Condom Use Practices for HIV Prevention Among Men Who Have Sex with Men in Banjarnegara

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ABSTRACT

Background: *Men who have sex with men (MSM) are a key population at high risk of HIV AIDS transmission, largely due to inconsistent condom use. This study analyzes determinants of condom use behavior among MSM in Banjarnegara Regency using Lawrence Green's theoretical framework*
Method: *A cross-sectional study was conducted with 115 respondents. Respondents in this study were MSM residing in Banjarnegara. Respondents were selected based on inclusion and exclusion criteria. The inclusion criteria were MSM who had sexual intercourse in the last month, while the exclusion criteria were MSM who were Field Officers (PL) and MSM who were HIV AIDS positive. The sampling technique used in this study was purposive sampling. Data collection was conducted using a questionnaire method. Data were collected via questionnaires and analyzed using Chi-square tests and logistic regression.*
Result*: Condom use remains low, with 47.8% of respondents not using condoms consistently. Bivariate analysis showed a significant association with marital status (p=0.007; OR=6.62), occupation (p=0.001; OR=2.3), attitude (p=0.001; OR=3.51), community support (p=0.000; OR=4.62), and partner support (p=0.003; OR=3.77 Multivariate analysis identified attitude as the dominant factor (p=0.021; OR=2.856). These findings conclude that the formation of positive attitudes plays a central role in increasing consistent condom use among MSM. Therefore, it is recommended that HIV prevention programs focus on strengthening attitudes, increasing community and partner support, and optimizing safe sexual behavior education among the MSM population.*

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INTRODUCTION

Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) continue to pose a major global health challenge. In 2024, WHO reported 40.8 million cases and 630,000 deaths, underscoring its persistence as a global epidemic.(1) In Indonesia, the epidemic reflects a similar trend, with cumulative HIV cases reaching 598,271 and AIDS cases totaling 168,263 as of June 2024. Central Java Province ranks fourth nationally, with 57,510 cases, the majority occurring among men of productive age.(2,3)

MSM (men who have sex with men) represent a key population at high risk for HIV AIDS transmission. Unprotected anal intercourse carries greater biological vulnerability due to the potential for rectal injury and the high concentration of CD4 cells, which serve as primary targets for HIV infection.(4) UNAIDS reports that MSM are 26 times more likely to contract HIV compared to heterosexual men.(5) The rectum and anus are not anatomically designed for sexual intercourse; therefore, anal sexual activity can cause injury to the rectal tissue and mucosal lining, creating entry points that facilitate HIV transmission.(6) In addition, the anal and rectal mucosa contain a high concentration of CD4 cells, which serve as primary target cells for HIV infection, further increasing biological vulnerability to HIV acquisition.(7,8) When used correctly and consistently, male condoms are estimated to reduce the risk of HIV transmission during anal intercourse by approximately 73–99.6%.(9)

The rise in HIV AIDS cases is evident in Banjarnegara District. Between 2022 and 2024, MSM cases increased by 78%, with MSM now accounting for 40% of new infections. Outreach by the Health Department and Wonosobo Youth Center (WYC) through dating apps, focus groups, mobile services, and door-to-door approaches has expanded case detection, but safe sexual practices, particularly condom use, have not improved.(10) This highlights a gap between prevention efforts and actual behavior in the field.

Various studies show that condom use among MSM is influenced by predisposing factors such as knowledge and attitudes, reinforcing factors such as partner and community support, and enabling factors such as access to information and condom availability. Individuals who understand HIV transmission risks, hold positive attitudes toward condom use, and tend to practice

safe sex more consistently. Socioeconomic factors, including income and employment, as well as health history such as STIs and VCT, also play important roles in shaping condom use behavior.(6,11,12)

To date, no research has specifically examined factors influencing condom use among MSM in Banjarnegara District. With rising HIV AIDS cases and suboptimal prevention behaviors in this group, this study therefore analyzes the determinants of condom use among MSM in Banjarnegara using Lawrence Green's theoretical framework, aiming to contribute to HIV AIDS prevention efforts at both regional and national levels.

