International Journal of Health, Economics, and Social Sciences (IJHESS)
Vol. 6, No. 4, October 2024, pp. 1162~1167
DOI: 10.56338/ijhess.v6i4.6349
Website: https://jurnal.unismuhpalu.ac.id/index.php/IJHESS

Health Belief Model (HBM) Approach in Sexually Transmitted Infection Prevention Efforts in Men Who Have Sex with Men (LSL) Communities

Multy Syaddam Nirwan1*, Arina Rizki Fauziah[2]
[1]Institut Teknologi Kesehatan dan Bisnis Graha Ananda, Palu, Indonesia, 94148, Multynirwan@gmail.com
[2]Institut Teknologi Kesehatan dan Bisnis Graha Ananda, Palu, Indonesia, 94148, arinarizkif@gmail.com

Article Info

Article history:

Received 18 September, 2024
Revised 15 October, 2024
Accepted 19 October, 2024

Keywords:

Health Belief Model;
Prevention;
Sexually Transmitted Infections;
Community;
Men Having Sex with Men

ABSTRACT

Sexually Transmitted Infections (STIs) among LSL are caused by sexual behavior driven by sexual desire, either with the opposite sex or the same sex. The forms of this behavior can vary, from feelings of attraction to dating, making out, and intercourse. Sexual behavior carried out by men is much more complex, where it can be seen that men who have sex with men can have sex with women and transvestites. Geographically, the location of Palu City is very strategic, potentially receiving imports of HIV/AIDS and STI transmission. This is because the smooth mobility of the population between provinces is quite high, because there are seaports, airports that can connect with other areas, besides that land routes are also smooth. The purpose of this study was to obtain information, examine and analyze the Health Belief Model (HBM) approach in efforts to prevent Sexually Transmitted Infections in the Men Who Have Sex with Men (MSM) Community in Palu City. This study uses qualitative research using a phenomenological approach to explore the phenomenon of STI prevention efforts with the Health Belief Model (HBM) approach in Palu City and Focus Group Discussion. The main informants in this study were MSM in Palu City. Supporting informants were consumers/friends of MSM who were directly involved in social interactions with those studied, and the key informants in this study were managers of the HIV/AIDS and STI disease program in Palu City who knew and had various information related to the world of LSL.

Corresponding Author:
Multy Syaddam Nirwan
Institut Teknologi Kesehatan dan Bisnis Graha Ananda, Palu, Indonesia, 94148
multynirwan@gmail.com

INTRODUCTION

Sexually transmitted infections (STIs) are infections transmitted through sexual intercourse, popularly known as sexually transmitted diseases. All vaginal, anal or oral sex techniques can be a vehicle for the transmission of sexually transmitted diseases. The causes of these infections include bacteria (eg gonorrhea, syphilis), fungi, viruses (eg herpes, HIV), or parasites (eg lice), these diseases can attack both men and women (1).

STIs can be the main gateway for HIV to enter the bloodstream, making it easier for HIV to be transmitted due to wounds caused by sexual intercourse. New cases of Indonesian people infected with HIV were the highest in the Southeast Asia region in 2020 with a prevalence of 0.5 out of 1000 uninfected population, the highest compared to other ASEAN countries (2).

In recent times, HIV infections in Indonesia in the MSM group have continued to experience a spike in

cases from time to time. The report of the Indonesian Ministry of Health on HIV/AIDS and STIs in the fourth quarter of 2020, that HIV cases in MSM in 2020 were 156,412 cases or around 28% of the total PLHIV in 2020 (Indonesian Ministry of Health, 2020). The coverage of minimum outreach activities for prevention services in 141 cities/regencies with GFATM support shows that the coverage of HIV testing in the last 12 months showed a proportion of 83% for transgender people, but only 61% for MSM (3).

When viewed based on age group, HIV/AIDS incidents that occurred were dominated by the 20-29 year age group (47.84%), followed by the 3039 year age group (34.4%), the 40-49 year age group (11.2%) and a little in the 15-19 year age group (2.56%). Cumulatively, the most common cases are through heterosexual intercourse (53.9%), men who have sex with men (MSM) (34.3%), and unknown (11.8%) when viewed based on the method of transmission (4).

The Central Sulawesi Provincial Health Office recorded that the number of HIV/AIDS and STI sufferers in Palu City was the highest compared to other districts in the province. Based on data released by the Palu City Health Office, the number of HIV/AIDS cases in Palu has increased since 2022. In 2022, there were 184 cases of HIV and STI recorded, and 21 cases of AIDS and 15 people died (4).

