

Program Implications and Recommendations

- **Implication:** Street-based FSWs are at greater risk of HIV and syphilis.
Recommendation: Interpersonal behavior change communication and availability and utilization of HIV and STI services should continue for all FSWs, with a greater focus on reaching those who are street-based.
- **Implication:** There is a high turnover of FSWs, which is greater among establishment-based FSWs. Therefore, many of the girls and young women entering sex work for the first time may not be informed about the risks of HIV and STI, locations of HIV related services and the importance of consistent condom use with all partners.
Recommendation: Continuous education and information sharing must be available for all FSWs. Additional efforts are required to identify and reach new FSWs through community and peer-based outreach activities.
- **Implication:** A high proportion of FSWs are under 20 years and in Kathmandu they are more likely to be establishment-based (Kathmandu 30% and Pokhara 40%). Internal migration is high as most are from outside the surveyed districts (87% of FSWs in Kathmandu and 75% of FSWs in Pokhara), which puts them at high risk of HIV and STI and vulnerable to other health and socio-economic problems.
Recommendation: Provide youth-and-migrant-friendly services for FSWs that give them access to information on HIV and STI, sexual and reproductive health services and psychosocial support. Linkages should be established for alternative livelihood opportunities. Establishment managers and peers need to be mobilized to provide HIV prevention information and support to new comers.
- **Implication:** Almost half of the FSWs in Kathmandu and one third of the FSWs in Pokhara are currently married, which means their husbands are also at risk of HIV infection if safer sex is not always practiced. About 40% of FSWs in both sites had ever terminated pregnancies, an indication of the number of unwanted pregnancies and the need for family planning counseling.
Recommendation: Provide education on HIV and STI to these FSWs along with the importance of consistent and correct

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- condom use for dual protection with all partners, family planning counseling and access to services and education on prevention of mother-to-child transmission (PMTCT) of HIV. Those who are using other forms of contraception need to know about and use condoms for HIV and STI protection.
- **Implication:** Knowledge of female condoms is moderate at around 50%, although use is very low (about 4%). Female condoms are not widely available free of cost.
Recommendation: Provide education on female condoms, increase availability and develop linkages with social marketing.
 - **Implication:** Consistent condom use is reasonably high among FSWs, more than 70% in Kathmandu and around 60% in Pokhara, with their paying and occasional partners and is significantly lower among their non-paying regular partners i.e. husbands and boyfriends (Kathmandu 12% and Pokhara 8%). This puts both them and their partners at risk of HIV and STI.
Recommendation: Strengthen the current consistent condom use practices and focus on improved communication and negotiation among couples, especially non-paying regular partners, through continuous education. Condom distribution must be adequate for the number of clients they serve.
 - **Implication:** Condom carrying behavior is still low among FSWs, around 30% among street-based FSWs in Kathmandu; establishment-based is even lower at 17%. In Pokhara, it is around 35%. However, the trend is increasing significantly in Pokhara and among establishment-based FSWs in Kathmandu.
Recommendation: Greater emphasis is required on the importance of condom-carrying behavior through improved outreach education and communication along with negotiation skills for FSWs. Strengthened efforts are required to create an enabling environment for condom-carrying behavior.
 - **Implication:** Although knowledge on HIV and STI is high, the health seeking behavior of FSWs is comparatively low.
Recommendation: Outreach education and referral to services should be strengthened and quality services must be available and accessible.

Brief Description of Survey

The fourth round of the Integrated Biological and Behavioral Surveillance (IBBS) surveys among female sex workers (FSWs) covered a sample of 938 respondents in Kathmandu valley – Kathmandu, Lalitpur and Bhaktapur districts (n=593) and Pokhara valley (n=345), henceforth, referred to as Kathmandu and Pokhara. The previous rounds of IBBS among the same sub-population were conducted in 2004, 2006 and 2008 in the same geographic locations. The surveys are primarily designed to track the trends in the prevalence of HIV and syphilis infection among FSWs in these selected locations and to assess their sexual and other risk behaviors related to HIV and sexually transmitted infections (STI). The surveys also explored the respondents' knowledge of HIV and STI, the presence of STI symptoms, sexual and injecting behaviors, and exposure to HIV programs.

