

**Kathmandu Female Sex
Workers Sero Prevalence
Study
(March 2001 – August 2001)**

**KATHMANDU FEMALE SEX WORKERS SERO
PREVALENCE STUDY
(March 2001 – August 2001)**

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1. Executive Summary

- **Study objective:**

This study was carried out among female sex workers in Kathmandu valley from March to August 2001 to determine the prevalence of HIV and syphilis and also to examine behavioral attitudes related to sexually transmitted disease.

- **Study population and data collection:**

Total of 500 female sex workers (300 street based and 200 non-street based) were included in the study. All the female sex workers who agreed to participate were included in the study. After obtaining an informed consent a questionnaire was administered and blood sample was collected.

- **Major findings:**

a) **Street based sex workers (300):** Overall HIV prevalence was 15.67%; active syphilis prevalence 14.3%; 10% were in age group below 19%; HIV prevalence was 12.6% in Kathmandu; 16.7% in Lalitpur and 15.4% in Bhaktapur among sex workers who reported the use of condom at last sex act and 22.9% in Kathmandu and 18.8% among those who did not use condom; 80% HIV prevalence was seen among regular users of injecting drug users and 33.3% among non-regular users.

b) **Non-street based sex workers (200):** Non-street based sex workers are either workers in small lodges and restaurants or those who negotiate with the clients at local bars and dance restaurants. Overall HIV prevalence was 2.5%; active syphilis prevalence 3.5%; 20% sex workers are below 19 years of age; HIV prevalence of 1.4% in Kathmandu and 4.8% in Lalitpur was noted among those who reported the use of condom use at last sex act and 6.7% in Kathmandu among those who did not use condom; no HIV was detected among 1% drug users. Sex workers from *Bhatti* have more clients in comparison to other groups. *Bhatti* is a traditional country-liquor shop for consumption on the premises or take out. Some of the *Bhatti* may have rooms for sexual activity. There is significant difference of HIV and active syphilis prevalence among street based and non-street based sex workers.

c) **Sex workers who have worked in India:** Street based sex workers in Kathmandu who have worked in India have HIV prevalence was 41.7% and 72.7% among sex workers who have worked as sex worker in Mumbai. Among non-street based sex workers in Kathmandu HIV prevalence was 40% among those who have worked as sex worker in India and 66.7% among those who have worked in Mumbai.

2. Background Information:

The first case of HIV/AIDS was detected in 1988. As of April 2000 a cumulative total of 1500 HIV infection, including 336 AIDS, cases and 140 deaths from AIDS, have been reported. (Source NCASC).

HIV/AIDS awareness activity has been ongoing for almost fifteen years in Nepal. Nevertheless Nepal today faces a serious challenge of HIV epidemic. Early investigation demonstrated infection among commercial sex workers only. However, the infection now is seen in migrant workers, male clients of commercial sex workers and housewives. Already vertical transmission of HIV from infected mother to newborn has been reported.

The HIV epidemic in Nepal is made more complex by trafficking of rural girls to brothels in and out of the country, large number of migrant workers to and from India, and a rapid increase in number of commercial sex workers in urban centers. The awareness campaign has not reached to all these groups. Low literacy rates have made it more difficult. Religion, socio-cultural practices and other traditional rigidities related to sex and sexually transmitted diseases have made the task more difficult. It is a paradox that sex is one of the most common practices we have in our life, yet we still seldom speak directly about this in our society. It is a subject that is considered to be very personal, secret and confidential. Because of social stigma people have a tendency to hide sex-related diseases and many infected people try self-medication. And women in general avoid talking and seeking help for STDs and silently suffer.

STDs prevention and treatment is considered as a program in HIV prevention. In absence of valid data it has been very difficult to assess the prevalence of STDs and its relation as a co-factor in spread of HIV in Nepal. However, there is now evidence supporting the need for strong STD prevention and treatment programs vis-à-vis HIV awareness and prevention.