METHOD

This study employed a quantitative, cross-sectional design to examine factors influencing condom use among men MSM in Banjarnegara District, with 115 MSM participated. Conducted from July to December 2025, the study population comprised MSM identified through outreach programs by the Health Office and the Wonosobo Youth Center (WYC) NGO. Purposive sampling was applied based on inclusion and exclusion criteria: MSM who had engaged in sexual activity within the past month were included, while field officers and HIV-positive

MSM were excluded. To minimize response bias in the Google Form-based questionnaire, the researchers first clearly established inclusion and exclusion criteria for respondents. The recruitment process involved enumerators, namely WYC community field officers, who introduced the researchers to potential respondents. Next, researchers contacted respondents directly to complete the questionnaire. Enumerators were used because of the high level of trust that MSM has in community field officers, which was expected to increase respondent honesty and minimize information bias.

The dependent variable is condom use behavior. Independent variables include respondent characteristics (age, education, marital status, income, occupation, history of STIs, history of VCT), predisposing factors (knowledge, attitudes), enabling factors (access to information, ease of access to condoms), and reinforcing factors (community behavior, partner behavior). Data were collected using a Google Form questionnaire that had been tested beforehand.

Respondent characteristics were measured using one question for each variable according to the operational definition of the study. Condom use behavior was measured using three questions regarding frequency of condom use, consistency in the past month, and use in risky situations, using a four-point Likert scale: always (3), often (2), sometimes (1), never (0). Total scores were categorized as good or poor based on the median (cut-off ≥7).

Knowledge was measured through 13 questions covering the definition of HIV AIDS, modes of transmission, risk behaviors, and the role and effectiveness of condoms. Answers were scored 1 for correct and 0 for incorrect, including reversal for unfavorable items. Knowledge was categorized as good if the score was ≥11. Attitudes were measured through 7 statements regarding the benefits of condoms, comfort of use, risk perception, and acceptance of condom use, using a Likert scale of strongly agree (3), agree (2), disagree (1), strongly disagree (0). The category of good attitude was determined based on the median (≥20).

Access to information consists of five questions regarding sources and frequency of exposure to condom-related information, whether from the media, health workers, or the community. Scoring uses yes (1) and no (0), with the high category determined based on the median (≥5). Ease of access to condoms includes 6 questions related to condom availability, ease of obtaining condoms, price, access to locations, and comfort when purchasing, including two unfavorable items with reversed scores. Answers use yes (1) and no (0); the easy access category is determined based on the median (≥4).

Community behavior and partner behavior as reinforcing factors, each consisting of three statements regarding forms of support in condom use. The support provided includes providing information on safe sexual behavior, motivation to use condoms, and consistency in condom use. Both use a four-point Likert scale: strongly supportive (3), supportive (2), less supportive (1), and not supportive (0). Categories are determined based on the median (supported ≥6).

Data collection was conducted by WYC field officers and health workers through mobile approaches, focus group discussions, and door-to-door visits. Data were analyzed using univariate analysis, bivariate analysis with the Chi-square test, and multivariate analysis using logistic regression. Variables with a p-value < 0.25 in bivariate analysis were included in the regression model. The study obtained ethical approval from the relevant authorities. This study has obtained ethical approval from the Health Research Ethics Committee of the Faculty of Public Health, Diponegoro University, with letter number 269/EA/KEPK-FKM/2025.

RESULT AND DISCUSSION

Table 1 regarding condom use behavior, the results show that not all MSM are in the same sexual position (bottom) during intercourse. Sexual positions, whether top or bottom, are determined by mutual agreement between the two individuals. In the context of

HIV AIDS prevention, condom use is particularly important when individuals are in the top position, as this role has a greater potential for HIV transmission if not accompanied by safe sexual practices.

