Disease Prevention and Public Health Journal
Vol. 19, No. 2, September 2025, pp. 01-11

e-ISSN: 2720-9997

Risk of Spouse HIV Status and Anal Sex on HIV/AIDS Transmission in Men Who Have Sex with Men (MSM) at Kendari City Hospital

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ARTICLE INFO

Article history
Received January 20, 2025
Revised April 21, 2025
Accepted April 21, 2025

Keywords
Condom Use
Sex Couple
Men Sex Men

ABSTRACT

Background : The incidence of HIV/AIDS occurs in many productive ages with the highest percentage in men. At Kendari City Hospital, there is a significant increase in new cases of HIV/AIDS every year, especially in the MSM group. The average proportion of HIV/AIDS cases in MSM in 2021 is 65.4%; in 2022 it is 74.3%, and in 2023 it is 77.1%. This study aims to analyse the risk of HIV status and anal sex on HIV/AIDS transmission in the group of men who have sex with men (MSM) at Kendari City Hospital. **Method** : This type of research is a quantitative study with a case control design. The study population consisted of 349 cases and 423 controls. The minimum sample size taken was 75 case subjects and 75 control subjects, with sample withdrawal using random sampling. Data analysis was carried out descriptively, epidemiology and logistic regression analysis. **Results:** This research found the Odds Ratio (OR) of HIV status of couples was obtained at 30.545 and anal sex was 7.042. **Conclusion** : The conclusion in this study is that the HIV status of the couple and anal sex are behavioural factors for the risk of HIV/AIDS in the group of Men who have sex with men at Kendari City Hospital. It is expected that the Kendari City Health Office will increase socialization activities about the use of condoms and examination for sexually transmitted infections as an effort to prevent HIV/AIDS, especially to the MSM group. This can be done through cross-sectoral cooperation with other agencies as well as the involvement of NGOs and moving with the community.

Introduction

HIV (Human Immunodeficiency Virus) is one of the global problems that have become a health problem in the people of Indonesia. HIV is a virus that can disrupt the immune system that

has been built up in the human body by infecting and destroying CD4 cells. The spread of HIV has a tendency to be rapid and widespread. HIV transmission can occur through direct contact with body fluids from an infected person, such as blood, breast milk, semen and vaginal fluids (1). The impact of the HIV/AIDS epidemic is not only a health problem, but also political, economic, social, ethical, religious and legal implications, and moreover, sooner or later, it will affect almost every aspect of human life. This threatens efforts to improve the quality of life of the people of the country. In addition, it is also an obstacle in development so the government must immediately take policy steps to prevent and overcome it (2).

The prevalence of HIV in the world based on Global Health Observatory data shows that about 0.8% of adults aged 15 – 49 years worldwide live with HIV. The African continent is the continent with the highest HIV prevalence in the world at around 4.5% and the lowest HIV prevalence in the Western Pacific at around 0.1%. Meanwhile, the global prevalence of sexually transmitted diseases in 2018 was 17% and increased in 2019 to 23% (3). Indonesia is included in the Southeast Asian region and the prevalence of HIV in Southeast Asia is around 0.3 - 0.4%. The highest prevalence of HIV in Southeast Asia in adults in the age group of 15-49 years is Thailand with a prevalence of around 1.1%, Myanmar at 0.6%, Indonesia is at 0.5%, Vietnam is at 0.3%, and the Philippines is at 0.2 (1).

The estimated number of HIV-AIDS cases in Indonesia until 2022 in Indonesia reaches 519,158 cases spread across all provinces HIV infection in Indonesia is predominantly found in key populations with a prevalence of 18.9% in the MSM group, 12.7% in the injecting drug user group, 11.9% in transvestites, 2.1% in sex workers, and 0.7% in prison inmates (Ministry of Health of the Republic of Indonesia, 2022). In Indonesia, the prevalence of HIV/AIDS cases by risk group in 2019, MSM ranked third for the percentage of HIV positive people taking HIV tests, which was 8.75%, the second place was female sex workers/FSWs customers at 10.75% and the first place was Sero Discordant (one of the couples had HIV, while the other did not) at 92.19% (4).

