

**Original Article**

# SELF REPORTED CONDOM USE AND INCIDENT SEXUALLY TRANSMITTED DISEASES (STD) AND REPRODUCTIVE TRACT INFECTIONS (RTI) AMONG FEMALE SEX WORKERS: IS THERE ANY ASSOCIATION?

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## ABSTRACT

**Background:** Assessing the Quality of self reported condom use always remains a challenge as it cannot be measured and studies also shows the high reported condom use always do not report lower incidence of STIs among High Risk Groups.

**Aims and Objective:** The study was undertaken with the objective to find any association between self reported condom use and incident STIs/ RTIs among High Risk Group such as Female Sex Workers.

**Methodology:** It is a cross sectional study design carried out from August 2009 – June 2010, comprising of 519 Female Sex Workers of Surat City who are the beneficiaries of SAHYOG MAHILA MANDAL and EKTA MAHILA MANDAL (CBOs) and PARAS-PSM Project. Sampling Technique used was Purposive sampling.

**Results:** 1) 99.42% Female sex workers reported condom use with their clients in last week and of them 81.3% used condom every time of their each sexual acts. 2) 72.45% of FSWs reported of using condom with their husband/ regular partner and 61.7% of FSWs every time used condom with regular partner. 3) In spite of reporting of consistent condom use with client/ regular partner/husband around half of FSWs (client- 48.4%, regular partner/husband- 44.8%) found positive for STI/RTI on clinical examination( Per Vaginal/Per Speculum).

**Conclusions:** The study reveals that in high risk population self reported condom use is not associated with lower STD incidence.

**Key words:** Sexually Transmitted Infections, Reproductive Tract Infections, Female Sex Workers, condom

## INTRODUCTION

Consistent and correct use of male condoms can reduce (though not eliminate) the risk of STD

transmission<sup>1,2</sup> Inconsistent use can lead to STD acquisition because transmission can occur with a single sexual act with an infected partner. Similarly, if condoms are not used correctly, the

protective effect may be diminished even when they are used consistently.<sup>1</sup> Majority of public health interventions designed to reduce the risk of STDs often are based on self-reported condom use<sup>3</sup>. A number of issues complicate measuring condom use. First, condom use is a private act that cannot be directly observed in most instances. Second, there are no good physiological indications that a condom has been used, as there are for many medications, although tests to identify whether a condom has not been used are being examined.<sup>4,5</sup> The risk of STI is related to several inter-related factors, including the susceptibility of the uninfected person, the infectiousness of the infected partner, the transmission efficiency of the type of STI and other variables even more difficult to measure than condom use. Thus, most studies and program evaluations rely on self-report of condom use despite it being subject to biases related to recall periods<sup>6</sup>. There is no real 'gold standard' for validating self-reported sexual behaviour and sex worker reporting of condom use is clearly subject to social desirability bias<sup>7</sup>. So the study was undertaken to determine if there is an association between recent self-reported condom use and incident STI/RTI in a high risk population such as FSWs.

## METHODOLOGY

It is a cross sectional study design conducted from August 2009 to June 2010 among 519 Female Sex Workers of Surat City within the age group of 18-49 years, who are the beneficiaries of PARAS-PSM project and Community Based Organisations (EKTA and SAHYOG) and those who denied participating in the study, those who were in menstruation at time of study and those in whom hysterectomy was done are excluded from the study.

Sample Size 519 derived from<sup>8</sup>:  
 $(n = NZ^2pq / (N-1) L^2 + Z^2pq)$

Where N= 3953 (Total no. of FSWs in all 3 units of PARAS-PSM and SAHYOG and EKTA Mahila Mandal)

## RESULTS

**Table 1: Distribution of Female sex workers according their condom use in last week**

Partner Type	Condom use (%)			Total
	Yes	No	No reply	
Client	516 (99.4)	3 (0.6)	0	519
Regular partner/ husband	376 (72.4)	131 (25.2)	12 (2.3)	519

(p= prevalence of vaginal Discharge (72%) on P/S examination as per HIV Sentinel Surveillance 2007, among the same population.<sup>9</sup>, L= 5% is taken as allowable error i.e. 3.6, Z= 1.96, q= 28 i.e (100-p)

**Ethical Approval:** Ethical approval obtained from Human Research Ethics Committee (HREC), Government Medical College, Surat prior to study and Female sex workers were first approached through meetings to provide information about the study and addressed any outstanding concerns.

### Procedure in the clinic:

Before starting the interview written informed consent was obtained. The questionnaire included questions related to their personal information, their sexual behaviour and condom use in last week with their clients (who pays every time for sex ) and regular partners (who regularly visits the particular FSWs and either pay or do not pay for having Sex with FSWs or living with FSWs under same roof just as husband ). In the present study history regarding last week of condom use with client or regular partner/ husband was asked because the longer recall periods are less reliable especially for behaviours that are frequent, so reference periods for sexual behaviours in published studies always varied from last sex act, past week, to months<sup>10</sup>. Also the secondary data of condom use among FSWs of PARAS-PSM also suggest 99.6% condom use with clients and 97.8% condom use with regular partners<sup>9</sup>.

After the collection of this information's, clinical examinations were conducted (General examination, Per Speculum and Per Vaginal examination) and as per National Guidelines on Prevention, Management and Control of Reproductive Tract Infections including Sexually Transmitted Infections, FSWs were diagnosed for any STIs on Clinical Examinations.<sup>11</sup>. After the completion of the quantitative data, data entry was undertaken in Microsoft Excel 2007.

