ORIGINAL PAPER

Qualitative assessment of HIV prevention program on men who have sex with men in Padang, Indonesia

Mahathir Mahathir, Bunga Permata Wenny, Rika Sabri, Agus Sri Banowo, Rika Sarfika, Okky Adelirandy, Serly Berlian, Teuku Ramadhani, Kintan Resqitha

Universitas Andalas, West Sumatra, Indonesia

Abstract

Introduction: The emerging trend of human immunodeficiency virus (HIV) transmission among men who have sex with men (MSM) is a significant concern in almost all sub-urban cities in Indonesia. The rising number of HIV cases among MSM is similar to an iceberg situation; it will delay the progress of HIV elimination and consequently, alarm healthcare system in the future. This qualitative phenomenological study aimed to review the perceptions of MSM on prevention strategies supporting reduction of the risk of HIV transmission.

Material and methods: This was a phenomenological research study conducted from July 2021 till January 2022. In-depth interviews took place among a sample of 22 MSM in Padang, Indonesia. Semi-structured questions relating to the insights of participants who engage in HIV transmission risk behaviors, were delivered to all participants. Stevick-Colaizzi-Keen analysis was employed to extract thematic analysis of the study.

Results: The study found five essential themes, including being unaware of preventative behavior strategies, difficulty in accessing condoms and lubricants, using alternative choices to condoms, lack of information on preventative strategies, and low knowledge about HIV treatment as prevention, pre-exposure antiretroviral prophylaxis, post-exposure antiretroviral prophylaxis, voluntary medical male circumcision, and testing as prevention strategies.

Conclusions: This study highlights the limitations of the prevention program's implementation and delivery of information. It is important to provide more appropriate prevention strategies for the MSM population based on their critical areas of need, new evidence, and emerging research on HIV prevention. This will help in a significant long-term reduction of new infection rates.

HIV AIDS Rev 2025; 24, 3: 206-214
DOI: https://doi.org/10.5114/hivar/161076

Key words: condoms, HIV infection, MSM, sexual behavior, sexual and gender minorities.

Address for correspondence: Mahathir Mahathir, Community Health Nursing, Faculty of Nursing, Universitas Andalas, Padang, Indonesia, e-mail: mahathirmahat@nrs.unand.ac.id

Article history:
Received: 20.11.2022
Revised: 09.02.2023
Accepted: 09.02.2023
Available online: 20.08.2025

International Journal of HIV-Related Problems
HIV & AIDS Review

Introduction

"To leave no one behind", is a known phrase addressing critical point of concern to achieve a more sustainable world for everybody by 2030 [1]. The Joint United Nations Programme on HIV/AIDS (UNAIDS) highlights the need to understand affected populations in order to achieve human immunodeficiency virus (HIV) elimination globally [2]. It started in 1981 with the discovery of *Pneumocystis carinii* pneumonia and mucosal candidiasis in four previously healthy gay men and other men who have sex with men (MSM) [3]. Until now, UNAIDS recognized MSM as one of the key population groups that require comprehensive and effective HIV and acquired immunodeficiency syndrome (AIDS) responses [4]. It is crucial to explore and gather data on inequalities, which impede access to services for MSM. These data will describe the situation and specific needs of MSM as the key population most affected by HIV [5]. Improved HIV prevention services are also one of the substantial targets, which should be achieved by 2025, providing that 95% of people at-risk for HIV infection will use a combination of appropriate and effective prevention options [6]. HIV prevention is not a single-strategy; it is recommended to combine at least two or three strategies from behavioral, structural, and biomedical approaches [7]. It is crucial to understand the need for multiple prevention options for MSM, as there are one of the key populations affected by HIV.

Globally, since the start of the epidemic, 79.3 million people have become infected with HIV, while nearly 1.5 million of newly infected by the disease in 2020 alone. It was predicted that more than 6.1 million people did not know their HIV status in 2020 [8]. As the key population, gay men and other men who have sex with men contribute to 23% of total infections globally. Nearly 45% of them have got infected outside sub-Saharan Africa, which is mostly consistent in low- and middle-income countries [9]. By comparison, in developed countries, such as the United States of America, approximately 70% of new infections were among the MSM population [10]. In Indonesia, a significant increase in the number of HIV infections among the MSM key population was recorded: from 5.3% in 2007 to 17.9% in 2019 [11]. In January-March quartile of 2021, 27.2% of new HIV infections were in the MSM population [12]. In Padang, 287 of HIV cases were recorded in 2019, mostly among MSM [13], while in 2021, 145 new HIV cases were dominated by MSM individuals [14].

MSM are much more vulnerable to contracting HIV, being at 25 times the risk as heterosexual men [15]. However, research relating to understanding the MSM population in Indonesia remains limited. In China, analysis of this population began as early as the 1990s [16]. There is no doubt that MSM face many barriers in accessing HIV prevention, care, and treatment programs [17].

MSM infected with HIV are associated with risky sexual behaviors. Recent studies in sub-urban cities in Southwest China revealed that primary HIV infection was associated with having 2-5 sexual partners, always/sometimes having unprotected anal sex, and engaging in both penetrative and receptive behaviors and roles or only receptive roles [18].

In Indonesia, MSM are facing social vulnerabilities and stigma, as they are considered hard to reach population, believed to engage with sexual partners through hidden technological methods. Political rhetoric and the rising social stigma worsen the situation by decreasing the motivation to reach healthcare facilities [19]. Moreover, MSM in Indonesia have started to use recreational chemicals during sex, including crystal meth, mephedrone, and γ-hydroxybutyrate, increasing the risk of HIV infection [20].

