

Original Research Article

## **A Cross-Sectional Study of Morbidity due to Sexually Transmitted Infections and Health Seeking Behavior in Male Migrants of Urban Slum of Mumbai**

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### **ABSTRACT**

**Background:** Migrants come across a various problems at place of destinations due to poverty, illiteracy, different culture and language etc. Migrants are staying away from their native place which results in loneliness and emotional stress. All these factors along with peer pressure may indulge them in risky sexual behavior leading to Sexually Transmitted infections (STI) and HIV AIDS

#### **Objectives:**

1. To estimate the prevalence of STI Symptomatics.
2. To identify the most common reported symptoms of STI.
3. To assess health seeking behavior for STI symptoms.

**Materials and Methods:** Community based Cross - sectional study was carried out in an urban slum of Mumbai from August 2013 to July 2014 for a period of one year. Data is collected by interview method using questionnaire. Total 210 study participants were included.

**Results and Conclusions:** Out of total 210 migrants, 25.2% had STI symptoms in last 12 months. The symptoms like sores on genitalia / Foda (9.5%), burning micturition (8.1%), and urethral discharge/ Safed pani (7.6%) were most common STI symptoms reported in last 12 months. Almost half of the migrants (45.3%) went to local private medical practitioners and only 22.6% migrants went to Government health facility. Thirteen percent of migrants did nothing for their STI symptoms. Most common reasons cited for not visiting govt. health facility were long waiting hours (39%), Government health facility far away from home (39%) and non-availability of medicines (17.1%).

**Key words:** Migrant, STI, HIV AIDS, Health seeking behavior.

### **INTRODUCTION**

Sexually transmitted infections (STI) cause serious health, economic and social consequences. In recent years, epidemiological studies have shown that persons with ulcerative and non-ulcerative STI are more susceptible to HIV. Sexually transmitted infections that cause genital inflammation have been shown to increase the efficiency of HIV transmission.

According to National Family Health Survey (NFHS) - 2 data, it is estimated that the prevalence of symptoms suggestive of STI/RTI in women was in the range of 23% to 43%, while in men it is in the range of 4% to 9%. It is estimated that about 6% of the adult population (15-49 years) have STI/RTI episode in a year which amounts to about 30 million episodes per year. The STI clinic based data indicates syphilis as the major prevalent STI among

men (12.6-57%) followed by chlamydia (20%-30%), chancroid (9.9%-34.7%) and gonorrhoea (8.5%-25.9%). The hospital based studies reports a varied prevalence for HSV (3.0-14.9%) and HPV (4.9-14.3%) among men. [1]

Besides High risk groups like FSWs, IV drug users, MSMs, transgender, two other population groups, long distance truckers and migrant workers, play a key role in the spread of HIV infection from HRGs to the general population. These populations, due to the nature of their work and mobility, sexually active age as well as separation from regular partners for extended periods of time are predisposed to come in contact with HRGs and constitute major proportion of the clients of sex workers. Since these groups serve as conduits of infection from HRGs to general population, they are also known as bridge populations. As these migrants are staying away from their native place, they come across a various problems at place of destinations due to poverty, illiteracy, different culture and language etc. As a result of loneliness, emotional stress and peer pressure migrants may indulge in risky sexual behavior leads to STI & HIV AIDS. Even after getting infected with virus and development of symptoms of STI, they don't report immediately to Health system. For formulating effective STI program, STI program managers need to have an estimate of the prevalence of STI symptomatic and assessment of health seeking behavior of Migrants.

## MATERIALS AND METHODS

It is a Community based Cross-sectional study conducted in an urban slum of Mumbai from August 2013 to June 2014.

### *Inclusion Criteria*

For the purpose of the survey, a male migrant worker is defined as,

1. A person who has moved to obtain work in Maharashtra state from their state of origin (Interstate migrants) and
2. Person who has been staying in an urban slum since last one year and

3. Person who visit their state i.e. place of origin at least once a year.

The male migrants aged between 15 to 49 years who had given informed consent were included

By using formula for estimating sample size

$$n = z^2 * p * q * N / e^2 (N-1) + z^2 * p * q$$

p = Prevalence of STI Symptoms amongst Migrants in Pilot study is 16 %

z = value of standard variate at 95% confidence level (1.96)

e = acceptable error (5%)

The estimated sample size for a given study was approximately 210.

Sampling method used was Non probability convenience sampling.

This study was done in collaboration with a NGO which has been awarded a project by NACO under the NACP III. The Migrants were explained the purpose of the study and their signed consent was obtained. With the assistance of outreach workers [ORWs] of the NGO, Migrants were contacted and face to face interviews were conducted. The ORWs was present during the interview to take care of the distress caused due to sensitive questions regarding high risk behaviour. They were assured that the questionnaire did not have any identifiers. Confidentiality and privacy was maintained.

