

ORIGINAL ARTICLE

SOCIAL CAPITAL IN PREVENTING HIV TRANSMISSION AMONG HIV-POSITIVE MEN WHO HAVE SEX WITH MEN (MSM) ADULTS IN INDONESIA

M. Nur Khamid^{1*}, Eti Poncorini Pamungkasari², Argyo Demartoto³ and Dewi Rokhmah⁴¹ Doctoral Student of Public Health Program, Sebelas Maret University, Surakarta, Central Java, Indonesia.² Doctoral of Public Health Program, Faculty of Medicine, Sebelas Maret University, Surakarta, Central Java, Indonesia.³ Sociology Program, Faculty of Social and Politics, Sebelas Maret University, Surakarta, Central Java, Indonesia.⁴ Department of Health of Promotion and Behavior, Faculty of Public Health, Jember University, Jember, East Jawa, Indonesia.***Corresponding author: M. Nur Khamid**Email: khamid_020192@student.uns.ac.id

ABSTRACT

The trend of Human Immunodeficiency Virus/Acquired Immunodeficiency syndrome has become a significant health problem in Indonesia. One of the primary factors contributing to the high transmission of the virus among the HIV-positive population, particularly men who have sex with men (MSM), is their practice of risky behavior. To address this issue, it is crucial to optimize social capital, including both structural and cognitive dimensions, to prevent the transmission of the disease and its progression to the advanced stage (AIDS). Therefore, this study aimed to explain the impact of social capital on in the prevention of HIV transmission among the MSM population with HIV-positive. This qualitative study was conducted in Jember, Indonesia, using a grounded theory approach between April and September 2021. Data were collected using in-depth interviews with 12 HIV-positive MSM obtained using purposive sampling. This study found that social networks were formed through community activities and associations built from participation in social activities, focused on improving the structural dimension of social capital. In the cognitive dimension, trust among HIV-positive peers was related to adherence to ARV treatment, including prevention and transmission. By providing information through both structural and cognitive dimensions, social capital can effectively prevent HIV transmission among MSM HIV-positive and serve as a behavior model in the prevention of the progression to AIDS. Therefore, the education of peers can be developed based on this social capital, providing a basis for effective interventions.

Keywords: HIV, AIDS, model, MSM, Social capital

INTRODUCTION

Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) has become a global health problem, specifically in Indonesia. According to the World Health Organization (WHO), there were 1.5 million new cases of HIV worldwide in 2020, and the Ministry of Health in Indonesia reported a total of 427,201 cases of HIV from 1987-2021. The highest number of infections was recorded in Jakarta, East Java, and West Java with 16.7%, 15.2%, and 11%, respectively³. One of the most common causes of transmission of this disease is men who have sex with men (MSM). Subsequently, MSM is at risk for the transmission of HIV cases globally. The Centers for Disease Control and Prevention (CDC) reported that 66% (23,100 sufferers) of new cases in 2019 were among gay and bisexual⁴. Furthermore, the WHO estimated that the prevalence of HIV among MSM in Southeast Asia was 5% -12.6%¹. In Indonesia, the highest risk factors for transmission are identified as heterosexual (70.1%), homosexual (8.2%), injecting needle users (7.9%), and perinatal transmission (2.8%)³. The Integrated Biological and Behavioral Surveillance (IBBS) reported that

the highest incidence in 2018-2019 was 17.9% among the MSM group population⁵.

MSM primarily refers to individuals who identify as gay, bisexual, or heterosexual but engage in sexual intercourse, including oral or anal sex, with other men. This sexual orientation is commonly known as homosexuality⁶. The MSM population tends to be closed, and therefore the distribution of MSM groups to the public is not clear. However, the Ministry of Health estimated that the number of MSM is more than three million people [or 2% of Indonesian population]⁷.