The knowledge and understanding of HIV has evolved over time, achieving significant progress in studies. Preventive research strategies have also advanced. Over the last decade, scientific discoveries have dramatically extended the evidential basis for HIV prevention. There is clear evidence regarding the efficacy of voluntary medical male circumcision (VMMC), pre-exposure antiretroviral prophylaxis (PrEP), post-exposure antiretroviral prophylaxis (PEP), HIV treatment as prevention (TasP), and other biomedical approaches. Also, there is strong evidence for the effectiveness of interventions to increase the supply of condoms, clean needles, and other prevention measures. Critical points of the strategies are biomedical, technological, behavioral, and structural interventions [21]. There is evidence suggesting that a combination of biological, behavioral, and structural interventions, which both lower vulnerability to HIV acquisition and increase the uptake of essential prevention strategies, is the most effective way to reduce the number of new HIV infections. Indonesia has been implementing several strategies in terms of HIV prevention, including condom and lubricant utilizations by key populations, TasP, HIV voluntary counselling tests, VMCC, PEP for healthcare providers, and PrEP in several selected cities. Even though Padang is not one of those cities [22], is a city where cultural norms have higher value, a barrier to the effective implementation of prevention programs.

There are also other obstacles for the effective implementation of prevention programs [23]; for example, there is the complexity of evidence-driven program implementation, persistent underfunding, lack of strategic and iterative program monitoring, and lack of systematic evaluation scheme. Studies have shown that there is an interest in and acceptability of various HIV prevention strategies among young MSM. Unfortunately, the uptake is hampered by the continuing consequences of intersectional oppression, such as racism and sexual discrimination, HIV stigma, institutional and provider bias, and unresolved health policy hurdles [24]. With regards to identity, MSM define themselves as being divided into two groups: "hidden" (typically heterosexually identified MSM) and "out" (transsexual or effeminate MSM). The hidden group is considered hard to reach, and unlikely to be engaged in prevention programs. The access to healthcare is also hindered by economic limitations and lack of MSM-friendly services [25]. The potential for overcoming these obstacles has yet to be studied. Further exploration of the perspective of a wide range of people across the MSM group to determine the prevention

strategies and their outreach is required. This study aimed to explore the MSM perceptions about the prevention programs in Padang, Indonesia.

Material and methods

Research design

A qualitative phenomenological research design was applied in this study, and the phenomenon of gradual change in HIV healthcare services was described. This technique was employed to analyze HIV healthcare experience from the view of service user. In this study, the experiences of MSM with at-risk behaviors for HIV transmission in Padang, Indonesia were investigated.

Setting and samples

MSM who participate in behaviors that might expose them to HIV transmission were recruited. This study used purposive sampling as a research sampling technique. Participant count was established by reviewing readily available information, and analyzing existing data. Through a recognized HIV non-government organization in the city and peer-led information, participants were chosen and enrolled. Data were gathered from 22 individuals enrolled in this study. In case of no additional information or issues, data saturation was considered achieved. Participants in this study were MSM who accessed HIV voluntary counselling tests in hospitals, public health facilities, and non-government organizations.

Measurement and data collection

This research was conducted through a non-governmental organization (NGO) in Padang, Indonesia that offers MSM outreach support and peer-led information. A list of participants meeting the study's inclusion criteria was provided by the NGO. Types of HIV prevention programs, behaviors, and services used by MSM were considered while choosing participants for the study, because it was anticipated it would enhance the information gathered. Before interviewing, the researcher scheduled a meeting with a participant to establish trust and identify any developing environmental scenarios. Time to conduct the interview was then scheduled. Semi-structured interviews to gather data were carried out from July 2021 to January 2022, and they were independently verified by other research professionals. One person conducted each interview. Data analysis and research validity were both confirmed by other researchers. The interviews were transcribed in Indonesian, followed by data analysis, and then translated into English.

Participants were questioned using trigger questions and follow-up questions based on their initial responses. "Could you briefly describe your experience so far in using HIV prevention services, program, or behavior?" was the first query in a session. The interviewer followed up with a question, "Would you kindly describe, what do you mean you did not pay attention?" depending on the response. Alternatively, "What do you mean by saying it was not what you had ever tried?", or "Could you please explain what else you did?". Information were checked and verified with additional follow-up questions. The interview took 45-60 minutes, and was performed in a quiet environment to reduce noise and disturbance. Any non-verbal communication information seen was recorded in field notes, while oral data was securely tape-recorded with a recording device that was tested to confirm it was not damaged before starting interviewing, with volume also tested. Data were properly kept on a personal computer in a private, secure folder. Outcomes of the recording were then integrated with the outcomes of the field notes in verbatim transcripts.

Data analysis

Stevick-Colaizzi-Keen analysis was utilized in this study's data processing phases to organize the interview material and transcribe audio recordings. Data script was repeatedly read and listened to accurate obtain important information. Participants' statements were highlighted to emphasize details relating to the study's aims. After gathering all relevant data, they were organized into categories, and classified using themes and sub-themes.

Trustworthiness/rigor (applies to qualitative studies)

By comparing findings with those of other studies, and ensuring that participants provided consistent information, the researchers confirmed reliability of data and results. By contacting every participant in advance and arranging pre-interview meetings, the familiarity with environment was also confirmed. The researcher shared the findings with colleagues and supervisors, who are more advanced in training and experience.