A semi structured questionnaire was used for collecting information about the respondents. The questionnaire was based on the Integrated Behavioral and Biological Assessment (IBBA) Questionnaire, used in National surveys of High Risk Groups [2] Changes were made in the framing of some questions, some were omitted and some added in the light of the findings of the pilot study and validated by experts. Ethical clearance was obtained from the Institutional Review Board before starting the study.

**Statistical analysis:** Analysis was done by using SPSS version 20 software. Percentage analysis was done for socio demographic factors. Statistical tools like means, median, range, proportions and chi-square and others were used appropriately.

## RESULTS

**Table 1: Sociodemographic profile and distribution of migrants as per presence or absence of STI Symptoms**

Determinants	Variables	People with STI Symptoms [53]	People without STI Symptoms [157]	Frequency* [n=210]	P value
Age (years)	15-19	21	45	66 (31.4)	0.02102
	20-24	14	58	72 (34.3)	
	25-29	05	31	36 (17.1)	
	30-34	08	07	15 (7.1)	
	>35	05	16	21 (10.1)	
Religion	Hindu	12	29	41 (19.5)	0.5078
	Muslim	41	128	169 (80.5)	
Educational status	Illiterate	09	26	35 (16.7)	0.3162
	Primary	24	51	75 (35.7)	
	Secondary	19	73	92 (43.8)	
	Higher secondary	01	07	08 (3.8)	
Monthly income(Rs)	1000-4000	02	08	10 (4.8)	0.00267
	4001-8000	14	86	100 (47.6)	
	8001-12000	28	48	76 (36)	
	>12000	09	15	24 (11.4)	
Occupation	Tailor	33	108	141 (67.1)	0.6426
	Zari workers	13	31	44 (21)	
	Imitation jewelry makers	02	10	12 (5.7)	
	Contractors	03	04	07 (3.3)	
	Bangle makers	02	04	06 (2.9)	
Marital status	Married	16	50	66 (31.4)	0.5120
	Unmarried	35	105	140(66.7)	
	Divorced	02	02	04 (1.9)	
Native Place	Uttar Pradesh	29	81	110 (52.4)	0.03016
	West Bengal	09	34	43 (20.5)	
	Bihar	02	25	27 (12.9)	
	Andhra Pradesh	09	10	19 (9.0)	
	Madhya Pradesh	04	07	11 (5.2)	
No of Visits to Native Place/Year	1	14	38	52 (24.8)	0.6931
	2	34	96	130 (61.9)	
	3	04	14	18 (8.6)	
	>4	01	09	10 (4.8)	
Duration of stay (yrs)	1-4	31	100	131 (62.4)	0.2120
	5-7	08	32	40 (19)	
	8-10	14	25	39 (18.6)	

\*Figures in parenthesis indicate percentage

Table 1 show that maximum numbers of migrants were in the age group of 20-24 years i.e. 34.3%. Out of total, 65.6% of migrants were under the age of 24 years. 80.5% of migrants were Muslim and 19.5% were Hindu by religion. Most of migrants educated up to secondary school (43.8%) followed by primary school (35.7%). Majority of migrants were from Uttar Pradesh (52.4%) followed by west Bengal (20.5%). Almost half of the migrants (47.6%) had monthly income of Rs. 4001 to 8000. Three fourth of the migrants (77.6%) belonged to upper lower class as per kuppuswamy classification modified for the year 2012. Most of the migrants (61.9%) visited their place of origin (Native place) 2 times a year. Maximum number of Migrants (62.4%) had been staying in Mumbai since

last 1- 4 years. Most of migrants were (67.1%) Tailor by occupation. Most of Migrants were unmarried (66.7%) and staying with migrant workers and amongst married migrants, 71.2% were staying away from wife.

STI Symptoms are more seen in < 24 age group, illiterates and who have completed their primary education, higher income groups, and migrants from Andhra Pradesh and Madhya Pradesh, who have only 1 visit per year and who have been staying at place of destinations for more than 8 years. Age, Monthly income and Native place of Migrants are significantly associated with STI morbidity. Out of 53 migrants who have STI symptoms, 35 (66%) were less than 24 yrs of age, 37 (70%) were having income more than 8000

Rs and 09 (47%) migrants were from Andhra Pradesh.

This table depicts that 53 (25.2%) participants had symptoms of STI in last 12 months. it is seen that most common symptom reported by Migrants is sores on genitalia i.e. 9.5% followed by 8.1% participants had burning micturition, 7.6% participants had urethral discharge and 6.7%

participants had frequency of micturition. Only 1.4% had pain during intercourse.