Table 1. Distribution of respondents' characteristics

Variable	Condom Use Behavior				OR	P-value
	Good		Poor			
	f	%	f	%		
Age						
Teenager (15-24 years)	18	54.5	15	45.5	1.45	0.360
Adult (>24 years)	37	45.1	45	54.9		
Level of Education						
Lower education	38	46.9	43	53.1	0.88	0.762
Higher education	17	50	17	28.3		
Marital Status						
Not married	53	52.5	48	47.5	6.62	0.007
Married	2	14.3	12	85.7		
Income						
Lower Income (< IDR 2,170,475)	29	53.7	25	46.3	1.56	0.235
Higher Income (≥ IDR 2,170,475)	26	42.6	35	57.4		
Employment						
Unemployed	9	100	0	0	2.30	0.001*
Employed	46	43.4	60	56.5		
History of STIs						
Never	43	46.2	50	53.8	0.71	0.483
Ever	12	54.5	10	45.5		
VCT history						
Ever had VCT	11	44	14	56	0.82	0.665
Never had VCT	44	48.9	46	51.1		
Knowledge						
Poor	16	55.2	13	44.8	1.48	0.360
Good	39	45.3	47	54.7		
Attitude						
Poor	32	65.3	17	34.7	3.51	0.001
Good	23	34.8	43	65.2		
Access to information						
Low access	29	50.9	28	49.1	1.27	0.516
High access	26	44.8	32	55.2		
Ease of access to condoms						
Difficult to access	26	54.2	22	45.8	1.54	0.249
Easy to access	29	43.3	38	56.7		
Community behavior						
Less supported	28	71.8	11	28.2	4.62	0.000
Supported	27	35.5	49	64.5		
Partner Behavior						
Less supported	22	71	9	29	3.77	0.003
Supported	23	39.3	51	60.7		

The employment variable showed a significant relationship with condom use behavior, p-value = 0.001 (<0.05), where respondents who were employed had a higher proportion of condom use behavior than those who were unemployed. However, cross-tabulation showed zero values in the unemployed category, resulting in complete separation that could potentially produce unstable and invalid coefficient and odds ratio estimates in logistic regression. Therefore, despite meeting the candidate criteria (p-value < 0.250), the employment variable was

not included in the multivariate logistic regression analysis to maintain model stability and estimation validity.

Table 2. Frequency distribution of respondents answers based on knowledge, attitude, and access to information, easy access to condoms, community behavior, and partner behavior

Variable	Answer Categories							
Knowledge	**Yes**				**No**			
	f		**%**		**f**		**%**	
Using condoms during sexual intercourse is one way to prevent HIV AIDS transmission.	111		96.5		4		3.5	
Condoms must be worn from the start of erection for maximum protection against HIV	106		92.2		9		7.8	
Pre-ejaculate fluid also contains the HIV AIDS virus	94		81.7		21		18.3	
Having sex with multiple partners (more than one) can increase the transmission of HIV AIDS	112		97.4		3		2.6	
Homosexsual is considered high-risk behavior for transmitting HIV AIDS	110		95.7		5		4.3	
Attitude	**Strongly Agree**		**Agree**		**Disagree**		**Strongly Disagree**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
I need to use a condom every time I have sex to prevent HIV AIDS transmission, even if my partner looks healthy.	92	80	19	16.5	2	1.7	2	1.7
If the VCT test result is negative, I will continue to use condoms during sexual intercourse	89	77.4	20	17.4	5	4.3	1	0.9
I will continue to use condoms even if my same- sex partner refuses or feels uncomfortable	77	67	29	25.2	8	7	1	0.9
Access to Information	**Yes**				**No**			
	f		**%**		**f**		**%**	
I ever deliberately searched for information on the benefits of condoms in preventing HIV AIDS on the internet	97		84.3		18		15.7	
I ever received information about the use of condoms in preventing HIV AIDS transmission from friends, community members, health workers, or partners	111		96.5		4		3.5	
I ever taken the initiative to invite friends or partners to discuss the importance of using condoms	89		77.4		26		22.6	
Easy Access to Condoms	**Yes**				**No**			
	f		**%**		**f**		**%**	
Is it easy for me to find a place to buy condoms when i need them	89		77.4		26		22.6	
I have received free condoms from health workers or the MSM community	73		63.5		42		36.5	
I am able to provide a supply of condoms	57		49.6		58		50.4	
Community Behavior	**Always**		**Often**		**Sometimes**		**Never**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Your MSM community friends motivate you to use condoms during sex to prevent HIV AIDS	47	40,9	35	30.4	24	20.9	9	7.8
Your MSM community friends provide information related to condom use in preventing HIV AIDS transmission	44	38,3	29	25.2	35	30.4	7	6.1
Your MSM community friends provide information related to condom use in preventing HIV AIDS transmission	54	47	32	27.8	22	19.1	7	6.1
Partner Behavior	**Always**		**Often**		**Sometimes**		**Never**	
	f	**%**	**f**	**%**	**f**	**%**	**f**	**%**
Your partner reminds you to always use condoms during sexual intercourse to prevent HIV AIDS transmission.	54	47	35	30.4	15	13	11	9.6
Your partner provides information related to condom use in preventing HIV AIDS transmission	44	38.3	38	33	20	17.4	13	11.3