Ensuring that different participant groups understood the study's findings entirely, allowed for data transferability to be tested. MSM who did not participate in the study but met the inclusion criteria, reviewed the results. A variety of participants were interviewed as part of this study. Preparing questions, which could obtain responses relevant to the study's topic was necessary to ensure that participants provided useful data. In order to clarify and uphold the accuracy of data provided by participants, questions were repeated with similar responses expected. Individuals involved were provided with data and outcomes, and the essentials of the study's data and findings were shown by the researchers.

Ethical considerations

The study strictly complied with all applicable ethical standards and concerns. It was essential to ensure that no one was harmed or experienced adverse effects from ac-

tivities conducted. This study was committed to protecting participants by offering autonomy, beneficence, non-maleficence, confidentiality, and fairness. City Centered Public Hospital of Dr M. Djamil Padang Council Committee examined and approved the current study, granting an ethical clearance number (0272/UN2. F12.D/HKP.02.04/2021).

Results

The study focused on 22 MSM individuals, who participate in at-risk behaviors for HIV transmission in Padang, Indonesia. The 22 MSM voluntarily contributed to the semi-structured interviews performed as part of the research. All participants acknowledged their sexual experiences with men, were willing to participate in the study, and cooperatively answered questions during the interviews. Moreover, none of the participants objected or refused to provide answers to any of the questions. The study's quoted text was initially written in Indonesian, and then translated into English to meet the Journal criteria. In Table 1, the participants' characteristics are shown.

In this phenomenological qualitative research, personal experiences based on the individuals' full descriptions were firstly defined. The experience illustrated was the participant's personal understanding relating to the phenomenon, and this description focused on what was stated by the participant. The researcher made significant statements according to those expressed by the participants. Significant statements were collected based on the uniformity of the meaning of these statements. After grouping of statements, a category showing similarity of the statements' meanings was created. From that category, the researcher would finally generate a theme in a textural description. The results of the analysis included five themes shown in Figure 1.

Theme 1: Being unaware of preventative behavior strategies

Nine participants in this study admitted that they had not given HIV prevention much thought and did not fully understand its significance. The participants despondently acknowledged that, if they did contract HIV, it would be of their own doing. The participants thought that, if they found they were HIV-positive, it was something that would have happened because of their behavior, which was considered aberrant. The participants acknowledged the precautions they had taken to stop the spread of HIV, including taking showers and using condoms, but they were unaware of any other ways to stop HIV from spreading apart from wearing condoms. One of the participants expressed the following quote:

Table 1. Characteristic of participants

Participant's code	Age	Education	HIV status	Sexual role
P1	29	High school	Negative/Non-reactive	Penetrative
P2	18	Elementary	Unknown status	Receptive
P3	22	Junior high	Unknown status	Receptive
P4	28	Junior high	Unknown status	Penetrative and receptive
P5	32	High school	Unknown status	Receptive
P6	34	High school	Unknown status	Receptive
P7	30	High school	Negative/Non-reactive	Penetrative
P8	18	Bachelor	Unknown status	Penetrative and receptive
P9	22	High school	Unknown status	Penetrative
P10	26	Bachelor	Unknown status	Penetrative
P11	22	High school	Negative/Non-reactive	Receptive
P12	31	Diploma	Unknown status	Receptive
P13	36	Bachelor	Unknown status	Penetrative
P14	32	Bachelor	Unknown status	Penetrative and receptive
P15	28	Bachelor	Positive/Reactive	Receptive
P16	22	High school	Unknown status	Penetrative and Receptive
P17	20	High school	Negative/Non-reactive	Receptive
P18	18	High school	Negative/Non-reactive	Receptive
P19	26	High school	Positive/Reactive	Receptive
P20	26	Bachelor	Unknown status	Receptive
P21	24	High school	Positive/Reactive	Penetrative and receptive
P22	35	Bachelor	Unknown status	Penetrative and receptive

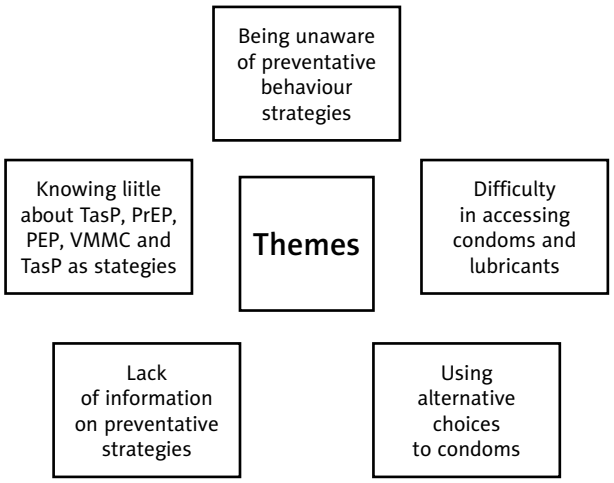

Figure 1. Themes of the study

"…well yeah, we have lived like this; we did something that were not supposed to be. Yes, we know the risks. If the time has come, the disease, I mean, we can only accept it. Of course, I am afraid, but if you are sexually driven, you are powerless" (P4).

