

# Risk Factor Analysis of HIV/AIDS Transmission to Loading Workers in Port of Padang City

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## ABSTRACT

The results of the initial survey at the Public Health Center in the port area of Padang City, showed a trend of increasing cases of HIV/AIDS. In 2014 there were 15 cases, in 2015 there were 21 cases and in 2016 there were 24 cases. The purpose of this study was to analyze risk factor of HIV/AIDS transmission to loading workers in port of Padang City. This type of research was analytic with cross sectional design. This research was conducted from January to May 2019 in the port of Padang City. The study population numbered 834 people and the total sample were 90 people. Sampling was done by cluster sampling technique. Primary data collection is done by interview using a questionnaire. Data analysis includes univariate and bivariate analysis. The results showed a relationship between social pressure with risk behaviors for transmitting HIV/AIDS (P value = 0.011), no relationship between perception of vulnerability with risk behavior transmission of HIV/AIDS (P Value = 0.103) and no relationship between knowledge with risk behaviors for transmitting HIV/AIDS (P Value = 1.00).

**Keywords:** behavior, HIV /AIDS, loading workers

## 1. INTRODUCTION

Indonesia represents the country with the highest number of HIV cases in Southeast Asia with an estimated 48,000 cases. In ASIA, Indonesia places the largest number in HIV/AIDS cases [1]. The number of HIV cases in Indonesia is currently increasing from year to year. In 2014 there were 32,711 cases, in 2015 there were 30,395 cases and in 2016 there were 41,250 cases. The highest cumulative AIDS percentage is in the age group of 20-29 years (31.4%) and based on the sex of men as much as 56% [2].

HIV AIDS in Indonesia is concentrated in certain population groups [3]. Key populations in this relationship: female sex workers (WPS), injecting drug users (IDUs), male sex with men (MSM), and transsexuals, convicts, pregnant women and Potential Risti Men (sailors, truck drivers, and loading / unloading workers) [4].

A loading worker is a man who has the potential to become a WPS customer (5). Based on the 2015 STBP, the number of HIV/AIDS cases in the number of loading workers in 2007 was 0.8%, in 2011 it increased to 0.7% and in 2015 it increased to 0.82% (6). Only 0.75% of loading workers always use condoms when having the last section (6). The results of an analysis of risk behaviors towards HIV in Indonesia in 2009 showed that 50% of male loading workers had a preference for sex [5].

Data from the Padang City Health Office in 2017, shows the number of HIV cases as many as 300 people, the highest number in men is 297 people and in women 71 people [7].

Kota Padang has a seaport managed by PT. Pelindo II Teluk Bayur, where there are two areas namely in Teluk Bayur and Muara Padang. Loading workers are managed solely by the Teluk Bayur Unloading Labor Cooperative (KOPERBAM). The number of loading workers is 782 while 722 people are located in Teluk Bayur and 60 people in Muara Padang. The results of the initial survey at the public health center in the port area of Padang City showed an increasing trend of HIV/AIDS cases. In 2014 there were 15 cases, in 2015 there were 21 cases and in 2016 there were 24 cases [8].

The results of an interview with KOPERBAM Teluk Bayur, it is known that some Loading Worker people have a risk of contracting HIV/AIDS, where there are sex purchase activities by loading workers. This is because the location of the port is close to the location of prostitution in the city of Padang. Even though the location of prostitution does not include localization, but at this location, it is always a prostitution activity. The close distance between the port and the location of prostitution, causing the loading worker has easy access to carry out activities at risk of contracting HIV/AIDS. Based on the above problem, the researcher is interested in researching the analysis of HIV/AIDS risk behavior in loading workers in the Port of Padang City in 2018.

The general objective of this research is to study the risk analysis for HIV/AIDS transmission at loading workers in the Port of Padang City. The specific objective in this research is to study the relationship between social pressure, perception of vulnerability and knowledge with risk behavior transmission of HIV/AIDS.

