

The Correlation between the Level of Knowledge and Perception to the Incidence of Sexually Transmitted Infections and HIV Infections in Female Sex Workers in Surakarta

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Abstract: Sexually transmitted infections (STIs) and Human Immunodeficiency Virus (HIV) infections are serious global public health issue. Commercial sex workers and their clients are two of the groups at the highest risk of acquiring and transmitting these infectious diseases. Knowledge is the result of knowing from human to something, or any deeds of man to understand an object certain. Perception is a complex multifactorial process built on the experiences that a person undergoes during the course of his or her life which are directly or indirectly influenced by socioeconomic, political, and cultural contexts. The purpose of this study was to explore the relationship between the level of knowledge and perception to the incidence of STIs and HIV infections in Female Sex Workers (FSWs) in Surakarta. A cross sectional based study was conducted among female sex workers in several area in Surakarta. A total 75 female sex workers completed a questionnaire and provided blood samples for HIV and syphilis testing, endocervical and vaginal smears were tested for STIs examination. All data were analyzed statistically by using Chi-Square test with $P < 0,05$ was considered significant. The overall incidence of various STIs was 42.67%, whereas HIV positivity was 4%. Bacterial Vaginosis were the most common infections (14.67%). There was no significant correlation between the level of knowledge and perceptions with the incidence of STIs and HIV infections.

1 INTRODUCTION

Sexually transmitted infections (STIs) and Human Immunodeficiency Virus (HIV) infections are an important serious public health problem worldwide, they are a major cause of acute illness, infertility, disability and death (Giri, Hiremath and Kasbe, 2012; Mesenburg, Muniz and Silveira, 2014). According to the WHO, in 2016 there were about 357 millions new cases of STIs such as Chlamydia (131 million), Syphilis (5.5 million), Gonorrhoeae (78 million) and Trichomoniasis (143 million) (WHO, 2016). The latest STIs and HIV prevalence data in the group of female sex workers based on the Surakarta AIDS Commission in 2015 there are 263 new STI cases and 77 new HIV cases (AIDS Commission, 2016). Female sex workers (FSWs) and their clients are the largest group of individuals at high risk (Auli et al., 2013). Regulations about prostitution vary widely, with some cities implementing but seldom enforcing radical laws to prosecute those who engage in or

manage the business of prostitution (Safika, Levy and Johnson, 2013).

Sexually Transmitted Infections which are diseases due to among humans sexual activities including vaginal intercourse, oral sex, and anal sex. Sexually transmitted infections is a broader term than sexually transmitted disease (Achunam Nwabueze et al., 2014). Based on its etiology, STIs can be caused by either bacteria or virus. The bacteria commonly presented in STIs are Chlamydia, Syphilis, and Gonorrhoeae. While viral infections originates from Human Papilloma Virus (HPV), HIV, and Hepatitis B (S and Uike Assistant Professor, 2016). The morbidity and mortality impacts of these STIs are compounded since they also facilitate the sexual transmission of HIV. HIV infection causes an immunosuppressed condition which can increase the number of STIs and lead to greater co-diagnosis condition. People with active STIs are prone to HIV infection. HIV positive patients who are exposed to

STIs also have a greater risk to transmit HIV (Puspitosari et al., 2014).

The perceptions about STIs and HIV have varied from one society to others and is a complex multifactorial process built on the experiences which are directly and indirectly influenced by socioeconomic, political and cultural context (Auli et al., 2013). Knowledge is an important prerequisite for intentional performance of health-related behavior and prevention STIs and HIV transmission. Most national programs have made considerable effort to increase knowledge about HIV, the behaviors that spreads the disease and the ways it can be avoided and reduce the stigma. Stigmatizing attitudes are strongly associated with the missperception of HIV transmission with negative attitudes toward the social group, particularly homosexuals and sex workers (Sohn and Park, 2012). Several government programs related to STI and HIV control include: improving early case detection, increasing coverage of ARV drugs, expanding access to STIs and HIV screening, improving the quality of primary care facilities, and advocating local governments to reduce the burden costs.¹¹ This study was conducted to assess whether knowledge and perception are related to the incidence of STIs and HIV infections.

2 METHOD

Cross sectional study was performed in 75 FSWs in Surakarta by interviewing and performing laboratorium examination for STIs and HIV. All data were analyzed statistically by using Chi-Square test with $P < 0,05$ was considered significant. Each participant completed a questionnaire survey regarding sociodemographic condition, knowledge, and perceptions associated with risk for STIs and HIV. The questionnaire was assessed based on the answers about such as ever heard STIs and HIV, misperceptions about STIs and HIV, transmission, prevention, and feel at risk of being infected. Participants can be said to have good knowledge if they can correctly answer the symptoms and ways of transmitting STI and HIV diseases. Participants who are aware that they have the possibility of being able to suffer from HIV and STIs are said to have a good perception. Blood was collected and tested for HIV rapid test and syphilis rapid test. Endocervical, posterior fornix and vaginal smears were tested for *Neisseria gonorrhoeae*, non specific genital infections, vulvovaginal candidiasis, and bacterial vaginosis (Kustanti, 2017).

