Knowledge and prevalence of Sexually Transmitted Infections Among Female Sex Workers in Ahmedabad city

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Abstracts: **Background & objectives:** Sexually transmitted infections (STIs) continue to present major health, social and economic problems especially amongst Female Sex Workers (FSWs). **Objectives :** 1. To assess the knowledge of STIs among FSWs. 2. To find the prevalence of STIs among them and correlate it with various variable. **Study method:** A cross sectional study was carried out in the two Targeted Intervention areas working in the Ahmedabad city covering 10% of their total registered population. **Results:** Total 353 FWSs were covered. The mean age was 32.85± 7.6 years. Majority was married and either illiterate or educated up to primary standards. Most common symptom of STI known to FSWs was Genital ulcer (67%) and 170 (48%) of FSWs had suffered from STI in last one year, out of them 128(75%) had taken the treatment. Eighty percent FSWs had consistently used condom in last 1 year. Risk of getting STI in 30 to 35 years age group was more than the overall risk (OR>1). The risk of STI was 7.85 times and 2.87 times more amongst the FSWs having duration of sex work ≤ 10 years and those not using condom consistently, respectively. The difference of treatment seeking behavior with duration of sex work and knowledge of STI was highly significant ($p<0.001$). **Conclusions:** Knowledge of symptoms of STI was high. Although the condom use was claimed by the respondents still half of them suffered from STIs in last one year. [Patel V NJIRM 2014; 5(2) :86-90]

Key Words: Condom use, Female Sex Workers, Sexually Transmitted Infections.

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Introduction Sexually transmitted infections (STIs) are a group of communicable diseases that are mainly transmitted by sexual contact and continue to present major health, social, and economic problems in the developing world and also leading to considerable morbidity, mortality and stigma. As per NACO 5% to 6% of sexually active adult population are suffering from some form of STI/RTI and 12% of female clients attending the out-patient departments for complaints related to STI/RTI.[1] Sex work is widespread in India, and occurs on a much larger scale than in many other countries. Women often get involved in sex work due to poverty, marital break-up or because they are forced into it.[2] Unsafe sexual practices, recurrent/ multiple/ asymptomatic STIs and poor access to health care facilities contributes to high rates of STIs and HIV in Sex Workers. [3] Sex workers form an important target group for HIV/STI prevention for three main reasons: the high incidence of STI and HIV among them; their role as 'core groups' populations in the STI and HIV epidemics; and because targeted programmes have been shown to be feasible and (cost) effective in various settings.[4] Hence assessing knowledge and prevalence of STIs as per syndromic treatment guidelines and associated risk factors is essential. So the present study was carried out to know the socio-demographic profile, awareness, prevalence, treatment seeking behavior for STIs and condom use rate.

Materials and Methods: There were two sites identified for the purpose of TI amongst FSWs, namely Jyoti Sangh and Sakhi Jyot (CBO) in Ahmedabad Municipal Corporation area during April –May , 2010. A Cross sectional descriptive type study was carried out. The FSWs registered with Jyoti sangh were 1750 and sakhi jyot were 1750. In the present study 10% of them were included, thus it was decided to select 175 FSWs from each TI by systematic sampling but practically total 353 FSWs (177 from Sakhi Jyot and 176 from Jyoti Sangh) were studied.

Pre-designed & pre-tested proforma was used for collection of data from the respondents. The proforma was first prepared and then field tested amongst 20 respondents by the surveyors who were the outreach workers of other NGOs working for TI amongst single male migrants. After that the final version of the proforma was prepared and used for survey.

The data collectors were trained and were explained about the site and the number of FSWs to be interviewed from that site. The information from the FSWs was collected by personal interview after obtaining the written consent. Five percent sample was concurrently cross checked by the investigators & feedback was given to the data collectors and fallacies were rectified.

Data so collected were analyzed with Epi info version 3.5.1. and trial version of SPSS. Percentages, Proportions, Mean, Standard Deviation, Standard Error, odds ratios, confidence intervals were calculated and suitable statistical tests were applied wherever required.