Unhealthy sexual behavior among the MSM population significantly contributes to the transmission of HIV and the progression of AIDS. As a hidden population, MSM, specifically among youths, is difficult to reach through HIV control programs. Subsequently, a previous study stated that the MSM behavior was hazardous for HIV transmission due to changing partners without using condoms and lubricants and engaging in oral and anal sex. Lubricants can reduce the damage of rectum membrane mucous, which could be the entry point of HIV viruses⁸. In addition, the use of condoms and lubricants during sexual activity is still lacking in the MSM community⁹. Li et al.

explained that there were barriers to consistent condom use in the MSM community due to the inconvenience of condom use, availability, and insufficient knowledge about HIV prevention¹⁰. Therefore, a preventive program is needed in form of innovation for this population through health promotion using the social capital approach.

The concept of social capital refers to behaviors aimed in the prevention of HIV transmission and complications in communities of HIV-positive MSM. Low levels of social capital can lead to stress and unhealthy behaviors, while high levels of social capital can provide social support and resources that promote healthy behaviors and prevent the spread of HIV.¹¹. Therefore, this study aimed to explain social capital in the MSM population with HIV, where information related to the structural and cognitive dimensions of social capital in MSM with HIV can be used to create a behavioral model to prevent transmission and progression.

METHODS

This qualitative study was conducted using a grounded theory approach between April and September 2021. This theory aimed at explaining how these processes shape behavior patterns based on social processes.

The sampling technique used in this qualitative study was purposive technique. The sample consisted of HIV-positive MSM individuals who were selected through purposive sampling. The inclusion criteria include a) a resident in Jember, East Java, Indonesia, b) an individual diagnosed as HIV-positive by a doctor with a rapid HIV test laboratory examination, and c) an age range between 18-30 years. To determine the number of samples, data saturation was the final limitation¹². At the 12th interview, data saturation was reached as no new information was available. In this study, in-depth interviews were carried out for data collection. The general guideline used for conducting interviews included structural and cognitive dimensions.

In this study, data analysis involved the use of substance codes, categorization, and identification of the basic social-psychological process. Coding of data from interviews and field notes was conducted to identify their substance. The coding was then categorized by comparing it with other data and reflecting reality. To ensure accuracy, multiple readings of the sentences were carried out to derive meaning from the sample information. The identification of the basic social-psychological process was also carried out, and the main themes generated from the data were compiled by the researcher, with the resulting theme being related to the study focus. To ensure the validity of the data, the researcher used

triangulation of sources to obtain reliable results. This involved cross-checking data from in-depth interviews with observations made during the interviews, which were recorded on observation sheets. Additionally, this study was approved by the Research Ethics Committee of the Faculty of Medicine, Sebelas Maret University, Indonesia, on March 17, 2021, with the registration number 11/UN27.06.6.1/KEP/EC/2021.

RESULTS

Table 1 showed the characteristics of the respondents revealing that all respondents were between the age of 25 years and above, and most with bachelor's degrees and unmarried. Furthermore, most respondents had been companions in the MSM support group for less than five years, as indicated by the length of time reported.

Structure Dimensions

The social network on HIV Positive MSM

This study examined how HIV-positive MSM build social connections with others in their community. The results indicated that these connections are often formed through informal gatherings, such as meeting at cafes, boarding houses, rented homes, or town square parks. Activities like karaoke and spending time together also contribute to the formation of these relationships. Interestingly, most participants did not discuss health-related topics during these social interactions.

"...when it is very frequent...When I am visiting, friends often come to my house...But as for my status, I am not very open...But when I visit MSM friends... it is often. Just to play and check the condition of friends. Because there are friends who do not have antiretrovirals (ARV) but are sexually active, and many drop out too... like accompaniment...When we meet, we usually talk and listen to their complaints" (Respondent 3, 29 years old).

This was reinforced by supporting respondents who revealed that routine counseling sessions were often held to promote HIV-positive MSM to adopt safer sex behaviors to prevent HIV transmission, including discouraging the consumption of medication.

