

# Condom Use and HIV Testing on Female Sex Workers

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**Abstract.** This research is a descriptive-correlative study with a cross-sectional design using a quantitative approach to predict the practice of Condom-Use and HIV-Test among female sex workers in the localization area of Batang district. The population were all FSW in the localization area of Batang Regency, which are the population at highest risk of contracting and transmitting HIV/AIDS. The sample selection technique was simple random sampling. Data collection is done by filling out a questionnaire. Data analysis was carried out descriptively and correlatively with the Chi Square test. The results showed that the practice of using condoms in sexual activities carried out by FSW and their customers was still low, namely only 30.1%. Factors that significantly influence the practice of using condoms consistently in every sexual activity performed by FSW and their clients are perceptions of vulnerability to HIV transmission, perceptions of HIV/AIDS severity, perceptions of condom benefits, perceived barriers to condom access, customer support and self-efficacy. Factors that significantly influence the practice of HIV testing among FSW are perceptions of vulnerability to HIV transmission, perceptions of HIV/AIDS severity, perceptions of the benefits of HIV testing, perceptions of barriers to HIV testing, knowledge of HIV/AIDS, pimp support and self-efficacy.

**Keywords:** PMT, condom-use, HIV-test.

## 1 Introduction

HIV/AIDS is still a global and national health problem with the number of new cases increasing every year. Central Java is the province with the fifth largest HIV / AIDS case. Every day an average of 10 new cases were found [1].

One of the HIV/AIDS red zone areas is Batang district. This region has a high risk of HIV/AIDS transmission because of the large number of localizations that are scattered along the coast of Java Island. The Batang Regency AIDS Commission (KPA) said HIV/AIDS cases in Batang have always been on the increase. From 2007 to June 2018 there have been 1,039 HIV/AIDS cases, 165 of which have died. In the past year, in Batang District, 75 new cases of HIV/AIDS have been found and 10 people have died [2].

HIV/AIDS in Batang district in the past year was dominated by women (63%) and most of them came from female sex workers (FSW). FSW is the group that has the greatest risk factor due to sexual behavior that has multiple partners [2]. This fact shows that HIV / AIDS is increasingly worrying both from a quantitative and qualitative side.

The area in Batang district that has the highest number of HIV/AIDS cases is Banyuputih sub-district, with 22 cases, followed by Bandar sub-district with 20 cases and Gringsing sub-district with 16 cases [2]. This is indicated because in that region there are the most

prostitution brothels, namely 3 official brothels and some hidden localizations in the form of cafes and karaoke places [2].

This fact shows that FSW is the group most at high risk of contracting and transmitting HIV / AIDS. In Indonesia, it is predicted that more than 50% of FSW suffer from sexually transmitted diseases. The low knowledge of FSW related to HIV/AIDS and economic reasons are the main causes of the weak efforts to prevent HIV/AIDS transmission carried out by FSW in lokalisasi [3].

Consistent condom use is an effective strategy in the prevention of sexually transmitted infections and transmission of HIV/AIDS [4]. Condoms are currently still a versatile prevention technology that can prevent unwanted pregnancies and sexually transmitted infections including HIV. If used correctly and consistently, condoms can provide the optimal level of protection [5].

In addition to consistent use of condoms, HIV testing for high-risk groups must also be carried out as early as possible and periodically so that early detection of AIDS can be recognized immediately and efforts can be made for prevention and treatment. HIV testing is done to identify, stage, initiate, and monitor infected people with antiretroviral therapy in order to save a sufferer's life [6].

However, in fact, the consistent use of condoms and testing for HIV as early as possible and periodically by FSW as a risk group is still very low. The use of condoms in sexual behavior among FSW in Banyuputih sub-district, Batang district is still low (15.8%), participation in monthly STI screening is still low (28.1%), and periodic HIV testing every three months is also low (26, 7%) [7]. The cause of the low HIV/AIDS prevention behavior must be explored. An assessment of the dangers or threats and vulnerability of AIDS in the FSW group (threat appraisal) and efforts to prevent and handle it (coping appraisal) must be carried out by FSW as a risk group in order to avoid and protect themselves from the threat of HIV/AIDS transmission. Research in 50 countries states that female sex workers (FSW) have a 14-fold higher risk of HIV/AIDS than women of the same age in the general population [8].

The motivations that drive and the factors that prevent a person from engaging in personal protective behavior (Personal Protective Motivation Model) must be identified for interventions to reduce the prevalence of HIV/AIDS transmission today.

Research questions how the consistency of condom-use and HIV tests and their determinants with an assessment of the dangers or threats and vulnerability to AIDS in the FSW. The purpose of this study was to analyze the consistency of condom-use and HIV tests and their determinants using the Personal Protective Motivation (PMT) assessment.

## **2 Method**

This type of research is a descriptive-correlative study with a cross sectional design using a quantitative approach. This study was conducted to predict the practice of Condom-Use and HIV-Test in female sex workers in the Banyuputih area, Batang district.

