



Original Article

## Knowledge and Awareness on Prevention of Sexually Transmitted Diseases among Commercial Sex Workers

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### Abstract

**Objective:** The main objective of the study was to assess the level of awareness on prevention and control of sexually transmitted diseases among 120 sex workers.

**Material and Methods:** The cross-sectional study was conducted for one year. Data were collected through face to face interview using Bengali questionnaire. Data analysis was done using SPSS 17.0 software.

**Place and Period of Study:** The study was conducted from January 1<sup>st</sup> to December 31<sup>st</sup> of 2014 among 120 sex workers living in brothel of Daulodia, Rajbariin Bangladesh.

**Results:** More than half (58.7%) of the respondents had children in the brothels. All the respondents (100%) heard about the sexually transmitted diseases. Majority (86.7%) of the respondents had knowledge on AIDS. Only a few (4.2%) respondents had knowledge on AIDS and Gonorrhoea. Majority (91.7%) of the respondents had knowledge on STD transmission from pregnant women. Almost all (97.5%, 98.3%) of the respondents had the knowledge about STD transmission not from toilet or shaking hands respectively. Almost all of the (95.8%, 94.2%, 94.2%, 85.8%) respondents had the knowledge on STD transmission through sexual intercourse, injection, through mosquito, sharing same razor respectively. Most of them (81.7%) had good level of knowledge on STD transmission. Only above one tenth (11.7%) had moderate and poor level of knowledge. Almost all of them (96.7%, 95.9%, 95.9%) were found to use condom, agreed to keep one partner at a time, to reduce the number of sex partner respectively. Most of them (89.3%) did not know the HIV status of partner before sex, almost all (97.5%, 94.2% and 97.5%) agreed to avoid risky sex, to screen blood during transfusion, to avoid sharing needles & blade respectively. All (100%) of the respondents agreed for need of sexuality education for preventing STD. Almost all (98.30%) of the respondents had good awareness on Prevention and Control of Sexually Transmitted Diseases. There was no association between level of education and level of awareness ( $P > 0.005$ ), between age and level of awareness ( $P > 0.005$ ) and between duration of work and level of awareness ( $P > 0.005$ ).

**Conclusion:** Education is the most consistent and important determinant for prevention of STDs among all classes of people.

**Key Words:** Sexually Transmitted Diseases (STDs), Awareness, Prevention, Control, Commercial Sex Workers (CSW)

TAJ 2016; 29: No-2: 47-56

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## Introduction

Sexually transmitted diseases are a major public health problem in developing countries, including Bangladesh. Sexually transmitted diseases (STDs) can be painful, irritating, unbearable, and life threatening. More than 25 STDs have been identified, and they occur most commonly in sexually-active teenagers and young adults, especially those with multiple sex partners. Some people carry the disease for days or weeks, while others carry the disease for longer periods, even for life. During this time, an infected individual or carrier can spread the disease. A person infected with an STD is more likely to become infected with human immunodeficiency virus (HIV), and a person infected with HIV and other STDs are more likely to transmit HIV. Consequently, STDs pose an enormous burden in many countries as a direct result of their effects on reproductive and child health and indirectly by facilitating sexual transmission of HIV infection (Vuylsteke B, 1993). In Bangladesh, there are approximately 100,000 commercial sex workers (CSWs), who are distributed in urban, semi-urban, and rural areas, either organized in brothels, or working as independent sex workers. (Choudhury M. Rmale, 1997). Female CSWs play an important role in the heterosexual transmission of HIV. These sex workers have been considered to be the most important reservoir of STDs and a high-risk population for STDs and HIV. (D'Costa L. Jontrol, 1985). Control of STDs among them would have a significant impact upon the spread of HIV. STDs can have serious consequences on reproductive health and well-being of both men and women. In many developing countries, an emphasis has been given to the prevention and management of STDs as a part of HIV prevention component. Before formulating public health policies for the prevention of STDs, it was critical to obtain information about the preventive knowledge, attitude and practices.