Your partner motivates you to use condoms during Sexual intercourse to prevent HIV AIDS transmission	47	40.9	36	31.3	18	15.7	14	12.2

Table 3. Bivariate selection variables used in the multivariate analysis model

Variable	B	S.E	Wald	df	Sig.	Exp (B)	95% C.I for EXP (B)	
							Lower	Upper
Marital Status	1.614	0.847	3.636	1	0.057	5.025	0.956	26.413
Income	0.340	0.440	0.595	1	0.440	1.405	0.592	3.330
Attitude	1.047	0.440	5.656	1	0.017	2.850	1.202	6.756
Ease of Access Condom	0.236	0.471	0.252	1	0.616	1.266	0.503	3.186
Community Behavior	0.954	0.599	2.530	1	0.112	2.595	0.801	8.403
Partner Behavior	0.323	0.625	0.266	1	0.606	1.381	0.406	4.701

Based on Table 3 above, not all independent variables showed a significant effect on condom use behavior. Attitude emerged as the most dominant factor, with B = 1.047; S.E. = 0.440; Wald = 5.656; p = 0.071, and Exp(B) = 2.850 (95% CI: 1.202–6.756). Respondents with a positive attitude were approximately 2.8 times more likely to use condoms consistently compared to those with a negative attitude, after controlling for other variables. This result aligns with previous studies, which found clear differences between individuals who never used condoms and those who always did. Strengthening positive attitudes has proven more effective than simply increasing knowledge. When attitudinal barriers are minimized, behavioral change becomes more achievable, particularly in encouraging consistent condom use as an HIV AIDS prevention strategy.(36) Each increase in positive attitudes toward condoms significantly enhances the likelihood of practicing safe condom use.(37)

The relationship between age and condom use behavior

According to Lawrence Green's behavioral theory (the PRECEDE–PROCEED model), age is classified as a predisposing factor that influences an individual's readiness to adopt health-related behaviors. As a demographic characteristic, age affects how individuals perceive health information, respond to health promotion messages, and ultimately make decisions regarding their health. The chi-square test results show that there is no significant relationship between age and condom use behavior, with a p-value = 0.360 (>0.05). This finding is consistent with Arisa's (2023) study, which also reported that age is not significantly related to risky sexual behavior among teenagers.(13) In this study, most respondents in the adult age category reported consistent condom use (54.9%). A similar pattern was observed in another study, where men aged 20–24 showed higher condom use (54.2%) compared to those aged 15–19 (45.8%). This is possible with greater maturity and maturity of thought, as men do not want to impregnate someone at a young age due to various considerations.(14) In this study, inconsistent condom use is defined as condom use that is not practiced during every sexual encounter, particularly in high-risk situations, indicating that HIV prevention practices have not been implemented consistently or sustainably.

The relationship between education level and condom use behavior

Education level was not significantly associated with condom use behavior, p-value = 0.762 (> 0.05). This finding aligns with research on MSM in China, which reported no significant relationship between junior high school education and consistent condom use, particularly in risky sexual relations with non-steady partners. In this study, junior high school is classified as low education. Thus, the results emphasize that progressing from elementary to junior high school alone is insufficient to enhance health literacy and decision-making skills needed to promote safer sexual practices, including consistent condom use.(15) Unlike other findings, studies on MSM in Latin America show that younger age and lower education levels are significantly associated with increased vulnerability to HIV p-value = 0.001 (<0.05). This condition is linked to limited sexual experience and access to information about safe sexual behavior, which contributes to suboptimal prevention behaviors among this MSM group. (16,17)

