



**Integrated Behavioural and Biological Surveillance,
among
Most at Risk Population
IBBS Study – Punjab 2014**

**Report Submitted to:
Punjab AIDS Control Program
By:
AP Consultancies
Bridge Consultants Foundation**

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ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
APC	AP Consultancies
BBSWs	Brothel Based Sex Workers
BCF	Bridge Consultants Foundation
CBO	Community Based Organizations
CHBC	Community & Home based Care
CPBSWs	Cell Phone Based Sex Workers
DCU	Data Coordination Unit
DGK	Dera Ghazi Khan
DOH	Department of Health
ERC	Ethical Review Committee
FBD	Faisalabad
FSWs	Female Sex Workers
GOP	Government of Punjab
GIS	Geographical Information System
GRT	Gujrat
GUJ	Gujrawala
HASP	HIV/AIDS Surveillance Project
HBSWs	Home Based Sex Workers
HIV	Human Immunodeficiency Virus
HRA	High Risk Activities
HSWs	Hijra Sex Workers
IBBS	Integrated Behavioral and Biological Surveillance
IDUs	Injecting Drug Users
KI	Key Informants
KKSWs	Kothikhana Based Sex Workers
KP	Key Populations
KPK	Khyber PukhtunKhwa
LHR	Lahore
MARPs	Most at Risk Populations
MBDN	Mandi Bahaudin
MLT	Multan
MSWs	Male Sex Workers
MSM	Men who have sex with Men
N	Numbers
NACP	National AIDS Control Program
NGOs	Non-Governmental Organizations
NWOs	Network Operators
PACP	Punjab AIDS Control Program
PAS	Punjab AIDS Strategy
PWID	People who Inject Drugs
RWP	Rawalpindi
SD	Standard Deviation
SDPs	Service Delivery Projects
SKT	Sialkot
SGD	Sargodha
SGS	Second Generation Surveillance
SM	Social Mobilizers
SKP	Sheikhupura
STIs	Sexually Transmitted Infections
SBSWs	Street Bases Sex Workers

TGs	Transgender
UN	United Nations
UNAIDS	United Nations Programme on HIV/AIDS
UNICEF	United Nations Children Emergency Funds
UNFPA	United Nations Population Fund
WHO	World Health Organization

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FOREWORD

The IBBS Punjab, 2014 has been conducted under the aegis of the Government of the Punjab, Health Department. The primary purpose of the survey to know the current trends in HIV epidemic and to furnish detailed information to policymakers and planners.

The Punjab AIDS Control Program has been the trend setter in Pakistan since year 2010 As regards, the response to HIV/ AIDS epidemic. Be it innovations in Prevention of Parent to Child Transmission District Model Approach, Community Home Based Testing or services for jail inmates, the PACP has always lead by example in reaching out to the people affected by HIV/ AIDS. This survey is another feather in the cap as Punjab is the first province in Pakistan that has conducted IBBS on its own, with its own resources. Earlier, four rounds of IBBS were conducted in Pakistan by CIDA funded HIV AIDS Surveillance Project.

The global community has embarked on an historic quest to lay the foundation for the eventual end of the AIDS epidemic. Responding to HIV/ AIDS epidemic requires adequate resources and we have got many other competing priorities at hand also. In this resource constraint setting, it is important to make the best use of the available resources. HIV/ AIDS can only be eliminated through sustained commitment and if the available evidence and limited resources are used as efficiently and effectively as possible. Effective response requires us to come up with strategies that suit our environment, culture and values. Thus, we need to have scientific evidence to formulate future policies. The Punjab IBBS 2014 would provide this evidence.

The trends identified in this survey will be utilized by policy makers, program planners and implementers, for elucidation of dynamics of HIV and AIDS transmission among most at-risk groups and for designing of appropriate HIV and AIDS Intervention-response strategies.

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EXECUTIVE SUMMARY

The Punjab AIDS Control Program undertook a comprehensive assessment of size and locations of most at risk populations (MARPs), which was followed by analysis of key socio-demographic characteristics, behaviours and HIV prevalence (Integrated Behavioural and Biological Surveillance – IBBS).

This report provides mapping, and biological & behavioral information related to HIV infection among four most at risk populations: Injecting Drug Users (IDUs), Male Sex Workers (MSWs), Hijra Sex Workers (HSWs), and Female Sex Workers (FSWs). The data presented here were collected during Punjab IBBS – Round 2014, conducted between June – November, 2014. The IBBS was preceded by mapping among MARPs, across 10 cities in Punjab. The cities included Lahore, Faisalabad, Multan, Sargodha, Gujranwala, Sialkot, Gujrat, Sheikhpura, Mandi Bahaudin and D G Khan. The results from these mapping activities are presented in a separate report¹. The mapping data provided sampling frames, diverse sampling techniques were used to draw representative samples of the MARPs from selected cities for IBBS. Behavioral data were gathered from said population using a structured questionnaire covering socio-demographic information and risk behaviour indicators identified from the literature on HIV. The study was ethically approved and informed consent was obtained prior to conducting interviews, in the field. Biological data were gathered through rapid HIV testing, in the field, as per WHO guidelines for surveillance. Specimens that were reported reactive by two rapid HIV tests, involving different antigens, were considered as HIV-positive. As unlinked anonymous surveillance data is not used for individual diagnosis, no additional testing was recommended to confirm HIV seropositivity in low-prevalence epidemic states or for discordant specimens, if any. Discordant specimens (Test 1 reactive/Test 2 non-reactive) were considered as non-reactive. The interviewers were adequately trained in interviewing techniques, administering the consent, maintaining an unbiased attitude and field testing. Universal infection control measures were followed. A debriefing session was held with the participants on completion of the interview and drawing of a biological sample, to answer participant queries. Information on HIV prevention and available services including voluntary counselling and testing (VCT) and specified service delivery packages for the study participants was also provided.