"First, I taught behavior changes, for those who did not use condoms at first, hence, they wanted to use condoms, then for those who did not want treatment, I promoted them to get treatment immediately..." (Respondent 1, 21 years old).

Associations for HIV-Positive MSM

The results showed that the social activities in which respondents usually participated in included youth activities in the village, youth organizations, health education, regular recitations, and fundraising for mosque

construction. Participating in these activities makes it easier for respondents to disseminate HIV prevention to the public.

“When it comes to socialization, I often use condoms. From there, I often share information on the benefits of condoms as a means of contraception, specifically. Although sometimes I avoid mentioning HIV prevention directly. However, I always recommend using contraception to stay safe. From there, I tucked in information about HIV...Well, after knowing they were welcome...” (Respondent 3, 29 years old).

Furthermore, the community's involvement is needed to prevent HIV transmission at the community level.

“...Recently, a few days ago, I had a patient I told you about. I asked the patient for VCT (Voluntary, Counseling, and Testing clinic), but he did not want to. I thought about how to get him to agree to do VCT, hence, his illness would be found. Moreover, I called the cadre to accompany me and made health insurance for the patient.

Finally, my friend, who is also a cadre, wanted to accompany me. In the end, the patient went for VCT, and the illness was found out....” (Respondent 1, 30 years old).

Cognitive Dimension

Trust in HIV-Positive MSM

This study showed that the trust of respondents in a partner, HIV service workers at the public health centers, and ARV treatment was related to adherence to ARV treatment. Furthermore, all respondents had confidence in the ARV treatment they were undergoing and felt the benefits of ARV adherence, including feeling healthy, increasing appetite, body weight, CD4, and suppressing the development of HIV in the body, as disclosed by respondent 7.

“...Sure...The proof is that I was often sick before I took ARV. I often complain of dizziness and all my body aches. However, after taking ARV for three months, I felt like I rarely got sick. The growth in my body fat is different from before I took ARVs. Therefore, before I took ARV, I weighed at least 53 kilos....” (Respondent 7, 26 years old).

Table 1: Characteristics of Respondents

Respondents	Aged	Education	Marital status	Occupation	Origin	Duration of becoming a companion
1	30	Bachelor	Unmarried	Employee	Jember	4 Years
2	27	Bachelor	Married	Entrepreneur	Jember	5 Years
3	29	Bachelor	Divorced	Teacher	Jember	6 Years
4	28	Senior High School	Unmarried	Companion	Jember	2 Years
5	27	Senior High School	Unmarried	Makeup services	Jember	3 Years
6	30	Bachelor	Unmarried	Employee	Jember	4 Years
7	26	Bachelor	Unmarried	Massage business	Jember	2 Years
8	27	Bachelor	Unmarried	Model	Jember	3 Years
9	27	Senior High School	Married	Farmer	Jember	2 Years
10	25	Bachelor	Divorced	Tailor	Jember	4 Years
11	28	Senior High School	Unmarried	Entrepreneur	Jember	3 Years
12	25	Bachelor	Unmarried	Student	Jember	2 Years

The respondents believed in practicing healthy living behaviors such as doing regular exercise, eating nutritious, taking vitamins/supplements, avoiding stress, having safe sex, and adhering to ARV medication, which can improve body health and prevent HIV transmission to male sex partners as disclosed by respondent 6 as follows.

“... first, watch your diet. Secondly, avoid risky relationships... I already started to reduce. Because I do not want to infect it and I do not want it to be transmitted to those who are positive too....” (Respondent 6, 30 years old)

Different findings were revealed by respondent 10, who stated that in addition to ARV treatment, the belief in the herbal treatment by consuming Dayak onions could maintain a healthy body. The subject believed this helps to heal when experiencing pain.