It was conducted under the leadership of the National Center for AIDS and STD Control (NCASC) according to the National HIV Surveillance Plan for generating the strategic information needed for guiding and monitoring the national response to HIV and AIDS. The survey was conducted in accordance with human rights standards and ethical approvals were obtained from Nepal Health Research Council (NHRC) and the Protection of Human Subjects Committee (PHSC), FHI 360's ethical review board.

Methods

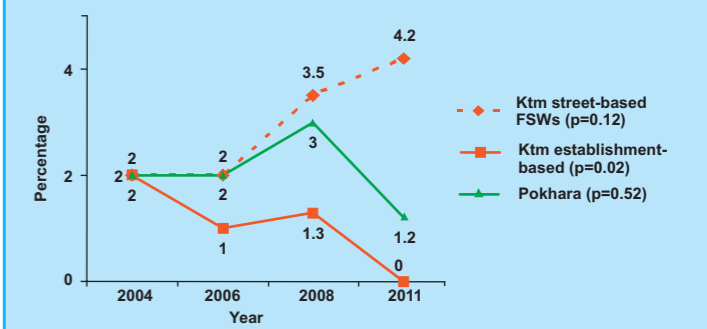
FSWs were defined as: *Women aged 16 years and above who reported being paid in cash or kind for sex with a male within the last six months.* Of the 593 respondents in Kathmandu, 238 were street-based and 355 were establishment-based. The typologies were not applied to FSWs in Pokhara. A two-stage cluster sampling method was used to draw samples in both the sites. The clusters (a group of one or more locations where at least 20 FSWs are found) were selected in the first stage and the respondents were selected in the second stage.

Survey participants were interviewed after obtaining witnessed oral consent followed by pre-test counseling and blood sample collection for HIV and syphilis. A structured questionnaire was used to collect background data along with information on knowledge, behavior and access to services. Rapid test kits: Determine HIV 1/2 test, Uni-Gold test and SD Bioline HIV 1/2 test kits were used for testing for the presence of antibodies against HIV in the serum. Syphilis was tested using Rapid Plasma Reagin (RPR) and was confirmed by Treponema Pallidum Particle Agglutination (TPPA) tests. Survey participants received HIV test results, with post-test counseling and syndromic treatment for STIs. Treatment for syphilis was provided based on the on-the-spot RPR screening.

Key Findings

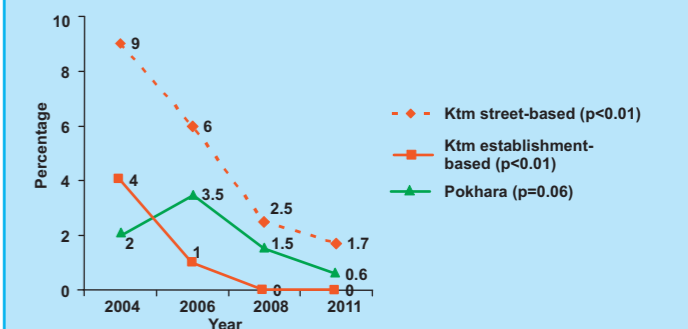
HIV prevalence among the establishment-based FSWs in Kathmandu has declined: In Kathmandu, none of the sampled establishment-based FSWs tested positive for HIV, a significant declining trend since 2004 (Figure 1). However, during the same period, HIV prevalence among the street-based FSWs in Kathmandu has increased from 2% (2004) to 4.2% (2011) but is not statistically significant.

Figure 1: HIV prevalence trend among FSWs in Kathmandu and Pokhara, 2004-2011



Active syphilis among FSWs is showing a declining trend: Active syphilis has decreased significantly over the years in both sites (Figure 2). In Kathmandu, active syphilis was higher among the street-based FSWs (1.7%) as no cases were detected among the establishment-based FSWs in 2011.

