe, and Rex Wong conceptualized the project and created the study protocol. Gloria Igihozo collected the data. Gloria Igihozo, Junious Mabo Sichali, Sandip Medhe, and Rex Wong analyzed and interpreted the data. Gloria Igihozo and Rex Wong wrote the manuscript. All authors read and approved the final manuscript.

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List of Abbreviations

HCP	Health Care Provider
KP	Key Populations
MSM	Men who have Sex with Men
IDUs	Injection Drug Users
HIV	Human Immunodeficiency Virus
AIDS	Acquired Immunodeficiency Syndrome