“...I set the mindset. I do not think too much, and I am sure if we stay calm, everything will be resolved. Apart from that, I adjusted my diet. I also use herbal medicines. I also use Dayak onions for the treatment of internal diseases....” (Respondent 10, 25 years).

Norms of Reciprocity in HIV-Positive MSM

The results showed that most of the respondents stated the efforts made in helping HIV-positive MSM through informative support, as reported by respondent 11 below.

"...Very often, sir, I provide HIV information through social media, WhatsApp, Facebook, I also chat sometimes, yes I can give health information as well..." (Respondent 11, 28 years old).

The results showed that the contributions given by the community of fellow HIV-positive MSM to help others were in the form of monetary support, demonstrating their concern and empathy towards their fellow HIV-positive MSM community members, as revealed by respondent 1 as follows.

"...for friends in the community, we are more concerned with providing support, assistance, visiting, motivating, etc. We cannot visit without bringing gifts, do not we? We will visit him, and bring gifts. Yes, there must be a contribution there...." (Respondent 1, 30 years old).

DISCUSSION

Social capital is a multifaceted concept that encompasses two distinct dimensions, namely structural and cognitive. The structural dimension pertains to tangible components such as social networks and community groups, while the cognitive dimension refers to intangible elements such as trust and reciprocity norms¹³.

Structure Dimensions

The Social Network of MSM HIV-Positive in the Prevention of HIV Transmission

The results showed that a social network among peers (including MSM) was built through community gathering activities, such as closeness, understanding, and trust built during friendship¹⁴. The characteristics of MSM required the involvement of the MSM community through this inclusive peer educator, hence, it can increase the knowledge of MSM on health issues⁵. Although most respondents did not disclose their HIV status to those around them, there were interesting findings that one of the respondents who disclosed his HIV status openly received positive support from those around them and did not experience stigma and discrimination.

Involvement in social activities could reduce the stigma and discrimination from the community against HIV and AIDS and build community relationships. This is due to social networks also influencing the closed behavior of MSM regarding their HIV status^{15,16}. This study suggested that motivational support during ARV treatment was achieved when subjects dare to reveal their HIV status to those around them. The form of social networking that HIV-positive MSM engaged in with the community can impact efforts to prevent HIV transmission to HIV-positive MSM.

Associations on HIV-Positive MSM in the Prevention of HIV Transmission

Participating in social activities facilitated the dissemination of HIV transmission and prevention to the public, therefore, people have a good understanding in the prevention of HIV transmission and progression (AIDS), including the impact of stigma and discrimination. Community associations can provide motivation, a place to ask questions and consultations, hold regular meetings, manage activities, raise donations, and provide disease prevention education¹⁴.

Respondents reported that they engaged in peer support activities within the community of fellow HIV-positive MSM, which includes following through with various activities. Berg et al. explained that peer support could improve the outcome of HIV and AIDS treatment¹⁷. Ferguson reported that community associations played an important role in strengthening communities in the health sector, including disseminating information, providing an example, awareness-raising, motivation, mentoring, implementing community goals, and facilitation and resource allocation¹⁸. Active involvement in associations or organizations, as well as community social activities, is very important because it is an effort to control risky behavior from people with HIV, including the prevention of HIV transmission and progression.

Cognitive Dimension

Trust in HIV-Positive MSM in the Prevention of HIV Transmission

This study showed that trust in facilitators, HIV health center service workers, and ARV treatment was related to adherence to ARV treatment. Furthermore, Khamid and colleagues reported that taking ARV, healthy lifestyles, and regular exercise are carried out to support and keep HIV-positive MSM healthy, including the prevention of HIV transmission¹⁹. Belief in ARV treatment greatly determines PLWHA to adherence to ARV treatment. Increasing belief in the effectiveness of ARV treatment for people living with HIV can lead to a reduction in both HIV transmission rates and loss of follow-up.