Injecting Drug Users: Due to effective preventive efforts, by the PACP, the HIV infection rates has come down, among the six cities, included in the successive IBBS rounds (2011 & 2014) – with a prevalence rate of 40.7 percent, in 2011 to 35.6 percent, in 2014. However, the overall prevalence remained 34.5 percent, during the current IBBS round. All 10 cities where the survey was conducted, in Punjab, indicate prevalence rate of over 5 percent, among IDUs. The highest prevalence was among

¹ Mapping of Most at Risk Populations (MARPs), Punjab – 2014

IDUs from Mandi Bahaudin (51.6 percent; N=197), followed by Faisalabad (47.4 percent; N=181) and D G Khan (40.2 percent; N=156).

Majority of **IDUs** start injecting in their early-thirties (31.01 years \pm SD7.542 (median: 30.00) and have been injecting for a period of 12.37 years (\pm SD25.113), at the time of survey. The frequency of injecting was also high with over two-quarters of IDUs surveyed (63.6 percent; N=2,444) reported injecting between two to three times a day in the past month, yet fewer (13.9 percent; N=532) reported injecting more than three times a day. Approximately 79.5 percent (N=3,049) of IDU reported injecting in public spaces and 72.7 percent (N=2,790) reported injecting with friends/family; an exceptionally high proportion (70.7 percent; N=2,867) reported that they had sought help in injecting by “professional injectors/street doctors” during the past month. Poly-drug use was the norm with Avil being the drug of choice in most cities, followed with Heroin and Sosegon. Overall, 57.8 percent (N=2,221) of IDUs reported always using a new needle / syringe for injection in the past month and 17.2 percent (N=660) reported injecting with a needle used by another IDUs, while 16.3 percent (N=625) passed needle/syringe to another IDUs.

Sexual interactions between IDUs and other MARPs varied by city. Overall, 9.6 percent (N=368) and 10.2 percent (N=392) of IDUs reported having sex with M/HSWs and FSWs, respectively in the past six months. Reported condom use was low (20.7 percent; N=78) during the last anal sex with MSW or HSW and 19 percent (N=98) during last sex with a FSW.

Although 73.9 percent (2,837) of IDUs had heard of HIV and/or AIDS and knew it could be sexually transmitted; while 38.5 percent (N=1,479) of the respondents knew that condoms can protect against HIV transmission, in contrast, a slightly higher proportion (55.0 percent; N=2,113) were aware that using clean needles/syringes could prevent HIV transmission. 49.3 percent (N=1,400) believed that they were at a risk of acquiring HIV; 71.4 percent (N=2,025) knew of a place where they could be tested for HIV, while 70.8 percent (N=2,010) had been tested for HIV in the past. 86.1 percent (N=3,306) of IDUs were aware of the HIV prevention programs in their city. Among those IDUs who participated in these preventive programs, approximately 74.5 percent (N=2,296) utilized the services more than once a week; approximately 87.3 percent (N=3,354) reported receiving free syringes in past 12 month.

Female Sex Workers: FSWs had the lowest prevalence of HIV infection, among the MARPs, with HIV prevalence of 0.5 percent. However it is noteworthy that there were only 7 HIV positive cases among all FSWs tested in four cities during the present round of IBBS in 2014.

Wide variation in typology of FSWs among the cities mapped was observed. Street based FSWs (37.4 percent, N=16,499) were found to be in highest proportion, followed by the Kothikhana based FSWs (30.8 percent, 13,608). Across all cities the average age of FSWs was $27.95 \pm$ SD5.384 (Median: 28.00), with little variation by FSW typology. Overall, 22.4 percent (N=345) of FSWs were aged 13-19 years, with the highest proportion of FSWs who were in age group of 25-29 years (35.9 percent (N=553). The

study participants have been working as a sex worker for an average of 9.14 years (median 4.00; \pm SD18.168), starting sex work while 18.91 years (Median 18.00; \pm SD8.709) old. FSWs who worked in brothels initiated sex work at a younger age (mean 18.1 years; \pm SD8.689), while home based FSWs were younger and worked for longer period (mean 15.6 years; \pm SD20.239) than other types of sex workers. FSWs in Multan started sex work at a younger age (Mean = 16.5 years; \pm SD2.029), while FSWs at Lahore recorded worked for longer duration (Mean = 14.3 years; \pm SD25.808).

The majority of FSWs (41.3 percent; N=632) were married, while 36.5 percent (N=562) were unmarried. Among unmarried FSWs, the majority (51.5 percent; N=34) were home based FSWs. There was substantial variation in the family situation of FSWs between the cities surveyed. The largest percent of unmarried FSWs resided in Sargodha (49.3 percent; N=189) followed by Multan (47.8 percent; N=183); Faisalabad had the lowest proportion of unmarried FSWs (16.5 percent; N=63). The majority (78.2 percent; N=761) of FSWs had children, with over fifty percent (50.3 percent; N=490) reporting having at least five children.

Vast majority of FSWs (67.1 percent; N=1,033) were found to have attained up to ten years of schooling. Illiteracy alone was recorded more common among FSWs in brothels (30.1 percent; N=254). Less than five percent of FSWs had more than ten years of education. Illiteracy levels varied substantially by city, with the high illiteracy among FSWs in Multan (52 percent; N=199), and the lowest among FSWs in Lahore (17.9 percent; N=70).