Southeast Sulawesi Province ranks 29th out of 34 provinces in Indonesia with a cumulative number of HIV/AIDS cases until 2022 of 2,346 cases (Prevalence 0.01%). The findings of new HIV/AIDS cases in the last 3 years have increased, namely 319 cases in 2020 (IR = 0.012%), in 2021 as many as 445 cases (IR = 0.016%), and in 2022 as many as 536 cases (IR = 0.0198%). The distribution of HIV/AIDS cases in Southeast Sulawesi was found to be the most in Kendari City with 155 cases (IR = 0.044%) in 2021, 224 cases (IR = 0.063%) in 2022, and 321 cases (IR = 0.088%) in 2023. In the last 5 (five) years, Southeast Sulawesi Province has experienced an increase in new cases, even though it is ranked 29th nationally for HIV/AIDS cases in 2023. As for Kendari City, the proportion of new case findings is 76.5% (5).

Based on data obtained from the Kendari City Health Office, the highest proportion of cases is the MSM group at 76.8%, Female Sex Workers at 10.3%; High Risk Pairs by 9.7%; HRM by 2.2%; transvestite by 1.0%; and Perinatal by 0.1%. The high number of cases of MSM is the main concern by the government, especially the Health Office and other related agencies in terms of this phenomenon (6). Factors that contribute to the high rate of HIV in NCDs can involve various aspects, such as stigma, discrimination, limited access to health services, and sexual behaviors that increase the risk of transmission.

Men Sex Men (MSM) is one of the key and high-risk groups that is still a problem in the world, including in Indonesia. Some key populations (sex workers, sex workers and transvestites) show that new HIV infections in populations aged 15 years and older have consistently declined over time, but this is not the case in the male, sexually active male (MSM) and low-risk female populations (key population pairs). In these two groups, the number of new HIV infections actually increased (7)

MSM is considered a deviation of sexual orientation that tends to like the same sex. This act is very contrary to social norms and religious norms that apply in Indonesia. This group is divided into two, namely men who only have sex with men or MSMO (Men Have Sex with Men Only) and men who are not only related to men, but also related to women or MSMW (Men Sex with Men and Women). Sexual behavior in MSD tends to be free, changing partners, and not using condoms, increasing certain health risks, especially Sexually Transmitted Infections (STIs) (8).

Based on the data from RSUD Kendari in 2016-2023 showed that there is a significant increase in new cases of HIV/AIDS every year, especially in the MSM group. The average

proportion of HIV/AIDS cases in MSM in 2021 is 65.4%; in 2022 it will be 74.3%, and in 2023 it will be 77.1%. Meanwhile, the total number of MSM cases was 448 cases (63.31%). Of these cases, as many as 349 people are still undergoing ARV therapy, while as many as 99 people have died and referred out to other services (9)

An MSM who buys sex (receptive) will ask his or her partner to play the role of a man or act actively (insertive) during anal sex and more extremely, the insertive partner will do rimming (oral-anal) which will facilitate the transmission of STIs, worms and diarrhea through or to the mouth of the insertive partner, and fisting (inserting fingers and/or fists into the anus) which will cause wounds/inflammations/infections in the gastrointestinal tract/anus. This extreme action is then followed by anal sex with the use of condoms that are inconsistent for reasons of sexual satisfaction, which makes it easier to be infected with STIs and HIV/AIDS (10)

Several studies related to risky sexual behavior reported that the most dominant factor influencing adolescent sexual behavior is sexual drive (11). According to the other research, that a history of STIs and receptive and versatile sexual role behavior are found as risk factors for the occurrence of HIV seroconversion in MSM. HIV seroconversion in MSM was found to be riskier in MSM that behaved sexually receptively and was predominantly found in MSM at a young age (12). Homosexuals and bisexuals are more at risk of exposure to HIV compared to heterosexuals (13). Sexual techniques for homosexual groups at risk of HIV/AIDS are oral sex/rimming and anal sex with a frequency of more than 1 time a month without using a condom (14,15,16,17,18,19). Previous research reported that consistent and correct use of condoms during sexual activity can greatly reduce the risk of HIV transmission. It is important for MSMS to have access to and use condoms consistently. Lack of systematic use of condoms with male partners during sex is at high risk of HIV/AIDS among young people (20,21).