Results : Total 353 FSWs were studied. Half of the FSWs were in this profession since more than 10 years and more than half (55%) of FSWs had first sexual contact at the age of 18 or less than that. All the FSWs were falling in the age range of 18 to 55 years. Majority i.e. 220(62.32 %) belonged to age group 25-40 yrs. Six belonged to age group < 20 years. Mean age of FSWs was 32.85± 7.6 years. Majority i.e. 226 (64%) were educated up to primary standards. 30% of FSWs were illiterate. 222 (63%) were married. Proportion of married to unmarried /widow/divorcee/ separated was **1.7: 1.** 206 (58.4%) FSWs were having children. (Table 1)

Table 1: Socio- Demographic Profile

Sr. No.	Variable	Frequency (n=353)	Percent
1.	**Age (years)**		
	15-19	6	1.7
	20-24	44	12.5
	25-29	77	21.8
	30-34	73	20.7
	35-39	70	19.8
	40-44	45	12.7
	>44	38	10.8
2.	**Age at first sexual intercourse (years)**		
	≤18 yrs	194	54.95
	>18 yrs	159	45.05
3.	**Education Status**		
	Illiterate	106	30.0
	Primary	160	45.3
	Secondary	66	18.7
	Higher	18	5.1
	Graduate	3	0.8
4.	**Marital Status**		
	Married	222	62.9
	Unmarried	73	20.7
	Widow	30	8.5
	Divorced	15	4.2
	Separated	13	3.7
5.	**FSWs having Children**		
	Yes	206	58.4
	No	147	41.6

FSWs were asked whether they were aware of any symptom of STIs. The information was collected as per the symptoms enumerated in syndromic approach and some other symptoms. Out of total, 315(89.2%) FSWs could mention at least one symptom of STIs. Most common symptom of STIs known to FSWs was Genital ulcer which was known to 237 (67.1 %) FSWs, followed by Vaginal discharge (64.02%). Only 23 (6.51%) FSWs told that STIs can be asymptomatic. None could tell that local lymph node enlargement can be the symptom of STI. (Table 2)

Table 2 Knowledge of Symptoms of STIs amongst FSWs.

Sr. No	Symptom	Frequency (n=353)*	Percent
1	Genital ulcer	237	67.13
2	Vaginal discharge	226	64.02
3	Vesicles over genital	179	50.70
4	lower abdominal pain	160	45.32
5	Itching and scabies	94	26.62
6	Inguinal bubo	-	-
7	Asymptomatic	23	6.51

*multiple responses recorded

History of symptoms of STIs was taken for previous one year from all the FSWs. 170(48%) of FSWs admitted that they suffered from one or the other symptom of STIs during that period. The prevalence of symptom of STI in different age categories ranged from 33.3% to 57.7%. Lowest prevalence was observed in age group less than 20 years and highest in 40 to 45 years. Risk of getting STI in each age group was compared with overall risk by calculation of odds ratio and it was observed that in 30 to 35 years age group the risk

was more than the overall risk as indicated by the odds ratio of > 1 in that age group. In rest other age group the risk was less than the overall risk indicated by the odds ratio < 1 in all other age-groups. Half of FSWs were in this profession since more than 10 years.

Table 3: Association of prevalence of STIs in FSWs to Various Socio-Demographic and Behavioural Factors

Sr. No.	Variable	Symptoms of STIs*		TOTAL (353)	CI of OR
		Present (n= 170)	Absent (n=183)		
1.	**Age(Years)**				
	15-19	2(33.3)	4(66.7)	6	0.096-
	20-24	18(40.9)	26(59.1	44	0.386-
	25-29	36(46.7)	41(53.3	77	0.58-1.55
	30-34	33(45.2)	40(54.8	73	0.54-1.43
	35-39	39(55.7)	31(44.3	70	0.80-2.22
	40-44	26(57.7)	19(42.3	45	0.78-2.71
	>45	16(42.1)	22(57.9	38	0.40-1.52
2.	**Duration of sex work(Years)**				
	≤10	127(71.7)	50(28.	177	4.88-
	>10	43(24.4)	133(75	176	
3.	**Consistent use of condom**				
	No	48(68.6)	22(31.	70	1.65-5.02
	Yes	122(43.1)	161(56	283	
4.	**Knowledge of symptoms of STI**				
	No	16(42.1)	22(57.	38	0.38-1.50
	Some	154(48.9)	161(51	315	