The majority of FSWs of all types and in all cities lived at home (66.9 percent; N=1,001) and/or with other family members (59.5 percent; N=917). Only 28.2 percent (N=434) of all FSWs had a source of income other than sex work, with kothikhana-based FSWs most likely to have other sources of income (43.5 percent; N=163) and brothel-based FSWs being the least likely to have other sources of income (18.2; N=154). The monthly median income reported among all FSWs was PKR: 28,410.96 / 26,000 \pm SD16547.421. When limited to sex work alone, the reported monthly median income was PKR: 25,528.89 / 24,000 \pm SD14983.013. The highest median income was reported among brothel based FSW (PKR. 31,433; \pm SD18596) followed by others, home-based, kothikhana-based FSWs and street based FSWs. Income from sex work was recorded highest with FSWs between 25 to 29 years with an average monthly income of PKR 29,791 (\pm SD18797).

15.1 percent (N=232) of FSWs reported having travelled to other cities in the past one year with Lahore followed by Rawalpindi, Karachi and Multan being most commonly cited as in-migration cities; 4.2 percent (N=62) of FSWs had travelled abroad.

Overall, FSWs reported that on days that they work they have an average of 2.86 clients a day (\pm SD0.7). Per month, an average of 57.7 (\pm SD26) clients were reported. Monthly client volume varies between different cities, with highest average number of clients recorded at Multan (62.46; \pm SD29.48). Client volume also varies by age, with younger FSWs having the highest client volume. 35.6 percent (N=548)

of FSWs reported that they always used a condom with their clients in the last month, while another 15.1 percent (N=233) reported that consistent condom use with non-paid partners. Kothikhana-based FSWs reported substantially more condom use than the other types of sex workers, with 48.0 percent (N=27) of them reporting consistent condom use, with the paid clients and 18.2 percent (N=12) with non-paid sex partners in the past month.

Overall, 34.2 percent (N=526) of FSWs reported having engaged in anal sex in the last one month, yet corresponding proportions for vaginal sex and oral sex were 95.1 percent (N=1,464) and 32.7 percent (N=504), respectively. A substantial number of (70.1 percent; N=848) of FSW reported using a condom during their last vaginal intercourse. The highest proportion of FSWs reporting consistent condom use during the last intercourse was among Kothikhana-based FSWs (74.4 percent; N=147), followed by Brothel-based (71.7 percent; N=140) and Home-based (68.4 percent; N=105) FSWs. Brothel-based FSWs recorded highest (26.2 percent; N=117) condom use during last anal sex, followed by Kothikhana-based FSWs (23.0 percent; N=97). Overall, condom use during anal sex was higher than that reported during oral sex.

Most FSWs (87.3 percent; N=1,344) who had heard about HIV and/or AIDS knew that HIV can be transmitted by sexual intercourse, slightly more than half (67.1 percent; N=860) knew that HIV can be transmitted through injuries by sharp instruments or needles/syringes and only 47.5 percent (N=608) knew about mother to child transmission of HIV. Approximately 86.3 percent (N=1,105) of those who had heard of HIV and/or AIDS were aware that condom use is a method to prevent HIV transmission, while 40.5 percent (N=519) believed that sexual abstinence is an HIV prevention method. Overall, 75.8 percent (N=1,019) knew where HIV testing services were offered, whereas 55.9 percent (N=752) had ever been tested for HIV, while 60.0 percent (N=448), reportedly knew about their result, out of those screened for HIV.

Male Sex Workers: Among 1,528 MSWs who were tested for HIV the overall HIV prevalence was recorded as 0.6 percent (N=9), with the highest prevalence reported in Multan (1.3 percent; N=5) followed by Lahore (0.8 percent; N=3); all other cities had less than 5% prevalence.

The mean age of all MSWs interviewed was $23.78 \pm SD 4.969$ (Median: 23.00). Approximately 87.1 percent (N=1,332) of MSWs were less than 30 years of age, with the highest proportion (39.2 percent; N=599) between 20 to 24 years of age. The majority of MSWs interviewed were unmarried (75.4 percent; N=1,152); only 19.8 percent (N=302), reported to be currently married. Approximately 17.9 percent (N=273) of MSWs had received no formal education. More than 84 percent (N=1,289) of MSWs lived at home with their families. On an average, MSWs started sex work at the mean age of 15.4 ($\pm SD 1.953$) years and had been in sex work for approximately 9.2 years ($\pm SD 19.717$). The median total monthly income was approximately PKR: 18,477.12 / 18,000 $\pm SD 7548.228$, with the largest proportion of that income generated from sex work at a median of approximately PKR: 11,121.09 / 9,000 $\pm SD 6942.269$.

Nearly 12.7 percent (N=194) of the MSWs had traveled to other cities within the past year, fewer (0.6 percent; N=9) had travelled internationally and of these, while 77.8 percent (N=7) of the total study respondents, had travelled internally for sex work, during the past one year. Approximately 45.7 percent (N=697) of MSWs solicited clients by roaming around in public places like bus stops and markets, which formed the largest mechanism of getting clients. A large proportion (34.5 percent; N=526) used cell phones to access clients. In addition, referral through old clients (17.9 percent; N=273) was also mentioned. On an average, MSWs entertained 3.12 (2.00±SD10.695) clients per day, however since many MSWs do not work every day, the average number of clients per month was 49.56 (26.00 ±SD107.359).

Consistent condom use was nearly 53.5 percent (N=818) reported regular condom use with paid clients; however the proportion was lower (18.5 percent; N=283) with non-paid sex partners. Younger MSWs less likely to use condoms when compared to older MSWs. Not surprisingly, consistent condom use increased as education level increased. Sexual networks with other key populations varied geographically but overall, 34.6 percent (N=529) of MSWs reported paying other MSWs for anal sex. Bisexual behaviour was reported by approximately 42.1 percent (N=643) of MSWs, where a female was paid for sex.