Unsafe sex with female sex workers is not uncommon amongst male clients. Recent investigations have documented evidence of a “vigorous commercial sex industry ” in Kathmandu, setting the stage for a rapid spread of HIV/AIDS from this core group to wider society. This is made more complex by a rise in drug abuse and needle sharing. Regular surveillance in previous years suggest that HIV infection prevalence is high among female sex workers and their clients. Because of the mobile nature of sex workers and minimal use of condom by their clients, the infection pass easily from sex worker to the client and from infected clients to newly recruited female sex workers. And these newly infected male clients of sex workers may carry the infection to their spouses.

HIV prevalence among sex-workers in Kathmandu-was less than 1% which gradually increased to 2.7% in 1995/96; 1996/97; 16% in 1997/98 and 17.1% in 1999/2000 (source SACTS). The HIV prevalence amongst sex workers outside Kathmandu is reported 3.7% in a study carried along East West high way (source FHI/New Era SACTS).

For any effective prevention program reliable data of STD/HIV prevalence is vital. Thus, this study is designed both as a continuation of previous years activity and also to measure prevalence of syphilis and HIV and to know vital aspects of behavioral attitude of female sex workers regarding sexual behaviors, safer sexual practice and drug injecting habit.

Present Situation:

The epidemiological data suggest that Nepal is still a low prevalence country. The prevalence is less than 1% among blood donors and antenatal clinic attendees. However the HIV prevalence is dramatically increasing among certain group of population.

The dynamics of HIV epidemic indicate rapid increase among FSWs, their clients and IDUs. In mid 1990s the HIV prevalence was 2% or below in FSWs and IDUs. In five years time period the prevalence rate has increased to 50% among IDUs and about 20% among FSWs. The prevalence is higher among FSWs using injecting drugs and sex-workers returned from India, especially from Mumbai.

Present situation - data:

Reported HIV cases	-	2024	-	July 31 2001.
Reported AIDS case	-	576	-	July 31 2001
Estimated No HIV positive adult and children	-	34400	-	December 1999.
	-	Adult (15 – 49)	-	33000
	-	Women (15 – 49)	-	10000
	-	Children (0 – 5)	-	93
Adult prevalence rate	-	0.29%		
Estimated number of death in adult and children	-	2500	-	1999

Estimated orphans:

-	Cumulative orphans	-	2500
-	Current living orphans	-	2157

Prevalence of HIV:

-	IDUs	-	50%
-	FSWs	-	2 – 20%
-	STI patients	-	0.7 – 6.6%
-	Blood donors	-	0.28-0.48%
-	ANC attendees	-	0.2%

(Source UNAIDS)

At present Nepal can be considered as a low HIV prevalence country. But there is evidence of high HIV prevalence among female sex workers and injecting drug user. And Nepal has entered the stage of “Concentrated epidemic” so there may be a serious problem of possibility of the spread of the disease from vulnerable group (i.e. FSWs and IDUs) to the general population via bridge population (clients of FSWs and partners of IDUs) to the general population via bridge population (i.e. clients of FSWs and partners of IDUs)

3. Objective of the study:

- To determine the prevalence of HIV and Syphilis among a sample of female Sex-workers in Kathmandu Valley.
- To examine certain key behaviors i.e. condom use, drug use and location of sex work in relation to HIV and ST infection.

4. Study Method:

- a. Sample size – 500 (300 street based and 200 Non-street based.)
- b. Sample population – female sex workers.
- c. Site: Kathmandu.
- d. All the female sex workers who agree to participate in this study were included.
- e. Briefing to each participant on nature of study followed by oral informed consent.
- f. Administration of questionnaire containing twelve questions followed by a blood sample collection.

