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Sexually Transmitted Diseases in Bangalore City : some findings from an exploratory study

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While the world's major killer disease, smallpox, that used to claim millions of lives has been eliminated, the planet has been struck with a more dreaded disease, AIDS or Acquired Immuno Deficiency Syndrome. Since the first AIDS case was detected in a homosexual community in the United States 15 years ago, it has been spreading rapidly all over the world. While scientists in many countries have been working hard to find a cure for AIDS, their efforts so far, have met with little success, and the disease continues to attack more and more people worldwide. The latest WHO estimates reveal that in just another 15 years India will emerge as an epicentre of AIDS and suffer casualties running into millions if effective steps are not taken urgently to contain the spread of the disease. [1]

HIV (Human Immuno Deficiency Virus), the virus responsible for AIDS, is known to be transmitted through sexual intercourse with an infected partner, the use of infected blood, needles or syringes, and from an infected mother to her children. In India, heterosexual intercourse has been found to be responsible for about 80 percent of the HIV infections. [1] In addition to these modes of transmission of HIV, the prevalence of sexually transmitted diseases (STDs) has been reported to facilitate its transmission. Research has shown that STDs like chlamydia, syphilis and gonorrhoea increase the risk of HIV infection by two to nine times. [2] Therefore, one of the best ways to control the spread of HIV infection besides undertaking HIV/AIDS prevention education countrywide, is to effectively control STDs.

STDs and public health impact

Sexually transmitted diseases like chlamydia, gonorrhoea, syphilis, trichomoniasis etc. are common infections observed in every society. They cause substantial morbidity and mortality that reduces productivity and earnings. STDs can cause pelvic-inflammatory diseases (PID), abdominal pain, ectopic pregnancies, still births, spontaneous abortions and even cervical cancers among women and total infertility among both men and women. Babies born to parents afflicted with STDs may suffer blinding eye infections and acute pneumonia.

Since young men and women in their prime working ages are affected by these diseases, it also has serious economic consequences.

The recent World Development Report has estimated that STDs along with HIV infections account for 2.7 percent DALY* loss in India. [3]

A 1990 WHO estimate puts the number of new STD cases reported annually all over the world at 250 million, 50 million of these being in India. [4] However, the latest estimates show an increase in the incidence to 333 million in 1995, [5] suggesting a sharp rising trend during the last few years. While the more developed countries with effective and easily accessible curative programmes have been able to keep the incidence rates under check, the less developed countries like India never considered STDs as a major threat to public health and accorded it a very low priority within a deficient health care service sector. In addition, talking about sex is taboo in India, and STDs are considered a social stigma; this further reduces people's accessibility to even the grossly inadequate and deficient curative services particularly for women who suffer the burden of STDs disproportionately more than men do because of the greater ease of transmission of the STD pathogens from the male to the female. All these factors have resulted in the mushrooming of quacks who promise secrecy, assure a quick cure, and have a roaring practice.

Under these circumstances, STDs have remained the least explored areas in the public health sector in India. Looking at the gravity of the situation created by the advent of AIDS, its established link with STDs, and the pace at which it is spreading in the country, there is an urgent need to improve our understanding of STDs with a view to develop effective and easily accessible curative services, and to create wider awareness through appropriate educational programmes regarding the prevention of STDs / AIDS to ensure that its spread is arrested.

The present exploratory study is an attempt in this direction. The study was conducted in Bangalore city mainly to explore the possibility of collecting some reliable basic data on this very private, sensitive and neglected area; to develop a methodology for extending the study to a larger area later, and to improve our understanding about the patterns of sexuality in contemporary society that would mainly determine the routes of STD infection.

Data and methodology

As mentioned earlier, the discussion of sex and related issues including sexually transmitted diseases is taboo in India. As such, there is hardly any literature on sexuality or data on the incidence of sexually transmitted diseases. Most of the STDs can be cured by simple inexpensive treatment that can be given by any

medical practitioner, but no medical records are maintained by the doctors who offer such services. Even the large hospitals in Bangalore which have well established medical record sections were not able to retrieve any information on STDs and the treatment provided to the patients. The only available data source was the Directorate of Health and Family Welfare Services (AIDS Cell) where the number of STD cases was recorded. This data was compiled from the 27 STD clinics established by the Karnataka State government in the district hospitals in the State. Table 1 presents this data.