The population of this study were all FSW in the Batang district brothel, namely Penundan, Banyuputih and Jentolsari brothels totaling 274 people. The number of samples was calculated according to Slovin minimum sample calculation, which is obtained a number of 163 people. Simple random sample selection technique.

The research instrument in the form of a questionnaire refers to the PMT construction components which consist of:

- 1) Extrinsic factors, namely an assessment of peer support or participation in using condoms.
- 2) Intrinsic factors, namely an assessment of a person's personal perceptions which include: (1) psychological or physical perceptions of not using condoms, (2) perceptions of vulnerability to infection with STIs and HIV, (3) perceptions of the severity of HIV infection, (4) perceptions of effectiveness or the benefits of using condoms, (5) self-efficacy of condom use, and (6) perceptions of barriers or negative consequences of condom use.
- 3) The intention to use condoms consistently
- 4) Consistent use of condoms.

The data was collected by filling out a questionnaire which the researcher was waiting for. Data analysis was carried out descriptively to determine the frequency distribution of demographic characteristics, intention to use condoms and consistency of condom use. To analyze the determinants of PMT and condom consistency using the Chi Square test.

### 3 Result and Discussion

Based on the results of the study, of the 163 FSW in Batang, it was found that their average age was 29 years, the youngest FSW was 20 years old and the oldest was 47 years old.

**Table 1.** Female Sex Worker Characteristic

Characteristic	Frequency	%
<b>Education Level</b>		
No School	5	3.1
Elementary School	99	60.7
Junior High School	53	32.5
Senior High School	6	3.7
<b>Merriage Status</b>		
Single	16	9.8
Merried	27	16.6
Widowed / divorce	120	73.6
<b>Length of Work as FSW</b>		
<1 year	48	29.4
1-5 years	102	62.6
6-10 years	8	4.9
>10 years	5	3.1
<b>Condom Use</b>		
Not always	114	69.9
Always	49	30.1
<b>HIV Tes</b>		
Not routine every 3 months	102	62.6

Characteristic	Frequency	%
<b>Education Level</b>		
No School	5	3.1
Elementary School	99	60.7
Junior High School	53	32.5
Senior High School	6	3.7
Routine	61	37.4

Table 1 shows that the majority of FSW in Batang Regency are widows/divorced 73.6%. Even so, 16.6% of FSW were still married and there were 16 (9.8%) FSW who were not married.

Most of the FSW had low education, Elementary School 60.7%, and Junior High School 32.5%. There were 5 people (3.1%) who did not complete elementary school, and there were 6 people (3.7%) with high school education.

Most (66.7%) of FSW had their work as FSW between 1 and 5 years. There were 13 FSW (22.8%) who had been working as FSW for less than 1 year, and 2 (3.5%) had been a FSW for more than 10 years.

### 3.1 Factors Affecting Condom Use Practices in Sexual Activity of FSW

To analyze the factors that influence the practice of condom use in FSW sexual activity, a Chi square test was performed using a cross table.

**Table 2.** Crosstab between perceived vulnerability, perceived severity, perceived benefits, perceived barriers, knowledge, customer support, pimp support and self-efficacy with the practice of using condoms

Variabel	Condom Use		P Value
	Not always	Always	
Perceptions of Vulnerability to HIV transmission			
Not good	93 (76.2%)	29 (23.8%)	0.005
Good	21 (51.2%)	20 (48.8%)	
Perceptions of the seriousness of HIV/AIDS			
Not good	88 (75.9%)	28 (24.1%)	0.016
Good	26 (55.3%)	21 (44.7%)	
Perceptions of the Benefits of Condoms			
Not good	45 (90.0%)	5 (10.0%)	0.0004
Good	69 (61.1%)	44 (38.9%)	
Perceptions of Barriers to Condom Access			
Not good	33 (89.2%)	4 (10.8%)	0.007
Good	81 (64.3%)	45 (35.7%)	
Knowledge about HIV/AIDS			
Bad	18 (78.3%)	5 (21.7%)	0.448
Good	96 (68.6%)	44 (31.4%)	
Klien's Support			

Less supportive	97 (77.0%)	29 (23.0%)	0.001
Supportive	17 (45.9%)	20 (54.1%)	
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Pimp support			
Less supportive	82 (73.9%)	29 (26.1%)	0.156
Supportive	32 (61.5%)	20 (38.5%)	
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Self Efficacy			
Bad	91 (76.5%)	28 (23.5%)	0.005
Good	23 (52.3%)	21 (47.7%)	
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The results of the data analysis showed that the factors that significantly influenced the practice of using condoms consistently in every sexual activity performed by FSW and their clients were: perceived vulnerability to HIV transmission (p 0.005), perceptions of HIV/AIDS severity (p 0.016), perceived benefits. condoms (p 0.0004), perceived barriers to condom access (p 0.007), customer support (0.001) and self-efficacy (0.005). Meanwhile, knowledge about HIV/AIDS (0.448) and support from pimps (0.156) did not influence the practice of using condoms consistently.

### 3.2 Factors Affecting HIV Testing Practices among FSW

To analyze the factors affecting HIV testing in FSW, a Chi square test was performed using a cross table.