Trust is essential because the person will feel more comfortable. Ransome et al. explained that social trust could increase earlier HIV testing, which impacts a faster diagnosis in a way that treatment can be carried out quickly²⁰. In addition, there is concern from respondents for fellow HIV-positive MSM manifested in providing interactive and friendly information on the prevention of HIV transmission.

Norms of Reciprocity in HIV-Positive MSM in the Prevention of HIV

Norms of reciprocity can be explained as concern and a sense of belonging to fellow HIV-positive MSM communities²¹. The results showed that most of the respondents stated the efforts made in

helping HIV-positive MSM through informative support, including psychological and social support. Subsequently, social support refers to help, encouragement, and care from family or community received or felt by an individual. Donating money from the community of fellow HIV-positive MSM to help colleagues who are sick is a form of concern and empathy for fellow HIV-positive MSM.

Previous studies showed that the role of HIV and AIDS prevention was influenced by caring, self-confidence, a sense of belonging, and support from other communities^{23,24}. Concern or sympathy is related to the motivation to be healthy for oneself and others and is raised through identification²². These norms of reciprocity can be the basis for communication, information, and education activities for fellow HIV-positive MSM, including the prevention of HIV transmission and AIDS, such as having a routine donation program.

CONCLUSION

In conclusion, the prevention of HIV transmission among HIV-positive MSM can be facilitated through high social capital, which encompasses both structural and cognitive dimensions. The structural dimension of social capital involves building social networks through participation in community activities and associations. The cognitive dimension, on the other hand, is related to trust between HIV-positive individuals and their peers, which is associated with adherence to ARV treatment. Other researchers or policymakers can use the provision of information through social capital in establishing a model of HIV prevention behavior in MSM by involving the role of peer groups or educators in increasing family and community understanding regarding HIV transmission. However, it is important to note that this study did not measure the magnitude of risky sexual behavior among HIV-positive MSM or the effectiveness of prevention strategies. Therefore, further investigation using the quantitative method is needed to gather a more comprehensive understanding of the characteristics of HIV-positive MSM across different conditions.

ACKNOWLEDGMENT

The authors are grateful to the respondents who are willing to participate, HIV program assistants, case managers, and also the relevant parties for providing permission and input in implementing this study.

Conflict of interest

The authors declare no potential conflicts of interest.

REFERENCES

1. WHO. HIV [Internet]. [cited 2022 Nov 21].

Available from:
<https://www.who.int/news-room/fact-sheets/detail/hiv-aids>.

2. CDC. HIV-Statistics Overview [Internet]. [cited 2022 Nov 21]. Available from: <https://www.cdc.gov/hiv/statistics/overview/index.html#:~:text=Worldwide%2C%20there%20were%20about%201.5,AIDS%2Drelated%20illnesses%20in%202020>
3. Ministry of Health the Republic of Indonesia. Report - Development of HIV AIDS and Sexually Transmitted Infection Diseases [Internet]. [cited 2022 March 20]. Available from: https://siha.kemkes.go.id/portal/files_upload/Laporan_TW_I_2021_FINAL.pdf
4. CDC. HIV and Gay and Bisexual Men (Differences in Knowledge of Status, Prevention, Treatment, and Stigma Exist by Race/Ethnicity) [Internet]. 2021 [cited 2022 Nov 21]. Available from: <https://www.cdc.gov/vitalsigns/hivgaybi men>
5. IBBS. Integrated Behavioral Biological Surveillance in Key Population Groups in Indonesia [Internet]. [cited 2022 March 20]. Available from: https://hivaids-pimsindonesia.or.id/download/file/2018-2019_IBBS_Report_Supplement_eng.pdf
6. CDC. HIV among gay and bisexual men in the US [Internet]. [cited 2022 March 20]. Available from: <https://www.cdc.gov/nchhstp/newsroom/fact-sheets/hiv/HIV-gay-bisexual-men.html>
7. Ministry of Health the Republic of Indonesia. Quarter III HIV and AIDS Report in Indonesia [Internet]. [cited 2022 March 20]. Available from: https://siha.kemkes.go.id/portal/files_upload/Laporan_TW_III_2021.pdf
8. Rokhmah D. Phenomenological Study on Homosexuality in Men having Sex with Men in Jember Regency. [Dissertation]. Surabaya: Faculty of the Public Health University of Airlangga; 2016.
9. Setyani RA. Female Sex Workers Perception of Female Condom Utilization in Indonesia: Barrier and Solution. In Proceeding International Conference 2019;1(1):190-195.
10. Li X, Lei Y, Wang H, et al. The Health Belief Model: A Qualitative Study to Understand High-risk Sexual Behavior in Chinese Men Who Have Sex with Men. *J Assoc Nurses AIDS Care* 2016; 27(1):66-76.