Approximately 78.1 percent (N=1,194) of MSWs had heard of HIV and/or AIDS but while knowledge of sexual transmission as a mode of HIV transmission was reported in 61.2 percent (N=935) of MSWs, whereas only 57.5 percent (N=878) knew that HIV can be transmitted through sharp instrument/syringe. Approximately 70.5 percent (N=1,077) of those who had heard of HIV knew that HIV transmission can be prevented by using a condom during sex, and 31.1 percent (N=475) believed that sexual abstinence can prevent HIV transmission. While 46.5 percent (N=710) knew that the use of clean needles/syringes could prevent HIV transmission.

79.1 percent (N=994) of MSWs interviewed had ever been tested for HIV and approximately one-half (62.6 percent; N=748) felt they were at risk for acquiring HIV infection. Over 87.7 percent (N=1,339) of MSWs were aware of a HIV prevention program (SDP) in their city. Among those who utilized the SDP, over one-half (67.2 percent; N=747) used the services less than once a month; 69.4 percent (N=1,059) received free condoms

Hijra Sex Workers: Among 1,521 HSWs who were tested for HIV the overall weighted HIV prevalence was recorded as 3.1 percent; with the highest prevalence reported in Lahore (4.1 percent; N=16) followed by Faisalabad (2.9 percent; N=11) and Sargodha (2.4 percent; N=9); all other cities had less than 5% prevalence.

The mean age of HSWs interviewed was 26.76±SD7.734 (Median: 25.00). Majority of HSWs (75.0 percent; N=1,140) were unmarried, while 23.2 percent (N=353) reported to be currently married. Approximately one-quarter (31.3 percent; N=476) of the HSWs were illiterate, while 67.2 percent

(N=1,023) had completed between 5 and 10 years of education. Approximately one-quarter (31.3 percent; N=476) of the HSWs were illiterate, while 67.2 percent (N=1,023) had completed between 5 and 10 years of education. On an average, HSWs started sex work at the age of 16.29 years (\pm SD6.032) and were involved in sex work for approximately 10.91 years (\pm SD13.480). The median total monthly income was PKR 19,000 (\pm SD9652.451) whereas the median monthly income from sex work alone was approximately PKR 10,000 (\pm SD9018.138).

Approximately 41.6 percent (N=632) get their clients through pimps or gurus; followed by roaming around (23.1 percent; N=350) and 22.4 percent (N=340) HSWs are relying on personal cell phones to contact clients. A higher proportion of HSWs rely on gurus for clients, reflecting their dependency on their guru for sexual partnering. On an average, HSWs entertained 5.56 clients per day ($2.00\pm$ SD38.214) and 80.59 clients per month ($45.00\pm$ SD177.806). Approximately 31.7 percent (N=481) of HSWs also reported having at least one regular, non-paying partner in the past month. 58.5 percent (N=890) of HSWs reported that they always used a condom with paid clients in the past month; the proportion was even lower with regular non-paying partners at 17.1 percent (N=200). Consistent condom use varied considerably across cities.

Overall, 9.0 percent of HSWs (N=136) reported to have had sex with IDUs in the past six months, whereas 2.1 percent of HSWs (N=32) reported that they had been injecting drugs in the same time period. Less than one-half (43.9 percent; N=667) of HSWs reported using alcohol and/or drugs during sexual intercourse in the past six months.

A high proportion (82.9; N=1,260) had knowledge of HIV and/or AIDS and its prevention. However, only 60.1 percent (N=914) knew that abstinence from sex could prevent HIV transmission and 52.9 percent (N=804) were aware that using clean needles was important in preventing HIV transmission. Approximately 89.7 percent (N=1,132) of HSWs knew where to go to access HIV testing, 74.5 percent (N=940) of HSWs had ever been tested for HIV; and more than half (64.5 percent; N=813) reported feeling at risk for HIV infection. Approximately 86.5 percent (N=1,316) of HSWs were aware of HIV prevention programs (SDPs) in their city. However very few (1.7 percent; N=18) of these HSWs reported they never utilized these services. Among those HSWs who utilized the SDP services, almost one-quarter of HSWs (35.1 percent; N=378) used the services less than once a month.

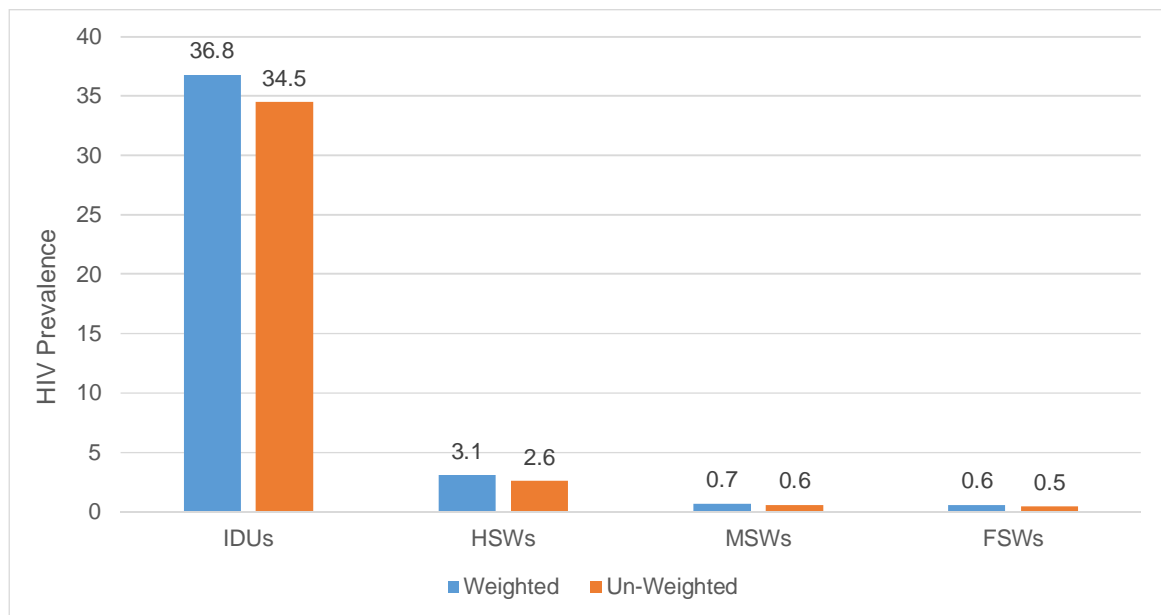
The analysis of bridge populations due to injecting and sexual networks indicate the overall potential for epidemic expansion within cities. In particular, considering the rising HIV prevalence among IDUs, low condom usage and risky injecting practices, there is the risk of spill-over into networks of sex workers and their clients.

