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Original Research Article

Socio-demographic and behavioural profile of HIV positive patients visiting ICTC at a tertiary care hospital in North India

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ABSTRACT

Background: Fast track approach is being followed by UNAIDS in order to achieve the aim of ending AIDS epidemic by 2030. It is important to keep a check on new infections and gather information about the HIV trends of the new cases. This study was planned to analyze the socio-demographic details, associated high risk behaviours and common routes of transmission of new cases.
Methods: Data of new HIV positive patients coming to the ICTC centre during the study period was collected. The HIV positive patients were counselled by the counsellor after taking informed consent. The socio demographic details of the patients were shared by the counsellor.
Results: Total 92 HIV positive patients were enrolled. Out of 92, 64 were males and 28 were females. Out of 92, 12 were illiterate. Most common route of transmission was found to be heterosexual route followed by blood transfusion. Of 92 patients, 36 were direct walk in clients and 56 were referred to ICTC. Most common high risk behaviour amongst HIV positive people is unsafe sexual practice with non-regular/casual partners, and homemakers are mostly secondarily infected from their reactive spouses.
Conclusions: The most common high-risk behaviour (HRB) amongst HIV positive people is unsafe sexual practice with non-regular/casual partners, and innocent homemakers are mostly secondarily infected from their reactive spouses. Thus, there is a need to further spread awareness amongst women about the HRB and risk of HIV. Sharing of results between partners needs to be encouraged in order to prevent HIV transmission.

Keywords: Counselling, High risk behaviour, Partner testing

INTRODUCTION

Despite all the efforts by World Health Organization (WHO), HIV continues to be a major health problem globally. The HIV program aims to end the epidemic of AIDS by 2030, for which the Joint United Nations Programme on HIV/AIDS (UNAIDS) has set targets for each country to reduce the number of cases and to have a Fast Track approach to achieve this aim.[1] Even at the national level, National AIDS Control Organization (NACO) and various other government and non-government agencies are working towards the aim of reducing HIV. Adult HIV prevalence has reduced to 0.21% in 2021 as compared to its peak at 0.55% in 2000 in India. Annual New Infections (ANI) were around 62.97 thousand in 2021 in India.[2] This decline in the rate of new HIV infections is attributed to two main factors, namely changing behaviour and increased awareness of HIV and its risk factors.[3] New infections is also influenced by an individual's gender, education, socio-economic status and occupation. Various studies have reported gender differences between the numbers of cases, with females being the more commonly affected due to various social factors like lack of proper knowledge and lack of care.[3] But at the same time, female cases seem to be underreported due to the fear of neglect and rejection by the family, leading to loss of financial support and various cultural constraints which are also faced more by females.[4,5]

It is the annual incidence of HIV which continues to add to the HIV burden globally, thus it becomes important to keep a check on new infections and gather information about the HIV trends, its routes of transmission and socio-demographic details of the new cases.[3] HIV cases in India are focused around the high-risk groups like men having sex with men (MSM), individuals having unprotected sex with non-regular partners and those sharing intravenous injections for drugs. Local epidemiological data of HIV positive individuals provides insight into the high-risk behaviour (HRB) and the common routes of transmission present in the society, thus are critical in identifying the target group and in ensuring safe practices amongst the target group.[6] There is hardly any literature available on epidemiological data of HIV positive individuals in and around Lucknow and Uttar Pradesh as a whole.

Thus, the present study was planned to analyse the socio-demographic details, associated high risk behaviours and the common routes of transmission of the new cases enrolled during the study period.

METHODS

This was an observational study conducted over a period of six months (November 2022 to April 2023) in an ICTC centre linked under the department of microbiology of a tertiary care centre in north India. The study was approved by the institution ethical committee (IEC 191/22 dated April 8 2023).

Data of the new HIV positive patients coming to the ICTC centre during the study period was collected. The HIV positive patients were counselled by the counsellor after taking informed consent. Only the socio-demographic details of the patients (collected as per NACO during the pre and post-test counselling in ICTC) have been shared by the counsellor and confidentiality of the patients has not been compromised at any level (no identification detail was revealed by the counsellor during data collection). The data included age, sex, district of residence, type of individual (self-initiated or provider initiated), source of HIV information (if self-initiated), type of risk behaviour, level of education, occupation, marital status, and HIV status of spouse/sexual partner.

Data was entered in a spreadsheet, analysed and presented in the form of percentages, frequencies and proportions. 'R' software (free software available for statistical programming) was used for statistical analysis.

RESULTS

A total of 92 new HIV positive patients visited the ICTC centre during the study period of six months.