## Material and Methods

The study was a cross sectional study conducted among these sex workers living in brothel of

## Result:

Daulodia, Rajbariin Bangladesh from January 1<sup>st</sup> to December 31<sup>st</sup> of 2014. About 1,500 sex workers who depend on prostitution for their survival lived in this brothel. All sex workers of brothel in Daulodia and who were willingly participated in the study was inclusion criteria. Who were physically and or mentally unstable and who were not interested to participate the study was exclusion Criteria. Non probability purposive sampling technique was used for data collection. Sample was taken purposively 120 as could because calculated minimum sample 384 are not attained within the stipulated time frame of study. Semi-structured questionnaire and Awareness measured by Likert's scale which correct answer carries 1 and wrong answer, don't know or others carry 0. The study was approved by ethical committee of National institute of Preventive and Social Medicine. Before initiation of the data collection a brief introduction on the aims of the objectives of the study was given to the respondents. They were informed about their full right to participate or refuse to participate in the study.

**Level of Awareness** were measured by 5 point Likert scale. The scoring criterion used in this study are as follows: 1= strongly disagree 2= Disagree 3= Don't know 4= Agree 5= Strongly Agree. Nine questions were used in the study to measure the awareness on prevention and control of sexually transmitted diseases. So, the scoring level will be in between 9-45. Level of awareness has been divided into three categories. These are:

9-21 = Poor; 22-33= Moderate; 34-45 = Good

**Level of Knowledge** were Total 8 questions have been prepared and used to assess the knowledge on prevention and control of sexually transmitted diseases. For every correct answer, a value of 1 has been assigned. So, the scoring scale lies between 1 to 8. Level of knowledge has been divided into three categories. These are 2-4 = Poor; 5-6= Moderate; 7-8 = Good.

This cross-sectional study was conducted in Daulodia brothel. It is one of the largest brothels in Bangladesh. About 1,500 sex workers who depend on prostitution for their survival. About 120 prostitute took participation in interview schedule.

The investigator completed a Semi structured interviewer administrative questionnaire to document socio-demographic characteristics of respondents, Knowledge on spread of sexually transmitted diseases and finally find out how much they were aware about these diseases. The parameters assess are described in the following pages

**Table 1: Socio-demographic characteristics of the respondents: (n=120)**

Socio-demographic	Frequency	Percentage	Mean(SD)
<b>Age</b>			
13-28	50	41.66	26.94 (±7.432)
29-44	63	52.5	
45-50	7	5.83	
<b>Religion</b>			
Islam	100	83.3	
Hindu	14	11.7	
Christian	6	5.0	
<b>Marital Status</b>			
Married		32.2	
Unmarried		30.6	
Divorced		36.4	
<b>No of children</b>			
Yes	70	58.7	
One child	45	64.3	
Two child	25	35.7	
No	50	40.8	
<b>other sources of income</b>			
Yes	9	7.5	
No	111	92.5	
<b>Monthly Income</b>			
3000 - 6000	68	56.70	6700(2364.3 )
7000 - 10000	46	38.30	
11000 - 15000	6	5.00	

Of the total 120 respondents about 83.3% respondents were Muslim, about 11.7% respondents were hindu and only 5% respondents were Christian..36.40% respondents were divorced, 32.20% were married and 30.60% were Unmarried.58.7% respondents had children in the brothels whereas about 40.8% respondents had no children. About 64.3% respondents had 1 child and 35.7% respondents had 2 children.Thus, only 7.5% people had alternate income sources in addition to the existing trade and about 92.50% had no additional income sources.out of 120 respondents, about 56.70% had a monthly income range between Tk. 3000 -6000. On the other hands, about 38.30% people had an income range of Tk.7000-10000 while only 5.00% people had a monthly income range of Tk. 11000-15000.

**Figure-2 Distribution of the respondents by their education level**

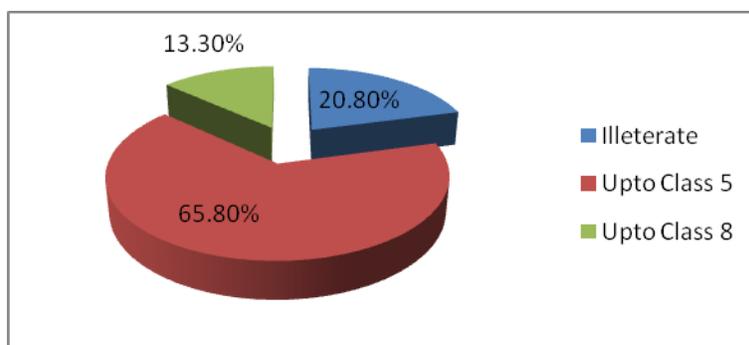


Figure 1 shows the education level of respondents. About 20.80% respondents are illiterate, about 65.80% respondents had completed their primary education while about 13.30% respondents had completed their study upto class eight.