In conclusion, the IBBS 2014, Punjab findings are suggestive of substantial and widespread networks of most at risk populations within Punjab, which are at a significant risk of acquiring HIV infection. While the epidemic is rapid progressing among IDUs, HIV prevalence among other MARPs has become

stabilized. Even with the best of efforts and availability of programs on ground prevention, still remains a crucial challenge to curtail the HIV epidemic in the province.

PACP is faced with a dual task, of confining the mounting epidemic among IDUs, while at the same time curtailing and keeping the epidemic down among the sex workers, which needs a well-coordinated and an intensive effort. The evidence suggest that HIV may not have, as yet, reached female sex work networks to a larger extent, thus here remains a window of opportunity to protect FSWs and their partners by scaling up prevention programs.

The behavioral and biological evidence generated from this round, should be used to plan and improve delivery of HIV prevention programs, while the PACP's implementing partners can also utilize this vital information to improve their service delivery.



Graph 1. Summary of HIV Prevalence among MARPs – IBBS 2014, Punjab

1.0 INTRODUCTION

The Punjab AIDS Control Program (PACP) is leading, the provincial AIDS response in Punjab. The Government is implementing the Program, through the Department of Health (DoH). PACP has extensive network of Preventive and Curative Services, 09 Service Delivery Packages (for Injecting Drug users, Male Sex Workers, Hijira or Transgender Sex Workers and Female Sex Workers); 09 HIV/AIDS Treatment Centres, 06 PPTCT (Prevention of Parent to Child Transmission) Sites; 09 CHBC sites (Community & Home based Care); 09 VCCT (Voluntary Counseling & Confidential Testing) Centres; and 12 Surveillance Centresⁱ.

Punjab is the most populous province of Pakistan, with approximately 56% of the country's total population. Forming most of the Punjab region, the province is bordered by Kashmir (Azad Kashmir, Pakistan and occupied Jammu and Kashmir) to the north-east, the Indian states of Punjab and Rajasthan to the east, the Pakistani province of Sindh to the south, the province of Baluchistan to the southwest, the province of Khyber Pakhtunkhwa to the west, and the Islamabad Capital Territory to the north. Punjab's estimated population of 92 million is growing at an annual rate of 1.9ⁱⁱ; the total fertility rate is currently reported at 4.1, which is 30 percent higher than its South Asian neighbors. Women in reproductive age constitute 21% of the total population of Punjab. Life expectancy at birth has been estimated to be 65.2 years and 64.6 years for females and males respectively. The Infant Mortality Rate (IMR) is estimated at 71 / 1000 live birthsⁱⁱⁱ.

HIV/AIDS Surveillance has been a critical part of the Enhanced Program's HIV response in Punjab from 2004 to date, and has provided timely and relevant information, by collecting serial data from key populations to describe trends in the HIV epidemic. The broad objective of this research has been to provide accurate information on the size and characteristics of most at risk populations including injecting drug users (IDUs), female sex workers (FSWs), male sex workers, (MSWs) and hijra sex worker (HSWs) and gathering data on behavioral and biological, aspects of the MARPs, including the HIV prevalence.

According to the United Nations Program on HIV/AIDS (UNAIDS) estimates in 2014, there are a total number of approximately 91,340 HIV Positive people in Pakistan^{iv}. Thus, there is an estimated 50,808 HIV positive people in Punjab. However, till December 2014, a total number of 4,379 HIV positive people have been identified, while 2,192 were reported getting ART, at the various Treatment Centres, in Punjab^v. The epidemic is predominantly concentrated in the urban cities, more among IDUs, and to a limited extent among Transgender. The prevalence in the General Population is around or less than 0.08 percent^{vi}.

The Punjab has rising prevalence of Human Immunodeficiency Virus (HIV) among People who Inject Drugs (PWID) or Injecting Drug Users (IDUs) and, to a lesser extent, among other Key Affected Populations (KAP) at-risk of sexual transmission, including Transgender (TG), men and women having sex work contacts. Despite a prevalence of around or less than 0.08 percent in the General Population, HIV positive cases are also reported by public health services, civil society

and Community-Based Organizations (CBO) from among vulnerable segments of the population with varied risk profile, such as spouses of PWID or returning migrant workers. However, generally, the information on the extent of HIV prevalence among such vulnerable populations is limited.

The report of Fourth Round of IBBS – 2011 (HIV/AIDS Surveillance Project) provided mapping and biological and behavioral information related to HIV infection among four most at risk populations: IDUs, MSWs, HSWs, and FSWs. The data was collected during Integrated Biological and Behavioural Surveillance (IBBS) conducted across 20 cities in Pakistan between June – September 2011. Nine cities from Punjab; DG Khan, Faisalabad, Gujrat, Lahore, Multan, Pakpattan, Rahim Yar Khan, Rawalpindi, and Sargodha, were part of IBBS 2011^{vii}.