Age and sex distribution amongst new cases

The majority of HIV positive patients were within the age group between 21 to 40 years, followed by 41-50 years. Nearly 70% of patients in the present study were male (64/92). The patients were interviewed regarding their sexual partner(s), if they had non-regular, casual/non-commercial sexual partners, whether their spouse was reactive, whether they had donated/received blood/blood products, or were exposed to the blood of HIV positive individuals while providing them care. Sensitive and personal high-risk behaviours (HRBs) like homosexuality and exposure to intravenous drugs were also enquired from the study population. In the case of children/infants, the HIV status of parents was enquired.

HRBs were mostly found in individuals in the age group of 20 to 50 years (Figure 1).

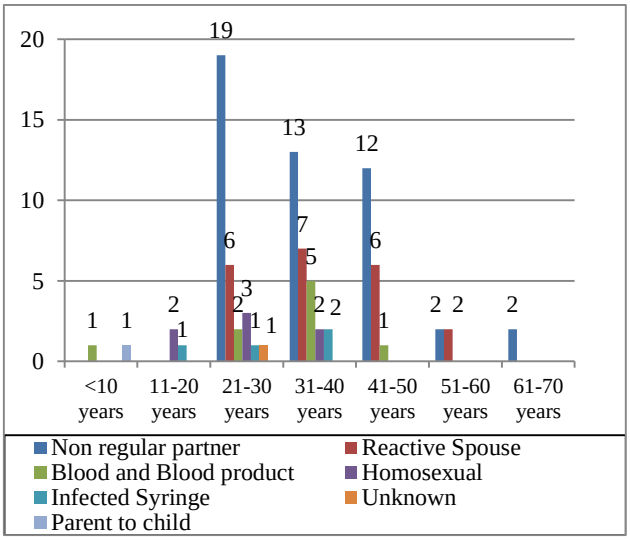

Figure 1: Risk factors as per different age brackets.

All the major HRBs are concentrated within the age group of 21-49 years. The most common HRB associated is a non-regular partner, followed by a reactive spouse. The most common HRB in males was multiple/non-regular sexual partners (46/64 males), followed by homosexuality in seven out of 64 males. The most common risk factor associated with the women was exposure to reactive husbands (21/28 women) (Figure 2).

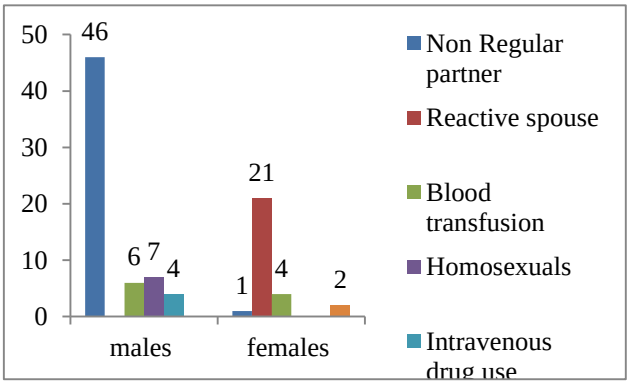

Figure 2: Associated risk behaviour with respect to the gender of the patient.

Education status and job profile

More than half of the HIV positive individuals were graduates, with only 12 out of 92 patients being uneducated. Of all the patients having non-regular partners as HRB, most had received at least primary education, and more than 50% were graduates (47/92). Amongst women, 25 out of 28 were homemakers; one was self-employed, while two were students. While amongst the male clients, 23 were in private jobs/service/self-business/hotel staffs, 17 were involved in skilled/semi-skilled labour/agriculture, ten were drivers of local transport, ten were students and the remaining four were unemployed/retired. Patients in private jobs/self-employed were seen to have multiple/non-regular sex partners. The youth (students) were also seen to have serious HRB like non-regular sex partners, intravenous drug use, etc. In the case of female patients, 21 out of 28 had reactive spouses.

Mode/route of transmission

The most common route of transmission was through heterosexual route (68/92), followed by blood transfusion. In about two % (2/92) of people, the exact route could not be known (Figure 3).

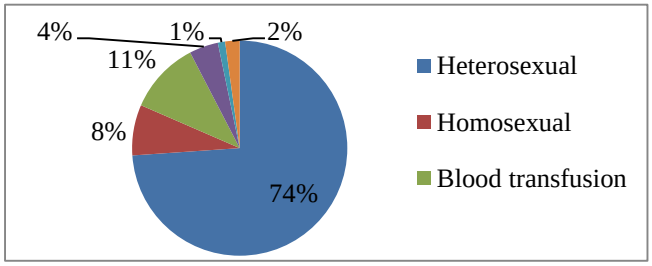

Figure 3: Routes of HIV transmission.