**Table 2: Commercial sex worker related variable**

Age of sex exposed at first time	Frequency	percentage	Mean(SD)
13-16	36	30.0	17.28(±2.34)
17-21	78	65.0	
22-25	6	5.0	
Total	120	100.0	
<b>Involve time with this occupation</b>			
1-15hrs	104	86.66	9.11(±6.852)
16-30	16	13.33	
Total	120	100.0	
<b>Having permanent partner</b>			
No	119	99.2	
Yes	1	.8	
Total	120	100.0	
<b>Occupation of the partner</b>			
Do not know		85.10	
Driver		10.7	
Buisenessman		3.3	
<b>Working frequency</b>			
Daily	10	8.3	
More than 3times a week	36	30.0	
2 times a week	52	43.3	
3 times a week	6	5.0	
once a week	16	13.3	
Total	120	100.0	

Of the total 120 respondents, more than half of the respondent 65% sexed first time at (17-21) years. Mean age was 17.28 with ±2.34 SD. 42.5% respondents were involving in this occupation for (1-5) years. About 25.8% respondents are involving in this occupation for (6-10) years. About 6.7% respondent are involving in this occupation for (16-20) years. Very few 1.7% respondents were involving in this

occupation for (21-25) years. Overall 99.2% respondent don't have permanent partner majority 85.10% respondent did not know about their customer's occupation. About 10.70 % respondents said that their customers were driver. Only 3.30% respondents said that their customers were business man.

**Table 3: Factors related to Knowledge on STD related variable**

<b>Knowledge on STD related variable</b>	<b>Frequency</b>	<b>percentage</b>
<b>Heard about STD</b>		
Yes	120	100.0
<b>Knowledge on transmission on STD</b>		
Yes	115	95.8
No	5	4.2
<b>Knowledge on route of transmission of STD</b>		
Yes	111	92.5
No	9	7.5
<b>Knowledge on transmission of STD from pregnant women</b>		
Yes	110	91.7
No	10	8.3
<b>Knowledge on transmission of STD from toilet</b>		
Yes	3	2.5
No	117	97.5
<b>Knowledge on transmission of STD by sexual intercourse</b>		
Yes	115	95.8
No	5	4.2
<b>Knowledge on transmission of STD by shaking hand</b>		
Yes	2	1.7
No	118	98.3
<b>Knowledge on transmission of STD from blood transfusion</b>		
Yes	115	95.8
No	5	4.2
<b>18 Knowledge on transmission of STD from injection</b>		
Yes	113	94.2
No	7	5.8
<b>Knowledge on transmission of STD from mosquito</b>		
Yes	7	5.8
No	113	94.2
<b>Knowledge on transmission of STD by sharing same razor</b>		
Yes	103	85.8
No	17	14.2

Almost all respondent 100% heard about the sexually transmitted diseases. Overall 92.58%, 91.7 %, 97.5 %, 95.8 %, 98.3% %, 95.8 %, 94.2%, 85.8%, respondents had the knowledge on route of transmission of STD, STD transmission from pregnant women not transmitted from toilet, transmitted through sexual intercourse, STD is not transmitted by shaking hands, transmitted through Blood transfusion, transmitted from injection, transmitted through mosquito and transmitted through sharing same razor respectively.

