Original Article

Treatment seeking behaviour of STI clients in a tertiary care centre of North India: A cross sectional study

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Abstract

Objective: (1) To determine the treatment seeking behaviour of STI clients. (2) To ascertain the relationship of socio-demographic factors and sexual behaviours with the treatment seeking component in STI clients. **Methods:** This cross-sectional study was conducted in Department of Dermatology, Faculty of Medical Sciences, King George's Medical University, Lucknow, Uttar Pradesh. After obtaining approval from the Institutional Ethical Committee, the data collected daily from master register, STI/RTI patient wise register and counsellor's patient diary during the study period August 2013 to July 2015 was processed by Microsoft Excel program. The counsellor also recorded the source of information regarding STI Clinic. The information collected regarding bio-social characteristics, high risk sexual behaviours and source of knowledge about Suraksha clinic was analysed. **Results:** Our results showed that literacy, male sex, urban residence and employment were some of the parameters which significantly improved the health seeking behaviour of STI clients. These variables were associated with higher odds for seeking treatment when adjusted for other variables. Similarly group with bisexual and homosexual behaviour had significantly lower odds for seeking treatment when adjusted for other variables. **Conclusion/Key Message:** The optimal use of information, education and communication (IEC) techniques needs to be strengthened to further improve the utilization of STI clinic services at tertiary care teaching hospitals.

Key words: Direct walk in STI client, referred STI client, sexually transmitted infection clinic, sexual behaviour

INTRODUCTION

As per the World Health Organization (WHO), there are 499 million episodes of curable sexually transmitted infections (STI) like syphilis, gonorrhoea, chlamydia and trichomoniasis occurring every year, out of which significant proportion occured in the developing countries.[1] It has been estimated that 340 million new cases of Reproductive Tract Infections (RTIs), including STIs emerge every year with 151 million of them occurring in Asian countries.[2] STI/RTI are an important public health problem in India. A community based STI/RTI prevalence study was conducted during 2002-03 by the Indian Council of Medical Research (ICMR) which showed that 6% of the adult population in India had one or more STIs/RTIs amounting to about 30-35 million episodes of STI/RTI every year in the country.[3] STIs/RTIs may result in many diseases like pelvic inflammatory diseases, infertility, adverse

pregnancy outcomes and increased susceptibility to Human Immunodeficiency virus (HIV). STI enhances the HIV acquisition and transmission risk by 4-10 times and even STI prevalence is a good marker for transmission of HIV.[4]

Due to the severe consequences and other associated morbidities, the early detection and treatment of RTIs and STIs is an important public health issue.[5] District Level Household Survey-3 reported that only 40% of the diagnosed STI/RTI cases took treatment.[6] The control of STI/RTIs helps to decrease HIV infection rates and provides a window of opportunity for counselling on HIV prevention and improving sexual and reproductive health.[7] With all these problems along with lack of awareness of the infection whacking at one end, the patients even after the appearance of various symptoms, wander to various health agencies for relief and thus lose their vital time. Despite the nature of the problem, the studies in India on the treatment seeking behaviour in STI/RTI clients are scarce. No previous studies have been carried out at any STI clinic to study about this treatment seeking behaviour. Moreover the conclusion drawn from this study may be useful for changing the treatment approach for managing STIs. It might go a long way in changing the pattern of counselling and public health measures for tackling such problems.

The present hospital based cross-sectional study was undertaken for the purpose of knowing the socio-demographic and behavioural factors that affects the treatment seeking behaviours in STI/RTI clients.

