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HIV/AIDS KNOWLEDGE AND PATTERNS OF SEXUAL BEHAVIOR AMONG ADULT SLUM DWELLERS IN MUMBAI, INDIA

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ABSTRACT

Background: In India, currently 2.1 million people are living with HIV. Prevention is the mainstay of the strategic response to HIV/AIDS in India. Awareness rising brings behaviour change. People inhabiting slums have low awareness and are more vulnerable to RTI/STIs and HIV/AIDS. **Aims:** To assess HIV/AIDS knowledge, sexual behaviour, reported symptoms of STI/RTI's along with the socio demographic profile of adult population of urban slum dwellers. **Methods**: A cross sectional, qualitative study. The study area, chosen by convenience sampling was an urban slum located in M East Ward of Greater Mumbai. The study was finally conducted with 104 participants. **Results:** The mean age of surveyed participants was 23.5yrs and nearly 38(40%) of participants were illiterate Age at first sexual intercourse among the study participants was between 12-16 years for 23(22.10%) participants. Among study participants; 30(29%) of participants do not have any knowledge about prevention and transmission of HIV/AIDS. **Conclusions**: Urban slum residents in Mumbai have knowledge gap regarding HIV/AIDS transmission and prevention. Initiation of sexual intercourse is at an early age, a high percentage report symptoms of STI/RTIs.

INTRODUCTION

HIV/AIDS was first identified in India in 1986[1] when serological testing found that 10 of 102 female sex workers in Chennai were HIV positive. In the face of increasing numbers of people being identified with HIV, the Government of India (GOI) established the National AIDS Committee (NAC) and in 1992, the National AIDS Control Organization (NACO). [1]In India, currently 2.1 million people are living with HIV. [2] The four high prevalence states Andhra Pradesh, Maharashtra, Karnataka, Tamil Nadu account for 55% of all HIV infections in the country[3]

In National AIDS Control Programme (NACP IV); prevention is the mainstay of the strategic response to HIV/AIDS in India as 99% population of the country is uninfected; prevention strategies include expanding IEC services for (a) general population and (b) high risk groups with a focus on behaviour change and demand generation. Among the general population, women, youth and adolescents are seen as most vulnerable. Also, lack of access to correct information can pose a possible barrier in HIV/AIDS prevention programmes. Interventions for general population are about raising their awareness of HIV. Awareness raising brings behaviour change. Changing knowledge, attitudes and behaviour as a prevention strategy of HIV/AIDS thus is a key thrust area of the National AIDS Control Programme. Through this route the programme aims to reach out to 80 percent of the high risk groups and 95 percent of the young people. [4]

In metropolitan cities; the rising rate of urbanization and the accompanying disproportionate growth in the proportion of poor city residents pose new challenges for health care in urban slums. They may start sexual intercourse at earlier ages, have more sexual partners, and are less likely than other city residents to know of or adopt preventive measures against contracting Sexually Transmitted Infections/Reproductive Tract Infections STIs/RTIs and HIV/AIDS [5]. Mumbai, the most populous city in India is unique in having a huge migrant population; largely young as it offers opportunities for all to earn a living. Slums too are a ubiquitous feature of Mumbai's geographical landscape. Socio-economic determinants that make a person vulnerable also increase the risk of exposure to HIV. People inhabiting slums have low awareness and are more vulnerable to RTI/STIs and HIV/AIDS [5]. As HIV infection is entirely preventable through awareness raising about its occurrence and spread, it is very significant in protecting the people from the epidemic. Thus, the present study was planned to assess HIV/AIDS knowledge and sexual behaviour, reported symptoms of STI/RTI's along with the socio demographic profile of adult population of urban slum dwellers. Information regarding age at first sexual intercourse, reasons for not using condoms during intercourse may give insights into novel approaches of applying HIV/AIDS prevention strategies.

MATERIAL AND METHODS

Study design: It was a cross sectional, qualitative study**.**

Ethical approval & Consent: Approval from institutional ethics committee (IEC) was obtained prior to initiation of the study. Informed verbal consent of the participants was taken after explaining to them that the information revealed by them would be kept strictly confidential and those who gave consent were enrolled as study participants

Mumbai is divided into administrative zones and wards. The study area, chosen by convenience sampling was an urban slum located in M East Ward of Greater Mumbai. It has a population of approximately one lakh, which is predominantly migrant. Inhabitants of the slum reside in dwellings in multiple lanes, parallel to each other.

Sampling technique: By systematic random sampling technique initially, ten lanes were selected by choosing every fifth lane of the study area. All dwellings in the selected lane were enlisted; following which every fifth household was selected, until the number of study participants equalled ten in each lane. Locked houses were excluded and the next fifth house on the list was selected.

Inclusion criteria: Individuals with chronological age eighteen years and above; residing in these households were eligible to be enrolled as study participants.

Sample size: Assuming HIV prevalence of between 0.25%- 0.3% in general population; the required sample size was calculated to be 104 using formula [$s=4\ PQ/\ E^2$]. Study was finally conducted with 104 participants.

