



## Status of Syndromic Management of Clients and their Partners at STI Clinic in a Suburban Area of Mumbai, India

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### ABSTRACT

**Introduction:** Sexually transmitted infections (STI) are major public health problem of economically productive age group. Worldwide more cases of STI are seen among reproductive age group i.e., 15 to 49 years. World Health Organization estimates 340 million curable STIs each year. In India, 6% to 15% population is infected with one or more STIs. Hence, present study was conducted at STI clinic in suburban area. The objectives were to assess the socio-demographic factors, syndromes suffered and factors influencing treatment outcome among clients attending STI OPD. **Methodology:** 274 clients participated in the longitudinal study over a period of 6 months. **Results:** 232 female clients (84.7%) proved female preponderance at STI clinic. Around 194 cases (70.8%) belonged to the age group 25 to 44 years which is economically productive age group. Married females (92.24%) and unmarried males (59.5%) presented with STI syndromes. Among males, urethral discharge (66.67%) and among females, vaginal discharge (82.76%) were the predominating symptoms. The clients studied up to 10th standard, constituted 48.54% of the study sample. 53.28% of the clients belonged to upper lower socio-economic status. About 211 (90.9%) women were housewives. About 31 (73.8%) males were semi-skilled and skilled laborers. **Conclusion:** This study highlighted the vulnerability of females to STIs. The reproductive and economically productive age group forms major part of the affected population. The gap between the knowledge and application of correct and consistent use of condom needs to be reduced. Special emphasis on partner notification and their management will have an impact on prevention of STIs.

**Keywords:** STI (Sexually Transmitted Infections), Syndromic management, Partner notification

### INTRODUCTION

Sexually transmitted infections are recognized as public health problem among women of reproductive age. Worldwide 340 million people are affected; of which 30 million reside in India. The disease prevalence is estimated to be 6% in India. Prevalence of STI/RTI in Indian women is 23% to 43% and in men is 6% to 9%. At any given point of time, only 1% of the partner treatment is completed.

Women are especially vulnerable to STI. One of the cornerstones of STI/RTI control program is adequate case management and partner notification. Knowledge of both symptoms and demographic changes in these cases may help us cater to the needs of the target population in STI clinics. In general, treatment has been recommended for all partners sexually exposed to the index case to curtail transmission and prevent morbidity in the partners. Therefore, this study was conducted to identify the factors and gaps in successful treatment of clients attending STI Clinic.

### Aims and Objectives

- To study the socio-demographic characteristics of clients attending STI Clinic.
- To assess the syndromes suffered by clients.
- To identify the determinants influencing outcome of syndromic management of clients.

## METHODOLOGY

### Study design

This is a longitudinal study.

### Study site

The STI clinic is located in urban health centre of a suburban area of Mumbai.

### Study period

Six months (October 2012 to March 2013).

### Study participants

Participants are the clients of STI clinic and their partners.

### Inclusion criteria

All adult clients of STI clinic and their partners after obtaining their consent.

### Exclusion criteria

1. Clients and their partner/s who did not give consent.
2. Clients below 18 years of age.

### Withdrawal criteria

1. Client/partners becoming too distressed during the interview.
2. Clients/partners wanting to leave the study midway.

### Sampling method

This study follows universal sampling method.

### Sample size

274 clients and their partners participated in the study.

### Study procedure

**Study instrument:** Pre-tested, validated semi-structured questionnaire designed as per WHO Library Cataloguing, NACO and CDC guidelines and modified as per the pilot study findings.

### Data collection

After screening of clients for STI complaints in General OPD, they were directed to STI clinic. Here the consent form was read to them in the language they could understand. Then after obtaining consent, in-depth personal interview was conducted. They were then assured about confidentiality and privacy and also counselled for partner notification and management.

### Statistical analysis

Data was analysed using SPSS software version 17.0. Statistical tools included mean, median, range, proportions and chi-square.

## RESULTS

The Table 1 shows that 70.80% were from the age group 25 to 44 years, 83.21% were married, 48.54% were educated up to 10th standard and 25.91% were illiterate. About 70.1% women were housewives and 12.7% subjects were skilled labourers.

Table 1 Socio-demographic profile of subjects

Age in years	Male	Female	Total
Less than 24	18	53	71 (25.91)
25 to 44	24	170	194 (70.80)
45 and above	0	9	9 (3.84)
<b>Marital status</b>			
Unmarried	25	10	35 (12.77%)
Married	14	214	228 (83.21%)
Divorced/Separated/Widow	3	8	11 (4.01%)
<b>Educational status</b>			
Illiterate	6	65	71 (25.91%)
Up to 5th standard	13	43	56 (20.44%)
Up to 10th standard	23	110	133 (48.54%)
12th standard and above	0	14	14 (5.10%)
<b>Occupation</b>			
Unemployed/Housewife	3	211	214 (70.10%)
Unskilled	8	9	17 (6.20%)
Semiskilled	16	2	18 (6.57%)
Skilled	15	10	35 (12.77%)
<b>Socio-economic status</b>			
Upper middle	1	11	12 (4.38%)
Lower middle	8	108	116 (42.34%)
Upper lower	33	113	146 (53.28%)
<b>Knowledge of using condom</b>			
Correct	16	53	69 (25.18%)
Incorrect	10	11	21 (7.66%)

Table 2 shows that 73.72% subjects were married and living together with their regular partners. About 88.34% were unmarried and had no regular partners whereas 12.31% were married and staying intermittently with their partners.

