# Peer Education: Increased Knowledge and Practice of HIV/AIDS Prevention in Female Sex Workers

Arulita Ika Fibriana<sup>1</sup>, Muhammad Azinar<sup>2</sup> {arulita.ika.f@mail.unnes.ac.id<sup>1</sup>, azinar.ikm@mail.unnes.ac.id<sup>2</sup>}

Universitas Negeri Semarang, Semarang, Indonesia<sup>1,2</sup>

Abstract. Prevalence of HIV/AIDS is still high in all regions of Indonesia. One of them in Batang, Central Java. In 2019 there were 75 new cases of HIV/AIDS and 10 people had died. Most cases occur in Female Sex Workers (FSWs). Low knowledge and economic reasons cause the weak behavior of preventing HIV/AIDS transmission by FSWs in the localization. This research is pre experiment with one group pretest posttest design. Total 61 FSW samples were selected purposively. Chi square test to analyze the correlation between knowledge and practice of HIV/AIDS prevention and Mc Nemar test to analyze differences in knowledge of HIV/AIDS and Condom Negotiation between before and after the implementation of peer education. The results showed that knowledge was significantly related to HIV/AIDS prevention practices. The peer education model can significantly increase knowledge and skill of condom negotiation among FSWs in localization.

Keywords: HIV/AIDS, Knowledge, FSW

## 1 Introduction

Case of HIV/AIDS in Indonesia from time to time is always increasing. Likewise in Central Java Indonesia. HIV/AIDS cases in the last three years have also increased. This fact has made Central Java province ranked fifth in the largest number of AIDS cases nationally. Based on data, it is known that in Central Java an average of 10 new AIDS cases occur every day [1].

Batang Regency is one of the districts that has a high risk of transmission of HIV/AIDS because the region has the most localization sites in Central Java, namely 12 prostitution localizations spread along the Pantura street of Javanese island. AIDS cases in Batang continue to increase. Since 2007 to June 2018 there have been 1,039 cases of HIV/AIDS, 165 of which have died. Another fact is cumulative, many cases occur in housewives, 204 cases [2].

In the past year, 75 new cases of HIV/AIDS have been found in the Batang district and 10 people have died. Data from the Batang AIDS Commission stated that the HIV/AIDS cases in Batang in the past year were dominated by women (63%) and mostly came from Female Sex Workers (FSWs). FSWs are the group that has the biggest risk factor due to sexual behavior that changes partners [2]. This fact shows that HIV/AIDS is increasingly worrying both in quantitatively and qualitatively.

Banyuputih sub-district is the region with the highest HIV/AIDS cases in Batang, which is 22 cases, followed by Bandar district with 20 cases and Gringsing 16 cases [2]. This is indicated because the region has the most places of prostitution localization in Batang, namely 3 localizations and some hidden localization in the form of cafes and karaoke venues [2].

The data shows that FSW are a high-risk group that is infected and also transmits HIV/AIDS. In Indonesia, it is predicted that more than 50% of FSW suffer from sexually transmitted diseases. This is exacerbated by the behavior of female sex workers who do not pay attention to their own health status. Most FSW do not want to do health checks and seek information related to their health status due to economic reasons and negative stigma. They prefer to buy their own medicines, including using antibiotics without consulting health workers.

Knowledge about HIV / AIDS is still low among FSWs and economic reasons have been the main cause of the low efforts to prevent transmission among them. The unavailability of comprehensive and sustainable information in the localization causes FSW to not fully know the information about the spread and ways to prevent the disease. Behavioral change that focuses on increasing knowledge and health beliefs, developing skills, and supporting the social environment can be effective strategies to reducing HIV/AIDS risk behaviors among female sex workers.

Peer education is a form of behavior change communication strategy based on peer groups. Peer education is a program based on the reason that peers have a strong influence on individual behavior. Peer educators are assumed to have a level of trust and comfort with their peers which allows a more open discussion about sensitive topics [3]. Peer education programs might empower both educators and target groups by creating a sense of solidarity and collective action [4]. This study aims to analyze the relationship between knowledge and practice of HIV/AIDS prevention and analyze differences in knowledge and skills in condom negotiation between before and after FSW following a peer education program in localization.

#### 2 Method

This is pre experiment research with one group pretest posttest design. The population of this study was the FSW in the Panundan Banyuputih localization in Batang regency. The research sample was taken by purposive sampling with the condition that they have lived in the localization for at least 2 months, can read and write, take part in peer education at least 4 times from the total meeting of 6 times. Based on these requirements, the eligible samples were 61 FSW. Research data collection using a questionnaire.

Data analysis used the Chi square test to analyze the relationship between knowledge and HIV/AIDS prevention practices and Mc Nemar test to analyze differences in HIV/AIDS knowledge between before and after the implementation of peer education. This research protocol has been reviewed and approved by the Ethics Commission of Health Research Universitas Negeri Semarang with Ethical Clearance number 137/KEPK/EC/2019.

## **3** Results and discussions

From 61 FSW is known that their average age is 28 years. The youngest is 20 years old and the oldest 47 years old. The following is an overview of the level of education, marital status and length of service as FSW in the Panundan Localization in Banyuputih, Batang district.