Objectives

- To determine the treatment seeking behaviour of STI clients.
- To ascertain the relationship of socio-demographic factors and sexual behaviours with the treatment seeking behaviours in STI clients

METHODS

This cross-sectional study was conducted in Department of Dermatology, Faculty of Medical Sciences, King George's Medical University, Lucknow, Uttar Pradesh. After obtaining approval from the Institutional Ethical Committee, the data collected daily from master register, STI/RTI patient wise register and counsellor's patient diary during the study period August 2013 to July 2015 was processed by Microsoft Excel

program. The counsellor also recorded the source of information regarding STI Clinic. The information collected regarding bio-social characteristics, high risk sexual behaviours and source of knowledge about Suraksha clinic was analysed. The treatment seeking behaviour in subjects who directly walked-in to the STI/RTI clinic was considered better and those who were referred-in by Non-Government Organizations (NGOs), ART centers or from any other sources was considered poor beacause of the time lapse present in the latter.

Statistical analysis

Statistical analysis was performed using the Statistical Package for Social Sciences, version 20.0 (SPSS, Chicago, USA). The continuous variables were described as mean ± standard deviation (SD). The categorical variables were presented in terms of their frequencies and proportions. For comparison of means between the groups, independent *t*-test was used. In order to test the association between attributes, Pearson's Chi-square test/Fisher's exact test was used. The univariate and multivariate logistic regression analysis was used to find the strength of the associations and to determine the predictors of the health seeking behaviour of STI clients. The odds ratio (OR) or adjusted odds ratio (aOR) and its 95% confidence interval (CI) was calculated. A *P* value of <0.05 was considered significant.

RESULTS

Majority of the patients (84.7%) accessed the STI/RTI clinic directly and only 15.3% were referred. The main source of knowledge about STI clinic was television (57.3%) followed by hoardings (21%), newspaper (12.7%) and friends (9.1%) [Figure 1].
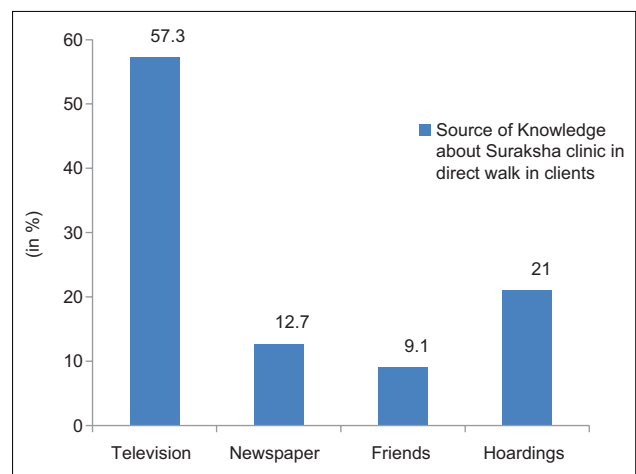

Figure 1: Source of knowledge about suraksha clinic in direct walk in clients

Table 1 presents the distribution of demographic characteristics and its relationship with the health seeking behaviour of the clients. The mean age of the subjects was 30.1 ± 9.4 years and the direct walk in group was younger by 3.7 years than those who were in the referred group. Pearson's Chi-square test revealed that health seeking behaviour had a significant association with age group (adolescents vs adults), sex (males vs females), religion (Hindus vs Muslims), place of residence (rural vs urban), education (literate vs illiterate) and job (employed vs unemployed).

Table 1: Demographic characteristics and treatment seeking approach of clients (*n*=1746)

Variables	Subjects		Treatment seeking approach				P
			Direct walk in		Referred		
	No.	%	No.	%	No.	%	
Age groups							
<19 years	122	7.0	117	7.9	5	1.9	<0.001
≥19 years	1624	93.0	1361	92.1	263	98.1	
Mean (SD)[a]	30.18 (9.4)		29.62 (9.4)		33.3 (8.6)		
Gender							
Male	1524	87.3	1302	88.1	222	82.8	0.017
Female	222	12.7	176	11.9	46	17.2	
Religion							
Hindu	1551	88.8	1324	89.6	227	84.7	0.02
Muslim	195	11.2	154	10.4	41	15.3	
Place of residence							
Rural	315	18.0	293	19.8	22	8.2	<0.001
Urban	1431	82.0	1185	80.2	246	91.8	
Education							
Literate	1427	81.7	1337	90.4	90	33.6	<0.001
Illiterate	319	18.3	141	9.6	178	66.4	
Job							
Employed	1276	73.1	1035	70.0	241	89.9	<0.001
Unemployed	470	26.9	443	30.0	27	10.1	