Several previous studies have also stated that MSM is not open enough to its condition so that there are still risky behaviors such as oral sex behavior, anal sex without condoms, or alternating oral-anal sex, engaging in commercial sex, finding free sex partners through the internet, and using illegal drugs that have the potential to transmit and/or contract HIV (8,22,23).

According to the results of the study, that the incidence of STIs (excluding HIV) was lower among those who used condoms consistently during anal and vaginal sex (OR = 0.03, 95% CI: 0.00–0.68) compared to those who inconsistently used condoms during anal and vaginal sex. The incidence rate of STIs is high among male sex workers in Mexico City (24). Factors that affect the susceptibility of MSM to HIV infection that have been carried out in previous studies are having unprotected sex with several sex partners, engaging in transactional/commercial sex, using illegal drugs and excessive alcohol consumption, finding free sex partners through the internet to have sexual intercourse (25).

The increase in the number of HIV/AIDS cases in the world tends to be caused by risky behaviors that are increasingly carried out by various groups of people in the world. Epidemiological risk factors for HIV infection include high-risk behaviors such as sexual intercourse with a partner without using a condom, intravenous narcotics users, especially when using needles together without adequate sterilization, unsafe sexual relations including multiparters, individual sex partners who are known to be infected with HIV and intimate sex contacts, health workers and laboratory workers who are exposed to HIV. In addition, a history of sexually transmitted infections and a history of receiving repeated blood transfusions without screening tests, a history of skin injuries, tattoos, piercings or circumcision with non-sterile devices are also risk factors for HIV infection (26). Therefore, this study aims to analyse the risk of HIV status and anal sex on HIV/AIDS transmission in the group of men who have sex with men (MSM) at Kendari City Hospital.

Materials and Method

The type of research used is quantitative research with a case control research design. This research was conducted at Kendari City Hospital from March to May 2024. The population in this study was 349 cases and the control population was 423 people in 2023. Case samples were obtained from a recap of respondent (MSM) data who had positive HIV status. The minimum sample size taken was 75 case subjects and 75 control subjects. This study uses a ratio of 1:1, so the ratio of case subjects to controls is 75:75. So that the total number of possible subjects in

this study is 150 people, with sample withdrawal using Random Sampling. The case sample criteria are male HIV sufferers who were infected with HIV through sexual transmission with men and are undergoing treatment at Kedanri City Hospital. The criteria for the Spouse's HIV Status variable are high risk if respondent did not know their partner's HIV status and the criteria for the Unsecured Anal Sex variable are high risk if respondent did not use a condom. Data collection was carried out primarily through observation and interviews using questionnaires and secondary through official sources such as the health office and other information from journals related to this study. In the data collection process, researchers collaborated with peer support groups/NGOs working in the field of HIV AIDS. Data analysis was carried out descriptively, epidemiology using odds ratio test. This research has received ethical approval from the Health Research Ethics Committee Universitas Muhammadiyah Yogyakarta with approval number No. 015/KEP/UMW/III/2024.

Results and Discussion

This section may be divided by subheadings. It should provide a concise and precise description of the experimental results, their interpretation as well as the experimental conclusions that can be drawn.