**Table 2: Distribution of participants according to the STI morbidity reported in last 12 months**

†Symptoms of STI (53 / 210)	Frequency	Percentages
Sores on genitalia / <i>Foda</i>	20	9.5
Burning micturition	17	8.1
Urethral discharge/ <i>Safed pani</i>	16	7.6
Frequency of micturition	14	6.7
Pain during intercourse	03	1.4
Groin swelling	01	0.5

†Multiple responses

**Table 3: Distribution of participants according to type of Health service utilization for STI Management**

Health seeking Behavior for STI symptoms	Frequency	Percentage
Private Medical Practitioners	24	45.3
Govt. Hosp./ Health Post / Dispensary	12	22.6
Did Nothing	07	13.2
Pharmacist	05	9.4
Hakim	03	5.7
Home Treatment	02	3.8
<b>Total</b>	<b>53</b>	<b>100</b>

Places sought for the treatment STI has been mentioned in table 3. Most of the participants 24 (45.3%) went to private medical practitioners. 13% Participants did nothing for their STI symptoms. Percentage of participants sought treatment in Govt. Health post/ Urban health centre is low i.e. only 22.6%. Out of 53, who had symptoms of STI 41 (77.4%) didn't go to Govt. Health post/ urban health centre/Suraksha clinic to

seek treatment. Proportion of participants who went to pharmacist was 9.4% followed by 5.7% who sought treatment from traditional health worker (Hakim). Participants seeking health services from private facilities exceeded those seeking services from Govt. and other facilities. This could be attributed to easy accessibility and convenience of timing at the private clinics

**Table 4: Reasons given by the migrants who had STI symptoms in last 12 Months and not visited any govt. Health facility. (n = 41)**

Reasons for not visiting Govt. Health Facility ‡	Frequency	Percentage
Long waiting hours	16	39
Far away from residential & working place	16	39
Medicines not available	07	17.1
Crowded place	06	14.6
Time unsuitable	05	12.2
Govt. Doctors don't treat properly	01	2.4
Better facilities at private clinics	01	2.4

‡ Multiple responses

Table 4 shows that majority of Migrants (39%) mentioned long waiting hours in urban health centre (UHC) /health post / Municipal dispensary and (39%) Far away location of govt. health facilities as the main reasons for not visiting govt. health facility. 17% migrants said medicines were not available in govt. health facility. 14.6% said govt. health facilities were always crowded with long queue. Twelve percent migrants said govt. health facilities were opened during their working hours so it was not possible to for them to visit.

Among all those who sought treatment in Private and Govt. Health facility (36) for STI symptoms, 36.1% reported within 2 days. 33.3% reported after 5 days, 13.9% reported after 1 week and 8.3% reported after 2 weeks of having STI symptoms.

## DISCUSSION

Maximum numbers of participants 72 (34.3%) were belonged to the age group of 20-24 years followed by 66 (31.4%) to 15- 19 yrs. age group in current study. SA Rizwan, et al [3] conducted study showed

that 45.7% of migrants were under the age of 25 yrs. and 54.3% were above it. In present study maximum no of participants i.e. 110 (52.4%) were from Uttar Pradesh followed by West Bengal (20.5%) and Bihar (12.9%). In a study conducted by population council of India in Maharashtra 2008 [4] reported the similar results that maximum no .of migrants to Maharashtra were from Uttar Pradesh (37.5%) followed by Bihar (15.4%), Madhya Pradesh (13.1%), Chhattisgarh (5.9%), Karnataka (3%), Jharkhand (2.8%): Andhra Pradesh (2.7%) and West Bengal (2.1. In present study it is seen that 61.9% of Participants visits their native place 2 times a year. 24.8% of participants visit only once a year. A study [5] Showed the similar findings that majority of these workers (67.4%) visited their homes more than once a year and (15.7%) visited only once a year. 62.4% of participants were living at place of destination for 1- 4 years. Kamla Gupta et al [6] showed that 9.9% of migrants had been staying for less than 1 year, 20.8% migrants for 1 to 3 yrs. 20.8% migrants for 3 to 5 yrs and 48.5% migrants for > 5yrs at the site of destination. In current study 67.1% participants were Tailor by occupation followed by Zari workers (21%). It is due to fact that many garment industries are established in this slum area and they need tailors. In a study conducted by D. Suryawanshi et al [7] most of the participants were Construction workers (28.0%), Hamalis [loader/unloader] (4.0), Daily wage labourers (4.9%), Industry workers (47.0%) and Stone cutters (4.9%). In present study total 66 (31.4%) were married, 140 (66.7%) were unmarried and 4 (1.9%) were divorced. D. Suryawanshi et al [7] reported that most of the migrants were unmarried (49.2%), currently married and staying with wife (16.8%). currently married but wife is at native place (33.9%). STI Symptoms are more seen in < 24 yrs age group, illiterates and who have completed their primary education, higher income groups, migrants from Uttar Pradesh and Andhra Pradesh, who have only 1 visit per year and who

have been staying at place of destinations for more than 8 years. Age, Monthly income and Native place of Migrants are significantly associated with STI morbidity.