Chi-square test used; *P* value that are bold denotes significant at <0.05.
[a]Independent "*t*" test used

Table 2: High risk sexual behaviours and treatment seeking approach

Sexual behaviour	Subjects		Direct walk in		Referred		P
	No.	%	No.	%	No.	%	
Premarital/extramarital contacts							
Present	1541	88.3	1282	86.7	259	96.6	<0.001
Absent	205	11.7	196	13.3	9	3.4	
Sexual partner							
Single	978	56.0	854	57.8	124	46.3	<0.001
Multiple	564	32.3	428	29.0	136	50.7	
Sexual Behaviour							
Bisexual	14	0.8	5	0.3	9	3.4	<0.001
Heterosexual	1663	95.2	1435	97.1	228	85.1	
Homosexual	69	4.0	38	2.6	31	11.6	

Chi-square test used, *P* value that are bold denotes significant at <0.05

In Table 2 the distribution of sexual behaviours about health seeking is shown. Pearson's chi square showed a positive association (*P* value <.001) between various sexual behaviours and health seeking. Patints with premarital/extramarital contacts came to the STI clinics only after referral (96.6%) whereas those without such contacts came directly. Similarly, clients with single and no partners (57.8%) came to the STI clinics directly as compared to those with multiple contacts (13.3%). In addition, the bisexual and homosexual patients (0.3% and 2.6% respectively) were less aware of STI clinic as compared to the heterosexual group and hence were more in the referred group.

Table 3 shows the univariate and multivariate binomial logistic regression analysis of factors influencing treatment seeking behaviours of STI patients.

Table 3: Regression analysis of factors influencing treatment seeking approach

Factors[b]	Direct walk in (95% CI)	
	Unadjusted odds ratio	Adjusted odds ratio
Age groups		
<19 years	4.52 (1.83-11.17)	1.45 (0.44-4.77)
≥19 years		
Sex		
Males	1.53 (1.07-2.18)	1.51 (1.29-1.94)
Females		
Religion		
Hindu	1.55 (1.07-2.25)	1.23 (0.747-2.03)
Muslim		
Residence		
Urban	2.76 (1.75-4.35)	5.30 (2.93-9.60)
Rural		
Education status		
Literate	18.71 (13.76-25.44)	37.13 (24.59-56.05)
Illiterate		
Job		
Employed	3.82 (2.52-5.77)	4.59 (2.48-8.48)
Unemployed		
Premarital/extramarital contact		
Absent	0.227 (0.115-0.449)	0.642 (0.041-10.10)
Present		
Sexual partner		
Single	0.281 (0.135-0.584)	0.887 (0.095-9.30)
Multiple	0.128 (0.062-0.267)	0.792 (0.042-8.48)
No partners		
Sexual behaviour		
Bisexual	0.088 (0.029-0.266)	0.031 (0.01-0.11)
Homosexual	0.195 (0.119-0.319)	0.208 (0.11-0.41)
Heterosexual		

[b]Last category in each group is taken as reference category; Referred-in category of the outcome variable is compared; Nagelkerke's R square=49.0%; Values that are bold indicate *P* value <0.05

The univariate analysis shows, literates had 18.7 times higher chances (95% CI = 13.76-25.44) of direct walk-in when compared to illiterates and this difference was statistically significant. Similarly significantly higher odds for direct walk-in were affiliated with ensembles like adolescents, employed, urban residents, Hindus, males when compared to their counterparts. Patients with premarital or extramarital contact, with multiple partners and having bisexual or homosexual behaviours were found to have lower odds of direct walk-in and the difference between two groups was statistically significant.