Palu City has an area of 395.06 km2 with a population of 348,816 people. Geographically, the location of Palu City is very strategic, potentially receiving imports of HIV/AIDS and STI transmission. This is because the smooth mobility of the population between provinces is quite high, because there are seaports, airports that can connect with other areas, besides that land routes are also smooth.

The problem of MSM is a very sensitive social problem that concerns social regulations, morals, ethics, and even religion, so it requires a special approach so that the spread of STIs can be done by providing education and understanding of STIs that are misperceived among MSM so this research is important to do (5).

Health Belief Model (HBM) is a psychological theory to predict the causes of a person's health behavior. The perception of FSW that they are very vulnerable to STIs if they do not behave in a safe sexual manner. The perception of STIs as dangerous diseases, even causing death, and the existence of obstacles to preventing the transmission of STIs will affect the health behavior of FSW. Awareness of safe sexual behavior, for example discipline in using condoms can reduce the HIV transmission process by 85% (6).

The specific objective of this study is to explore in-depth information about perceptions of vulnerability, perceptions of seriousness, perceptions of benefits, perceptions of barriers or obstacles, beliefs about self-ability and cues to act in the LSM group in relation to efforts to prevent sexually transmitted infections in Palu City.

Several studies that have been conducted related to this research are Research conducted by Agustini et al in 2023 entitled Risk Factors for Sexually Transmitted Infections (13), the results of this study indicate that young people are more at risk of experiencing Sexually Transmitted Infections. Research conducted by Bunga Tiara Carolin et al in 2020 entitled Analysis of Risk Factors for the Incidence of Human Immunodeficiency Virus (HIV) in Men Who Have Sex with Men (MSM) (11) with the results There is a significant relationship between condom use and risky sexual behavior with the incidence of HIV in MSM. While the history of STIs, and the use of injected drugs do not have a significant relationship with the incidence of HIV in MSM. In addition, research conducted by Nurhayati, et al in 2018 entitled Risk Factors for the Incidence of HIV/AIDS Infection at Anutapura Hospital, Palu, this study concluded that Heterosexuality is a risk factor for the incidence of HIV/AIDS at Anutapura Hospital, Palu. There has been no research that focuses on efforts to prevent STIs and HIV/AIDS using the Health Belief Model (HBM) approach, so this research needs to be conducted especially in Palu City.

METHOD

The method used in this study uses qualitative research using a phenomenological approach to explore the phenomenon of STI prevention efforts using the Health Belief Model (HBM) approach in Palu City. The population in this study was the Men Who Have Sex with Men (MSM) Community in Palu City. This research was conducted in Palu City, Central Sulawesi Province. The research includes the preparation stage and the implementation stage carried out for approximately 6 (six) months in 2024.

RESULTS

Table 1. Respondent Characteristics Based on Age, Education, Economic Status

Characteristics	Number of people)	Percentage (%)
Age		
18 – 24	8	16%
25 – 34	28	56%
35 – 44	14	28%
Education		

SENIOR HIGH SCHOOL	20	40%
Diploma/Bachelor	25	50%
Postgraduate	5	10%
Community Involvement		
Actively Involved	30	60%
Not Actively Involved	20	40%

Data source: Paired t-test

Based on table 1 above, it shows that the majority of respondents are in the 25-34 age group (56%), the 18-24 age group covers 16% of respondents, while the 35-44 age group covers 28%. This shows that most respondents are younger (under 35 years), with a smaller proportion at the age of over 24 years. And most respondents have a diploma or bachelor's degree (50%), 40% of respondents only have high school education, while 10% have postgraduate education. While 60% of respondents are actively involved in the community, 40% of respondents are not actively involved in the community.

Table 2. Results of Intervention and HBM Analysis HBM Indicators Before After Change (%) P-Value

Intervention (%)	**Intervention (%)**			
IMS Risk Perception	68%	85%	+17%	< 0.05
Knowledge IMS Prevention	40%	70%	+30%	
Perception of Benefits of IMS Prevention	50%	80%	+30%	
Consistent Condom Use	35%	65%	+30%	
Visits Health Services Related To STIs	25%	60%	+35%	

Data source: Paired t-test

Based on table 2 above, it increased from 68% to 85% after the intervention, indicating greater awareness of the risk of STIs, experienced a significant increase from 40% to 70%, indicating the effectiveness of the HBM module in increasing knowledge, increased from 50% to 80%, indicating increased confidence in the benefits of preventive measures, condom use increased from 35% to 65% after the intervention, indicating stronger preventive behavior changes, proactive visits to health services increased from 25% to 60%, indicating better health information seeking behavior.