Methodology

A self designed, semi- structured questionnaire was prepared comprising questions pertaining to the demographic and socioeconomic Profile, their knowledge regarding HIV /AIDS prevention and transmission, misconceptions regarding HIV/AIDS transmission. It also included questions on age at first sexual intercourse, reported symptoms of Sexually Transmitted Infections (STIs) /Reproductive Tract Infections (RTIs) and means of protection of themselves from an intimate partner who has symptoms of STI/RTIs and their sexual Practices. All participants reporting symptoms of STI/RTI were referred to the nearest health care centre. Socioeconomic classification of study participants was done using B. G Prasad's classification.[6] A pilot study was carried out prior to the final study with thirty participants to test the accuracy and completeness of the questionnaire

Data collection was done by administration of the questionnaire through personal interviews and in depth discussions with the participants.

Statistical analysis: Data was collated and qualitative data analysis (frequencies & percentages) done by using MS Excel.

RESULTS

Table 1 depicts the demographic profile of study participants. The mean age of study participants was 23.5yrs .Table 2 depicts knowledge regarding HIV/AIDS prevention & transmission among study participants and 30(29%) of participants do not have any knowledge about prevention and transmission of HIV/AIDS. Table 3 depicts Misconceptions Regarding HIV/AIDS transmission. Table 4 shows Reported symptoms of STI/RTIs in study participants.

Age at first sexual intercourse among the study participants was between 12-16 years for 23(22.10%) participants and between 17-21yrs for 62(59.60%) participants whereas it was between 22-26 yrs for 14(13.50%) participants and in 4(3.84%) participants it was between 27-31 yrs. Partner during first sexual intercourse for 85(81.20%) participants was their spouse, for 2(1.9%) it was an acquaintance, for 5(7.14%) male participants it was a commercial sex worker, for 3(2.88%) partner was a relative and for 8 (7.70%) male participants it was their intimate partners. Regarding condom usage during first sexual intercourse; only 3(2.90%) participants had used a condom and 100(96.20%) had not used a condom. Among the reasons for not using condoms, 9(8.70%) revealed they had no knowledge of how to use a condom, 6 (5.8%) revealed that a condom was not available at that time, two revealed that they did not feel it was required.

Regarding means of protection of themselves from an intimate partner who has symptoms of STI/RTIs, 31(29.80%) said they would insist on condom usage is preferable, 17(16.30%) said refusal for intercourse and 9(8.70%) participants said they would take treatment for the symptoms, whereas 47(45.20%) did not know how they would protect themselves if their partner had symptoms of STI/RTIs.

Table 1: Demographic profile of study participants:

Demographic factors		**N**umber	(%)
Gender	Male	70	67.30
	Female	34	32.70
Age group(yrs)	21-25	15	14.80
	26-30	33	32.91
	31-35	25	24.82
	36-40	17	16.81
	41-45	12	10.76
Educational status	Illiterate	40	38.50
	Primary	12	11.50
	Secondary	48	46.20
	H. Secondary	2	1.90
	Graduate	2	1.90
Marital status	Married	4	3.80
	Unmarried	97	93.30
	Separated	2	1.92
	Widow	1	0.96
B.G.Prasad Socioeconomic Classification	a)Class I	3	2.88
	b)Class II	38	36.53
	c)Class III	46	44.23
	d)Class IV	17	16.30

Table 2: Knowledge regarding HIV/AIDS prevention & transmission among study participants

Knowledge of regarding HIV/AIDS Prevention and transmission	Yes	No	Don't know
Is HIV/AIDS Curable	14(13.5%)	45(43.30%)	45(43.30%)
HIV/AIDS Prevented By Consistent Condom Use	81(77.90%)	2(1.90%)	21(20.20%)
HIV/AIDS Prevented By Single Uninfected Sexual Partner	84(80.80%)	0(0.00%)	20(19.20%)
HIV/AIDS Prevented By Sterilized Needles And Syringes	75(72.10%)	1(0.96%)	28(26.90%)
HIV/AIDS Prevented By Blood/Blood Products Tested For HIV	76(73.10%)	0(0.00%)	28(26.90%)
HIV/AIDS transmission can occur By Sexual Intercourse Without A Condom	84(80.80%)	0(0.00%)	20(19.20%)
HIV/AIDS transmission can occur by Infected blood/blood products	77(74.00%)	0(0.00%)	27(26.00%)
HIV/AIDS transmission can occur By Needles Syringes Infected With HIV	75(72.10%)	1(0.96%)	28(26.92%)
HIV/AIDS transmission can occur from Mother To Child During Pregnancy	65(62.50%)	7(6.70%)	32(30.80%)
HIV/AIDS transmission can occur from Mother To Child During delivery	48(46.20%)	12(11.50%)	44(42.30%)
HIV/AIDS transmission can occur from Mother To Child through breast milk	52(50.00%)	9(8.70%)	43(41.30%)