The predictors of direct walk-in were determined by the multivariate model proposed. Results showed that literacy, male sex, urban residence and employment were some of the parameters which significantly improved the health seeking behaviour of STI clients. These variables were associated with higher odds for seeking treatment when adjusted for other variables. Similarly group with bisexual and homosexual behaviour had significantly lower odds for seeking treatment when adjusted for other variables.

DISCUSSION

Overall conduct for seeking treatment was observed to be superior for direct walk in clients as compared to the referred group because 6 out of every 7 clients advanced directly to the clinic. Both socio-demographic as well as sexual behaviours played a significant role in determining the treatment seeking approach of the clients.

Age
The younger generation are more acquainted with the means of acquiring knowledge and that too with the available internet facilities. Patients under the age of 19 years had better treatment approach, possibly due to their knowledge and peer group discussions. This study also highlights the difficulty in tackling of non contact problems like Dhat syndrome and other problems in the younger age group because of lack of knowledge and sex education that could have motivated them to directly walk in to the STI clinic.

Sex
Out of sample group, 87.3% patients were male and 12.7% were females. The low reporting of female to the STI clinic may be due to mostly asymptomatic nature of STDs in females, lack of knowledge and various social taboos in our male dominant society. Our findings are in accordance with Rashmi Sharma *et al.*[8] and also of national RCH II report, which showed higher awareness about STI/RTI in males as compared to females.In 15 out of the 20 states, treatment seeking behaviour among females was found to be poor, which further declined by 43% from 1998-99 to 2002-04.[7]

Religion
In our sample group 88.8% patients were Hindus and 11.2% were Muslims. Whereas in Uttar Pradesh Muslims constitute 18.5% of the total population and hence a lower percentage in our sample may not be an exact representative of the state population.[9] Our study showed poor treatment seeking conduct in Muslims. This could be attributed to the fact that there was significantly higher proportion of illiterates (25.6%) in the former as compared to the Hindus (17.4%). It could also be due to inter social and inter religion differences in the knowledge and health seeking behaviour, especially towards STDs.

Residence
82% of the total population was urban and only 18% were rural. The low attendance of the rural population at STI clinic signifies lack of awareness and knowledge about STIs, lack of internet facilities and absence of STI clinics in the rural area making their number increased in the referred group.

Education
In our study, we found 81.7% of the patients literate and 18.3% of the total were illiterate. Illiteracy also has a considerable impact on the Human Development Index of a country. It is supported by the fact that 65.5% of the rural population of Uttar Pradesh being illiterate, makes them vulnerable to poor treatment seeking behaviours.[9]

Employment
Out of total 1746 people in the study about 73.1% were employed and 26.9% were unemployed. Unemployed patients are more likely to be poor. This causes a negative impact on their treatment seeking behaviour, thereby increasing their attendance to low quality treatment providers. In concordance with this, a study done in Uttarakhand reported that 76.9% of people with STI preferred being treated with quacks as they felt it economical and sufficient.[10]

High risk sexual behaviour
In our study we had significantly higher proportions of illiterate patients having multiple sex partners (22.2%) as compared with no partners (5.9%). Their proportion remained higher not only in groups with premarital or extramarital contacts (19.8%)

but also in homosexuals (29.0%). With evidences suggesting futility of barrier methods in these groups, lack of awareness due to illiteracy might have inclined this group to poor treatment seeking approach.

Strengths and limitations

To our knowledge, this is the first study in India that compared the profile of direct walk in patients and referred STI/RTI patients. Large sample size also adds substantive strength to our study.

However, further intensive studies are desired to elucidate the disease patterns, difference in cure rate and loss of vital time before seeking treatment in high risk group patients.

CONCLUSIONS

More number of hoardings at public places, further increased use of television and newspaper to spread awareness about STI and STI/RTI clinics can lead to increased utilization of such tertiary care clinics to optimum by both general population and individuals in the high risk group. Improvising treatment seeking by raising the awareness about STI/RTI combined with early detection and treatment to can help seal some gaps in the global efforts to combat HIV/AIDS.

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Conflicts of interest

There are no conflicts of interest.

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