Table 1 : Number of STD cases, Karnataka, 1989-93

Year	No. of cases
1989	54,824
1990	59,499
1991	60,923
1992	36,553
1993*	40,543

* up to December 1993. Other years from 1st April to 31st March of the following year.

From this available data it is very difficult to comment on either the incidence or the prevalence of STDs in Karnataka. It is obvious, however, that these numbers represent only a fraction of the actual number of STD cases in the State.

The present study is based on the primary data collected from STD patients visiting eight selected medical institutions in Bangalore for diagnostic and curative services. These hospitals were four major government hospitals catering mainly to the poor, two large mission hospitals that mainly serve middle class clients and two private clinics of high standing situated in a posh area and largely visited by upper class clients.

A brief, simple, self-explanatory, one-page questionnaire was constructed to collect the data. The questionnaire, that would take about 8-10 minutes to complete, was administered by the medical officer of the selected hospitals to each STD patient visiting the hospital for diagnostic and curative services. The interview took place in the clinic and not a single case of 'non-response' was reported. The data thus collected is reliable and representative. It also showed that vital information on such a very private, sensitive and neglected area can be scientifically collected for research purposes. However, as against the envisaged sample size of 1000 cases, data were collected from 286 persons only mainly because of the problem of logistics and because the medical officers of some of

the clinics were often over-burdened with too many patients making it impossible to spare any time to administer the questionnaire.

Results and discussion

The following paragraphs describe socio-demographic profile of the clients visiting the hospitals and their sexual behaviour with a view to determine the route(s) of STD infection.

The analysis showed that about 14 percent of the clients were not residents of Bangalore and had come from different places within and outside the State. Casual enquiries revealed that they had come to Bangalore either to avail of the relative services available in the city or for maintaining secrecy about their health problem. Further, 87 clients (30 percent) had been treated previously at least once for a STD. In other words, 70 percent of the cases interviewed were new and were visiting a clinic for the first time for diagnostic and curative STD services. Syphilis, chlamydia and gonorrhoea were the most commonly seen STDs.

Socioeconomic background

Table 2 presents the social and economic characteristics of the respondents.

Table 2 : Socio-economic profile of the respondents

	Number	Percent
Religion	245	85.7
Hindu	20	7.0
Muslim	20	7.0
Christian	1	0.3
Other		
Education	40	14.0
Illiterate	65	22.7
Primary	104	36.4
High school	77	26.9
College and University		
Employment status	148	51.7
Low paid jobs	61	21.3
Middle paid jobs	39	13.6
High paid jobs	33	11.6
Students	5	1.8
Unemployed		

The table shows that the respondents belonged to all sections of society. The high proportion of students (11.6 percent) among them is rather alarming. Similarly, the proportion of individuals who had attained college/university level

education was significantly high. The employment status however showed a large proportion of low paid jobholders such as coolies, painters, auto-garage workers etc. The others included cinema artists, teachers, and executives drawing salaries ranging from Rs. 5,000 to Rs. 20,000 per month indicating that STDs are not confined to the poor and the illiterate classes.

Fewer female patients

Table 3 presents a distribution of the respondents by age, sex and marital status. Of the 286 patients only 22 (7.7 percent) were women. This does not necessarily indicate a low incidence of STDs among women. Rather, given the fact that women are more susceptible to STDs as mentioned earlier and the socio-cultural conditions affecting them, it is more likely that their reluctance to consult or be examined by male doctors, more so when afflicted with a sexual problem, was responsible for their low representation in the sample. It also indicates poor accessibility to health care services particularly for women, for gynecological and sexual disorders, as has also been reported by others. [6]

Table 3 : Age, sex and marital status of the STD cases

Age (yrs)	Never married		Currently married		Widowed/divorced or separated		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
10-19	24 (15.3)	2 (66.7)	--	--	--	--	24 (9.1)	2 (9.1)
20-24	67 (42.7)	1 (33.3)	10 (9.6)	2 (11.8)	--	2 (100.0)	77 (29.2)	5 (22.7)
25-29	57 (32.5)	--	37 (35.6)	5 (29.4)	--	--	88 (33.3)	5 (22.7)
30-39	13 (8.3)	--	36 (34.6)	5 (29.4)	--	--	49 (18.6)	5 (22.7)
40+	2 (1.9)	--	21 (20.2)	5 (29.4)	3 (100.0)	--	26 (9.8)	5 (22.7)
(N)	157	3	104	17	3	2	264	22
%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