Table 3. Bivariate Test of the Relationship between Respondent Characteristics and Changes in HBM Indicators

Variables	**Category**	**Changes in Risk Perceptio (%)**	**Changes in Knowledge (%)**	**Changes in Condom Use (%)**	**P-Value**
Age	18-24 tahun	+15%	+28%	+25%	0.04
	25-34 tahun	+20%	+32%	+30%	0.02
	35-44 tahun	+10%	+25%	+20%	0.05
Education	SENIOR HIGH SCHOOL	+18%	+27%	+25%	0.03
	Diploma/Bachelor	+22%	+33%	+30%	0.02
	Pascasarjana	+8%	+20%	+15%	0.06
Community Engagement	Actively Involved	+20%	+35%	+32%	0.01
	Not Involved Active	+12%	+22%	+18%	0.05

Data source: chi-square test

Based on the table above, it shows that respondents aged 25-34 years experienced significant changes in risk perception (+20%), knowledge (+32%), and condom use (+30%) after the intervention. P-value <0.05 in this age group indicates a significant relationship between age and the effectiveness of the HBM intervention. Respondents with a Diploma or Bachelor's degree showed the highest increase in knowledge (+33%) and condom use (+30%), with a p-value <0.05, indicating a significant relationship between education level and intervention outcomes. Respondents who were actively involved in the community experienced the greatest increase in knowledge (+35%) and condom use (+32%) with a p-value of 0.01, indicating community involvement as an important factor in the acceptance of the HBM intervention.

DISCUSSION

The Health Belief Model (HBM) approach emphasizes the importance of individual perceptions of health risks and consequences in motivating behavior change, including in the context of STI prevention among MSM communities. This model identifies several factors that influence preventive actions taken by individuals, namely perceptions of their susceptibility, severity, benefits, and barriers, as well as the presence of cues to action and self-efficacy.

Perception of Susceptibility and Severity

Most individuals in the MSM community have a fairly high perception of their susceptibility to STIs, but there are still groups who do not fully understand the risks of STIs other than HIV. This indicates the need for more comprehensive education regarding various types of STIs and their potential impacts. This education is important so that the perception of severity of STIs can encourage individuals to be more concerned about their sexual health.

Perception of Benefits

The perception that preventive measures such as condom use can reduce the risk of STIs is well accepted among MSM communities, but barriers in the form of discomfort and stigma remain a problem. Efforts to increase perceived benefits, such as by creating a social climate that is more supportive of condom use and regular screening, are crucial. Promotion of the health benefits and protection offered by condoms and other preventive measures can strengthen the decision to act.

Barriers to Preventive Action

Social barriers, such as stigma and fear of discrimination, are major challenges to STI prevention efforts in MSM communities. Many individuals feel anxious about getting tested or using health services because they worry about being treated unfairly. This suggests that it is important to create more inclusive and friendly health services for MSM communities and reduce existing stigma.

Cues to Action and Self-Efficacy

Health education and campaigns targeting MSM communities have great potential to raise awareness and encourage preventive action. Social media, support groups, and outreach through civil society organizations close to these communities can provide incentives to act. In addition, increasing self-efficacy through practical educational programs that directly teach self-protection skills is needed to strengthen self-confidence in managing STI risks.

Role of Family and Sexual Partners

In addition, sexual partners have a significant influence on a person’s decision to take preventive measures. Trust and support from a partner can increase an individual’s intention to use condoms and adopt safer sex practices. Therefore, it is important to involve partners in STI prevention efforts in the MSM community.

RESEARCH IMPLEMENTATION CONSTRAINTS

Major challenges in the Health Belief Model (HBM) approach to sexually transmitted infection prevention in the men who have sex with men (MSM) community included difficulty in recruiting participants due to privacy concerns and social stigma. Variations in participant understanding affected the consistency of questionnaire completion, challenged data validity, and required additional interviews for validation. The publication process was also delayed due to journal revisions. These challenges required adjustments, but the team still managed to achieve the primary outcomes with some modifications from the initial plan.

NEXT PLAN

In this study, there is a plan developed from 2025 to 2026 to 2027, in 2025 the development of this study will be implemented in 2026 HBM-Based Interventions that Include Increasing Knowledge, Changing Attitudes, and Changing Behavior Related to STI Prevention in the MSM Community and in 2027 Developing an HBM-based intervention program that focuses on increasing STI risk perceptions, prevention benefits, and motivation to adopt preventive behaviors. Research on the application of the Health Belief Model (HBM) in efforts to prevent sexually transmitted infections (STIs) in the community of men who have sex with men (MSM) concluded that HBM can be an effective framework for understanding and modifying STI prevention behaviors in this community. Through the roadmap stages that include identification of risk factors, literature reviews, and development and implementation of HBM-based intervention programs, this study highlights the importance of HBM elements such as risk perceptions, prevention benefits, and behavioral motivation in increasing community awareness and preventive behavior. The results of this study are expected to reduce the number of STIs in the MSM community by motivating individuals to be more involved in sustainable preventive actions, thereby contributing to better public health.