The information gathered from IBBS Round IV (2011), among the cities from Punjab, revealed, HIV infection rates among IDUs have steadily increased from 10.8% in 2005 to 37.8% in 2011^{viii}, despite various preventive efforts. Not only has the overall prevalence increased, but the number of sites with relatively advanced epidemics has also expanded. With the exception of Pakpattan, all 17 cities where the survey was conducted showed prevalence rates of over 5% among IDUs. In cities like Faisalabad, DG Khan, and Gujrat, HIV prevalence was close to 50% among the surveyed population. The overall HIV prevalence among MSWs remains low at 3.1%. While these results may be encouraging, of concern is the almost 3-fold increase in the HIV prevalence among MSWs since 2008^x. This finding, coupled with the IDUs and sexual networks with IDUs and HSWs in certain cities suggest that MSWs remain at risk for HIV transmission. With an overall HIV prevalence of 5.2%, the HIV epidemic appears to be more established in HSWs than among MSWs and FSWs^x. When compared to the other key populations, FSWs had the lowest prevalence of HIV infection. In 2011, a total of 27 FSWs tested HIV-positive, for an overall weighted prevalence of 0.6% in Pakistan. However it is noteworthy that there was only 1 positive HIV case among all FSWs tested in 12 cities during the previous round of IBBS in 2008. Furthermore, in certain cities including Lahore and Multan, fairly extensive FSWs/IDUs sexual network suggests a potential for the spread of HIV from IDUs to the FSWs population^{xi}.

The Government of the Punjab, Health Department has developed the Punjab AIDS Strategy (PAS) in April, 2012 to address the issues of resource estimation and its proper mobilization at Public, Private and Development Partner level^{xii}. The PAS 2012-16 is aligned with sector development policies, especially the forthcoming Punjab Health Strategy 2012-16. PAS recognizes international agreements signed by the Government of Pakistan, such as the Millennium Development Goals (2000), UNGASS Declaration of Commitment on HIV/AIDS (2001), Paris Declaration for Aid Effectiveness (2005), and the Political Declarations on HIV/AIDS of 2006 and 2011. As per PAS, the resource estimation for HIV response in Punjab for “Outcome-HIV prevalence is reduced among Key Affected Populations and is maintained at less than 0.08 percent, in the General Population” is Rs.1325.480 million per year. However, Government of the

Punjab is providing Rs. 546.044 million per year through its PC1 resources^{xiii}. Even though, there is a huge gap to fill this estimate through its provision from development partners / donors

This report provides behavioral and biological information of most at risk populations that was gathered in Punjab IBBS Survey, 2014. Since the previous rounds identified emerging HIV epidemics among IDUs, MSWs, HSWs, and FSWs, the focus of the study was to monitor trends in these MARPs, in ten districts, in Punjab. It is envisaged that this report will provide further insights into the status of the epidemic in subpopulations and the transmission dynamics, and that will serve as key information for planning, improving and implementing prevention and care services, in the province.

2.0 THE STUDY METHODOLOGY

The study has been a cross-sectional biological and behavioral survey for the four Most at Risk Populations, including IDUs, MSWs, HSWs and FSWs, in ten districts of Punjab. The IBBS study was preceded by a Mapping Study in same cities.

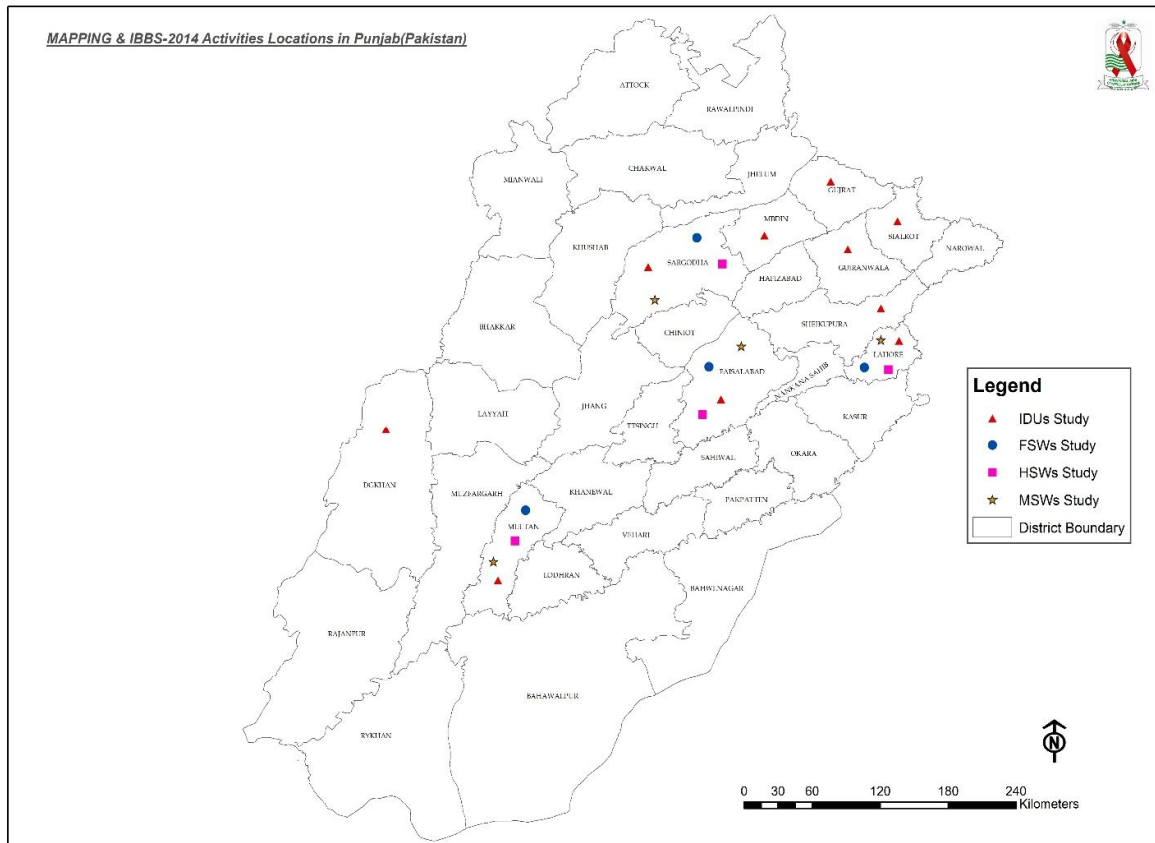
2.1 The Study Sites.