Another participant stated the same thing casually, acknowledging the risks of his behavior. However, he said that it is hard for him to think clearly in order to decide on how to protect himself from the possibility of contracting HIV. He said he could not control his actions when he was going to have sex; with an ignorant, cynical smile he answered as follows:

"Yes, I am pretty much aware of the consequences, but if I want to have sex, I cannot think intelligently; the important thing is to vent, whether with a condom or not. Yes, it depends on the circumstances; if it (condom) was available, I would use it, and if it was not, I would not" (P6).

Another participant responded that cleansing himself in a proper bath before and after sex would help to protect him against the disease. The misconceptions of prevention strategies and lack of awareness in their implementation were showcased in this statement:

"There is not a particular way to prevent it, the least you can do is take a shower before having sex and another one afterwards to kill the virus. So that is the thing, I guess, or maybe you could use a condom. Sometimes I use it, sometimes I don't. It depends if the partner does not want it, I mostly also do not" (P17).

Theme 2: Difficulty in accessing condoms and lubricants

Although almost all participants were aware that using condoms was the primary method of preventing HIV infection, they acknowledged that it was challenging to access and obtain condoms. One participant said he had to buy a condom in a very remote and hidden place in order to feel comfortable buying it, as quoted in the text below:

"… As for me, Bro, if I would like to buy condoms, I usually go far to get them from inside the traditional market. It makes me feel comfortable to buy there, because people used to buy condoms there. Sometimes, because the place is far away, I am too lazy to go and buy them" (P11).

Also, participants showed that when they purchase condoms from a neighborhood pharmacy, they occasionally receive a strange look and are interrogated because they are young and using condoms. With a bitter smile, one person stated:

"When I bought them at the pharmacy, I noticed that the staff members were staring at me curiously and they occasionally asked me what I was doing. Possibly because I appeared so young, and because I do not look like a married person, they assume I do not have a wife, so maybe they felt weird. I felt ashamed" (P2).

The subjects reported they are reluctant to buy condoms because they do not have enough money to buy them. Buying condoms is considered a waste of money as well as pointless. Another partaker added that condoms are expensive. Conversely, the participants also complained about the difficulty in obtaining free condoms, and the fact that the information was never provided. Some statements are quoted below:

"…sometimes if you want to use a condom, you have to spend a quite amount of money. Sometimes I do not have the money to buy it. Thank God, if the spouse brought it; if not, just keep going without a condom" (P7).

"Although my friend and I have both heard of a program that provides free condoms, it seems to be hearsay, as I was never given any information about it. I also heard that if you got one, it would only be in a small amount, pointless. Anyway, it seems the program no longer exists" (P20).

Theme 3: Using alternative choices to condoms

Most of the participants did not know of other options, which could be used to prevent contracting HIV. The subjects would only sometimes limit the type of sexual activity to reduce the risk. However, they hoped that other programs and other ways would be available to help protect them from this disease:

"…Although I am aware that perhaps condoms are the only thing that might keep us safe, I still want to know whether taking certain vitamins, for instance, can boost the body's immune system and prevent HIV" (P18).

Practically, the individuals were unaware of any other ways to prevent themselves from HIV infection, but believed there may be other initiatives or strategies. To lower the risk, the participants sometimes restricted the nature of their sexual activity. However, they believed that other initiatives and strategies would enable them to stay protected from HIV infection. One of them expressed:

"I hope there are other protection options besides condoms; perhaps there is a technology that can keep us safe during sexual activity" (P13).

Theme 4: Lack of information on preventative strategies

The subjects in this survey believed that there was little information given to them about how to prevent HIV infection and how to protect themselves from contracting it. They understood how to get information about what could be done from health professionals and their environment. The participants became aware of their limited understanding regarding the selection of preventive options. Some of them answered:

"Even though prevention programs are crucial for us, I hardly ever receive counselling on them, and it appears that they no longer exist" (P6).

"...no information is available regarding the kind of prevention we can use. I acknowledged that condoms are the best" (P12).

Another participant complained about very shallow and non-informative way in which healthcare services provide information. With an annoyed face, he explained his criticism:

"Yes, sometimes the medical professionals fail to inform us. In the meantime, we require comprehensive information. Simply put, the health professionals appear too busy and perhaps inattentive to assist us, especially if we ask numerous inquiries" (P13).

Yet another subject realized the growing progress and updates of HIV information were available in media, but it seems he did not wanted to follow:

"… it appears that information is in the news or the newspapers. I simply do not have the time to read, so I am unaware of the most recent research on HIV prevention" (P9).

Theme 5: Knowing little about TasP, PrEP, PEP, VMMC, and testing as prevention strategies

The participants said they had never received information about behavioral or biological preventive choices. Most of them had no clue about any other prevention strategies besides condom using. All subjects were circumcised, but they did not realize that circumcision itself is one of the preventative strategies to protect against STDs. Some of them revealed:

"What, really? Circumcision is a thing? Could it help to prevent? How does it work actually? I did not follow" (P19).

"I have never heard of anyone having experience with those things, and nobody has ever mentioned how the stuff mentioned previously can stop HIV" (P10).

"Regarding the other choices of HIV transmission prevention, I have never even heard of it, and as for the others, I am not sure either" (P15).

Discussion

In the current study, qualitative phenomenological research was applied; the primary focus of a phenomenology is an individual's lived experiences within a particular occurrence [26]. Purposive sampling was utilized, so that appropriate circumstances contributed to successful completion of objectives [27]. The use of purposive sampling in a qualitative research is relatively prevalent. The purposive sampling allowed qualitative researchers to select participants and their characteristics based on the study. It is crucial for phenomenological research to allow participants with first-hand knowledge and experience on the topic to fulfil research questions. This will ensure the accuracy of data provided by the research participants. Therefore, in Padang city, a sub-urban city in Indonesia, MSM who engaged in risky sexual behavior and were willing to discuss their experiences, met the criteria for participation in this study.