Figure 2: Active syphilis prevalence among FSWs in Kathmandu and Pokhara, 2004-2011



New FSWs are constantly entering sex work: Around 43% of the respondents had begun sex work within 12 months of the survey (about 40% in Kathmandu and 47% in Pokhara). In Kathmandu, a higher proportion of establishment-based FSWs (43%) had begun sex work within the past year compared to street-based FSWs (36%). Figure 3 illustrates the trends in the annual turnover of FSWs.

The IBBS Surveys are part of the National HIV Surveillance Plan, led by NCASC. The survey field work was carried out by New ERA and Intrepid Nepal, with external quality assessments by the National Public Health Laboratory. Technical and financial assistance was provided by the United States Agency for International Development (USAID), Cooperative Agreement 367-A-00-06-00067-00, and Strategic Objectives: 9&11

For more information and the full report, please contact

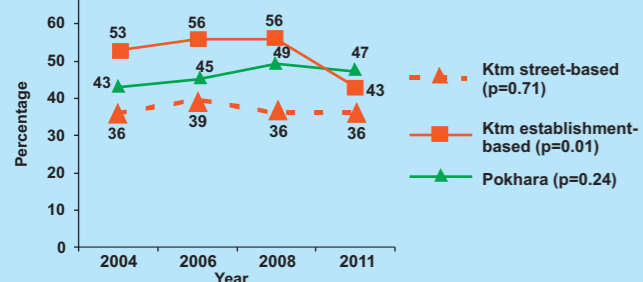
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Figure 3: Trend in annual turnover of FSWs in Kathmandu and Pokhara, 2004-2011



Most of the FSWs are young internal migrants: The majority of the respondents were born outside the valleys (about 87% in Kathmandu and 75% in Pokhara). Around 28% of the respondents in Kathmandu and 42% in Pokhara were below 20 years of age and twice as many were from establishment-based settings (about 36% establishment-based; 18% street-based).

Early marriage is a common practice among FSWs: Of the total ever married FSWs at both sites, around 86% were married before the age of 20 years and about 52% from Kathmandu and 33% from Pokhara were currently married. The median age of marriage was 16 years.

The majority of the married FSWs had given birth at least once before the survey: About 81% of the ever married FSWs in Kathmandu and 73% in Pokhara had given birth at least once before the survey. The average number of children born to married FSWs was almost two in both sites. About 15% in Kathmandu and 13% in Pokhara had experienced at least one miscarriage, while almost 40% from both sites had undergone at least one pregnancy termination.

Most of the FSWs use condoms for family planning as well as HIV prevention: Almost all the FSWs in Kathmandu and Pokhara know about condoms. They also know about injectables, pills and female/male sterilization. Over 80% in both the sites (87% Kathmandu and 84% Pokhara) had been using some form of family planning to delay or avoid pregnancy. The most commonly used family planning method was condoms (about 86% in Kathmandu and 80% in Pokhara). Both in Kathmandu and Pokhara, injectables were the second highest method of family planning used by FSWs (around 17% in Kathmandu and 10% in Pokhara).

Over two-fifths of the FSWs served more than one client on average per day: The mean number of clients served by the respondents was 1.6 per day in Kathmandu (1.8 for street-based and 1.5 for establishment-based) and 2.1 in Pokhara. In the week preceding the survey, FSWs in Kathmandu's had an average of 5 clients while Pokhara reported an average of 5.7 clients.