**Table 2: Distribution of female Sex workers according to frequency of condom use with clients and Regular Partner / Husband in last week**

Partner Type	Frequency of Condom use (%)				Total
	Every time*	Most time**	Sometimes***	Occasional****	
Client	420 (81.3)	81 (15.7)	13 (2.59)	2 (0.41)	516
Regular partner/ Husband	232 (61.7)	66 (17.55)	42 (11.17)	36 (9.57)	376

\* 100%, \*\*50% to 75%, \*\*\*25% to 50%, \*\*\*\*< 25%

Almost all (99.42%) Female sex workers reported condom use with their clients while 72.45% of FSWs reported of using condom with their husband/ regular partner.

Out of total FSWs reported condom use with their clients, 81.3% used condom every time of their sexual acts, and 61.7% FSWs reported every time condom use with regular partner/husband.

**Table 3: Distribution of STI/RTI according to consistent condom use with client/regular partner/husband**

Consistent condom use	STI/RTI (%)		Total
	Positive	Negative	
Client	204(48.4)	216(51.5)	420
Regular partner	104(44.8)	128(55.1)	232

$\chi^2 = 0.70$ ;  $p = 0.40$

In spite of consistent condom use with client/regular partner/husband around half of FSWs (client- 48.4%, regular partner/husband- 44.8%) found positive for any STI on clinical examination( Per Vaginal/ Per Speculum Examination), however the association between self reported consistent condom use and STI/RTI was found not significant statistically.

**Table 4: Percentage of STIs/RTIs according to clinical findings on P/S & P/V examination**

Clinical presence of RTI/STI	Number (%)
Vaginal discharge	160 (64)
Vaginitis and cervicitis	40 (16)
Lower Abdominal Pain	25 (10)
Cervicitis	17 (6.8)
Herpes	6 (2.4)
Bubo with vaginal Discharge	1 (0.4)
Multiple Tinea over Genitalia	1 (0.4)
<b>Total</b>	<b>250 (100)</b>

Out of the total FSWs (519), 64% had vaginal discharge, 16% had both cervicitis and Vaginitis, 10% had lower abdominal pain, 6.4% had

cervicitis, and 2.4% had herpetic infection on clinical examination.

## DISCUSSION

In present study, (Table 1) 99.42% Female sex workers reported condom use with their clients, while 72.45% reported of using condom with their husband/ regular partner as well as 81.3% and 61.7% FSWs (Table 2) used condom every time of their sexual acts in last week with the clients and regular partner respectively. Similar finding is seen in a study conducted by Patel Seema et al among FSWs of Surat city in 2006, which revealed that 99.7% of FSWs had used condom with client while 98.5% CSWs of on role category said that their clients uses condom most of times<sup>12</sup> while in a study conducted by Audrey Pettifor et al on FSWs of Madagascar, USA, it was found that more than 40% of participants reported never using a condom with their main partner, compared to 0.5% who never used male condoms with clients. Condom use at the last sex act with main partners was reported by 26.6% of women compared to 61.7% with clients<sup>13</sup>. Also in present study it was found that in spite of consistent condom use with client/ regular partner/husband around half of FSWs (Table 3) found positive for any STI/RTI on clinical examination( Per Speculum/ Per vaginal), similar finding was seen in a cohort study of condom use to prevent incident STDs: The validity of self reported condom use done among attendees of STD clinics of Baltimore USA in 1992 by Jonathan M et al found that 21% of participants reported using condom at every sexual act over a period of 30 days, 21% reported of occasionally using condom and 59% reported of not using condom. Then at a follow up period 21% of subjects had new incident cases of gonorrhoea, Chlamydia, syphilis or trichomoniasis. 15% of men who 'always' condom users had incident STD compared with 15.3% of 'never' users. 23.5% of women who 'always' users had incident STD compared with 26.8% of 'never' users. These findings suggest that self reported condom use measures even in research setting may be

subjected to substantial reporting bias<sup>14</sup>. Whereas a contrast finding was observed in Sonagachi project which is WHO model of STD/HIV prevention that HIV prevalence decreases below 10% when condom use rates increases to 90% among sex workers in Kolkata<sup>15</sup>. Similar finding was observed by Rojanapitahyakorn W, during 1992 in Thailand among sex workers during 100% condom intervention programme revealed that condom use rate was observed 50% in 1990 and reached upto 90% by December 1991, reflected decline in STD rate from 25% to less than 1%<sup>16</sup>

While in present study 64% (**Table 4**) vaginal discharge was observed with highest rate. These may be due to presentation of Reproductive Tract Infections (RTI), because Consistent and high use of condom will not affect vaginal discharge. Male condom will not cover all part of external genitalia of male but only penis. This may be one of the reasons of transmission of STIs.<sup>2</sup> Presence of STIs like cervicitis, Lower Abdominal Pain and Herpes remain 34%, which also goes against of consistent and correct condom use.

The present study failed to find any significant association statistically between self reported condom use and incident STI and RTI on clinical examination (Per Vaginal/Per Speculum).

## CONCLUSIONS

High rate of condom use is observed with clients (99.4%) and regular partner/ husband (72.4%) and overall STI is observed as 34%. This may be due to self reported condom use among these High Risk Group (FSWs).

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