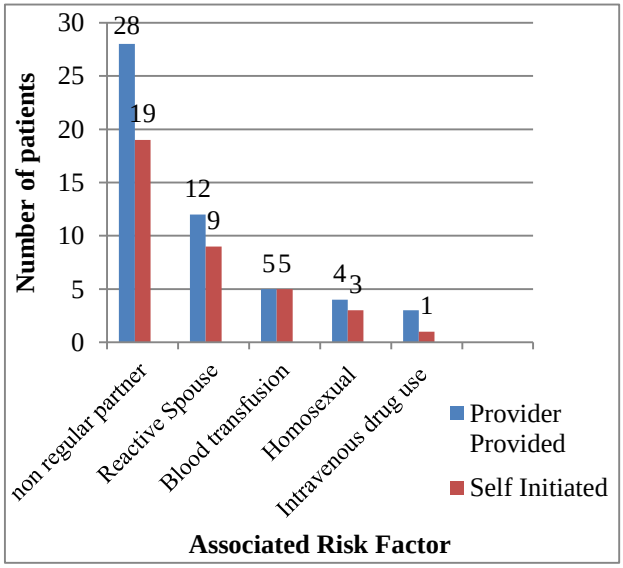

Figure 4: Risk factors and type of testing (self-initiated/provider provided).

Client-initiated versus provider-initiated HIV testing

Out of the 92 new HIV positive patients, 61% (56/92) were provider-initiated, and 39% (36 out of 92) patients walked in directly to ICTC by themselves. Most of the patients were referred from different departments of the institute; few were referred from private centres and also were referred by different NGOs. Around 46% (13/28) of females walked in directly, while more than 50% (41/64) of the males were referred to ICTC. A major reason for visiting ICTC directly was the presence of high-risk behaviour. Out of 47, 19 (40%) patients with non-regular partners, and nine out of 21 females with reactive spouses walked in directly for self-testing, while patients with other high-risk behaviours were mostly referred (Figure 4).

HIV status of sexual partner

31 HIV positive cases did not know the HIV status of their sexual partners. The various reasons attributed were that; the sexual partner in six cases were not alive and the cause of death could not be ascertained. Of the above six cases, five were wives of men with non-regular partners (with no HRB other than having sexual relations with her husband) and one was the husband of an HIV positive female, 18 patients had non-regular partners and seven homosexual patients were no longer in touch with their sexual partner(s).

Twenty-seven of the 64 male patients did not know HIV status of their sexual partner (47%), while only four out of 28 female HIV patients (18%) had no information on the HIV status of their sexual partners (Table 1).

Table 1: HIV status of spouse/sexual partner at the time of their own diagnosis.

HIV status of spouse/ sexual partner	Numbers	
	Men[a]	Women[a]
Reactive	15	20
Non-reactive	19	1
Unknown	27	4
NA[#]	2	4

[a]Gender of the patient under study. #Either child, or not sexually active

DISCUSSION

Out of a total of 92 patients enrolled in the study, around 2% (2/92) were children <15 years of age, and the remaining 98% patients (90/92) were adult (WHO and NACO divides children and adults as <15 years and ≥15 years respectively).[7] Amongst adult patients, 87% (80/92) were in the age group of 21 to 49 years which is comparable to a study done in Madhya Pradesh in 2019 and HIV data published by NACO in 2019.[8,9] The highest incidence of HIV in youth is seen not only in India but also in developed countries like USA.[10] This seems to be the vulnerable population driven by unsafe

sexual practices with multiple partners and intravenous drug abusers (Figure 1).[11-13] As per a publication, India reported the highest number of adolescent HIV cases in South Asia.[14] As per NACO's data, by the end of 2021, the number of people living with HIV in India was 24 lakh.[9]

Male (69.5%) (64/92) outnumbered female patients with the ratio being 2.3:1, which is higher than what was seen during the global HIV epidemic 2022 (1.2:1) and NACO data of 2015 (1.5:1).[15,16] The lesser number of females coming positive could be because of the lesser number of females getting tested because of gender-biased social barriers.[17] This higher male: female ratio could also be the actual trend in Uttar Pradesh/Lucknow, since the male: female ratio of a particular region is strongly influenced by the ratio of male-female population of that place, social stigma and medical care-seeking behaviour of the female of that region.[8,13]

Education is thought to play a protective role in the spread of HIV, but results of the present study showed more than half of the HIV positive patients are graduates (47/92; 51%), and around (36%; 17/92) patients have attained at least primary education, this is similar to a study done in Maharashtra.[18] But this higher percentage of graduates being HIV positive could also indicate that education brings more awareness about HIV testing and treatment. As was seen in a survey in Zambia in 2014, which found that a higher level of education lead to increased HIV testing and counselling especially among pregnant females.[19] Ironically, in the present study, it is the young students who constitute a major (10/92) chunk with high-risk behaviour like non-regular partners, men having sex with men and infective blood and blood products (Figure 1).