FSWs have easy access to condoms: Around 83% of FSWs in Kathmandu and 92% in Pokhara have access to condoms within 10 minutes of their workplace. However, access to condoms within 5 minutes drops considerably (Kathmandu 36% and

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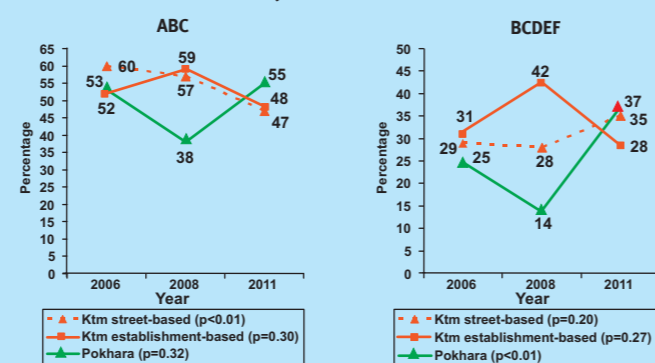
Pokhara 62%). About of 49% of FSWs in Kathmandu and 67% in Pokhara usually received free condoms. A slightly higher proportion of establishment-based FSWs reported having access to free condoms (establishment-based about 52%; street-based 44%).

Positive change in condom carrying behavior by FSWs: Condom carrying behavior among street-based FSWs in Kathmandu has not changed over the last four rounds of IBBS and has remained around 30%. However, this behavior has significantly improved among the establishment-based FSWs since the first round (5% in 2004 to 17% in 2011). About 35% of the FSWs in Pokhara reported carrying condoms regularly, a significant increase since 2004 (5.5%).

The comprehensive knowledge of HIV and AIDS among FSWs still low: Overall, the percentage of FSWs who knew all ABC HIV prevention indicators (A- abstinence, B- being monogamous, and C- consistent condom use) decreased significantly in Kathmandu street-based FSWs primarily due to a lower knowledge of A (around 60% in Kathmandu and 55% in Pokhara). In contrast, B and C indicators are substantially higher (Kathmandu- 81% and 89% respectively and Pokhara-84% and 93% respectively). However there were no significant changes since 2006 in Pokhara. There was no significant change in the comprehensive knowledge* in Kathmandu in the previous three IBBS rounds, however, it increased significantly to 37.4% in 2011 from 25% in 2006 in Pokhara. Except for the misconception on HIV transmission from a mosquito bite (around 47%) the other indicators are above 80% (Figure 4).

*being faithful, condom use and with no misconceptions on HIV in healthy looking person, HIV transmission by mosquito bite and sharing food utensils

Figure 4: Comprehensive knowledge of HIV among FSWs in Kathmandu and Pokhara, 2006-2011



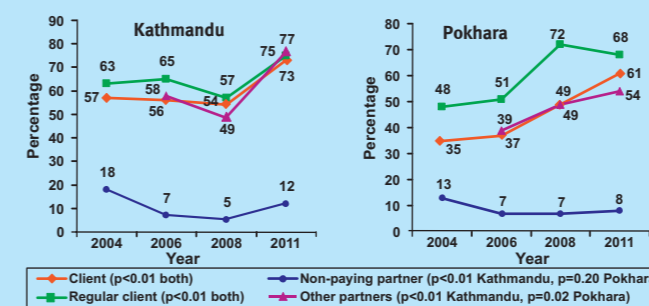
Use of female condoms is low among FSWs: About 46% of the respondents in Kathmandu and 52% in Pokhara were aware of female condoms. A very high proportion, 67.8% in Kathmandu and 77% in Pokhara had heard about female condoms from NGO staff. However, only 4% reported having ever used a female condom at both sites.

Consistent condom use with clients of FSWs has increased over time: Consistent condom use with both regular clients and 'other' sex partners (besides clients, husbands and boyfriends)

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by FSWs has increased significantly at both sites in the last four rounds of IBBS while condom use with their non-paying partners is relatively low and has declined significantly in Kathmandu only (Figure 5).