## 2. METHOD

This type of research is analytic with a cross-sectional design. This research was conducted from January - May 2019 at the Port of the City of Padang. The study population numbered 834 people and a sample of 90 people. Sampling was done by a cluster sampling technique. Primary data collection is done by interview using a questionnaire. Data analysis included univariate analysis, bivariate analysis to test whether there was a relationship between the independent variable and the dependent variable using the chi-square test at a 95% confidence level ( $p < 0.05$ ). The dependent variable in this study is the prevention of HIV / AIDS transmission and the independent variable, namely social pressure, knowledge and perception of vulnerability.

## 3. RESULTS AND DISCUSSION

### Results

#### 1. Univariate Analysis

##### a. Social Pressure

The results of the frequency distribution of social pressure on loading workers can be seen in table 1.

**Table 1**  
**Frequency Distribution of Social Pressure in Loading Workers at Port of Padang City in 2019**

No	Social Pressure	f	%
1	Good	56	62,2
2	Not Good	34	37,8
<b>Total</b>		<b>90</b>	<b>100%</b>

Based on table 1. it can be seen that as many as 37.8% of loading workers get bad social pressure at the Port of Padang City in 2019.

The following is a description of the answers based on the social pressure of loading workers, as presented in table 2. as follows:

**Table 2**  
**Frequency Distribution of Social Pressure Questionnaire Answers on Loading Workers at Padang City Port in 2019**

No	Statement	Yes	No
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		f	%	f	%
1.	The use of narcotic drugs by friends	22	24,4	68	75,6
2.	Invite friends to use narcotics	9	10	81	90
3.	Friends have sexual relations freely (changing partners)?	18	20	72	80
4.	Friends invite loading workers to have sex freely (changing partners)?	17	18,9	73	81,1
5.	The loading worker friend has same-sex sexual relations	3	3,3	87	96,7
6.	Friends have invited same-sex sexual relations with loading workers	1	1,1	89	98,9

Based on table 2 it can be seen that as many as (24.4%) in the last year got friends who used narcotics and as many as (10%) loading workers had been invited by friends using narcotics.

##### b. Perception of Vulnerability

The results of research on the perception of vulnerability in workers can be seen in table 3:

**Table 3.**  
**Frequency Distribution of Perception of Vulnerability in Loading Workers at the Port of Padang City in 2019:**

No	Perception of Vulnerability	f	%
1	Good	35	38,9
2	Not Good	55	61,1
<b>Total</b>		<b>90</b>	<b>100%</b>

Based on table 3 it can be seen that more than half of 61.1% of loading workers have a bad perception of severity about the impact of contracting HIV / AIDS in Padang City Port in 2019.

The following is a description of respondents' answers based on the perception of the severity of the loading workers regarding the impact if loading workers contract HIV / AIDS, as presented in table 4 as follows:

**Table 4.**  
**Frequency Distribution of Perception of Vulnerability of Loading Workers in Padang City Port in 2019**

No	Statement	Strongly agree		Agree		Neutral		Disagree		Strongly Disagree	
		f	%	f	%	f	%	f	%	f	%
1	Loss of a job	8	8,9	54	60	17	18,9	6	6,7	5	5,6
2	The treatment costs are expensive and cannot be cured	5	5,6	54	60	10	11,1	20	22,2	1	1,1
3	Excommunicated family and friends	7	7,8	50	55,6	2	2,2	29	32,2	2	2,2
4	Shame	11	12,2	66	73,3	5	5,6	8	8,9		
5	Lost future	11	12,2	60	66,7	5	5,6	11	12,2	3	3,3

Based on table 4. it can be seen that more than half of the 60% loading workers agree the impact of contracting HIV / AIDS.

### c. Knowledge

The results of research on HIV / AIDS transmission and prevention knowledge conducted on 90 loading workers obtained data as below:

**Table 5**  
**Frequency Distribution of Loading Workers' Knowledge at Padang City Port in 2019**

No	Knowledge	f	%
1	Good	52	57,8
2	Not good	38	42,2
<b>Total</b>		<b>100</b>	<b>100%</b>

The results showed that 38% of loading workers had poor knowledge and 52% of loading had good knowledge of HIV / AIDS transmission and prevention in Padang City Port in 2019.