Results

Table 1. Frequency Distribution of Respondent Characteristic on Male Sex Men at Kendari City Hospital in 2024

Respondent Characteristic	Case		Control	
	n	%	n	%
Age of First Sexual Intercourse				
15-19	46	61,3	18	24,0
20-24	29	38,7	50	66,7
25-49	0	0,0	7	9,3
Age of First Confirmed HIV Positive				
15-19	14	18,7	9	12,0
20-24	34	45,3	31	41,3
25-49	27	36,0	35	46,7
Education				
Elementary School	1	1,3	0	0,0
Junior High School	5	6,7	3	4,0
Senior High School	62	82,7	58	77,3
College	7	9,3	14	18,7
Occupation				
Civil Servants	4	5,3	2	
Honorary	0	0,0	11	2,7
Self-Employed	13	17,3	14	14,7
Private Employee	22	29,3	24	18,7
Not Working	36	48,0	24	32,0
Total	**75**	**100,0**	**75**	**100,0**

Source: Primary Data, 2024

Based on the table 1, it shows that out of 150 respondents, the age of first sexual intercourse in the case group is the most, namely the 15-19 year age group with 46 respondents (61.3%), while in the control group the most is the 20-24 year age group with 50 respondents (66.7%). Based on the age of first confirmed HIV positive in the case group, the most is the 20-24 year age group with 34 respondents (45.3%), while in the control group the most is the 25-49 year age group with 62 respondents (46.7%). Based on the table above, it shows that out of 150 respondents, the most education level of respondents is high school with 120 respondents (80.0%) and the least is elementary school education with 1 respondent (0.7%). In the case group,

the most education level is high school with 62 respondents (82.7%), while in the control group the most is high school with 58 respondents (77.3%). Based on the respondents' occupation, the most respondents in the case group were unemployed, with 36 respondents (48.0%), while the most respondents in the control group were private employees and unemployed, with 24 respondents each (32.0%).

Table 2. Risk Factor Analysis of Spouses' HIV Status on the Incidence of HIV/AIDS in Male Sex Men at Kendari City Hospital in 2024

Spouse's HIV Status	Incidence of HIV/AIDS				Total		Statistical Analysis
	Case		Control				
	n	%	n	%	n	%	
High Risk	63	85,1	11	14,9	74	100,0	OR=30,545
Low Risk	12	15,8	64	84,2	76	100,0	LL=12,556
Total	**75**	**50,0**	**75**	**50,0**	**150**	**100,0**	UL=74,309

Source: Primary Data, 2024

Table 2 shows that of the 74 respondents with the criteria of HIV status of high-risk couples, there are 63 respondents (85.1%) who are HIV positive (cases) and 11 respondents (14.9%) who are HIV negative (control). Meanwhile, of the 76 respondents with the criteria of HIV status as a low-risk couple, there were 64 respondents (84.2%) who were HIV negative (control) and 12 respondents (15.8%) who were HIV positive (cases). The results of the risk factor analysis obtained an Odds Ratio (OR) value of 30.545 (OR > 1), meaning that respondents who have sex partners with HIV-positive status are 30.545 times more likely to suffer from HIV/AIDS compared to respondents who have partners with HIV-negative status. Confidence Interval (CI) at a confidence level of 95% with a lower limit of 12,556 and an upper limit of 74,309. The OR value obtained shows that the HIV status of the couple is a risk factor with the Lower Limit (LL) and Upper Limit (UL) values not including the number 1 which means statistically significant. Based on the results of the analysis, the HIV status of the couple is a behavioral factor for the risk of HIV/AIDS in the group of Men Sex Men at the Kendari City Hospital.

Table 3. Risk Factor Analysis of Unsecured Anal Sex on the Incidence of HIV/AIDS in Male Sex Groups at Kendari City Hospital in 2024

Unsecured Anal Sex	Incidence of HIV/AIDS				Total		Statistical Analysis
	Case		Control				
	n	%	n	%	n	%	
High Risk	47	64,4	26	35,6	73	100,0	OR=3,163
Low Risk	28	30,4	49	63,6	77	100,0	L=1,623
Total	**75**	**50,0**	**75**	**50,0**	**150**	**100,0**	U=6,164