The city selection for the IBBS study was undertaken, through an extensive consultative process, involving key stakeholders, including NACPs, SDPs, CSOs, academia, Institute of Public Health (IPH), World Bank, UN agencies, etc. The other key consideration to select the cities included an existing or the potential for a services delivery programs (SDPs) for the targeted intervention for MARPs, evidence for an increase in number of HIV reported cases at the PACP, anecdotal evidence of high risk activity, and presence of multiple of MARPs.

The sampling strategy was based on mapping results, in each city, conducted prior to the IBBS study. The mapping methodology is described below, in subsequent section.

Sr.	City	IDU	FSWs	MSWs	HSWs
1	Lahore	√	√	√	√
2	Faisalabad	√	√	√	√
3	Multan	√	√	√	√
4	Sargodha	√	√	√	√
5	Gujranwala	√			
6	Sialkot	√			
7	Gujrat	√			
8	Sheikhupura	√			
9	Mandi Bahaudin	√			
10	DG Khan	√			

Table 1 Shows the names of cities along with the MARPs surveyed – Punjab Mapping Study, 2014



Map 1; Cities along with MARPs Mapped – Punjab Mapping Study, 2014

2.2 The Mapping Study

Mapping had been conducted in all targeted cities to understand the risk situation; to quantify the number of settings and the size of the key populations; and to describe the various sub-types of the vulnerable groups. The mapping methodology was based on a geographical approach, supplemented by network mapping of FSWs and HSWs networks.

The mapping approach was broadly divided into the following levels:

1. Pre-mapping exercise
2. Level one (L1)
3. Level two (L2)
4. Triangulation of results

The pre-mapping phase of the study served as a facilitation phase for the actual mapping activity and laid the foundation for field data collection. Sensitization meetings were held with key government staff and police in each target city to garner local support and participation. Detailed maps of all targeted cities were developed using the Geographical Information System (GIS), based on satellite imagery. Subsequently, the cities were divided into smaller data collection units referred as zones. Data collection formats were developed and PACP staff and master trainers were trained on data collection.

In Geographical mapping, Level One (L1) was the first step of field activity, which gathered information on the key geographic locations and hotspots where high risk activity (HRA) occurred, along with the typology and estimated numbers (minimum and maximum) of the key populations. The field teams trained on mapping techniques and communication skills comprising of male and female team members visited each zone of the city and interviewed key informants. The information obtained from the key informants was entered in the software and it was programmed to generate lists of hotspots which had multiple frequency of mentioned. Hence the hotspots mentioned multiple times automatically came up in the list. This helped in the validation process. However, the exhaustive list was not limited to hotspots mentioned multiple times but it also had spots which were mentioned once but the key informant was highly reliable e.g. MARP itself or any Network Operator (NWO).

While L1 focused on gathering information on 'hotspots' and places where HRA took place, Level Two (L2) consisted of validating information collected in L1, through visiting "hotspots", and interviewing members of key populations present at those spots. Network mapping focused on the promoters and mediators of sex work (gurus, in case of HSWs) and mapped networks within which the target populations operate. Network operators (NWO) were thus the primary source of information and were mapped along with the number of sex workers/hijra's with whom each network operator worked. NWOs were systematically identified within each zone and further contacts were traced through a process of "snowballing" whereby each key informant in the field (madam and NWO) was asked to identify others that they knew. Only NWOs in the same city and currently in business were noted. Each NWO interviewed was inquired about the total number of sex workers with whom he/she works and a minimum and maximum estimate was noted down. All data was field edited and data set was entered in a software database, designed for the study.

Data collected from the mapping was augmented with a GIS survey. In addition, all validated spots within each zone were marked on maps, and coordinates for these spots were acquired using Google Earth. To obtain the final figures, the estimated ranges for each site and location were rolled up for a zone and city to produce minimum and maximum estimates after adjusting for duplication. Data from network mapping was analyzed and city wide estimates were developed through combining zonal estimates and removing overlaps. GIS distribution maps and spot maps for each key population were created after obtaining spatial and attribute data for each spot, and linking them with digitalized maps of target cities.

Mapping has been subsequently followed with Behavioural & Biological Surveillance.

2.3 Integrated Behavioral & Biological Mapping

2.3.1 The Study Subjects.

The study population comprised of the four key populations at higher risk for HIV: IDUs, MSWs, HSWs, and MFSWs.

2.3.1.1 Study Subjects and Case Definitions

2.3.1.1.1 Injecting Drug Users (IDUs)

Inclusion Criterion

A person who has injected drugs regularly, for non-therapeutic purposes in the past six months.

Exclusion Criteria

- Age under 18 years (lower age limit for the age of consent for research)
- A person who appears to be, in the interviewer's judgment, incapable of understanding the information provided about the survey (e.g., due to intoxication, dope sickness, or the person is cognitively impaired etc.)
- Not willing to participate in the study/unwilling to provide informed consent.
- A person who has already participated in the survey in the current round.