The following is a description of respondents 'answers based on the knowledge of workers' loading on HIV / AIDS transmission, as presented in table 6 as follows:

**Table 6**  
**Frequency Distribution of the Loading Questionnaire Knowledge Knowledge Questionnaire on Transmission of HIV / AIDS in Padang City Port in 2019**

No	Statement	Right		Wrong	
		f	%	f	%
1	Definition of HIV	64	71,1	26	28,9
2	Mode of transmission of HIV	73	81,1	17	18,9
3	Prevent HIV by avoiding the use of contaminated needles	67	74,4	23	25,6
4	The use of condoms can prevent HIV transmission	49	54,4	41	45,6
5	The HIV virus can be transmitted through perspiration	21	23,3	69	76,7
6	Exchanging clothing with people with HIV can cause a person to contract the HIV virus	23	25,6	67	74,4
7	HIV can be transmitted through blood transfusions	80	88,9	10	11,1
8	Sharing using a razor can transmit HIV	73	81,1	17	18,9

The results of the questionnaire analysis found that loading workers did not know about HIV not transmitted through sweating (76.7%) and HIV was not transmitted through exchanging clothes (74.4%).

### d. HIV/AIDS Risk Behavior

A description of HIV / AIDS risk behavior in loading workers in the Port of Padang City can be seen in table 7:

**Table 7.**  
**Frequency Distribution of HIV / AIDS Risk Behavior in Loading Workers at Padang City Port in 2019**

No	Risk Behavior	f	%
1	No Risk	56	62,2
2	Risky	34	37,8
<b>Total</b>		<b>90</b>	<b>100</b>

Based on table 7. it can be seen that as many as 62.2% of loading workers in the Port of Padang City do not have a risk-free behavior in the transmission of HIV / AIDS.

The following is a description of loading workers answers based on HIV / AIDS risk behavior as presented in table 8 as follows:

**Table 8**  
**Frequency Distribution of Questionnaire for HIV / AIDS Risk Behavior in Loading Workers at Padang City Port in 2019**

No	Pertanyaan	Ya		Tidak	
		f	%	f	%
1.	Narcotics use	1	1,1	89	98,9
2.	Inject narcotics together	1	1,1	89	98,9
3.	Having sexual relations with different people	19	21,1	71	78,9
4.	Use of condoms during sexual intercourse	24	26,7	66	73,3
5.	Always use a condom when having sex	15	16,7	75	83,3
6.	Have been forced into sexual relations with other people	10	11,1	80	88,9
7.	Having anal intercourse	6	6,7	84	93,3
8.	Having sexual intercourse orally	6	6,7	84	93,3
9.	Buy people to have sexual relations	12	13,3	78	86,7
10.	Paid people to have sexual relations with respondents	9	10	81	90
11.	Have a tattoo	18	20	72	80
12.	Never tattooed using the same needle	3	3,3	87	96,7
13.	Share shavers	7	7,8	83	92,2

Based on table 7. it is known that generally the behavior of workers is not at risk in the transmission of HIV / AIDS. However, there are still some workers who have risk behaviors, such as not using a condom during sexual intercourse (73.3%) and not always using a condom during sexual intercourse (83.3%).

## 2. Univariate Analysis

### a. Relationship between Social Pressure with Risk Behavior of HIV/AIDS Transmission

The results of research on the relationship of social pressure with risk behaviors of HIV / ADIS transmission at Loading Workers in Padang City Harbor, the data below is obtained:

**Table 9.**

**The Relationship between Social Pressure and HIV / AIDS Risk Behavior at Loading Workers in Padang City Port in 2019**

No	Social Pressure	Risk Behavior of HIV/AIDS				Amount		P Value
		No Risk		Risky				
		F	%	F	%	F	%	
1	Good	41	73,2	15	26,8	56	100	0,
2	Not Good	15	44,1	19	55,9	34	100	00
Total		56	62,2	34	37,8	90	100	6

Based on table 9. it can be seen that respondents who have good social pressure have more behavior that is not at risk of HIV / AIDS (41 people) than respondents with bad social pressure (15 people). Statistical test results obtained the value of P Value 0.006 which means that there is a significant relationship between social pressure with HIV / AIDS prevention behavior.