A study [7] in rural Maharashtra observed that of the 650 women examined 55 percent had one or more gynecological or sexual problems whereas only 8 percent had the privilege of being examined by a gynecologist, and treated. In other words, 92 percent of the women who were in dire need of medical attention were not able to avail of medical help and had to suffer the agony of the disease. This does not rule out the fact that these women did not avail of any other curative services especially because quacks are easily accessible (even in cities) and also promise confidential services. None of the quacks in the study area however, agreed to talk to us in this regard.

Table 3 also shows that about 56 percent of the respondents were unmarried and as many as 70 percent of them were below 30 years of age. Those married,

widowed and separated accounted for 44 percent of the total, and were relatively older than the unmarried. The number of women was too small for any meaningful analysis though most of them were currently married and younger. Among the male respondents, 59 percent were married and 72 percent were below 30 years of age.

Age at first sexual intercourse among males

All the respondents were asked the age at which they had their first sexual intercourse; the responses received from 211 male respondents is presented in Table 4.

Table 4 : Age at first sexual intercourse – males

Age (in years)	Number	Percent
15 or less	20	9.5
16	9	4.3
17	5	2.4
18	22	10.4
19	13	6.2
20	32	15.2
21	16	7.6
22	20	9.5
23	12	5.7
24	10	4.7
25+	52	24.5
Total	211	100.0

The data shows early initiation of sexual intercourse with a fifth of the male respondents reporting that they were 18 years or younger at the time of their first sexual intercourse and almost half of them (48 percent) by the time they had attained the age of 20 years. Only 24.5 percent reported to have had their first sexual intercourse when they were 25 years or older. Another survey [8] of sexual behaviour of urban men has reported similar findings.

Premarital sex

Marriage in India is universal and takes place at an early age though the legally prescribed minimum age for males and females is 21 years and 18 years respectively. Sex is permitted within marriage only. Our data revealed that as many as 78.5 percent of all respondents reported to have had a premarital sexual experience. Almost all (93.2 percent) the 160 unmarried male and female

respondents and over half (55.3 percent) of those (121 respondents) who were married reported that they had had premarital sex.

In most developed nations, surveys conducted periodically provide valuable information on changes in sexual behaviour patterns. In India, such information is hardly available; it is generally presumed that sex is effectively controlled by social and cultural factors. However, reports of scattered research studies suggest that drastic changes are taking place in sexual behaviour in India. A recent study [9] conducted in Delhi revealed that 60 percent of under-16 year-old high school students (mostly boys) were sexually active. The boys reported that they had sexual intercourse with commercial sex workers or with elderly women in their neighbourhood. Many parents and school authorities in Delhi were shocked at the findings and blamed the western cable networks operating in the country for it. Similarly, in another study [10] conducted in Aurangabad in Maharashtra, over 50 percent of the STD cases were diagnosed among unmarried men. [10]

Extramarital sex

Extramarital sex was reported by almost four-fifths (79.4 percent) of the 126 ever married men and women (including three divorced, widowed and separated men). Most of them except three were currently married and were staying with their spouse at the time of the study. Several men reported to be engaged in sexual relations with more than one woman apart from their spouse.

The alarmingly high proportion of premarital and extramarital sex observed among the respondents needs further investigation in a cross-section of the society. Until then the findings presented here have will have to be accepted with caution. Our discussion with some of the leading medical practitioners in Bangalore city in this regard supported these findings. They were of the view that long with modernisation, attitudes regarding sex are changing fast and promiscuity is on the increase indicating a weakening of the traditional familial and societal controls on sexual behaviour. Large-scale migration, an increasing number of women taking up jobs outside the home, a decline in the joint family system, and exposure to western media were considered to have contributed to this phenomenon.