**Figure-2 Distribution of the respondent in-terms of knowledge about Diseases**

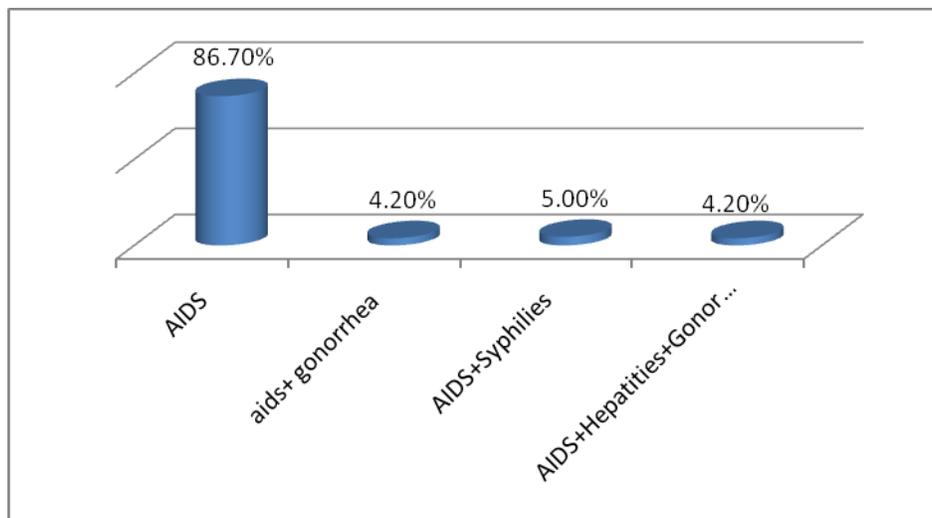


Figure 2 shows 86.7% respondent had knowledge on AIDS. 4.2% respondent had knowledge on AIDS and Gonorrhoea. 5% respondent had knowledge on AIDS and syphilis. 4.20% respondent had knowledge on AIDS, Hepatitis, Gonorrhoea and syphilis.

**Table-4: Level of knowledge on STD transmission ( n=120)**

Level of Knowledge	Frequency	Percentage
poor	14	11.7
Moderate	8	6.7
Good	98	81.7
Total	120	100.0

Table 4 shows that 81.7% respondent had good level of knowledge on STD transmission. About 11.7% had moderate level and 11.7% had poor level of knowledge on STD transmission.

**Figure- 3: Distributions of respondents according to level of awareness on Prevention and Control of Sexually Transmitted Diseases among Commercial Sex Workers.**

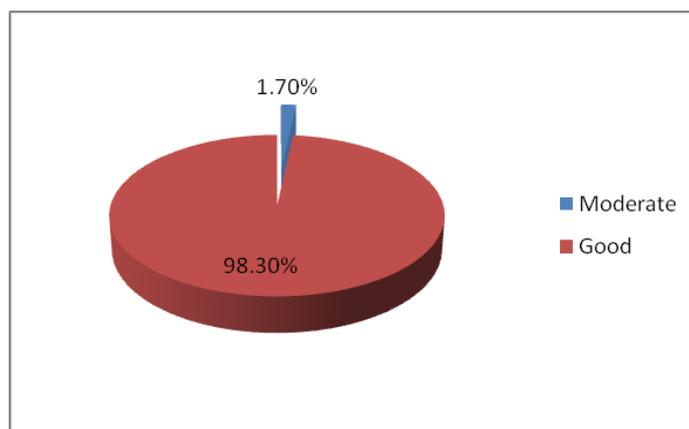


Figure 5 shows 98.30% respondent had good awareness on Prevention and Control of Sexually Transmitted Diseases, only 1.7% respondent had moderate awareness on prevention and Control of Sexually Transmitted Diseases.

**Table-5: Association between level of awareness and socio-demographic characteristics**

Socio-demographic character	Level of Awareness			
	Poor	Moderate	Good	$X^2$ , df, P valve
<b>Level of Education</b>				
Illiterate	-	0	25( 20.8%)	$X^2-1.056$ df- 2 P valve-0.590
Upto class v		2 ( 1.6%)	77( 64.1%)	
Upto class viii		0	16( 13.3%)	

Table 5 shows that there is no association present in level of education and level of awareness  $P > 0.005$

**Table-6 : Relationship between level of knowledge and awareness on Prevention and Control of Sexually Transmitted Diseases among Commercial Sex Workers.**

Level of Awareness	Level of Knowledge		
	Good	Moderate	Poor
Good	98( 81.6%)	8( 6.6%)	12( 10%)
Moderate	0	0	2 ( 1.6%)
Poor	-	-	-

Table-6 shows that there is association present on level of knowledge and awareness on Prevention and Control of sexually transmitted diseases, this is statistically significant. ( $P < 0.005$ ).