### b. Relationship between Perception of Vulnerability with Risk Behavior of HIV/AIDS Transmission

The results of research on the relationship of perception of vulnerability with HIV / AIDS prevention behavior in loading workers, obtained data below:

**Table 10.**

**The Relationship between Vulnerability Perception and Risk Behavior of HIV/AIDS Transmission at Loading Workers in Padang City Port in 2019**

No	Perception of Vulnerability	Risk Behavior of HIV/AIDS				Amount		P Value
		No Risk		Risky				
		F	%	F	%	F	%	
1	Good	31	72.1	12	27.9	43	100	0,065
2	Not Good	25	53.2	22	46.8	47	100	
Total		56	62.2	34	37.8	90	100	

Based on table 10. it can be seen that respondents with a good perception of vulnerability have more risk-free behavior in HIV / AIDS transmission (72.1%) compared to respondents with a perception of vulnerability that is not good (53.2%). Statistical test results obtained a P Value of 0.065 which means there is no meaningful relationship

between the perception of vulnerability with HIV / AIDS prevention behavior.

### c. Relationship between Knowledge with Risk Behavior of HIV/AIDS Transmission

The results of research on the relationship of knowledge with HIV / AIDS risk behavior in loading workers in the Port of Padang City, obtained the data below:

**Table 11.**

**The Relationship between Knowledge and Risk Behavior of HIV/AIDS Transmission at Loading Workers in Padang City Port in 2019**

No	Knowledge	Risk Behavior of HIV/AIDS				Amount		P Value
		No Risk		Risky		F	%	
		F	%	F	%			
1	Good	32	61,5	20	38,5	52	100	0,876
2	Not Good	24	63.2	14	36,8	38	100	
Total		56	62.2	34	37,8	90	100	

Table 11. shows that most loading workers with good knowledge have risk-free behavior (32 people) compared to loading workers with bad knowledge. Statistical test results obtained a P Value of 0.876 which means there is no meaningful relationship between knowledge and risk behaviors of HIV / AIDS transmission.

## Discussion

### 1. Univariate Analysis

#### a. Social Pressure

The results obtained that as many as 20% of loading workers get social pressure and 18.9% of loading workers do not get social pressure at the Port of Padang City in 2019. The results of the questionnaire analysis showed that as many as 3.3% of loading workers in the past year had friends who used narcotics and as many as 1.1% of WBP had been invited by they friends to use narcotics.

Susilowati's research results in Semarang and surrounding areas showed the proportion of HIV and AIDS incidence in the case group of respondents with injecting drug use status (48.1%) was greater than that of the control group respondents who used injecting drug use (22.5%). While the proportion of cases of respondents who did not use injecting drugs (51.9%) was smaller than the control group who did not use injecting drugs (77.5%) [9].

Mindayani and Hidayat research results at Class IIA Penitentiary in Padang City showed that 53% of WBP (Penitentiary Fostered Citizens) received social pressure and 47% of WBP did not get social pressure at Class IIA Penitentiary in Padang City in 2018. It was seen that as many as ( 58%) WBP in the last year got friends who used narcotics and as many as (50%) WBP had been invited by friends of WBP (Penitentiary Prisoners) using narcotics [10].

Attempts by a person to loading workers to do something contrary to the wishes of loading workers in the behavior of

preventing transmission of HIV / AIDS are the pressures felt by loading workers while at the Port.

According to the researchers, social pressure from loading workers who use narcotics has a very strong influence on the transmission of HIV / AIDS because they have been invited to use narcotics.