Table 3 Misconceptions Regarding HIV/AIDS transmission

Misconceptions Regarding HIV/AIDS transmission			
	Yes (%)	No (%)	Don't know (%)
Person Get Infected By Kissing On The Mouth	22(21.2)	16(15.4)	66(63.5)
Person Get Infected By Mosquito Bites	23(22.1)	34(32.7)	47(45.2)
Person Get Infected By Sharing A Common Toilet	12(11.5)	39(37.5)	53(51)
Person Get Infected By Bug Bites	15(14.4)	38(36.5)	51(49)

Table 4: Reported symptoms of STI/RTIs in study participants

Reported Symptoms of STI/RTIs	No. (%)
Urethral discharge	22 (31.42%)
Burning Micturition	42 (41.20%)
Genital ulcers	8 (7.69%)
Itching In Genital Area	33 (32.40%)
Inguinal Lymph nodes	17 (16.70%)
Chronic Lower Abdominal Pain	9 (8.80%)
Vaginal Discharge	21(61.76%)

DISCUSSION

The education status of study participants shows that nearly 38(40%) of participants were illiterate, and only 4(3.84%) had studied beyond secondary school. Lack of formal education may be one of possible causes of migrating to Mumbai and it may influence sexual behaviour choices. In National Behavioural Surveillance Survey, 2006 carried out by NACO, it was seen that level of awareness about HIV / AIDS was lower in illiterates (45.8%) as compared to primary (77.7%), middle (91.6%), secondary and higher secondary (98.2%) and graduate and above (99.8%). [7]

As seen in table 2; by studying responses regarding the existence of a cure for AIDS, 13.4% of participants thought there is a cure for HIV/AIDS at present; almost similar to 12% and 14 % participants seen in other studies. [8, 9] A considerable knowledge gap is seen among study participants as 30(29%) of participants do not have any knowledge about prevention and transmission of HIV/AIDS. Similarly in a study [10] in 13 states of India, low rates of knowledge and awareness were reported more among rural women. This could be associated with lack of formal education and media exposure. A study done among slum-dwellers in another metropolitan city of India [11] showed 67% males and 55% females were aware of the sexual mode of transmission, as compared to 84% in our study population.

About one fifth of the study population had misconceptions regarding HIV/AIDS transmission as seen in table 3. Only 23% of participants in our study thought AIDS could spread through mosquito bites, as compared to45% males and 62% females in the above study. [11]

Since Information education and communication (IEC) strategies are important as components of behaviour change in HIV/AIDS prevention among the general population; possible interventional areas to address the knowledge gap could be consistent involvement of visual and print media, health education at each level of their interaction with the formal health system along with involvement of informal health care providers (unqualified practitioners). Health education through all the above channels may also dispel misconceptions regarding HIV/AIDS transmission and act also aid in reducing stigma and discrimination against people living with HIV/AIDS(PLHA) in families and general population.

Age at first sexual intercourse was less than 21 years for 85(81.70%) of participants which includes the 12-16 years age group in 23(22.10%) participants, similarly is also seen in other studies. [12] This observation may lead to suggestion of initiation of sex education/family life education both in formal and informal setups at an earlier age group possibly at eight to nine years of age. In informal setups; for out of school children different strategies may have to be explored for e.g. peer facilitators, adolescent groups for girls etc.

On exploring the reasons for not using condoms, 9(8.70%) revealed they had no knowledge of how to use a condom, indicating further strengthening of IEC and health

education component. Cultural beliefs might moderate the way in which STI/HIV is perceived and therefore addressed in that particular context. [13] Addressing risky sexual practices such as early sexual debut is one strategy which could lead to lower risk for RTI/STIs and HIV/AIDS among slum dwellers.

Reported symptoms of STI were seen in both males (31.4%) and females (61.76%), compared to a study in Nigeria[14] where 27% of males and 10% of females reported symptoms of STI/RTIs .Women are more vulnerable to RTI/STIs. Out of 47(45.20%) study participants who did not know how they would protect themselves if their partner had symptoms of STI/RTIs, 30 (88.23%) were women. Teaching assertiveness skills in sexual and reproductive health areas for women in slums can an important interventional area.

Lack of awareness of symptoms of STI/RTIs coupled with less priority given to women and their health could be possible reasons for high reported prevalence seen in women participants.

CONCLUSION

Urban slum residents in Mumbai have knowledge gap regarding HIV/AIDS transmission and prevention. Initiation of sexual intercourse is at an early age, they report symptoms of STI/RTI and are making unsafe sexual behavioural choices. These findings highlight the need to possibly treat slum residents as a sub-population vulnerable to reproductive health problems and may require allocation of more/special innovatively packaged resources for interventions in slums. At individual level, the interventions would focus on behaviour change; aimed at HIV / AIDS prevention and at community level they may focus on raising awareness and reducing stigma regarding both STI/RTI and HIV/AIDS, thus empowering communities in fighting the battle against HIV/AIDS.

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Conflict of Interest: Nil

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