Table 1: Sociodemographic characteristics of Female Sex Workers in Surakarta.

Characteristics		Frequency (n=75)	Percent (%)
Age	17-25 y.o	3	4
	26-35 y.o	15	20
	36-45 y.o	36	33
	46-55 y.o	18	25
	56-65 y.o	3	4
	>65 y.o	-	-
Education	Illiterate	10	13.33
	Elementary	21	28
	Junior	21	28
	Senior	21	28
	College	2	2.7
Source of STIs information	Counseling	30	65.21
	Media	13	28.26
	Environment	2	4.34
	Social media	1	2.17
Source of HIV information	Counseling	29	50
	Media	23	39.65
	Environment	3	5.17
	Social media	3	5.17
STIs diseases history	Yes	24	32
	No	51	68
HIV diseases history	Yes	0	0
	No	75	100

3 RESULTS

The other reason is that many of the FSWs women fulfill the client's request not to use condoms, and government screening programs are not routinely performed so that FSWs feel that they are free from STIs and HIV diseases. It is important public health to conduct exploration, identification, and analysis the perception, knowledge and behaviours of FSWs as well as the associated sociopolitical and cultural factors and the role of FSWs in the risk of acquiring and transmitting STIs and HIV (The highest proportion (33%) of subjects was 36-45 years old. The majority of subjects had education background,

as they all finished their study from elementary, junior, and senior high school (28% each). The information about STIs and HIV were mostly from counseling, 65.21% and 50% respectively. About 32% of female sex workers claimed to have had an STI in the past.

Of the 75 participants 4% were identified as HIV positive, screening showed that 53.33% had STIs, consisting of Bacterial Vaginosis (18.67%), Syphilis (14.67%), Vulvovaginalis candidiosis (9.3%), Trichomoniasis(5.3%), Non-Specific Genital Infection (2.6%), Diplococcus Gram Negative Intracellular (1.33%), and Condyloma Acuminata (1.33%).

Table 2: The correlation between the level of knowledge and perception with the incidence of STIs and HIV.

		STIs			HIV			
		(+)	(-)	P value	(+)	(-)	P value	
Knowledge	Good (n=47)	21 (44.7%)	26 (55.3%)	0.648	Good (n=42)	2 (4.8%)	40 (95.2%)	0.704
	Bad (n=28)	11 (39.3%)	17 (60.7%)		Bad (n=33)	1 (3.0%)	32 (97%)	
Perception	Good (n=35)	18 (51.4%)	17 (48.6%)	0.151	Good (n=30)	1 (3.3%)	29 (96.7%)	0.810
	Bad (n=40)	14 (35%)	26 (65%)		Bad (n=45)	2 (4.4%)	43 (95.6%)	

There was no significant correlation between the level of knowledge with the incidence of STIs ($p>0.05$) as well as the perception and the incidence of STIs ($p>0.05$). the same results was also observed in HIV. Knowledge and perception have nothing to do with the incidence of HIV.

4 DISCUSSION

In this study, most of FSWs had a good education. Risk perception is a complex multifactorial process built on the experiences that a person undergoes during the course of her life which are directly or indirectly influenced by socioeconomic and cultural contexts. Some of these condititons may influence the perception about exposure to acquisition, transmission and treatment of STIs and HIV (Auli et al., 2013). Some researchers have found that the level of knowledge and perception can serve as a barrier to safer sex practices (Bruce et al., 2011). Our study

revealed that higher levels of knowledge of STIs and HIV have no effect on the incidence of STIs and HIV, as well as the perceptions of female sex workers are unrelated to the incidence of STIs and HIV. In this study, FSWs who were positive for STIs and HIV for have good knowledge and good perception better than FSWs who were illiterate. Most of female sex workers received the information about STIs and HIV through counseling, but this is not enough to reduce the incidence of STIs and HIV. Previous studies have revealed that awareness and attitudes towards sexuality as well as also educational background play role in the overall knowledge of STIs and HIV incidences (Mutha et al., 2014). High risk groups such as female sex workers even they know better about HIV, are still involved in behavioral risk (Unicef, 2012). Most of FSWs knew and have a good perceptions about STIs and HIV, but their needs did not allow any fear and worry, also they did not see any other options beside sexwork Auli et al., 2013).

5 CONCLUSION

Most of the FSWs had objective knowledge and good perception on STIs and HIV, but from the results of the screening is still found 4% participants were identified as HIV positive, and 53.33% had STIs. We believe that this study can provide useful knowledge in controlling STIs and HIV in a high-risk population group FSWs and the users, even though the findings are not able to be generalized due to the study subjects were limited in number and area as well as the recall bias in fulfilling the questionnaire. We recommend routine screening and periodic surveys in order for early detection of STIs and HIV. Other approaches for example forum group discussion, community gathering, workshops also peer education for counseling and experience sharing with imparting correct knowledge about STIs and HIV are needed, so that these FSWs do not just know about STI and HIV but have a high level of awareness of both diseases.

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