Therefore, it is expected that Port officials will collaborate with related parties, such as the Padang City Health Office, to conduct direct monitoring of loading workers who are still using narcotics. Health workers are also expected to be able to provide counseling and demonstrations of the impact of narcotics use on loading workers. The Port Management issued a policy in the form of rules and gave strict sanctions against them who use drugs.

#### **b. Perception of Vulnerability**

Based on table 4. it can be seen that more than half of the 60% loading workers agree on the impact of contracting HIV / AIDS.

The results of this study are not in line with research conducted by Mindayani and Hidayat at the Class IIA Penitentiary in the City of Padang that there is no significant relationship between the perception of severity with HIV / AIDS transmission prevention behaviors with a P-Value of 0.658. Respondents with good severity perception had less good prevention behavior in HIV / AIDS transmission (20%) than respondents perceived bad severity (25%) [10]. According to researchers, the perception of loading workers about the impact of contracting HIV / AIDS, can be improved through the provision of health information (leaflets, posters and banners), showing videos of HIV cases and their impact on health.

#### **c. Knowledge**

The results of this study are in line with research conducted by Pratiwi and Basuki in Indonesia that there is a significant relationship between sexual behavior with knowledge of HIV / AIDS prevention in adolescents aged 15-24 years ( $p = 0,000$  at  $\alpha = 0.05$ ).

The results of this study are in line with research conducted by Chibtia Irsyad et al in Kudus Regency that adolescents in the street children community have knowledge of HIV / AIDS in the good category of 38 people (69.1%) and in the unfavorable category of 17 people (30, 9%) [11].

The results of this study are not in line with research conducted by Mindayani and Hidayat on WBP (Penitentiary Prisoners) in Class IIA Penitentiary in Padang City that there is no meaningful relationship between knowledge and HIV / AIDS transmission prevention behavior with a P Value of 0.224. Where respondents with good knowledge have more good prevention behavior in the transmission of HIV / AIDS (24%) compared to respondents with poor knowledge (21%) [10].

According to researchers, loading workers have good knowledge about HIV / AIDS transmission and prevention. Based on this, Port officials are expected to collaborate with the Padang City Health Office, to socialize and conduct continuous counseling on prevention of HIV / AIDS transmission so that loading workers can make preventive efforts against HIV transmission.

#### **d. HIV/AIDS Risk Behavior**

Based on table 10 it is known that generally the behavior of workers is not at risk in the transmission of HIV / AIDS. However, there are still some workers who have risk behaviors, such as not using a condom during sexual intercourse (73.3%) and not always using a condom during sexual intercourse (83.3%).

This study is in line with the Laksana and Lestari research which shows that heterosexual and homosexual men have a tendency not to use condoms during sexual intercourse [11].

### **2. Bivariate Analysis**

#### **a. Relationship Between Social Pressure with Risk Behavior of HIV/AIDS Transmission**

Based on table 7. it can be seen that respondents who have good social pressure have more behavior that is not at risk of HIV / AIDS (41 people) than respondents with bad social pressure (15 people). Statistical test results obtained the value of P Value 0.006 which means that there is a significant relationship between social pressure with HIV / AIDS prevention behavior.

This study is in line with Hardani's research which shows the relationship between subjective norms (social pressure) and HIV / AIDS risk transmission behavior in the AL TNI soldiers in Kobangdikal in 2013. From the results of Hardani's research) shows respondents who believe that people who are considered important or influencing it, namely family, friends, and the community will support respondents not to behave at risk of HIV / AIDS transmission, most people who are considered important in the lives of respondents provide sufficient support and approval so that respondents do not behave at risk of HIV / AIDS transmission [13].

Likewise in this study, the more social pressure from the environment around loading workers, it will affect to take risky actions in HIV / AIDS transmission.

With the existence of free sexual behavior in loading workers, it will indirectly affect risky behavior in the transmission of HIV / AIDS. Thus, to minimize HIV/AIDS risk behavior in loading workers caused by social pressure, there needs to be attention from Koperbam in the form of providing routine information on HIV / AIDS risk behavior in loading workers. In addition, it is suggested to Koperbam to collaborate with local health centers to carry out HIV testing, due to the existence of free sexual behavior at loading workers.