**Table 2.** Crosstab between perceived vulnerability, perceived severity, perceived benefits, perceived barriers, knowledge, pimp support and self-efficacy with HIV testing practices among FSW

Variabel	HIV test		P Value
	Not routine every 3 months	Routine	
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Perceptions of Vulnerability to HIV transmission			
Not good	84 (68.9%)	38 (31.1%)	0.008
Good	18 (43.9%)	23 (56.15)	
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Perceptions of the seriousness of HIV/AIDS			
Not good	80 (69.0%)	36 (31.0%)	0,014
Good	22 (46.8%)	25 (53.2%)	
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Perceptions of the Benefits of HIV testing			
Not good	37 (80.4%)	9 (19.6%)	0.006
Good	65 (55.6%)	52 (44.4%)	
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Perceptions of Barriers to HIV testing			
Not good	36 (81.8%)	8 (18.2%)	0.004
Good	66 (55.5%)	53 (44.5%)	
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Knowledge about HIV/AIDS			
Bad	20 (87.0%)	3 (13.0%)	0.018
Good	82 (58.6%)	58 (41.4%)	
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Pimp support			
Less supportive	76 (68.5%)	35 (31.5%)	0.036
Supportive	26 (50.0%)	26 (50.0%)	
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Self Efficacy			
Bad	83 (69.7%)	36 (30.3%)	0.003
Good	19 (43.2%)	25 (56.8%)	
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The results of the cross-table analysis above, show that the factors that significantly influence the practice of HIV testing among FSW are: perceived vulnerability to HIV transmission (p 0.008), perceptions of HIV/AIDS severity (p 0.014), perceived benefits of HIV testing (p 0.006), perception of barriers in HIV testing (p 0.004), knowledge about HIV/AIDS (p 0.018) pimp support (0.036) and self-efficacy (0.003).

FSW is a population at high risk of contracting and transmitting HIV/AIDS due to unsafe sexual behavior. Prevention of transmission is very important for FSW, one of which is the compliance with condom use in risky sexual behavior. The non-compliance of condom use was because the FSW did not dare to refuse sexual intercourse without a condom [9].

The results of this study have proven that Protection Motivation Theory (PMT) which states that the reason for someone to do unhealthy behavior is based on their perception of danger or threat and their susceptibility to disease [10,11,12,13,14]. A person with bad perceptions has a greater tendency to engage in unhealthy behavior. FSW who feel that they are not a group that is vulnerable to HIV/AIDS transmission and think that HIV/AIDS is a common disease and it takes a long time to be infected, so they tend not to take good preventive measures, for example by consistently using condoms every time they have sex with their clients.

PMT theory also explains that when a person is faced with a health threat, there are two judgments that emerge, namely an assessment of the threat and an assessment of coping. Threat assessments provide an individual's assessment of their vulnerability to the threat of HIV infection and the severity of perceived threats. The assessment comes from both personal and intrapersonal perceptions of risky behavior, for example behavior not using condoms. Meanwhile, the coping assessment will compare the effectiveness of the behavior carried out with threats, namely comparing the behavior of using condoms with the threat of HIV infection. The two assessments will ultimately form the motivation (intention) for protective behavior against the threat of HIV infection.

Several previous studies have shown that PMT can predict risky sexual behavior including intention and condom use in the adolescent population [15,16,17,18,19]. In particular, coping assessments have estimated intention to initiate sex among Bahamian youth and intention to use condoms among South African youth [16,18]. Another study in China in 2015 showed that self-efficacy, and the perception of barriers predicted the intention and behavior of using condoms consistently among FSW [20].

There are two factors underlying the behavior of using condoms as HIV/AIDS prevention behavior according to PMT theory, namely:

- 1) Extrinsic factors, namely an assessment of peer support or participation in using condoms.
- 2) Intrinsic factors, namely an assessment of a person's personal perceptions which include: (1) psychological or physical perceptions of not using condoms, (2) perceptions of vulnerability to infection with STIs and HIV, (3) perceptions of the severity of HIV infection, (4) perceptions of effectiveness or the benefits of using condoms, (5) self-efficacy of condom use, and (6) perceptions of barriers or negative consequences of condom use

## 4 Conclusion

The practice of using condoms in sexual activities carried out by FSW with their customers is still low, namely only 30.1%. Most of the FSW did not comply with the HIV test, which should be done regularly every three months.

Factors that significantly influence the practice of using condoms consistently in every sexual activity performed by FSW and their clients are: perceived vulnerability to HIV transmission, perceptions of HIV/AIDS severity, perceptions of condom benefits, perceived barriers to condom access, customer support and self efficacy.

Factors that significantly influence the practice of HIV testing among FSW are: perceived vulnerability to HIV transmission, perceptions of HIV/AIDS severity, perceived benefits of HIV testing, perceived barriers to condom access, knowledge about HIV/AIDS, pimp support and self-efficacy.

Based on the results of the study, the most influencing practice of consistent condom use and routine HIV testing were intrinsic factors (factors in individuals). Therefore, efforts to increase HIV/AIDS transmission prevention behavior in risk groups must be carried out through intensive behavior change communication interventions.

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