The relationship between marital status and condom use behavior

Marital status and condom use behavior showed a significant relationship, p-value = 0.007 (< 0.05). This finding aligns with research in Eastern China, which reported a similar difference p-value = 0.000 (<0.05), indicating that married MSM may act as a bridge for HIV AIDS transmission to female partners, particularly when

condom use is inconsistent.(18) In contrast, unmarried individuals tend to have greater awareness of transmission risks due to having multiple sexual partners, especially if they are bisexual, so they pay more attention to preventive measures such as condom use. These results contradict other studies showing that married respondents tend to use condoms consistently as a means of protecting their own health and that of their partners, given that unprotected sex increases the risk of sexually transmitted infections. (19) The results of this study conclude that marital status affects condom use behavior. Unmarried individuals are more aware of the risk of HIV AIDS transmission and therefore pay attention to condom use, while married individuals often consider relationships within marriage to be safe and therefore tend to neglect condom use. However, if a person is bisexual, they can easily transmit the virus to their female partner.

The relationship between income and condom use behavior

In general, income influences health behaviors and the ability to obtain disease prevention resources.(20) This study supports that view, showing that respondents with higher incomes demonstrated more consistent condom use (57.4%) compared to those with lower incomes, although the chi-square test results were not statistically significant, p-value = 0.235 (> 0.05). In other similar studies on MSM groups who engage in HIV AIDS risk behaviors, there was no significant relationship, p-value = 1.00 (> 0.05) between income and HIV transmission among MSM who have sex with other MSM in Ningbo, China.(17) Further analysis of MSM in Banjarnegara shows that some respondents consider free condoms provided by the government to be less comfortable than condoms purchased at supermarkets when having sex with same-sex partners. This preference for quality and comfort encourages MSM to purchase condoms independently. Income level plays an important role in this decision, as individuals with higher incomes have greater economic capacity to purchase condoms regularly and access health services and information related to HIV AIDS prevention. Conversely, MSM with low incomes are at greater risk of limited access, which can affect the consistency of condom use.

The relationship between employment status and condom use behavior

The analysis yielded a p-value = 0.000 (<0.05), indicating a significant relationship between employment status and condom use behavior. This finding is consistent with research in Botswana, which showed that respondents employed in the past year used condoms more frequently than those who were unemployed. Employment, as an individual factor, supports financial independence and enhances the ability to make decisions regarding condom purchase and use.(21) In a study conducted in Banjarnegara, 92.2% of respondents who were employed showed a consistent tendency to use condoms compared to respondents who were unemployed. Economic independence through employment allows individuals to have greater control over sexual decision-making, including condom use. However, these findings differ from other studies that report no significant relationship between employment status and consistent condom use, p-value = 0.610 (<0.05).(22)

The relationship between STI history and condom use behavior

There was no significant association between STI history and condom use behavior, p-value = 0.0483 (> 0.05). This finding is consistent with other studies reporting no such relationship. The lack of significance may be influenced by the limited sample size and study duration, which may not fully capture conditions in the at-risk population. Moreover, experiencing STIs does not necessarily increase awareness or alter sexual behavior, and inaccuracies in self-reported STI history could affect the results. Overall, these findings suggest that condom use behavior is shaped by factors beyond STI history alone.(23) However, other similar studies show a significant association between condom use and STI incidence, p-value = 0.029 (<0.05), where not using condoms is associated with a higher proportion of STIs, confirming the role of condoms in reducing the risk of STIs among MSM.(24)

The relationship between VCT history and condom use behavior

The results of this study show that a history of VCT was not significantly associated with HIV AIDS risk behaviors, particularly condom use, p-value = 0.665 (> 0.05). Although participation in VCT was relatively high, it did not directly influence consistent condom use among respondents. Bivariate analysis results show that the tendency to use condoms when having sex is higher (56%) among MSM who have undergone VCT. In contrast, other studies on MSM engaging in HIV AIDS risk behaviors reported a significant relationship, p-value = 0.01 (< 0.05) between individuals taking their first HIV test and engaging in insertive anal sex with multiple partners.(25) with more sexual partners tend to have a higher awareness of VCT, in line with research in China showing that individuals with more than two sexual partners are more likely to undergo VCT because they are aware of the higher risk of transmission.(26) When MSM undergo VCT, they will receive counseling before and after the test. This process not only focuses on HIV testing, but also increases MSM's understanding and knowledge of HIV

AIDS, including how it is transmitted, prevention, and the importance of safe sexual behavior. The majority of respondents revealed that positive VCT results encouraged them to use condoms more consistently to protect themselves from HIV AIDS.

