

## SHORT COMMUNICATION

# Impact of targeted intervention on HIV in female sex worker in Nagpur district of India

Dilip Gedam<sup>1</sup>, Sarfaraz Ahmad<sup>2</sup>

Assistant Professor<sup>1</sup>, Associate Professor<sup>2</sup>, Department of Microbiology, Indira Gandhi Government Medical College, Nagpur, India

<http://dx.doi.org/10.18049/jcmad/239a15>

### Abstract

*In India, HIV and consequent AIDS is becoming serious health problem. It is not only common in males but also in females and among females, commercial sex workers facing the burnt. Hence in the present study impact of targeted intervention on HIV in female sex worker is assessed. A total of 3425 commercial sex workers were screened for HIV. Overall prevalence of HIV in commercial sex workers was found to be 0.44%. It is concluded that prevalence is declining among commercial sex workers due to targeted intervention program in India.*

**Key words:** HIV, AIDS, Female sex workers

**Address for correspondence:** Dr. Dilip Gedam, Assistant Professor of Microbiology, Indira Gandhi Government Medical College, Nagpur, India. Email: [gedam\\_dilip74@rediffmail.com](mailto:gedam_dilip74@rediffmail.com), 09421784800

### Introduction

World Wide AIDS (Acquired Immune Deficiency Syndrome) is an equal opportunity disease for women. Women are generally more susceptible in contracting the HIV infection simply because of their receptive nature.<sup>1</sup> HIV infection followed by AIDS spread worldwide during the 1980s. Initially, HIV occurred mainly among more susceptible individuals such as homosexual and intravenous drug users in many parts of American and parts of Africa. The infection was spread among general population mainly through heterosexual contacts.<sup>2</sup>

India has been experiencing the most serious public-health challenge posed by the HIV epidemic since its first detection in 1986. It is not only common in males but also in females and among females, commercial sex workers facing the burnt. Since the nature of the HIV epidemic in India is heterogeneous, more than 90 percent of the infections were acquired through the people having multiple partners and not practicing safe sex practices. Sexual transmission of HIV is the most dominant route of infection in the country and is concentrated among the high risk group particularly female sex worker, their clients/partners, Men having sex with men (Transgender/Hijras), intravenous

drug users. An estimated 75 million men in Asia visit Female sex workers (FSWs) and 10 million women cater to them. Female sex worker are at the core in transmitting the disease. Very fewer studies have been done on this in Nagpur region of India. Since female sex workers are 14 times more vulnerable to other high risk groups, This study was conducted to see the seroprevalence and impact of targeted intervention on HIV in female sex worker in this area.<sup>1,2</sup>

### Materials and Methods

It was a cross sectional study. This study was carried out in the mobile ICTC, Department of Microbiology Indira Gandhi Government Medical College Nagpur from the period of April 2013 to March 2014 through NGOs Indian Red Cross Society (IRCS), Indian Institute of Youth Welfare (IYW) and Bhartiya Aadim Jati Sevak Sangh (BAJSS). Mobile Van team visited Red light areas through NGOs. IRCS worked for brothel base areas of female sex worker and IYW and BAJSS worked for non brothel base female sex workers in Nagpur district of central India. Non brothel FSWs were traced through peer FSWs. A total of 3425 commercial sex workers were screened for HIV. After counseling, blood sample were collected and

tested according to NACO guidelines. Data was analyzed by applying Chi ( $X^2$ ) test.

## Results

A total 3425 FSW were screened for HIV antibodies out of which 1298 (37.90%) were brothel based and 2127 (62.10%) were non brothel based female sex worker. Most of the HIV positive cases were between the age group of 16 to 25 years (8=0.23%) followed by 26 to 35 years (5=0.15%). Overall prevalence of HIV in FSWs was 0.44%. Prevalence in brothel base FSWs were 0.15% and in non brothel base FSWs it was 0.29%. The difference was found not significant after applying chi( $x^2$ ) square test (P value = 0.7149) table 1&2.

**Table- 1: Age-wise distribution of FSWs**

Age(Y)	FSWs	%	Positive	%
16-25	1488	43.35	8	0.23
26-35	1143	33.37	5	0.15
36-45	686	20.03	2	0.06
> 45	108	3.15	0	3.15
<b>Total</b>	<b>3425</b>	<b>100</b>	<b>15</b>	<b>0.44</b>

**Table- 2: Positivity of HIV in FSWs**

Base of FSWs	No.	Positive	%
Brothel Based	1298	5	0.15
Non Brothel Based	2127	10	0.29
<b>Total</b>	<b>3425</b>	<b>15</b>	<b>0.44</b>

## Discussion

National AIDS control program in India has been recognized globally as a success story. The adult HIV prevalence at National level has been continued its steady decline from estimated level of 0.41% in 2001 through 0.35% in 2006 to 0.27% in 2011. Considerable decline in HIV prevalence have been recorded among female sex workers at national level (5.06% in 2007 to 2.67% in 2011) (HSS 2010-2011). According to HSS 2008 in Maharashtra, highest HIV prevalence in FSW was in Pune District 40.80%, and lowest was in Jalgaon district 1.60%. In Nagpur district it was 17.20%. In 2008 there were 174 TIs including 74 for FSW 40 for MSM and 4 for injecting drug users, 48 for migrants, 4 for transgender and 6 for

truckers (HIV/AIDS situation and response in Maharashtra).