5. Implementation of the study:

a) Briefing: -

A short briefing and training session was organized for field staff. In the first two weeks, field staff spent their time contacting local social workers and pimps and establishing close linkage with sex workers.

b) Field area: -

Sex workers from Bhaktapur, Lalitpur and Kathmandu were recruited for the study. The field areas were as follows:

1. *Bhaktapur:*

- Thimi
- Sallagari
- Suryabinayak

2. *Lalitpur:*

- Jawalakhel
- Lagankhel
- Gwarko
- Ekantakuna
- Ring Road

3. *Kathmandu:*

- Thankot
- Kalanki
- Balazu Bus park
- Jorpati
- Baudha
- Ratnapark
- New Road
- Sundhara
- Tundikhel Area
- Nachghar
- Old Bus Park
- Kalimati
- Tripureswor

c) Field team:-

The team consisted of interviewers, laboratory assistant and social workers. The field team staff had previous experience of working in HIV/STD study project. Two day training program was arranged. The training included lectures on HIV/STD, counseling, administration of questionnaire and blood sample drawing for HIV and syphilis. Role play for administration of questionnaire was also carried.

d) Interview:-

Administration of the questionnaire and collection of blood samples were carried mostly in the office of SACTS, small lodges and other private places.

Prior to the administration of the questionnaire each participant was briefed on the nature of the study and confidentiality. An informed consent form was read to each participant and was told that they were free to participate or not. The informed oral consent was signed by the interviewer after the participant had agreed to participate in the study and was also countersigned by a witness. All the answers to the questions and laboratory results were confidential and there was no way to link any one of them with their answers and results of the blood test.

Questionnaire: All together there were twelve questions:

- Age
- Time period spent in commercial sex trade,
- Condom use and source of condom,
- Operation area.
- History of working as FSW outside Kathmandu and NEPAL.
- History of drug use.
- Amount paid by last client.

Blood Tests:

Tests were carried for the diagnosis of Syphilis and HIV.

Laboratory Procedure:

1. Two rapid HIV tests were used to detect antibodies to Human immunovirus.
2. RPR and TPHA tests were carried to diagnose syphilis.
3. 10% of samples were submitted for re-testing.

6. Result:

6.1 Major findings – Street Based Sex-workers.

1. 58% of the sex workers are in the age group 20 – 29. (Chart S1)
2. 10% of the sex workers are young and fall in the age group 13 – 19. (Chart SI)
3. 18.3% of the sex workers are in this profession for 1 year, majority of them (48%) are in the sex trade for 2 – 3 years. (Chart S2)
4. 63 out of 247 sex workers in Kathmandu and 9 out of 40 in Lalitpur had 2 clients in last week and HIV prevalence was 19.0% and 33.3% respectively. (Table S3)
5. 175 out of 247 sex workers in Kathmandu, 24 out of 40 in Lalitpur and 13 out of 13 in Bhaktapur reported condom use at last sex act and HIV prevalence was 12.6%; 16.7% and 15.4% respectively. (Table S4)
6. 70.7% customers bring their own condom and 22.7% sex workers report that they buy the condom. (Chart S5)
7. Out of 66/247 sex workers in Katmandu reported that all their clients use condom, during last six months and HIV prevalence was 1.5%. (Table S6)
8. 6 out of 40 sex workers in Lalitpur and 6 out of 13 in Bhaktapur reported that their entire client use condom, during last six months and HIV prevalence in both situations was 16.7%. (Table S6)
9. Out of 33 female sex workers that have worked in India 10 were coerced and 23 have gone to work on their own. HIV prevalence was 40% among coerced and 43.5% among those who went on their own. (Chart S7A)
10. 24 sex workers in Katmandu who have worked in India and 11 in Mumbai had HIV prevalence rate of 41.7% and 72.7% respectively. (Table S7)
11. 9 sex-workers in Lalitpur who have worked in India and 1 in Mumbai had HIV prevalence rate of 44.4% and 100% respectively. (Table S7)
12. 80% HIV prevalence was seen among regular users of injecting drug users and 33.3% among non-regular users. (Chart S8A)
13. 131 out of 240 sex-workers in Katmandu are paid Rs.200-400; 26 out of 40 in Lalitpur are paid Rs.200-400. (Table S9)
14. No significant difference was noted for HIV prevalence among sex workers in Katmandu, Lalitpur and Bhaktapur. (Table 14)
15. HIV and active syphilis co-infection was seen among 2% of sex workers in Kathmandu valley. (Chart S15)
16. In all sex workers above 20 years of age in Kathmandu and Lalitpur HIV prevalence was 10% or more except in age group 20 – 24 in Lalitpur. (Table S12)
17. Active syphilis prevalence was 16.2% in Kathmandu, 2.5% in Lalitpur and 15.4% in Bhaktapur. (Table 13)
18. Overall HIV prevalence was 15.7% and active syphilis 14.3%. (Table 13 and 14)