The relationship between knowledge and condom use behavior

As a predisposing factor, knowledge plays an essential role in shaping individual readiness to adopt preventive health behaviors, including consistent condom use. The knowledge variables in this study included respondents' understanding of the definition and transmission of HIV AIDS, risky sexual behavior, the benefits of condom use, and the correct way to use condoms. The level of knowledge was measured using a questionnaire to assess the extent of respondents' understanding of the risks they faced as part of a high-risk group. Although most respondents demonstrated a good level of knowledge (54.7%), chi-square test results revealed no significant relationship between knowledge and condom use behavior, p-value = 0.360 (> 0.05). This finding is consistent with other studies, indicating that the absence of such a relationship does not diminish the importance of HIV-related knowledge. Instead, it highlights the need for more specific and contextual information for MSM. Targeted measurement of safe sexual practices, condom use according to sexual roles, and the distinct transmission risks in same-sex male relationships is essential to more accurately capture the influence of knowledge on HIV prevention behavior.(22)

The relationship between attitudes and condom use behavior

According to Lawrence Green's Theory, there are three main components that influence health behavior, namely predisposing factors, enabling factors, and reinforcing factors. Attitudes are included in the predisposing factors that play an important role in encouraging a person to behave in a certain way. In the context of HIV AIDS prevention, increasing positive attitudes and awareness of risks is an important strategy, especially in health promotion, particularly among at-risk groups.(27) The chi-square test results indicate a significant relationship between attitudes and condom use behavior, p-value = 0.001 (< 0.05). This finding aligns with a study in South Africa, which showed that positive attitudes toward condoms are linked to greater consistency in their use. The more favorable a person's perception of condoms, the more likely they are to engage in safe sexual practices. Fear of HIV AIDS infection also plays a key role in shaping these positive attitudes. Furthermore, limited health interventions, such as testing and access to HIV AIDS information can act as predictors that strengthen positive attitudes toward consistent condom use.(28) However, this contrasts with other studies that show that positive attitudes are not always reflected in behavioral practices. Although respondents had positive attitudes toward condom use, this was not always followed by consistent practices, as they were still influenced by various factors beyond individual attitudes.(29)

The relationship between access to information and condom use behavior

As an enabling factor, access to information facilitates individuals' ability to adopt and maintain preventive health behaviors by providing resources, guidance, and supportive environments. Access to information in this study describes the extent to which MSM acquire knowledge about the importance of condom use, either through independent research or from health services, the media, and the community. This information plays a role in shaping understanding of HIV risk and encouraging consistent condom use. The analysis indicates no significant relationship between access to HIV AIDS information and condom use behavior p-value = 0.516 (> 0.05). Nonetheless, respondents with greater access to information were more likely to use condoms consistently (55.2%). This suggests that adequate exposure to information may still contribute to HIV prevention among MSM. Consistent with other studies, only about 32% of respondents reported condom use, and few had ever recommended condoms to others. Overall, these findings reinforce the hypothesis that information alone is insufficient to increase condom use.(30) Communities and peers play an important role in disseminating information about HIV AIDS prevention. Peer-based approaches have been shown to increase condom use, as MSM tend to be more open and feel a sense of belonging within their communities. This shows that community support and activities are effective as sources of information, motivation, and promotion of HIV prevention behaviors. (31)