Routes of infection

It is very difficult to pinpoint the source of infection unless the sexual partners are medically examined. The medical officers of all the hospitals included in this study reported that they rarely succeeded in examining both spouses. If they insisted that the client bring his/her spouse (in the case of married men and women) the client was more likely than not to discontinue the treatment.

Therefore, the data presented in Table 5 is based on the information as reported by the 264 male and 22 female clients to the medical officers during the interview. From the responses, commercial sex workers appeared to be the major route of infection; as many as 67.5 percent of the unmarried male respondents and close to 60 percent of the ever-married ones reported to have visited a commercial sex worker. Homosexuality was found to be practiced to a very small extent by the unmarried men.

Table 5 : Probable routes of STD infection

Marital status	Commercial sex worker	Friend	Relative	Homosexual	Wife	No information	Total (N)
Never married	106 (67.5)	25 (15.9)	16 (10.2)	5 (3.2)	NA	5 (3.2)	157 (100.0)
Married/ widowed/ divorced/ separated	64 (59.8)	11 (10.3)	7 (6.5)	--	3 (2.8)	22 (20.6)	107 (100.0)
Total	170 (64.4)	36 (13.6)	23 (8.7)	5 (1.9)	3 (1.1)	27 (10.2)	264 (100.0)

Friends and relatives appeared to be the next major route of reported infection. Three married men reported that they had caught the infection from their promiscuous wives. A young unmarried girl reported incest by her father who suffers from an STD. Information was not available for five unmarried men and 22 ever married men.

Awareness of STDs

During the interview each respondent was asked whether he/she was aware that having sex with an unknown or promiscuous partner can cause STDs. The responses presented in Table 6 show that well over three-fifths (63.3 percent) of the respondents were aware of the fact that casual sex can lead to STDs. Moreover, many of them were also aware that it could lead to AIDS.

Table 6 : Awareness of cause of STDs by respondent's educational level

Education	Awareness
Illiterate	40 (42.5)
Primary	65 (53.8)
High school	104 (55.8)
College and University	77 (92.2)

Total	286 (63.3)
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While 92.2 percent of the college- or university- educated men and women reported to be aware of the risk of catching STDs as compared to less than half (42.5 percent) of those who were illiterate, it was surprising, that none of them - not even those who had attained a very high level of education and held highly paid jobs, had taken any precaution to protect themselves from the possible risk of contracting the disease, and that the concept of 'safe sex' was totally unknown to them.

Conclusion

This exploratory study has brought to light several important findings that point to the need for further studies in this area. The first and most important among them is that information on such a very private and neglected area can be scientifically collected. Second, it reveals the existence of premarital and extramarital sex in society, though the extent is debatable. Third, the fact that the awareness of the consequences of high risk behaviour, even among the highly educated respondents, had not made them take protective measures, has serious implications for the spread of STDs and AIDS.

Although in a very conservative society like ours premarital and extramarital sex is considered sacrilegious, and is socially and culturally condemned, it exists very clandestinely. The use of sex in the mass media is likely to result in a further weakening of the traditional controls on sex, and one foresees a possible increase in promiscuity in the years to come. Considering the threat of AIDS and its possible consequences, all public and private sector agencies involved in providing curative health services should give top priority to STD services, and increase the required resources adequately. There is also an urgent need to integrate STD services with current family planning and maternal health services to expand their accessibility particularly to women. Further the initial diagnosis or confirmation of pregnancies should always be accompanied by screening for STDs; this is the only effective way to improve the accessibility of these services to women. More importantly, women should be educated during their visits to clinics as to how they can protect themselves from STDs.

Counselling of STD patients was found to be non-existent in any of the clinics selected for the study. Counselling is an important preventive measure and has to be introduced on a priority basis in all STD clinics. Information, education and communication (IEC) programme promoting sexual and family responsibility, and directed to adults and adolescents are another urgent need.

This study, though a very modest attempt, has indicated a very high prevalence of not only pre and extramarital sex but also some homosexuality and incest which most believe do not exist in the country. Whether or not to provide sex education to young people is being discussed since the last several years. It is high time to reconsider the matter with all seriousness and implement it immediately to save the younger generation from a possible catastrophe. Further research on the topic in different parts of the country has to be given priority in order to obtain valuable information for improving our understanding of sexual behaviour patterns in contemporary society, and for developing effective interventions to reduce STDs.

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