Characteristic	Frequency	%	
Education Level			
No School	2	3,3	
Elementary School	39	63,9	
Junior High School	18	29,5	
Senior High School	2	3,3	
Marriage Status			
Single	5	8,2	
Merried	13	21,3	
Widowed / divorce	43	70,5	
Length of Work as FSW			
<1 year	16	26,2	
1-5 years	39	63,9	
6-10 years	4	6,6	
>10 years	2	3,3	

Table 1. Female Sex Worker Characteristic

Table 1 above shows that the majority of FSWs with elementary school education are 63.9%, and 29.5% of junior high schools, and there are 2 people (3.3%) of senior high school graduates. Judging from the marital status, the majority of FSWs were widowed/divorced at 70.5%. However, there were 21.3% of FSWs who were still married and there were 5 people (8.2%) FSWs who were not married. Based on the length of work as FSW, the majority of FSW who have worked as FSW are between 1 and 5 years. However, there were 16 FSW (26.2%) who took the profession as new FSW (less than a year).

Table 2. The correlation between knowledge and HIV / AIDS prevention practices

Variabel	HIV/AIDS preve	HIV/AIDS prevention practices	
	Not good	Good	ue
Knowledge			
Not good	31 (96,9%)	1 (3,1%)	0,010
Good	21 (72,4%)	8 (27,6%)	

Table 2 shows there is correlation significantly between knowledge and HIV/AIDS prevention practices (p value 0.010). FSW with good knowledge have a tendency to practice HIV/AIDS prevention better than those with low knowledge. This research is also known that there are still many FSWs who have poor knowledge (52.45%).

 
 Table 3. Knowledge Difference between Before and After the Implementation of Peer Education in Localization

Variable –	Knowledge (Post-test)		n ualuo
	not good	good	p value
Knowledge (Pre-test)			
not good	16 (26,2%)	16 (26,2%)	0,000034
good	0 (0,0%)	29 (47,5%)	
	Condom Negoti	iation (Post-test)	
	not always	always	
Condom Negotiation (Pre-test)			
not good	22 (36,1%)	26 (42,6%)	0,0000002
good	0 (0,0%)	13 (21,3%)	

The results (table 3) shows there are differences in FSW knowledge between before and after the application of the Peer Education model in Localization. FSW who before applying the Peer Education model who had poor knowledge, after following the Peer Education model their knowledge became better. This shows a significant increase in knowledge (p value 0,000034) and skill of Condom Negotiation (p value 0,00000002) after FSW joined Peer Education.

Peer Education is a form of behavioral change communication intervention aimed at increasing the practice of preventing HIV/AIDS transmission through increasing knowledge about HIV/AIDS among FSWs in localization. Peer education actively involves the role of FSW, namely as peer educators, peer counselors and at the same time as targets of peer education. The implementation of peer education in this localization has been able to increase FSW's knowledge in localization. Peer Education has also indirectly provided awareness and motivation on the importance of using condoms in risky sexual behavior, as well as regular STI screening and Voluntary Counselling and Testing HIV. The results of this study are in line that health education provided to the Commercial Sex Workers community has an influence on increasing the knowledge and attitudes of Sex Workers communities [5]. Another study, health education can improve knowledge and attitudes in controlling HIV/AIDS [6].

Support among fellow FSWs in localization to remind one another and support one another in preventing transmission of HIV/AIDS has affected the better awareness of FSWs in preventing HIV/AIDS transmission by increasing condom use, increasing FSW participation in STI screening and participating in VCT. These results are consistent with research that states there is health education to improve attitudes and awareness in controlling HIV/AIDS [6].

The reason of FSW's clients and FSW are not to use condoms is the lack of information about the importance of condoms as a prevention of transmission of sexually transmitted diseases including HIV/AIDS. The use of condoms is felt unpleasant, uncomfortable, and can reduce pleasure in sexual activity. Therefore, FSW need to be empowered to not only reject the unprotected sex, but also to be able to motivate the clients for using condoms. These skills can be improved through continuous intensive peer education interventions. This is in accordance which states that condom intervention and promotion must also be able to overcome the factors that affect the ability of FSW to negotiation of condom use [7].

This research also in line with those stating that peer education has produced positive changes in comprehensive knowledge related to HIV in students and shows a better interest in taking HIV tests [8]. This can be explained by assuming that peer educators are reliable source of information about HIV/AIDS for adolescents. This research is in line with research on the influence of peer education in other countries [9,10,11].

Peer education can significantly increase knowledge about HIV [12]. Peer education is effectively to increasing knowledge, attitudes, and prevention practices against HIV/AIDS among adolescents in schools. Program for education about HIV/AIDS must therefore be designed to target this group taking into account their characteristics. Program for education about HIV/AIDS must therefore be designed to Female sex Worker by their characteristics [13].

#### 4 Conclusions

Knowledge was significantly related to HIV/AIDS prevention practices. The implementation of peer education in the localization is effective in increasing knowledge about HIV/AIDS in FSWs. There are differences in FSW knowledge between before and after the application of the Peer Education model in Localization. FSW who before applying the Peer Education model who had poor knowledge, after following the Peer Education model their knowledge and Condom Negotiation became better.

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