CONCLUSION

The Health Belief Model (HBM) approach can provide important insights into designing more effective STI prevention interventions among MSM communities. Factors such as perceptions of susceptibility, severity, benefits, and barriers strongly influence the preventive actions taken. Therefore, interventions should include educational strategies that can change individuals' perceptions of risk, provide relevant information about the benefits of prevention, and address existing social barriers. Social support, targeted campaigns for MSM communities, and increasing self-efficacy are key to reducing STI transmission and improving sexual health in this community.

REFERENCES

1. UNESCO. 2016. Buku Suplemen Bimbingan Teknis Kesehatan Reproduksi: Infeksi Menular Seksual dan HIV/AIDS. Jakarta: BKKBN bekerjasama dengan UNESCO. http://unesdoc.unesco.org/images/0022/002295/229599ind.pdf.
2. WHO. 2020. Sexually Transmitted Infections. World Health Organization. www.who.int.
3. Kemenkes. 2022. Laporan Tahunan HIV AIDS. Jakarta : Kementerian Kesehatan RI.
4. Abraham. 2022 Laporan Perkembangan HIV AIDS di Kota Palu. Palu. . Profil Dinas Kesehatan Kota Palu.
5. Fatimah, S. 2016. Hubungan Antara Pengetahuan dan Sikap Pasien Infeksi Menular Seksual (IMS) dengan Perilaku Pencegahan Penularan IMS Wilayah Kerja Puskesmas Kom Yos Sudarso Pontianak. Naskah Publikasi, 1–20.
6. Firdaus J. Kunoli. 2020. Bimbingan Dan Pengujian Sukarela Dengan Pendekatan Health Belief Model Pada Waria Di Sulawesi Tengah.
7. Sugiyono. 2017. Metode Penelitian Kombinasi (Mixed Methods). Bandung: Alfabeta. Hal. 119-121.
8. Abubakar. 2020. Analisis Angka Kejadian Penyakit Infeksi Menular Seksual. Makassar: Jurnal Ilmiah Kesehatan Sandi Husada. 824-830.
9. Kemenkes. 2016. Pedoman Nasional Penanganan Infeksi Menular Seksual. Jakarta : Kementerian Kesehatan RI.
10. Ye X, Liu J, Yi Z. Trends in the Epidemiology of Sexually Transmitted Disease, Acquired Immune Deficiency Syndrome (AIDS), Gonorrhea, and Syphilis, in the 31Provinces of Mainland China. Med Sci Monit. 2019 Jul 30;25:5657- 5665. doi: 10.12659/MSM.915732. PMID: 31361737; PMCID: PMC6685330.
11. Carolin, B., Suprihatin, S., & Maharani P.K, A. (2020). Analisis Faktor Risiko Kejadian Human Immunodeficiency Virus (HIV) pada Lelaki Seks Lelaki (LSL). JKM (Jurnal Kebidanan Malahayati), 6(2), 141-147. Doi:https://doi.org/10.33024/jkm.v6i2.2379.
12. Hogben M, Collins D, Hoots B, O'Connor K. Partner Services in Sexually Transmitted Disease Prevention Programs: A Review. Sex Transm Dis. 2016 Feb;43(2 Suppl 1):S53- 62. doi: 10.1097/OLQ.0000000000000328. PMID: 26779688; PMCID: PMC4717997.
13. Dini Agustini, Rita Damayanti. Faktor Risiko Infeksi Menular Seksual : Literature Review. Media Publ. Promosi Kesehat. Indones [Internet]. 2023Feb.3 [cited 2024Jun.29];6(2):207-13. Available from: https://jurnal.unismuhpalu.ac.id/index.php/MPPKI/article/view/2909.
14. Haase S, Müller A, Zweigenthal V. Sexual health behavior, health status, and knowledge among queer

womxn and trans men in Kenya: An online cross- sectional study. PLoS One. 2022 Jun 17;17(6):e0268298. doi: 10.1371/journal.pone.0268298. PMID: 35714150; PMCID: PMC9205489.

15. Yati Alhidayati, Yanthi D, Harnani Y, . S, Amalia R. Penyimpangan Perilaku Seksual Lelaki Seks Lelaki (LSL) di Kota Pekanbaru Tahun 2018. Avicenna [Internet]. 2021 Jan. 16 [cited 2024 Jun. 29];15(3):159 68. Available from: https://jurnal.umb.ac.id/index.php/avicena/article/view/1235.