*self reported prevalence of STIs

Table 4 Association of treatment seeking behaviour

Sr. No.	Variable	Treatment Taken		Total	P Value
		Yes (n=128)	No (n=42)		
1.	**Literacy status**				
	Illiterate	31(73.8)	11(26.2	42	**0.79**
	Literate	97(75.8)	31(24.2	128	
2.	**Duration of sex work (years)**				
	≤10	103(81.1	24(18.9	127	**0.002**
	>10	25(58.1)	18(41.9	43	
3.	**Knowledge of STI**				
	No	5(31.2)	11(68.8	16	**<0.00**
	some	123(79.9	31(20.1	154	

The prevalence of symptoms of STI was 71.8% in the FSWs having duration of sex work ≤ 10 years and the same was 24.4% in FSWs having duration of sex work > 10 years. Risk estimation by odds ratio showed 7.85 times more risk amongst the FSWs having duration of sex work ≤ 10 years. The difference observed was statistically highly significant (p< 0.001). Two hundred and eighty three (80%) of FSWs told that they had consistently used condom during the last one year with all the partners. Prevalence of STIs was also associated with consistency of condom use with all partners and it was 68.6 % among those not using condom consistently, where as among those who used condom consistently it was 43.1%. Odds ratio was 2.87 indicating that the risk of STI was 2.87 times amongst those not using condom consistently with all the partners. The difference was also highly statistically significant (p<0.001). Knowledge of STI was categorized as "no knowledge" if FSWs could not mention even a single symptom of STI as per the symptom list of syndromic management. On the contrary if she could mention even a single symptom, she was categorized as having "some knowledge" about STI symptoms.

Prevalence of STI as per the knowledge of symptoms showed that it was more amongst those having some knowledge as compared to those who were unaware about the symptoms. Risk estimation also as showed that odds ratio was 0.76 in the favor of having no knowledge about the symptom of STI. (Table 3)

Out of the 170 FSWs who had symptom of STIs, 128(75.3%) had taken the treatment. Out of those who received treatment, 112(87.5%) were counseled during the treatment. (Figure1)

Treatment seeking behavior was associated with variables like literacy, duration of sex work and knowledge of symptoms of STIs. Out of 42 illiterate FSWs, 31(73.8%) had taken the treatment during the last episode of STI and out of 128 literate FSWs, 97(75.8%) had taken the treatment. The difference in taking the treatment of STI among Literate and Ill-literate FSWs was not significant (P=0.79). Out of 127 FSWs who were in this profession since 10 or less than that, 103(81%) had taken treatment and out of 43 FSWs who were for more than 10 years in this profession, 25(58%) had

taken the treatment and this difference between treatment seeking behavior and duration of sex work was highly significant (p=0.002). Out of 16 FSWs who were not aware of STI symptoms only 5(31%) had taken treatment and out of rest 154 FSWs who were aware of STIs symptoms, 80% had taken the treatment and the difference between treatment seeking behavior and knowledge of STI was highly significant (p<0.001).

Discussions : In the present study the age range of FSWs was 18 to 55 years while a study in south India reported age range of 17 to 48 years.[5] In our study mean age of FSWs was 32.85 ± 7.6 years which was similar to a study in Andhra Pradesh[6] , however N.J.Talsania et al reported mean age of 27 .5 years.[7] Majority of FSWs had first sexual contact at the age less than 18 years. This was similar to the observations in National Behavioral Surveillance Survey(BSS) 2006, NACO.[2] Another study by H. G. Thakor et al reported that 76% of FSWs had their first sexual encounter before the age of 20 years.[8]

Genital ulcer was the most commonly known symptom followed by vaginal discharge, vesicles over genitals and lower abdominal pain respectively.

Prevalence of STIs in last one year was 48% which was similar to the observations in many other studies.[2,9,10] Prevalence of STIs was highest in the age group of 40 to 44 years followed by the age group of 35 to 39 years whereas N.J.Talsania et al reported higher STI prevalence in more than 25 years age group.[7] Higher prevalence of STIs was observed in FSWs having duration of sex work less than 10 years as compared to those who were in the profession since more than 10 years.