Source: Primary Data, 2024

Table 3 shows that of the 73 respondents with high-risk anal sex criteria, there are 47 respondents (64.4%) who are HIV positive (cases) and 26 respondents (35.6%) who are HIV negative (control). Meanwhile, of the 77 respondents with low-risk anal sex criteria, there were 49 respondents (63.6%) who were HIV negative (control) and 28 respondents (30.4%) who were HIV positive (cases). The results of the risk factor analysis obtained an Odds Ratio (OR) value of 3.163 (OR > 1), meaning that respondents who have or sometimes have unprotected anal sex in sexual intercourse are 3.163 times more likely to suffer from HIV/AIDS compared to respondents who have never had unprotected anal sex. Confidence Interval (CI) at a confidence level of 95% with a lower limit of 1,623 and an upper limit of 6,164. The OR value obtained shows that anal sex without safety is a risk factor with Lower Limit (LL) and Upper Limit (UL) values not including the number 1 which means it is statistically significant. Based on the results of the analysis, anal sex without safety is a behavioral risk factor for HIV/AIDS in the group of Men Sex Men at Kendari City Hospital.

Discussion

1. Spouse's HIV Status

Based on bivariate analysis, it was shown that as many as 85.1% of respondents did not know for sure the HIV status of their sex partners but were diagnosed HIV positive. This can be explained by the fact that an MSM person who does not know at all the HIV status of his partner is very at risk of HIV transmission. Moreover, if the partner turns out to be HIV positive and does not take ARV treatment therapy, it is very likely to be infected with HIV. Unawareness of HIV status in high-risk partners can increase HIV transmission. Studies have shown that MSM are at higher risk of HIV transmission than other groups, and that ignorance of a partner's HIV status is an important factor exacerbating this risk (27).

The results of the analysis showed that as many as 14.9% of respondents did not know for sure the HIV status of their sex partners but were diagnosed as HIV negative. It can be explained that in couples where one of the individuals has HIV, the risk of transmission in intercourse depends on many factors, including immune status, adherence to ARV treatment, and the type of sexual activity performed. However, the risk of HIV transmission in serodiscordant relationships is still possible (28). In addition, couples who do not know their HIV status are at the highest risk because they may not take the necessary precautions to protect themselves and their partners. Regular HIV testing and correct and consistent use of condoms can reduce the risk of transmission in these relationships (29).

The results of the analysis showed that as many as 15.8% of respondents knew for sure the HIV status of their sex partners but were diagnosed HIV positive. This can be explained that even though a person knows the HIV status of his partner, the sexual behavior he or she commits is quite high and the risk makes it very risky to be infected with HIV. Some cases occur that a person knows for sure the HIV status of his partner but does not know whether his partner is diligent or regular in consuming ARVs. When this happens, the amount of virus in the partner's body is quite large and will be at risk of transmitting HIV to the sex partner.

The results of the analysis showed that the HIV status of the partner was a behavioral factor for the risk of HIV/AIDS in the group of Men Sex Men (MSM) at the Kendari City Hospital with an Odds Ratio (OR) value of 30.545 (OR > 1), meaning that respondents who had a sex partner with HIV-positive status were 30.545 times more likely to suffer from HIV/AIDS compared to respondents who had a partner with HIV-negative status. Confidence Interval (CI) at a confidence level of 95% with a lower limit of 12,556, and an upper limit of 74,309.

Focusing on the likelihood of transmission over a 1-year or long-term period will give couples a better understanding of the risk compared to what the data for a single sexual act depicts. The likelihood of long-term transmission to negative pairs in serodiscordant pairs can be high, although this can be significantly reduced by the use of strategic prevention methods, especially those that include domestic assistant (30).

In line with research conducted in Pemengkasan Regency, which states that the prevention of HIV transmission in serodiscordant couples with consistent condom use can help ODHA have safe sexual intercourse in (31). Use of condoms during sex is one of the first steps in HIV/AIDS prevention, usually during sexual intercourse the serodiscordant couple provides condoms and reminds their partners to use condoms (32).

2. Risks of Anal Sex

Anal sex is at great risk of HIV infection. The anus is not designed for sex, but rather is a drain for human feces. In addition, the anus is not like the female reproductive organs or the vagina which can lubricate (lubricate) when feeling aroused. Having anal sex is at risk of wounds or abrasions on the anal tissue because the anal structure is tighter than the vagina, so it will be easy for the HIV virus to enter the blood (33).