The results showed that MSM are unaware of preventative strategies and options. Being sexually active and having multiple partners, make MSM more likely to contract the HIV virus [28]. In a systematic review, it has been revealed that among MSM, condomless anal intercourses with HIV-discordant partners are increasing. The rise in condom-free anal sex could explain the rise in HIV infections [29]. Also, a study in Peru recognized that most respondents were unaware of their status and risky behaviors. High-risk sexual activities were linked to HIV non-disclosure, which rapidly increases HIV transmission [30]. Due to inadequate HIV prevention education, this population has many misconceptions about the importance of HIV prevention behavior. The promotion of HIV prevention and other service-related strategies to support MSM is the principal focus [31]. According to a study on MSM, stigma still poses a significant challenge to assess HIV status as well as seeking HIV prevention and treatment. Moreover, stigma deters people from pursuing information, keeping them from getting tested and seeking assistance, making more difficult to receive biomedical interventions [32].

It is incredibly alarming to see recent changes in HIV response. Little progress has been made in suppressing new infections during the past ten years. However, the numbers of new HIV infections and AIDS-related fatalities have declined significantly since the epidemic's peak [33]. Prevention strategies must be upscaled in all community contexts to increase the literacy of population. In developed countries, there are multiple HIV prevention strategies, which should serve as examples. In the USA, MSM with better education levels and access to HIV service resources are more likely to be aware of and implement a broader number of strategies [34]. It is vital to design numerous options for HIV prevention strategies in order to combat the HIV epidemic and achieve the outcomes of prevention methods by 2025 [6].

In addition, the research results show that MSM, as the key population in HIV transmission, have difficulty accessing condoms and lubricants. A study from Ghana on MSM

experiences suggest that poor condom quality, limited availability, and disruptive condom use are barriers to the efficacy of this prevention method. Condoms, HIV testing, and appropriate sexual health education are examples of preventative strategies, which are less likely to be adopted in healthcare settings not promoting MSM's autonomy [34]. Furthermore, the likelihood of condom use was much lower among those who believed they were at risk or could not determine their HIV risk [35]. The usage of condoms was directly influenced both positively and negatively by behaviors: HIV/AIDS intervention programs and costs, respectively. Barriers to using condoms, such as prohibition of condom distribution initiatives and lack of support, are lowering the intention of use. Stigma associated with condom use as a social component was pervasively evident in every circumstance or situation. There is a strong need for multilevel condom promotion initiatives to increase condom utilization [36].

Prevention strategies based on research evidence are now rapidly growing. Since there is no known treatment for HIV/AIDS, prevention is still at the pinpoint of the global effort to end the HIV pandemic. The traditional strategy for prevention includes condom distribution and behavioral interventions, such as individual and group counselling as well as peer education among MSM [7]. This study reveals the expectation of MSM to be more flexible in choosing various options besides condom use. Globally, it has been recognized that there are several prevention services available. Although significant progress can be made by maximizing current preventive and treatment measures, the HIV pandemic is expected to remain a significant worldwide concern for the foreseeable future. As the available HIV tools and strategies are currently insufficient, the tremendous global commitment to expand the access to HIV prevention programs must be matched by an equally strong commitment for upscaling of HIV treatment services [33]. The extent of personal/ interpersonal networks and structural factors fuel the HIV epidemic among MSM and transgender women, requiring comprehensive HIV prevention programs incorporating biological, behavioral, and structural interventions [37]. In a study on prevention preferences, most MSM expressed interest in using several prospective HIV prevention products, including long-acting injectable antiretrovirals. Some MSM used sexual event-based methods, such as condoms, event-based pills, penile gels, and suppositories, but others used non-sexual, event-based approaches, such as daily pill or long-acting injectable drugs [38].

This study also highlights the MSM's lack of awareness of preventative strategies. A study discovered four primary sources of information on treatments, such as NGOs, peers, media, and healthcare professionals [39]. Knowledge and information are the key to the effectiveness of implementation of the strategies. Raising the understanding of HIV is essential in encouraging testing and treatment access [40]. The challenge that has permanently lowered the impact of HIV prevention strategies is the insufficient knowledge of information. Improved, comprehensive knowledge among the MSM population will optimize the integration of prevention implementation behaviorally, structurally, and biomedically [40]. Inadequate knowledge will lead to a negative attitude and risky behavior, and is a significant barrier to preventing the spread of HIV [41]. Receiving educational resources was considered to be a potential source of knowledge. One study suggests the necessity for more public prevention initiatives targeted at MSM with more successful communication techniques as well as the construction of knowledge that includes the motivation and capability for safer practice [42].

Almost all participants in this study described their low perceptions of ARV, PrEP, PEP, male circumcision, and testing as prevention strategies. In the Asia Pacific, most nations have adopted antiretroviral as a treatment for prevention (TasP). TasP is an overall approach to HIV control, and it is vital to increase HIV treatment recommendations to cover all infected with the virus. HIV transmission statistics among MSM generally portray a somber image of TasP's ability to keep MSM engaged throughout the continuum. It is crucial to control the HIV epidemic within this population by extending prevention methods, including the use of ARV as treatment. PrEP and PEP are the only HIV prevention methods in MSM demonstrated to be effective [43]. There is still misinformation about the possibility of transmission of undetectable HIV despite widespread awareness of TasP. Also, there are many evidences of TasP informational interventions having positive effects on knowledge, stigma, HIV testing, and viral suppression [44].