6.2 Major findings Non-street Based sex workers:

1. 55% of the sex workers are in the age group 20 – 29. (Chart NS1)
2. 20% of the sex workers are young and fall in age group 13 – 19. (Chart NS1)
3. 37.5% of sex workers are in this profession for 1 year while 28.5% and 17% are in profession 2 and 3 years respectively. (Chart NS2)
4. 87 out of 170 sex workers in Kathmandu had 2 to 3 clients in last week and 31 out of 170 had 5 or 6 clients; 13 out of 30 sex workers in Lalitpur had 2 – 3 clients and 6 out of 30 had 5 or 6 clients. (Table NS4)
5. 74% customers bring their own condom and 21% sex workers reported that they buy their own condom (Chart NS5)
6. 140 out of 170 sex workers in Kathmandu and 21 out of 30 in Lalitpur reports condom use at last sex act and HIV prevalence was 1.4% and 4.8% respectively (Table NS6)
7. 67 out of 170 sex workers in Kathmandu and 8 out of 30 in Lalitpur reported condom use by their clients in last six months. (Table NS7A)
8. Among 5 sex workers who have worked in India HIV prevalence was 40% and 66.7% among 3 sex workers who have worked in Mumbai. (Table NS8)
9. 1 out of 170 sex workers in Kathmandu and 1 out of 30 in Lalitpur reported occasional use of injecting drug. (Table NS 9)
10. 42.9% sex workers in Kathmandu was paid more than Rs. 500 and 40% in Lalitpur was paid Rs. 500. (Table NS 10)
11. HIV prevalence was high in age group 20 – 24 in Kathmandu and 25 – 29 in Lalitpur. (Chart NS 11)
12. Active syphilis prevalence was 3.5% in Kathmandu and 3.3% in Lalitpur. (Table NS 13)
13. HIV prevalence was 2.4% in Kathmandu and 3.3% in Lalitpur. (Table NS 14)
14. HIV and active syphilis co-infection was seen in 1 sex worker in Lalitpur. (Table NS 15)
15. HIV prevalence among both street based and non-street based who have worked in India and Mumbai was significantly high. (Chart NS 17)
16. Sex workers from *Bhatti* in Kathmandu reported that only 30.2% clients use condom in last six months in comparison to 60% clients of Massage parlour. (Chart NS 7)
17. HIV was not seen among sex workers in Kathmandu from dance restaurant and Massage parlour. (Table NS 12)

7. Implication of findings

Prevalence of HIV and active syphilis is found to be quite high amongst street based sex workers. Compared to non-street based sex workers the HIV among street based sex workers was six times high. Clients of street based sex workers are mostly young and mobile people with low literacy rate. And these people are at significant risk of being infected with HIV infection through unsafe sex with sex workers. The situation is made more complex by high prevalence of syphilis, as ulcerative lesion of early syphilis increases the chance of getting HIV. This situation opens the chapter of infected male clients slowly taking this infection home. And this will lead to extend the infection to general population and also peri-natal transmission from partners of infected males. As most of these men are mobile and practice unsafe sex, they will gradually infect more newly recruited sex workers in Kathmandu and will also spread infection to other cities and urban centers in Nepal.