Eighty percent FSWs had consistently used condom during last one year which was more than as reported in a study in Chennai.[11] Less prevalence of STIs was observed in our study amongst FSWs who were consistently using condom.

Prevalence of STI was more in FSWs having some knowledge of symptoms of STI indicating that they could seek treatment as soon as they suffered from the alarming symptoms and also they were continuing the sex work in spite of knowing about STIs due to financial reasons often without condom use. However, H.G.Thakor et al did not find significant association between STIs and the different factors .[8]

In the present study 75.3% of FSWs received treatment as per the guidelines of syndromic management and 87.5% out of them received counseling as a part of treatment. Twenty five percent of FSWs in our study did not avail treatment for STIs. The studies by NACO and H.G. Thakor et al reported treatment seeking rate of 8% and 63% respectively.2,8. Treatment seeking was statistically significantly higher amongst FSWs with duration of sex work ≤ to 10 years and amongst FSWs having some knowledge about symptoms of STIs.

Conclusions: Over all Knowledge of symptoms of STIs was good among FSWs but majority knew about only few symptoms so there is a need for generation of awareness regarding all the symptoms of STIs. This will also improve their treatment seeking behavior and will also have an influence on pattern of condom use. On the side of health care providers, importance of counseling as a part of syndromic management needs emphasis. Women empowerment and rehabilitation with the BCC is very much required especially as they become the core group for HIV/STIs. Knowledge of symptom is high amongst FSW meaning prevalence is high. This suggests probable low use of condoms and requires greater efforts for behavior change communications.

Limitations: Reliability of self-reporting is a critical issue in this study. Given that many question asked about past history of behavior and exposure, recall bias is highly probable.

References :

1. National STI/RTI Control And Prevention Programme,NACP, Phase-III, India Http://Www.Nacoonline.Org/Upload/Publication/STI%20RTI%20services/Other%20STI%20Material/STI-Report_7.Pdf Accessed On 1/10/12

2. National Behavioural Surveillance Survey(BSS),2006,Female Sex Workers(Fsws) And Their Clients. National AIDS Control Organization, Ministry Of Health And Family Welfare, Government Of India.
3. Adler M, Foster S, Grosskrurth H, Richens J, Slavin H, Sexual Health And Health Care, Sexually Transmitted Infections, Guidelines For Prevention And Treatment: Health And Population Occasional Paper DFID, London; 1998.
4. HIV/AIDS & STI NEWS From The DFID Knowledge Programme On HIV/AIDS & STI No.4,April 2003 Medical Research Council(MRC)
5. Anuradha Roy , A Comparison Of Female Sex Work, Condom Use And Exposure To Programme Interventions In 3 Indian Districts, CHARME WORKING PAPER NO. 6 ,November 2009.
6. Results Of A Cross-Sectional Survey Of Female Sex Workers In Rajahmundry, Andhra Pradesh, A Summary Report, May 2007, Parivartan Project.
7. N.J Talsania, Dinesh Rathod ,Rakesh Shah,Yogesh Patel, Neeta Mathur. STI Prevalence Among Sakhi Swasthya Abhiyan, Jyotisangh, Ahmedabad :A Clinico Epidemiological Study,.Indian J Sex Transm Dis 2007, Vol 28, No 1
8. H. G. Thakor, J. K. Kosambiya, D. N. Umrigar, V. K. Desai, Prevalence Of Sexually Transmitted Infections In Sex Workers Of Surat City, Indian Journal Of Community Medicine, Vol. 29, No. 3 (2004-07 - 2004-09)
9. Report On Mid Term Review Of Sexually Transmitted Infection Services, National AIDS Control Programme Phase III, December 2009, Ministry Of Health And Family Welfare, Government Of INDIA.
10. V K Desai, J K Kosambiya, H G Thakor, D D Umrigar, B R Khandwala, K K Bhuyan.: Prevalence Of Sexually Transmitted Infections And Performance Of STI Syndromes Against Aetiological Diagnosis, In Female Sex Workers Of Red Light Area In Surat : India. Sex Transm Infect 2003;79:111–115
11. Indian Community Welfare Organization,(I.C.W.O.), Assessment Research Of Sex Workers And Their Clients In Chennai Supported By TNSACS, May 2002.

Conflict Of Interest: None
Funding: none