Other findings also showed that the population has high-risk scores, highlighting that 58% of the subjects had heard of this preventive measure. It is essential to adopt a proactive approach towards reaching MSM in order to raise awareness of new preventive methods [45]. Nowadays, a broad spectrum of at-risk populations for HIV infection use antiretroviral-based PrEP, which is an established, reliable, and secure method of HIV prevention [46]. Despite the willingness to implement better strategies to prevent the HIV disease from spreading, PrEP also faces significant challenges. Even in a high-income countries, such as Japan, there is a report on limited and finite access to subsidized PrEP uptake [47]. One of the most effective methods to lower the risk of infection in recent years is HIV testing. Regular quarterly HIV testing might well be cost-effective. Poor understanding of HIV/AIDS and testing as prevention could be related to HIV testing practices [40]. There is evidence that circumcision is likely to be effective in preventing HIV infection among MSM. MSM might be well-protected from HSV and penile HPV infection by circumcision. In low- and middle-income countries, MSM should be a part of an ongoing effort to encourage circumcision as a good practice for reducing sexually transmitted diseases in men [48]. However, problems persist at every stage of HIV care process in Indonesia. Efforts to provide a growing strategy are constrained by finances and lack of public acceptance. HIV-related stigma and discrimination are frequently experienced by key populations, discouraging MSM from using HIV care services.

The setting of the present study (Padang) is characterized by strong cultural and religious values, which reduce the options available to MSM in terms of HIV prevention programs.

Conclusions

The wise saying, "Prevention is better than the cure", rings very true. To achieve the desired outcomes and sustainable achievement of health and well-being for all individuals, HIV prevention strategies should be accelerated. The rapid growth of evidence-based prevention strategies is now being implemented globally. As one of the marginalized but substantial populations, MSM should be protected from the risk of harm from HIV transmission. The currently limited choices and inadequate initiatives put MSM at an undeniable risk of transmitting HIV.

This research highlights the role of community health nurses to advocate for prevention needs, especially at the primary level in key populations. This is crucial, considering that various options will provide a minimal chance of transmission by which, the protection of key populations will be maximized. The provision of optimal nursing care for the use of existing preventive strategies must be encouraged by community health nurses, so that the achievement of good health status for all individuals, regardless of the type of group, can be achieved.

Disclosures

1. Institutional review board statement: This study was approved by the City Centered Public Hospital of Dr. M. Djamil Padang Council Committee (approval number: 0272/UN2. F12.D/HKP.02.04/2021).
2. Assistance with the article: The authors would like to gratefully acknowledge the Faculty of Nursing at Universitas Andalas for financial support of the overall study, from which this paper originated.
3. Financial support and sponsorship: Universitas Andalas, Indonesia.
4. Conflicts of interest: None.