8. Recommendation

- I. This type of study in Kathmandu should continue to monitor and evaluate HIV and STD prevalence.
- II. In addition to surveillance, diagnosis and treatment facilities should be made available for female sex workers.
- III. Outreach field activities should be organized to encourage sex workers to visit clinics for diagnosis and treatment of STDs as well as counseling.
- IV. Outreach field program must have a strong condom promotion activity with information on access of condom supply targeted to the sex workers and their clients.
- V. Peer group training program should be organized to educate sex workers on early recognition of symptom of STDs and seek medical services.
- VI. STD treatment clinic should be specially organized to serve street based sex workers.
- VII. Presently, HIV and active syphilis prevalence is not high among non-street based sex workers. For containment of this situation, active condom promotion and safe sex program should be launched targeted to this group.

STUDY TEAM

1. Dr. V. L. Gurubacharya - Chief Investigator.
2. Mr. Binod. Bdr. Shrestha - Research Assistant.

FIELD STAFFS

Laboratory staffs:

1. Mr. Janardan Kuinkel.
2. Mr. Purusottam Kuinkel.

Interviewers:

3. Ms. Rajya Shrestha
4. Mr. Nara Hari Paudyal.

ABBREVIATION

FHI	- Family Health International.
FSW	- Female Sex Workers.
HIV	- Human Immuno-deficiency Virus.
RPR	- Rapid Plasma Reagin Test.
SACTS	- STD/AIDS Counselling and Training Services.
STD	- Sexually Transmitted Disease.
TPHA	- Treponoma Pallidium Haem-agglutination Test.
IDUs	- Injecting drug users.

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We also sincerely appreciate the co-operation of street and non-street based sex workers and local social workers without whose help this study would not have been possible.

ANNEX - I

Table/Chart – Street Based Sex Workers

ANNEX - II

Table/Chart – Non-Street Based Sex Workers

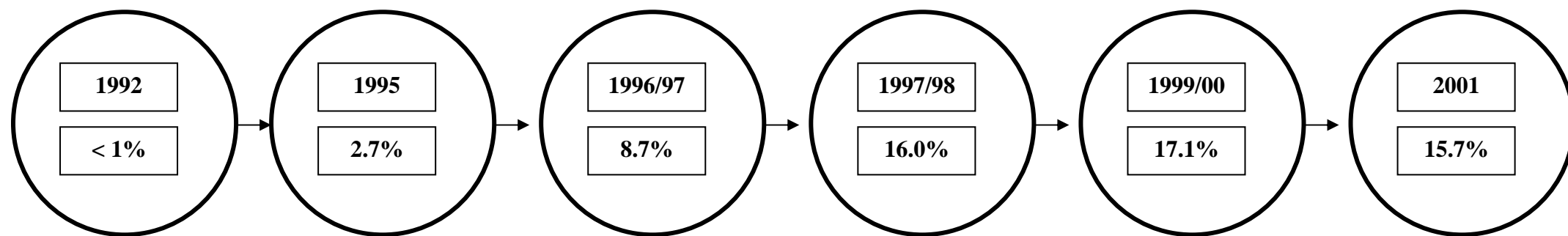
ANNEX - III

Questionnaire/Consent Form/Laboratory Methods

LABORATORY METHODS

- A. RPR – Reagent:
- “Syphistat”
Ranbaxy. India.
- B. TPHA – Reagent:
- “Immutrep – TPHA”
Omega Diagnostics
Alloha, Scotland, UK.
- C. HIV – Kits:
1. “Determine”
Abbott Laboratories, Japan.
 2. “HIV Spot”
Genelabs Diagnostics, Singapore.

Kathmandu FSW Sero-prevalence Study



N=300

N=300

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