The relationship between condom accessibility and condom use behavior

Within the PRECEDE–PROCEED framework, ease of access is considered an enabling factor that facilitates the adoption of safer sexual practices by ensuring the availability and affordability of condoms. The bivariate analysis revealed no significant relationship between ease of access and condom use behavior, p-value = 0.249 (> 0.05). Nonetheless, respondents with easier access tended to use condoms more consistently (33%). These findings suggest that while condom availability alone may not determine behavior, it still plays an important role in supporting preventive practices alongside other influencing factors. Other studies show a significant

relationship between condom stock ownership and consistency of use, p-value = 0.002 (<0.05). MSM who purchase condoms independently tend to be more consistent than those who rely solely on free condoms, as independent purchases reflect HIV risk awareness and the perception that condoms are an important necessity that must always be available.(32) Conversely, dependence on condoms from friends or the community is associated with less consistent use. These findings are consistent with Fatiah's (2023) research, which states that MSM with good access to condoms and who purchase condoms independently are more likely to use condoms consistently.(12)

The relationship between community behavior and condom use behavior

The reinforcing factors in Lawrence Green's theory that encourage a person to behave in a certain way are support, motivation, or behavior from the surrounding environment. One form of reinforcing factor from this study is support from the MSM community, which plays a role in increasing a person's motivation to maintain condom use among MSM during sexual intercourse. The study results demonstrate a significant relationship between peer support and condom use, p-value = 0.000 (< 0.05). Most respondents (66.1%) reported receiving reminders from peers to consistently use condoms during sexual intercourse. These findings highlight the crucial role of peer influence in promoting safe sexual practices and strengthening awareness of HIV AIDS prevention. Conversely, limited community support can diminish awareness and weaken essential prevention behaviors.(7) New findings from another study conducted by Hang Lyu (2025) reveal that a peer/community approach to MSM groups can encourage MSM to increase the scope of HIV AIDS prevention behaviors such as knowledge and group VCT for at-risk groups.(33) Unlike studies on other key populations of sex workers, bivariate analysis showed no significant relationship between peer educator assistance and condom use behavior. This insignificance was likely influenced by the limited sample size and duration of the study, so that the effectiveness of the assistance was not yet optimally apparent.(34)

The relationship between partner behavior and condom use behavior

According to Lawrence Green in his precede-proceed theory, reinforcing factors are forms of reward or consequences that are received or expected to occur after a behavior is performed. This study found a significant relationship between same- sex partner support and condom use behavior, p-value = 0.003 (< 0.05). Most respondents (60.7%) reported receiving support from their same-sex partners, primarily through providing condoms and encouraging their use during sexual intercourse. This result is consistent with Nirwanto's (2023) findings, which highlight the crucial role of homosexual partner support in promoting consistent condom use. Conversely, the absence of partner support, such as failing to remind partners about HIV AIDS risks can weaken preventive practices.(7)

In relationships with new partners, individuals tend to pay more attention to condom use because they do not know the history and HIV status of their homosexual partners, thereby increasing awareness and reminding each other to prevent HIV AIDS transmission. In long-term relationships, high levels of trust often reduce the intensity of condom use.(35) However, other studies show that support for condom use is not always consistent, especially in the context of purchasing sex, where negotiations to have sex without a condom may occur in order to meet the interests of both parties.(36)

CONCLUSION

This study shows that condom use among MSM in Banjarnegara is still not optimal, with nearly half of respondents not using condoms consistently despite engaging in risky sexual behavior. Bivariate and multivariate analyses reveal that not all predisposing, enabling, and reinforcing factors have a significant effect; however, attitudes toward condoms emerge as the strongest determinant, increasing the likelihood of condom use nearly threefold. Social factors such as partner and community support also play an important role, while knowledge, access to information, history of STIs, education, and VCT did not show a significant relationship. These findings confirm that HIV prevention interventions among MSM need to focus on strengthening positive attitudes, increasing social support, and contextual approaches that emphasize not only knowledge but also changes in perceptions and norms of safe sexual behavior. Efforts to improve condom use among MSM in Banjarnegara should prioritize strengthening the most influential strategic factors, namely attitudes, partner support, and community support. Health interventions need to focus on fostering positive attitudes through targeted education on safe sexual practices, while simultaneously encouraging greater involvement of partners and communities to reinforce preventive behaviors. Additionally, ensuring easier access to condoms, expanding relevant and contextual information, and enhancing VCT services must be integrated continuously to provide comprehensive support for HIV AIDS prevention among MSM.

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Conflict of Interest

No potential conflicts of interest relevant to this article were reported.

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