#### **b. Relationship Between Perception of Vulnerability with Risk Behavior of HIV/AIDS Transmission**

Based on table 8. it can be seen that respondents with a good perception of vulnerability have more risk-free behavior in transmission of HIV / AIDS (72.1%) compared to respondents with a perception of vulnerability that is not good (53.2%). Statistical test results obtained a P Value of 0.065 which means there is no meaningful relationship between the perception of vulnerability and HIV / AIDS transmission behavior.



This research is opposite with Wulandari, et al.'s research showing that there is a significant influence between perception of vulnerability and sexually transmitted infections prevention behavior in female sex worker (FSW) in Banjarsari Surakarta  $p = 0.012$ , where the stronger perception of vulnerability of a FSW, the greater the possibility of having healthy behavior in preventing sexually transmitted infections [14]. However, this study is in line with the study of Umam, et.al which shows that the perception of vulnerability is not related to HIV prevention behavior in University Students in Indonesia in 2017 [15]. This study did not show a meaningful relationship between perceptions of vulnerability and risk behaviors for HIV / AIDS transmission. Although loading workers has an assumption of vulnerability to contracting HIV / AIDS, the behavior still does not match their perceptions, because they are in a risky environment.

### c. Relationship Between Knowledge with Risk Behavior of HIV/AIDS Transmission

Table 9 shows that most loading workers with good knowledge have risk-free behavior (32 people) compared to loading workers with bad knowledge. Statistical test results obtained a P Value of 0.876 which means there is no meaningful relationship between knowledge and risk behaviors of HIV / AIDS transmission.

This study is in line with Erniwati's research, it was found that knowledge about HIV / AIDS had no significant relationship with HIV / AIDS prevention behavior ( $p = 0.723$ ) with a confidence interval of 0.756-0.910 [16].

This research is also in line with Mindayani and Hidayat's research which shows that knowledge has no relationship with HIV / AIDS transmission prevention behavior in WBP in Lapas Class IIA Padang (10). However, this study is not in line with Margawati and Hargono, where the results show that knowledge has a relationship with sexual behavior at risk of HIV/AIDS transmission at loading workers in the Port of Kalimas Surabaya with a P Value of 0.013 [17].

According to Azwar knowledge is not directly related to a behavior in action and produces a positive value. This is caused in responding to a knowledge as a result of sensing, it takes a response in the form of a good attitude so that it changes or shapes a behavior or action [18].

According to Festinger in Azwar who put forward the theory of 'cognitive dissonance', that there is a human tendency to avoid behavior so that it is not in accordance with the attitude or knowledge may not correspond to the attitude and behavior. Humans are basically always logical and assumed so they try to maintain the consistency of the knowledge they have, but in fact they have to deal with the fact that human behavior is often irrational. Cognitive dissonance occurs when a person holds two different behaviors or when beliefs are not in line with the behavior. In addition, according to Rosenberg in Azwar komponen knowledge is not only what is known about the object, but includes what is believed about the relationship between the object's attitude and affective value. Affective value is a person's feelings towards an object so that if the components of knowledge and feelings are considered good and in line with attitude, the three things are considered to be related.

However, if there are inconsistencies between the three things, the results are not related [19].

From the explanation of the theory above, it is very possible that the knowledge of loading workers is not related to risk behavior in HIV / AIDS transmission. Even though they already know about the risk of HIV / AIDS transmission, but with the influence of social pressure, the surrounding environment, it is very possible loading workers have a behavior not in line with the knowledge they have.

## 3. CONCLUSION

Based on the results of the study above, it can be concluded that there is a relationship between social pressure and HIV / AIDS risk behavior, and the absence of a relationship between social pressure and perceived vulnerability to HIV / AIDS risk behavior among loading workers at Padang City Port in 2019.

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