Based on bivariate analysis, it was shown that as many as 64.4% of respondents who had anal sex were at high risk and were diagnosed with HIV positive. This can be explained by a person who engages in anal sex has a higher risk of HIV transmission compared to some other types of sexual intercourse. In anal sexual activity, the tissue inside the rectum is more susceptible to minor cuts or tears during anal sex. This increases the risk of direct exposure to HIV-infected

body fluids, such as sperm or rectal mucus that contain the HIV virus. During anal sex, there is a possibility of exposure to a larger amount of body fluids (such as sperm or rectal mucus) that contain the HIV virus, compared to vaginal sex. Anal sex activities can cause microtrauma to the rectal tissue, which can allow the HIV virus to enter the bloodstream more easily. Sometimes, anal sex can cause minor bleeding or wounds, which allows direct contact between HIV-infected blood and body fluids. Some sexual practices associated with anal sex, such as the use of non-sterile sex toys or not using adequate lubricants, can also increase the risk of HIV transmission (34).

This can be explained by a person who does not use a condom during sexual intercourse can become infected with HIV because the HIV virus can be transmitted through direct contact with infected body fluids, such as blood, sperm, vaginal fluids, and anal fluids. In unprotected sex, there is a risk of direct contact between HIV-infected body fluids and mucous membranes or open wounds in their sexual partners. This allows the HIV virus to enter the bloodstream and cause infection. Some conditions, such as open wounds, other sexually transmitted infections, or inflammation of the genital area, can increase the risk of HIV transmission even without condom use. The risk of HIV transmission is also related to the level of viral in infected body fluids. The higher the viral rate, the greater the risk of HIV transmission, especially if there is contact with wounds or mucous membranes. Some types of sexual intercourse have a higher risk of HIV transmission than others. For example, anal sex has a higher risk than vaginal sex because the anus is more susceptible to tears and cuts (35).

The results of the analysis showed that as many as 35.6% of respondents who had high-risk anal sex were diagnosed with HIV negative. This can be explained that if condoms are used correctly and consistently during anal sex, the risk of HIV transmission can be significant. Condoms are one of the most effective protective tools in preventing the transmission of HIV and other sexually transmitted diseases. The use of water-based lubricants during anal sex can reduce friction and the risk of wounds or tears in the rectal tissue, which can minimize the risk of exposure to the HIV virus. If their sexual partners are not infected with HIV, the risk of HIV transmission will be much lower. It is important to know the HIV status of sexual partners and communicate openly about safe sexual practices. A person who engages in anal sex but is not infected with HIV may undergo regular HIV testing to check their HIV status (36).

The results of the analysis showed that as many as 63.6% of respondents who did not have anal sex were at high risk but were diagnosed negative for HIV. This can be explained because the use of condoms during vaginal or oral sex can significantly reduce the risk of HIV transmission. Condoms are a very effective method of protection in preventing the transmission of HIV virus and other sexually transmitted diseases. If the sexual partner is not infected with HIV, the risk of HIV transmission becomes much lower. It is important to know the HIV status of sexual partners and communicate openly about safe sexual practices. A person who does not have anal sex but is not infected with HIV may undergo regular HIV testing to check their HIV status. By knowing their HIV status regularly, they can take the necessary steps to protect themselves and their partners from HIV transmission. Factors such as good health conditions, good personal hygiene, and avoidance of risky behaviors such as drug use or syringe sharing can help a person stay HIV-free even if they do not have anal sex (37).

The results of the analysis showed that as many as 30.4% of respondents who did not engage in anal sex were at high risk but were diagnosed positive for HIV. This can be explained because a person who does not have anal sex but is infected with HIV can occur because the HIV virus can be transmitted through contact with infected body fluids, such as blood, sperm, vaginal fluids, and anal fluids. Although anal sex has a higher risk of HIV transmission compared to some other types of sexual intercourse, HIV transmission can still occur through other sexual practices. Exposure to HIV-infected bodily fluids, such as blood, sperm, vaginal fluids, or anal fluids, can occur in situations other than anal sex, such as through open wounds or small lacerations during various types of sexual activity such as oral sex.