Figure 5: Consistent condom use in past year reported by FSWs in Kathmandu and Pokhara by type of partner, 2004-2011

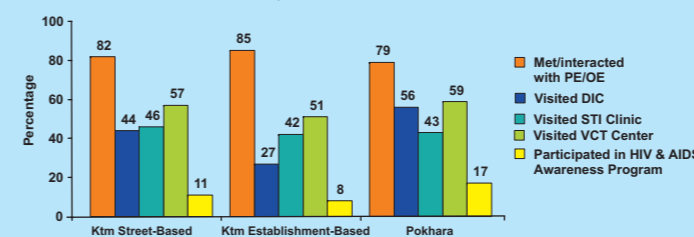


More FSWs are getting tested for HIV: The majority of FSWs in Kathmandu (84%) and Pokhara (90%) know about an available HIV testing facility. About 64% in Kathmandu and 70% in Pokhara reported having ever tested for HIV. In both sites, the percentage of FSWs who had ever tested for HIV prior to the survey has increased significantly over time (41% in 2006 to 64% in 2011 in Kathmandu; 30% in 2006 to 70% in 2011 in Pokhara).

Over two-fifths of the FSWs reported having STI symptoms and treatment seeking behavior is low: Around 44% of FSWs in Kathmandu and 53% in Pokhara had experienced at least one STI symptom in the past year and 48% in Kathmandu and 44% in Pokhara had STI symptom(s) at the time of survey. In both the sites, around 77% who experienced symptoms in the past year sought treatment while only a few who were currently experiencing symptoms had sought treatment at the time of survey (8.7% in Kathmandu and 16% in Pokhara).

Outreach for HIV prevention and treatment services is high: The majority of the FSWs (84% in Kathmandu and 79% in Pokhara) had met or interacted with peer educators (PE) or outreach educators (OEs) in the year preceding the survey. In both sites, about half of the FSWs had also visited a voluntary counseling and testing (VCT) site in the last 12 months and a slightly lower proportion had visited a drop-in-center (DIC) and STI clinic in the past year. However, participation of FSWs in any HIV prevention/awareness program was low (Kathmandu 9.3% and Pokhara 17.4%) (Figure 6).

Figure 6: Exposure to HIV programs in the past year by FSWs in Kathmandu and Pokhara, 2011



Key Indicators

IBBS Key Indicators among FSWs	Kathmandu valley			Pokhara valley
	Street (N=238)	Establishment (N=355)	Total (N=593)	Total (N=345)
	%	%	%	%
HIV Prevalence	4.2	0.0	1.7	1.2
Active Syphilis Infection	1.7	0.0	0.7	0.6
History of Syphilis Infection	4.2	1.4	2.5	3.2
HIV among those FSW working less than a year	0 (n=55)	0 (n=109)	0 (n=164)	0 (n=199)
Below 20 years of age	18	35	28	42
Currently married	56	50	54	33
Median age at first sexual intercourse	16 years	16 years	16 years	16 years
Mean duration of FSWs involved in sex work	34 months	28 months	30 months	25 months
Average number of clients per day	1.8	1.5	1.6	2.1
Average number of clients in the past week	5.0	5.0	5.0	5.7
Average weekly income from sex work	Rs. 3,254	Rs. 5,257	Rs. 4,453	Rs. 5,838
Have other jobs besides sex work	62	90	79	48
Usually carry condom	28	17	21	35
Always obtain condom free of cost	44	52	49	67
Condom use with last client	84	82	83	79
FSWs reached with targeted HIV prevention	84	87	85	83
Know that an HIV positive pregnant woman can transmit the virus to her unborn child	88	87	87	87
Know that an HIV positive woman can transmit the virus to her new-born child through breastfeeding	67	66	67	63
Know people living with HIV and AIDS or died	43	41	42	33
FSWs that have received an HIV test in the last 12 months and who know their results	55	54	55	59
FSWs who were physically assaulted in the past year	21	16	18	20
FSWs who were forced to have sex in the past year	27	18	22	21
FSWs used any method of family planning	85	88	87	84
FSWs who ever used female condoms	7	2	4	4
FSWs who reported ever injected drugs	2	2	2	5
Consumption of alcohol every day during the past month	24	33	29	17
Knowledge of sex partners being IDUs	2	2	2	8