Table 2 Marital status of subjects and living with regular partner

Status	Married	Unmarried	Widow	Total
No regular partner	0	30	8	38 (13.86%)
Living together	202	0	0	202 (73.72%)
Not living together	0	4	0	4 (1.46%)
Living intermittently	30	0	0	30 (10.95%)
Total	232	34	8	274

Vaginal discharge was the commonest syndrome (70.08%) in females, followed by lower abdominal pain (12.77%). About 10.22% males presented with urethral discharge (Table 3).

Table 3 Syndromes presented by subjects on the first visit

Syndromes	Male	Female	Total
Urethral discharge	28 (66.67)	NA	28 (10.22)
Vaginal discharge	NA	192 (82.76)	192 (70.08)
Non-herpetic genital ulcers	11 (26.19)	5 (2.15)	16 (5.84)
Herpetic genital ulcer	2 (4.76)	0	2 (0.73)
Lower abdominal pain	0	35 (15.09)	35 (12.77)
Inguinal bubo	1 (2.38)	0	1 (0.36)
Total	42	232	274

Table 4 shows that literacy status of the subjects is statistically significant with risk perception ( $P < 0.001$ ) and follow up visit in STI clinic ( $P < 0.02$ ). The literate subjects are seen having non-regular partners and not using condom. When partners didn't receive treatment, the STI symptoms persisted among the subjects (Table 5).

Table 4 Relation between literacy of subjects with various determinants

Risk perception	Yes	No	Total	P value
Illiterate	3	68	71	X <sup>2</sup> =16.96
Literate	34	169	203	
<b>Having non-regular partners</b>				
Illiterate	10	61	71	X <sup>2</sup> =3.62
Literate	30	173	203	
<b>Condom usage with non-regular partner</b>				
Illiterate	1	9	10	F=0.9836
Literate	3	27	30	
<b>Condom usage with regular partner</b>				
Illiterate	2	66	68	X <sup>2</sup> =26.46
Literate	7	161	168	
<b>Follow up visit in STI Clinic</b>				
Illiterate	23	48	71	X <sup>2</sup> =6.03
Literate	100	103	203	

Table 5 Outcome of syndromic case management among subjects with partner treatment

Partner treatment	Symptoms not relieved	Symptoms relieved	Total
Given	30	40	70
Not given	92	18	110
Total	122	58	180

X<sup>2</sup>=32.59; dF=1

## DISCUSSION

The present study had 274 participants of which 232 (84.7%) were females. Female preponderance (85%) is also documented by Neerja Jindal [1-12]. In this study, 92% females were married, and 57% males were unmarried. STI/RTIs are more reported in married women [13]. Suneela Garg has reported higher percentage (72.4%) of married males suffering from STIs [14].

Various studies have reported 86.3% of STIs in age group 15-29 years [1], 62% in 21-30 years [10]. Our study showed 194 participants (70.8%) in the age group of 25 to 44 years. In this study 203 (74.08%) participants were literate. This is in accordance with the Census of India, 2011 and findings from other studies [2,8]. Total 146 (53.28%) participants were from upper lower socio-economic class of which 113 were females. This finding is also observed in other studies [4,5]. Out of 214 (70.1%) unemployed participants, 211 (90.95%) were housewives. These findings highlight the vulnerability of women to STIs and importance of male participation in sexual and reproductive health of women [7].

Only 53 females out of 274 (19.34%) participants had correct knowledge of using condom. Although 62% males were aware of condom, only 38% knew about its correct use. 202 (72.7%) participants were married and staying together with their partner. About 10.95% married subjects were not staying together regularly due to occupational migration and 13.8% were not having regular partners. This finding is similar to that reported by Ragi Ravi [13] while higher percentages (99.6%) than our study are reported by Ray [9].

Among male participants, syndromes like urethral discharge (66.67%), non-herpetic ulcers (26.19%), herpetic ulcers (4.76%) and inguinal bubo (2.38%) were seen in decreasing order. Among female participants, syndromes like vaginal discharge (82.76%), lower abdominal pain (15.09%) and non-herpetic ulcers (2.15%) were seen. Similar finding is reported in studies by Shilpee Choudhry [10] and Karun Sharma [11].

When literacy status of the participants was examined against various indicators, it was observed that risk perception (p=16.96), condom usage with regular partner (p=26.46) and follow up visit in STI clinic (p=6.03) were significantly associated. It was observed that literate subjects had more risk perception and they did follow up in STI clinic. Only

3.81% subjects used condom with their regular partners and 10% with non-regular partners. The poor condom usage with regular partners is noted from Andhra Pradesh [6]. The risk perception has been reported as 34.9% from Delhi, India [15] while same was 13.86% in our study.

### CONCLUSION

The STIs were predominantly seen in reproductive age group subjects. The females were married but unemployed and males were unmarried but employed. Even though literacy status was good, the correct and consistent use of condom was very poor. It was only 10% among non-regular partners; compounding the risk of contracting STIs. Only 11% married subjects had migrant partners while 13.8% subjects didn't have regular partners. Both these groups potentially had high risk behaviour. Urethral discharge among males and vaginal discharge among females were the predominating symptoms. Herpetic ulcers were seen among males. The partner treatment and follow up in STI OPD was poor resulting to a cure rate of only 21%, thus continuing as a public health problem. The emphasis on correct and consistent use of condom and partner management during counselling session will have an impact on STIs among the clients attending STI clinic.

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