Reference

1. United Nations Sustainable Development Group. Operationalizing Leaving No One Behind. 2022. Available at: https://unsdg.un.org/resources/leaving-no-one-behind-unsdg-operational-guide-un-country-teams.
2. UNAIDS. Global AIDS Strategy 2021-2026 [Internet]. 2021. Available at: https://www.unaids.org/sites/default/files/media_asset/global-AIDS-strategy-2021-2026_en.pdf (Accessed: 09.09.2023).
3. Gottlieb MS, Schroff R, Schanker HM, Weisman JD, Fan PT, Wolf RA, et al. Pneumocystis carinii pneumonia and mucosal candidiasis in previously healthy homosexual men: evidence of a new acquired cellular immunodeficiency. N Engl J Med 1981; 305: 1425-1431.
4. UNAIDS. Key populations. Vol. 1, UNAIDS Report. 2016. Available at: https://open.unaids.org/sites/default/files/documents/SRA4_Keypops_2016.pdf
5. UNAIDS. UNAIDS Global AIDS Update [Internet]. 2022. Available at: https://www.unaids.org/sites/default/files/media_asset/2022-global-aids-update_en.pdf (Accessed: 09.11.2022).
6. UNAIDS. 2025 AIDS TARGETS [Internet]. 2021. Available at: https://www.unaids.org/sites/default/files/2025-AIDS-Targets_en.pdf (Accessed: 09.02.2023).
7. Verboom B, Melendez-Torres G, Bonell CP. Combination methods for HIV prevention in men who have sex with men (MSM). Cochrane Database Syst Rev 2018; 2018: CD010939. DOI: 10.1002/14651858.CD010939.pub2.
8. Unaids. Fact Sheet 2022 [Internet]. 2021. Available at: https://www.unaids.org/sites/default/files/media_asset/UNAIDS_FactSheet_en.pdf (Accessed: 09.09.2023).
9. UNAIDS. Confronting inequalities: lessons for pandemic responses from 40 years of AIDS. 2021. Geneva: UNAIDS; 2021.
10. Biello KB, Mimiaga MJ, Santostefano CM, Novak DS, Mayer KH. MSM at highest risk for HIV acquisition express greatest interest and preference for injectable antiretroviral PrEP compared to daily, oral medication. AIDS Behav 2018; 22: 1158-1164.
11. Kementerian Kesehatan & UNICEF. Integrated Biological-Behavioral Surveillance Survey Among Adolescent and Young People Who Inject Drugs, Female Sex Workers, Males Who Have Sex with Males and Male to Female Transgender Persons [Internet]. 2018. Available at: https://www.unicef.org/indonesia/media/8496/file/IBBS%20Report%20YKAP%202019.pdf (Accessed: 09.12.2023).
12. Dirjen P2p Kemenkes RI. Laporan Perkembangan HIV/AIDS dan Penyakit Infeksi Menular Seksual Tahun 2021 [Internet]. 2021. Available at: https://siha.kemkes.go.id/portal/files_upload/Laporan_TW_I_2021_FINAL.pdf (Accessed: 19.10.2023).
13. Dinas Kesehatan Kota Padang. Laporan Tahunan Dinas Kesehatan Kota Padang [Internet]. 2021. Available at: https://dinkes.padang.go.id/laporan-tahunan-tahun-2021-edisi-tahun-2022 (Accessed: 09.09.2023).
14. Dinas Kesehaatn Kota Padang. Profil Kesehatan Tahun 2019 [Internet]. 2019. Available at: https://ppid.padang.go.id/uploads/audios/ppidpadang_5f360db28f7bf.pdf (Accessed: 12.11.2023).
15. Baral S, Sifakis F, Cleghorn F, Beyrer C, Elevated risk for HIV infection among men who have sex with men in low- and middle-income countries 2000-2006: a systematic review. PLoS Med 2007; 4: e339. DOI: 10.1371/journal.pmed.0040339.
16. Dong MJ, Peng B, Liu ZF, Ye QN, Liu H, Lu XL, et al. The prevalence of HIV among MSM in China: a large-scale systematic analysis. BMC Infect Dis 2019; 19: 1000. DOI: 10.1186/s12879-019-4559-1.
17. Babel RA, Wang P, Alessi EJ, Raymond HF, Wei C. Stigma, HIV risk, and access to HIV prevention and treatment services among men who have sex with men (MSM) in the United States: a scoping review. AIDS Behav 2021; 25: 3574-3604.
18. Zheng M, He J, Yuan Z, Zhang X, Yao Y, Fang X, et al. Risk assessment and identification of HIV infection among men who have sex with men: a cross-sectional study in Southwest China. BMJ Open 2020; 10: e039557. DOI: 10.1136/bmjopen-2020-039557.
19. Gedela K, Januraga PP, Luis H, Wignall FS, Irwanto I. COVID-19 lockdown in Indonesia: greater investment will be needed to mitigate the impact on people living with HIV. Asia Pac J Public Health 2020; 32: 461-462.
20. Nevendorff L, Schroeder SE, Pedrana A, Bourne A, Stoové M. Prevalence of sexualized drug use and risk of HIV among sexually active MSM in East and South Asian countries: systematic review and meta-analysis. J Int AIDS Soc 2023; 26: 26054. DOI: 10.1002/jia2.26054.
21. Threats M, Brawner BM, Montgomery TM, Abrams J, Jemmott LS, Crouch PC, et al. A review of recent HIV prevention interventions and future considerations for nursing science. J Assoc Nurses AIDS Care 2021; 32: 373-391.
22. Kementerian Kesehatan. Program Pengendalian HIV AIDS dan PIMS [Internet]. 2017 [cited 2022 Nov 29]. Available at: https://siha.kemkes.go.id/portal/files_upload/BUKU_3_PENGENDALIAN_HIV_COLOR_A5_15x21_cm.pdf.