In present study most common symptoms reported by Migrants are sores on genitalia i.e. 9.5%. 8.1% participants had burning micturition. A study conducted in slums of Delhi [8] reported that 18 (9.2%) participants gave a history of having suffered from an STI. 8.7% of subjects had urethral discharge, 2.5% subjects had genital ulcer, 1% subjects had swelling in groin and 1.5% reported of scrotal swelling in last 12 months. IBBS (2008) survey [9] among labour migrants in Nepal reported that STI symptoms experienced by the migrants were burning micturition (1.7%), ulcer or sore around genitalia area (1.7%), urethral discharge (1.1%). So in present study proportion of STI symptomatic is higher as compared to other studies.

Present study shows that Private clinics were the most sought for treatment of STI A study conducted by V Roy, P Bhargava et al [10] for treatment seeking behavior mentioned the similar findings that private clinics were the most preferred (72.4%) source of treatment for STI symptoms. The IBBS (2008) survey Round II Nepal [9] shows that health services seeking behavior of the labor migrant workers is poor. Only about half of the respondents (53.3% in the Western and 47.2% in the Mid to Far Western samples) had sought/received treatment for STI symptoms in the past year. Most of the respondents in the Western region (75%) and the Mid to Far Western region (47.1%) had sought treatment in private clinics. Two each of the respondents in both regions had visited hospitals for treatment. A relatively high number (29.4%) of respondents in the Mid to Far Western region had also visited a pharmacy for the treatment of STI symptoms in the past year. In present study 9.4% of migrants had taken medications from Pharmacy. Stephen L. Schensul et al [11] conducted a community-based survey of STI prevalence of the 431 men reporting a

symptom in the previous 3 months, 54.1% (N - 233) had sought care either through self-prescribed medication obtained from local pharmacies (chemists) without prescription or from local private providers, which in these communities consist of 90% non-allopathic (Ayurvedic, unani, and homeopathic) providers and 10% allopathic providers. The highest rate of men seeking treatment for symptoms such as burning urination, itching, sores, and pus discharge (193 of 317 [60.9%]). So it is clear that private doctors, traditional healers and pharmacists are the most preferred treatment places by Migrants.

In present study among all those who sought treatment in Private and Govt. Health facility (36) for STI symptoms, 36.1% reported within 2 days, 33.3% reported after 5 days, 13.9% reported after 1 week and 8.3% reported after 2 weeks of having STI symptoms. Long waiting hours and far away from the place of work were the most common reasons mentioned by the migrants. The IBBS (2008) survey Round II Nepal [9] showed that 57.1% migrants from mid far western region of Nepal had sought treatment within a week, 14.3% after 1 week, 14.3% after 2-4 weeks and 14.3% received treatment after a month. Duration between having symptoms and visit to any health facility is shorter in present study as compared to above survey.

### Limitations

1. Inter-district migrants were not included in the study.
2. The collected data were self-reported, relying on the respondent's truthfulness and insight into themselves. Even though utmost efforts were taken to build rapport and confidence in the respondents, the sensitive nature of the study questions might have led to deliberate under reporting by the respondents.

### CONCLUSIONS

STI Symptomatics are higher in male migrants and health seeking behavior for the same is poor. They are not reporting

to health facility immediately after development of STI Symptoms. In spite of availability of Allopathic doctors and Suraksha clinic in their area, they are attracted towards Hakims, pharmacist and private doctors for treatment of STI. They have also elaborated reasons for same hence they don't get proper treatment and leads to increase transmission of STI.

To increase proportion of people availing services of suraksha clinic Migrants should be encouraged to enroll in the nearest Targeted intervention project for relevant empowerment through the concerned NGOs. They should get information from qualified persons like trained volunteers of NGOs (ORWs and PEs) regarding correct knowledge of HIV/AIDS, the importance of seeking care early and avoidance of self-treatment for STI related symptoms. Evening STI clinics should be started by Government or NGO to provide health services to migrant workers at a place convenient to them. Proper referral linkages with government health facilities should be present. Local non-allopathic private doctors should be trained in syndromic management of STI. This strategy calls for interaction with the private sector currently attracting migrants and the development of innovative services that can address their needs.

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