## Discussion

The study on Awareness on Prevention and Control of Sexually Transmitted Diseases among Commercial Sex Workers was conducted in in Daulodia brothel in Rajbari, Bangladesh, with a objective to assess the level of awareness on prevention and control of sexually transmitted diseases among sex workers such as assess the level of awareness on prevention and control, find out the factors related to awareness and determine the Socio-demographic characteristics among the respondents. For assess the level of awareness on prevention and control of sexually transmitted diseases 120 respondents were selected from Daulodia brothel in Rajbari.

It was found that among 120 respondents, 12.5% respondents were at between 13-20 year. Mean age 26.94 Median age was 25, mode was 25 and SD was  $\pm 7.47$ . Majority ( 83.3% ) of the respondents were Muslim, about 11.7% respondents were hindu and only 5% respondents

were Christian. Among them 36.40% respondents were divorced, 32.20% respondents were married and 30.60% respondents were Unmarried.

It was also found that 58.7% respondents had children in the brothels. About 40.8% respondents had no children. About 64.3% respondents had 1 child and 35.7% respondents had 2 children. Interestingly all the (100%) respondents belong nuclear family in brothels. To see the the education level of respondents about 20.80% respondents are illiterate, about 65.80% respondents had completed their primary education while about 13.30% respondents had completed their study up to class eight. Respondents who had alternate source of income in addition to the existing profession. It was estimated that out of 120 respondents, about 56.70% had a monthly income range between Tk. 3000 -6000. On the other hands, about 38.30% people had an income range of Tk.7000-10000 while only 5.00% people had a monthly income

range of Tk. 11000-15000. More than half of the respondent 65% sexed first time at ( 17-21) years. Mean age was 17.28 with  $\pm 2.34$  SD. It was estimated that 42.5% respondents were involving in this occupation for (1-5) years. It was observed that more than half 85.10% respondent are not known about their customers occupation. About 10.70 % respondents said that their customers are driver. Only 3.30% respondents said that their customers are business man. It was also observed that 8.3% respondent do their job at daily basis.

A higher proportion of sex workers in the intervention community knew at least 1 HIV/AIDS preventive method (67%), compared with 41% in the control community ( $\chi^2 = 13.61, P = 0.0002$ ). Furthermore, a higher proportion of sex workers in the control group reported 100% condom use (47%), compared with 32% in the intervention group at the time of study initiation ( $\chi^2 = 4.71, P = 0.03$ ) (Ishika, 2004).

Surprisingly, all most all of the (98.30%) respondents had good awareness on Prevention and Control of Sexually Transmitted Diseases, Interestingly, it was observed that there is no association present in level of education and level of awareness  $P > 0.005$ . This finding were opposite in contrast with the study conducted by Nazrul Islam Mondal. This study showed that literate SFSWs have a lower incidence of STDs than illiterate SFSWs. Less than 2% of literate SFSWs have gonorrhoea compared to 34% of illiterate SFSWs; similar patterns have been found for other components of STDs. There is a highly significant (negative) relationship ( $\chi^2$  test,  $p = 0.000$ ) between educational status of respondents and all components of STDs. (Nazrul, 2008). Findings shows that there is association present on level of knowledge and awareness on Prevention and

Control of sexually transmitted diseases, this is statistically significant. (0.005).

### Conclusion

It can be concluded from present study that, improve protocol and health education about Prevention and Control of Sexually Transmitted Diseases, can led to improve the scenario. Raise awareness about STD within the CSW offer numerous challenges as a result of reduced resources related to socio-economics, infrastructure and human resources. However it is possible to achieve substantial progress even within such challenging circumstances through program and training led by trained and empowered professionals.

The only sure way to avoid becoming infected with an STD is monogamy with an uninfected partner. It is important for partners to discuss their sexual and STD histories before having sex. Prevention is possible only if sexually active individuals understand STDs and how they spread. The risk for transmission is dramatically reduced with the use of condoms.

### 6.2 Recommendation

Keeping several limitations in mind researcher have following recommendation to improve the situations of sexually transmitted diseases among commercial sex workers.

1. Education is the most consistent and important determinant for prevention of STDs among all classes of people. So health education is needed for raising the awareness on prevention and control of sexually transmitted diseases among commercial sex workers.
2. Regular Health check-up and health camp should be provided for them.

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