The presence of a 'non-regular partner' as the major risk factor amongst the HIV positive individuals (51% of all patients; 72% of male patients), emphasizes that education can act as a double-edged sword. On one hand, education level predicts protective behaviour like the use of safe sex practices, avoiding needle sharing, knowledge about HIV/AIDS and its testing/counselling, and discussing HIV status with spouse/partner; on the other hand, higher education status may lead to higher infidelity, lesser abstinence, as concluded by a study done on five African countries in 2009.[20]

As far as job profile is concerned, those in private jobs/self-employed were seen to have the maximum exposure to multiple/non-regular partners (19/47). This finding has been reported by Caballero-Hoyos et al too in their study.[21]

In the present study, the majority of HIV positive women were homemakers (25 of 28 women). Also, our finding corroborates the results of a previous publication which stated that women are usually infected by their husbands (72% of women) and are also diagnosed after their husband's diagnosis.[21] According to a study, sex with own husband was the only risk factor for getting HIV in the majority of women.[22] A study published 23 years back rightly pointed out that educated girls play a role as a 'social vaccine' in reducing the spread of HIV.[23]

The most common route of transmission was through heterosexual route (74%), followed by blood transfusion (11%). This is in accordance with the studies done in different parts of the country as well as beyond India.[18] A serious data to ponder upon is that a very low number of patients walked in to the ICTC centre directly to get HIV testing done (39%) (36/92) as opposed to 61% (56/92) who were referred. This feeling of a barrier towards HIV testing, speaks volumes about both the lack of awareness amongst the general population and the social stigma attached to HIV testing.[13,24] Amongst directly tested cases, there were more women (13 of 28 women) as compared to men (23 of 64 men). Despite the bill (2014) to remove the stigma and stop discrimination against HIV positive individuals in the work place, education, health care, travel etc., the stigma is still attached to HIV testing and its reactive status.[25,26]

When inquired, the common reasons for visiting ICTC directly were the presence of high-risk behaviour, 40% (19 out of 47) with non-regular partners, followed by a reactive spouse. Patients with other high-risk behaviour were mostly referred. This is in accordance with a study done in the ICT centre of Ahmadabad.[17] This is the major key population which needs to be targeted to reduce the gaps in HIV diagnosis, especially among the key population (sex workers, men having sex with men, transgender, people who inject drugs and people in prisons and other closed settings), WHO has recommended HIV self-testing (HVST) in some parts of the world. The national policy development and implementation of HIV self-testing by NACO is under consideration.[27]

Disclosure of HIV status to the spouse/sexual partner is very essential public health goal of partner services programs to increase testing/counselling and decrease HIV transmission, thus reducing the incidence of HIV cases.[21,28]

In the present study, 34% (31 out of 92) patients were unaware of their sexual partner's HIV status; this is much higher than what was seen in Puducherry in 2012 but it is in accordance with a meta-analysis published by WHO, according to which disclosure rate is much higher in developed countries than in developing country like India.[29,30] A higher number of males had no update on their spouse's HIV status (47%; 27/64) as opposed to only 18% (four out of 28) females being unaware of their sexual partner's HIV status. This is not surprising, because various social problems are attached to disclosure of their HIV status like social abuse, abandonment by family members, loss of financial support and many others; it is the female partners who usually do not disclose their HIV status.[13,29]

A major limitation of the study is that some important factors like the economic status of the patient, and social habits like drinking, smoking, and chewing tobacco even though are enquired during counselling, but are not recorded, thus this data is not available.

CONCLUSION

The study throws some light on the behavioural pattern of new HIV cases (Lucknow and nearby towns) coming to the ICTC centre. The most common HRB amongst HIV positive people is unsafe sexual practice with non-regular/casual partners, and innocent homemakers are mostly secondarily infected from their reactive spouses. Thus, there is a need to further spread awareness amongst women about the HRB and risk of HIV. Sharing of results between partners needs to be encouraged to prevent HIV transmission.

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