In the present study the overall HIV prevalence in FSW was 0.44% out of which 0.15% FSW were brothel base and 0.29% were non brothel base. Sarkar et al<sup>2</sup> in 2005 showed 9.6% prevalence of HIV in female sex worker and also showed that prevalence of HIV in brothel base FSW and non brothel base FSW was similar. In the present study difference in seroprevalence of HIV in brothel base and non brothel base FSW was not significant (P value = 0.7149).

National prevalence of HIV among FSW is 2.67%. According to HSS 2010-11 in FSWs, Maharashtra has 6.89% prevalence of HIV. Andhra Pradesh 6.86%, Karnataka 5.10%. 11 FSW's sites have showed 10% or higher HIV prevalence among FSW that includes 5 sites in Maharashtra, 4 in Andhra Pradesh, each in Karnataka & Tamil Nadu.<sup>3</sup>

In the present study none of FSW was intravenous drug user, Venkatesh at al<sup>4</sup> showed that 1.3% of FSWs reported to had history of injecting drug for pleasure and showed that HIV prevalence in FSWs using intravenous drugs was 8.26% as compared to FSWs who never exposed to intravenous drugs i.e 4.79%.

FSW who use IDU are 9.4 times have more risk of acquiring HIV infection (STI/HIV Maharashtra). In the present study prevalence of HIV is very less both in brothel base and non brothel base FSW. This may be due to target intervention program started by NACO through NGOs and well awareness of HIV/AIDS and other STI among FSW. NGOs constantly visited to FSW site and insist the FSW to use the condom. They distributed the condom 250/month/FSW during monthly visit.<sup>3</sup> In the present study it was found that 95% of FSW (brothel base) using condoms with their clients except the regular partner. FSW of brothel base serve 3-4 clients/day. The non brothel based FSW uses condoms except with their husbands. So FSW is responding and accepting well the prevention strategies of HIV/AIDS and STI program. In the present study 90% of brothel base FSWs was illiterate only 10% had hardly primary education, while in non brothel FSW 10% were illiterate, 70% had primary education, and 20% had secondary education. The mean

age was 22 years for both brothel and non brothel FSW.

India has demonstrated on overall reduction of 57% in estimated annual new HIV infection (among adult population) during the last decade, from 2.74 lakh in 2000 to 1.16 lakh in 2011. This is one of the most important evidence on the impact of the various interventions under National AIDS Control Program and scaled up prevention strategies.<sup>3</sup>

### **Conclusion**

From this study we concluded that HIV prevalence is declining among FSWs due to targeted intervention program and India is on track to achieve the global targets of 'Zero new infection, Zero aids related deaths and Zero discrimination'.

### **Acknowledgements**

Authors acknowledge the support given by Indian Red Cross Society (IRCS), Indian Institute of Youth Welfare (IIYW) and Bhartiya Aadim Jati Sevak Sangh (BAJSS) for conducting the study.

---

*Source(s) of support: Nil*

*Conflict of Interest: None declared*

---

### **References**

1. Vasana J, Gupte MD, Adhikary R, Paranjape RS, Manikar MK, Brahman GNV, Mahatma J and Ramesh BM: Index based mapping of high risk behaviors for HIV among female sex workers in India. *Indian J Med Res* 2012;136:14-22.
2. Sarkar K, Bal B, Mukharjee R, Niyogi SK, Saha MK and Bhattacharya SK. Epidemiology of HIV infection among Brothel-based sex worker in Kolkata, India. *J Health Popul Nutr* 2005;23(3):231-235. [[PubMed](#)]
3. National Aids control organization. Annual Report 2008-2009. Available from [http://nacoonline.org/upload/publication/Annual\\_Report\\_NACO\\_2008-09.pdf](http://nacoonline.org/upload/publication/Annual_Report_NACO_2008-09.pdf) (last accessed on 2010 Feb 18).
4. Venkatesh S, Raj Y, Kumar P, Chavan L, Sarathi CP. Dual risk among sex workers in India: Profile and HIV prevalence among female workers who injects drug in India from national HIV sentinel surveillance. *AIDS* 2012. <http://pag.aids2012.org/Abstract.aspx?AID=6423>. Accessed on 6/11/2014.