23. Mnyaka OR, Mabunda SA, Chitha WW, Nomatshila SC, Ntlongweni X. Barriers to the implementation of the HIV universal test and treat strategy in selected primary care facilities in South Africa's Eastern Cape povince. J Prim Care Community Health 2021; 12: 21501327211028706. DOI: 10.1177/21501327211028706.
24. Fields EL, Hussen SA, Malebranche DJ. Mind the gap: HIV prevention among young black men who have sex with men. Curr HIV AIDS Rep 2020; 17: 632-642.
25. Veronese V, Clouse E, Wirtz AL, Thu KH, Naing S, Baral SD, et al. "We are not gays... don't tell me those things": Engaging "hidden" men who have sex with men and transgender women in HIV prevention in Myanmar. BMC Public Health 2019; 19: 63. DOI: 10.1186/s12889-018-6351-3.
26. Creswell JW, Creswell JD. Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. 2013.
27. Tongco C Dolores Ma. Purposive Sampling as a Tool for Informant Selection. University Hawaii. 2017.
28. Hardisman Dasman. Perilaku LSL dan Penularan HIV AIDS di Sumbar Paradoks Sosial di Minangkabau [Internet]. 2018. Available at: http://repo.unand.ac.id/6643/1/Perilaku%20LSL%20dan%20Penularan%20HIV_AIDS%20di%20Sumbar_%20Paradoks%20Sosial%20di%20Minangkabau%20-%20Minangkabaunews-ok.pdf (Accessed: 12.12.2022).
29. Hess KL, Crepaz N, Rose C, Purcell D, Paz-Bailey G. Trends in sexual behavior among men who have sex with men (MSM) in high-income countries, 1990-2013: a systematic review. AIDS Behav 2017; 21: 2811-2834.
30. Vagenas P, Ludford KT, Gonzales P, Peinado J, Cabezas C, Gonzales F, et al. Being unaware of being HIV-Infected is associated with alcohol use disorders and high-risk sexual behaviors among men who have sex with men in Peru. AIDS Behav 2014; 18: 120-127.
31. Nakiganda LJ, Bell S, Grulich AE, Serwadda D, Nakubulwa R, Poynten IM, et al. Understanding and managing HIV infection risk among men who have sex with men in rural Uganda: a qualitative study. BMC Public Health 2021; 21: 1309. DOI: 10.1186/s12889-021-11365-9.
32. Iott BE, Loveluck J, Benton A, Golson L, Kahle E, Lam J, et al. The impact of stigma on HIV testing decisions for gay, bisexual, queer and other men who have sex with men: a qualitative study. BMC Public Health 2022; 22: 471. DOI: 10.1186/s12889-022-12761-5.
33. Bekker LG, Alleyne G, Baral S, Cepeda J, Daskalakis D, Dowdy D, et al. Advancing global health and strengthening the HIV response in the era of the Sustainable Development Goals: the International AIDS Society – Lancet Commission. Lancet 2018; 392: 312-358.
34. Sharma A, Paredes-Vincent A, Kahle EM. Awareness, utilization, and preferences for traditional and contemporary HIV prevention strategies among Facebook and Instagram-using MSM in the United States. J Int Assoc Provid AIDS Care 2021; 20: 23259582211024770. DOI: 10.1177/23259582211024770.
35. Reza MM, Rana AKMM, Azim T, Chowdhury EI, Gourab G, Imran MS, et al. Changes in condom use among males who have sex with males (MSM): Measuring the effect of HIV prevention programme in Dhaka city. PLoS One 2020; 15: e0236557. DOI: 10.1371/journal.pone.0236557.
36. Restar AJ, Adia A, Nazareno J, Hernandez L, Sandfort T, Lurie M, et al. Barriers and facilitators to uptake of condoms among Filipinx transgender women and cisgender men who have sex with men: a situated socio-ecological perspective. Glob Public Health 2020; 15: 520-531.
37. Pines HA, Patrick R, Smith DM, Harvey-Vera A, Blumenthal JS, Rangel G, et al. HIV prevention method preferences within sexual partnerships reported by HIV-negative MSM and TW in Tijuana, Mexico. AIDS Behav 2020; 24: 839-846.
38. Mansergh G, Kiran Kota K, Stephenson R, Hirshfield S, Sullivan P. Preference for using a variety of future HIV pre-exposure prophylaxis products among men who have sex with men in three US cities. J Int AIDS Soc 2021; 24: e25664. DOI: 10.1002/jia2.25664.
39. Mahathir M, Wiarsih W, Permatasari H. How do people living with HIV acquire HIV related information: a qualitative evaluation of Jakarta setting. J Ners 2020; 15: 126-134.
40. Liu Z, Chen Y, Yao T, Zhang T, Song D, Liu Y, et al. Factors related to HIV testing frequency in MSM based on the 2011-2018 survey in Tianjin, China: a hint for risk reduction strategy. BMC Public Health 2021; 21: 1900. DOI: 10.1186/s12889-021-11948-6.
41. Thanavanh B, Harun-Or-Rashid M, Kasuya H, Sakamoto J. Knowledge, attitudes and practices regarding HIV/AIDS among male high school students in Lao People's Democratic Republic. J Int AIDS Soc 2013; 16: 17387. DOI: 10.7448/IAS.16.1.17387.
42. Guimarães MDC, Magno L, Ceccato MDGB, Gomes RR de FM, Leal AF, Knauth DR, et al. HIV/AIDS knowledge among MSM in Brazil: A challenge for public policies. Rev Bras Epidemiol 2019; 22 (Suppl 1): e190005. DOI: 10.1590/1980-549720190005.supl.1.
43. van Griensven F, Guadamuz TE, de Lind van Wijngaarden JW, Phanuphak N, Solomon SS, Lo YR. Challenges and emerging opportunities for the HIV prevention, treatment and care cascade in men who have sex with men in Asia Pacific. Sex Transm Infect 2017; 93: 356-362.
44. Bor J, Fischer C, Modi M, Richman B, Kinker C, King R, et al. Changing knowledge and attitudes towards HIV treatment-as-prevention and "undetectable = untransmittable": a systematic review. AIDS Behav 2021; 25: 4209-4224.
45. Torres TS, de Boni RB, de Vasconcellos MTL, Luz PM, Hoagland B, Moreira RI, et al. Awareness of prevention strategies and willingness to use preexposure prophylaxis in brazilian men who have sex with men using apps for sexual encounters: online cross-sectional study. JMIR Public Health Surveill 2018; 4: e11. DOI: 10.2196/publichealth.8997.
46. Bekker LG, Pike C, Hillier SL. HIV prevention: better choice for better coverage. J Int AIDS Soc 2022; 25: e25872. DOI: 10.1002/jia2.25872.
47. Gilmour S, Peng L, Li J, Oka S, Tanuma J. New strategies for prevention of HIV among Japanese men who have sex with men: a mathematical model. Sci Rep 2020; 10: 18187. DOI: 10.1038/s41598-020-75182-7.
48. Yuan T, Fitzpatrick T, Ko NY, Cai Y, Chen Y, Zhao J, et al. Circumcision to prevent HIV and other sexually transmitted infections in men who have sex with men: a systematic review and meta-analysis of global data. Lancet Glob Health 2019; 7: e436-e447. DOI: 10.1016/S2214-109X(18)30567-9.