11. Rohmawati R, Indrianti DT. Social Capital of Coastal Women and Efforts to Prevent HIV/AIDS Transmission in Jember District. *Culture* 2018;**5**(1):26-44.
12. Saunders B, Sim J, Kingstone T, et al. Saturation in qualitative research: exploring its conceptualization and operationalization. *Qual Quant* 2018;**52**:1893-907.
13. Ozmete E. Understanding of social capital with an ecosystem approach. *Int J Acad Res* 2011;**3**(3):333-9.
14. Sulaeman ES, Reviono R, Setyowati A. Health Cadres' Social Capital, and Community Figures' Leadership in the Detection of Tuberculosis. *Jurnal Kedokteran Yarsi* 2016;**24**(1):20-041.
15. Latkin C, Yang C, Tobin K, et al. Social Network Predictors of Disclosure of MSM Behavior and HIV-Positive Serostatus Among African American MSM in Baltimore, Maryland. *AIDS Behav* 2012;**16**(3):535-42.
16. Fauk NK, Merry MS, Sigilipoe MA, et al. Culture, social networks, and HIV vulnerability among men who have sex with men in Indonesia. *PLoS One* 2017;**12**(6): e0178736.
17. Berg RC, Page S, Øgård-Repål A. The effectiveness of peer-support for people living with HIV: A systematic review and meta-analysis. *PLoS One* 2021;**16**(6): e0252623.
18. Ferguson KM, Kim MA, McCoy S. Enhancing Empowerment and Leadership Among Homeless Youth in Agency and Community Settings: A Grounded Theory Approach. *Child Adolesc Social Work J* 2011;**28**(1):1-22.
19. Khamid MN, Marchianti N, Rokhmah D. Predisposing Characteristic of MSM (Men who Have Sex with Men) in Utilizing of CST (Care Support and Treatment) Services in Jember District. *Health Notions* 2018;**2**(4):483-6.
20. Ransome Y, Batson A, Galea S, et al. The relationship between higher social trust and lower late HIV diagnosis and mortality differs by race/ethnicity: results from a state-level analysis. *J Int AIDS Soc* 2017;**20**(1):21442.
21. Demartoto A. Social Capital Representation in Structured Peer Education for Prevention of Mother - to - Child Transmission. In: Proceedings of the Third International Conference on Social Transformation, Community and Sustainable Development (ICSTCSD 2019). Paris, France: Atlantis Press; 2020.
22. Heryana A, Hubaybah H, Putri ME. Social Interaction of Housewives with Human Immunodeficiency Virus in Deciding to Support Anti-Retroviral Therapy: A Case Study in Bekasi City. *JCA Health Science* 2021;**1**(1).
23. Sinulingga E, Waluyo A, Yona S. The Role of Church Community in Increasing Self Awareness to Prevent an Increase in HIV/AIDS: Literature Review. *Nursing Current* 2021;**9**(2):214-29.
24. Rahima P, Irawan E, Fauzia P, et al. Intervention in Patients with HIV/AIDS: Systematic Review. *Jurnal Keperawatan BSI* 2019;**7**(2):127-4