The results of the analysis showed that unprotected anal sex was a behavioral risk factor for HIV/AIDS in the group of Men Sex Men (MSM) at Kendari City Hospital with an Odds Ratio (OR) of 3.163 (OR > 1), meaning that respondents who had or occasionally had anal sex in sexual intercourse were 3.163 times more likely to suffer from HIV/AIDS compared to respondents who

had never had anal sex. Confidence Interval (CI) at a confidence level of 95%, with a lower limit of 1.623 and an upper limit of 6.164.

In line with that previous research revealed that many respondents did anal sex (53.8%), either doing anal as a perpetrator or receiver, and doing anal by removing sperm in the anus. Being a perpetrator or recipient during anal sex is associated with a high risk of HIV/AIDS infection (38).

Research from various agencies suggests that actors in anal sex (insertive and receptive) have different effects on HIV transmission. The Centers for Disease Control and Prevention (2020) reported that receptive anal intercourse (RAI) has a higher risk than insertive anal intercourse (IAI). Therefore, RAI is 13 times more at risk of developing HIV than IAI. Anal sex is the riskiest sexual behavior in LSD. Failure in condom use is also higher in anal sex compared to vaginal sex. Anal sex is at great risk of HIV infection. The anus is not like the female reproductive organ (vagina) which can lubricate (lubricate) when feeling aroused. Having anal sex is at risk of wounds or abrasions on the anal tissue because the anal structure is tighter than the vagina, so it will be easy for the HIV virus to enter the blood (17)

In the MSM community, the preferences of the difference in anal relationships are determined by three labels, including: insertive which means MSM prefers the insertion position, reserative which means MSM prefers the receiver position, and versatile which means MSM is willing to perform one of the positions. The concept of sexual roles in MSM can be a determinant in HIV prevention efforts in MSM. Choice in anal sex roles is an important component of sexual identity in LS, and is almost equated with sexual position, which is of course very contrary to culture. In a study conducted by Cunha et al., in Brazil and Canada, MSM who had anal sex without a condom receptively was shown to have a higher risk of HIV transmission than MSI who had versatile sex. The study also showed that MSM who had unprotected anal sex with a seroconversion partner was a major risk factor for getting HIV positive with an increased risk of unprotected sex (39).

In some types of studies, it has been suggested that versatility plays the largest role in HIV transmission because men who play a versatile role are at high risk of infection when playing a receptive role in unsafe anal sex, and are at high risk of infection when playing an insertive role in unsafe anal sex. Based on the results of a survey of 9170 MSM who filled in data on the American Men's Internet Survey. Survey data from USAID reported that 46.3% of MSM in Maseru and 59.7% in Maputsoe, receptive anal sex is riskier compared to insertive anal sex. Research by Tieu et al., published that the role of insertives is a lower role for the risk of HIV infection compared to both receptive and versatile. Meanwhile, versatility is the riskiest sexual role in the transmission of HIV infection between MSM couples (39).

Conclusion

The conclusion in this study is that the HIV status of the couple and anal sex are behavioral factors for the risk of HIV/AIDS in the group of Men Sex Men at Kendari City Hospital. It is expected that the Kendari City Health Office will increase socialization activities about the use of condoms and examination for sexually transmitted infections as an effort to prevent HIV/AIDS, especially to the MSM group. This can be done through cross-sectoral cooperation with other agencies as well as the involvement of NGOs and moving with the community. In addition, it is necessary to educate MSM to have safe and healthy sexual relations so that it can minimize the impact of HIV/AIDS virus infection among MSIs, help facilitate the provision of condoms and lubricants for MSIs, provide assistance for MSIs so that they can reduce their activities in having risky sexual intercourse.

Declaration (11pt)

Acknowledgments: The researcher expressed his gratitude to the Director of the Kendari City Regional General Hospital for giving permission to conduct the research and also to the partners who have assisted in the data collection process, as well as to all respondents who have participated in this study.

Conflicts of Interest: The authors declare no conflict of interest

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