2.3.1.1.2 Male Sex Workers (MSWs)

Inclusion Criterion

Any male above 13 years, who undertakes sexual activity with a man in return for money or benefits. Considering recent studies cited in the background and references, PACP has proposed lower age limit of 13 years in the present surveillance round and has put in place strategies to ensure that consent is secured without coercion and that adolescents are referred to appropriate services.

Exclusion Criteria:

- Not willing to participate in the study by providing informed consent.
- A person who has already participated in the survey in the current round.

2.3.1.1.3 Hijra Sex Workers (HSWs)

Inclusion Criterion

Any transvestite/transsexual above 15 years, who undertakes sexual activity with a man in return for money or benefits.

Exclusion Criteria:

- Not willing to participate in the study by providing informed consent.
- A person who has already participated in the survey in the current round.

2.3.1.1.4 Female Sex Workers (FSWs)

Inclusion Criterion

Any female above 15 years, who undertakes sexual activity with a man or woman in return for money or benefits irrespective of site of operation i.e., street, brothel kothikhana or home etc.

Exclusion Criteria:

- Not willing to participate in the study/unwilling to provide informed consent.
- A person who has already participated in the survey in the current round.

2.4 Sample Size

Sample sizes for each key population was calculated based on assumptions in which baseline prevalence and expected change in prevalence were varied to get a maximum sample size. Behavioral data from previous surveillance was used to determine baseline prevalence rates to inform the sample size calculations. For IDUs, use of a new syringe at last injection (48%), while for MSWs, HSWs and FSWS “condom use at last sex” were used, which was reported to be 35%, 32% and 45% respectively.

The following formula was used to determine the sample size for target groups:

$$n = D \frac{\left[\sqrt{2P(1-P)}Z_{1-\alpha} + \sqrt{P_1(1-P_1) + P_2(1-P_2)}Z_{1-\beta} \right]^2}{\Delta^2}$$

Sample sizes for each high risk group were calculated based on assumptions in which baseline prevalence and expected change in prevalence were varied to get a maximum sample size:

P1 = estimated prevalence at baseline (varied for different groups).

P2 = expected prevalence in future (detect a change of 10-15%)

$P = (P1 + P2)/2$

$$\Delta^2 = (P2 - P1)^2$$

$Z_{(1-\alpha)}$ = 95% level of significance

$Z_{(1-\beta)}$ = Power of the study set at 80%

Based on the calculations, varying numbers of subjects were calculated for each key population to optimize a meaningful analysis. The numbers have been inflated by 10% to accommodate for non-response and data errors. Thus 382 IDUs, 383 FSWs, 380 MSWs and 378 HSWs were needed for this study. See table below; for the sample size calculated:

Sr.	City	IDUs	MSWs	HSWs	FSWs
1	Lahore	382	380	378	383
2	Faisalabad	382	380	378	383
3	Sargodha	382	380	378	383
4	Multan	382	380	378	383
5	DG Khan	382			
6	Gujranwala	382			
7	Mandi Bahaudin	382			
8	Sialkot	382			
9	Sheikhupura	382			
10	Gujrat	382			
TOTAL		3820	1520	1512	1532

Table 2 Sample Size – Punjab IBBS 2014

2.5 Sampling Methodology

Since a list of potential sampling units were available from the mapping preceding IBBS 2011, recruitment of a representative sample of the key populations, through various sampling techniques was possible.

- **IDUs and MSWs** were recruited through multistage cluster sampling. The top 10 clusters in each zone were identified from the fresh mapping data, and the study subjects recruited through a random process. In cities where the estimated number of IDUs or MSWs was smaller than the required sample size, a “take all” approach was used.
- **HSWs** were recruited utilizing information obtained from mapping of networks Dera’s/Gurus selected randomly from the list available through mapping results and these contacts were utilized to recruit eligible subjects. Sampling weights were applied based on zonal estimates and 3 to 5 HSWs were randomly selected from a Dera/Guru.
- **FSWs** were distributed among the identified typologies (brothel based, street based, kothikhana and home based), proportionate to size. The clusters were identified by the mapping work

preceding data collection, and the study subjects were recruited through a random process. **Brothel based FSWs** were selected through systematic random sampling of brothels (i.e. systematic sampling from a list of FSWs using a random start) and a “take all” approach was used if the number of brothel-based FSWs were less than the required sample size. **Street based FSWs** were selected through multistage cluster sampling, in a manner similar to IDUs and MSWs. **Kothikhana and home based FSWs** were recruited through a similar sampling technique used for HSWs after applying sampling weights (based on zonal distribution). **Network operators** were randomly selected and 3 to 5 FSWs working with these network operators were recruited through a random process.

2.6 Subject Recruitment

IBBS survey was conducted by separate team members, specifically hired for this purpose and recruitment was facilitated by social mobilizers. Once the social mobilizers identified all eligible participants at a selected spot, the recruiter randomly selected a key population member, introduced the study and sought consent for participation. The social mobilizer facilitated the process of selection, introduction of the study, and seeking of the consent. If the eligible participant refused, the next available community member was recruited and transported to the interviewing site. In case of Kothikhana-based FSWs and HSWs where the interviews were conducted at the participants place, recruitment was done by the interviewer him/herself.

2.7 Data Collection Tools

Data was collected by trained interviewers using structured questionnaires. Survey questionnaires used in the previous round (IBBS 2011) were thoroughly reviewed and updated, with addition/deletion of some variables. The study questionnaires were thoroughly reviewed and approved by the technical review committee, constituted for the Mapping & IBBS; Punjab 2014. The questionnaires were designed in English and subsequently translated into Urdu; the Urdu versions were used to collect the required data. Questionnaires included questions on socio-demographic and personal characteristics, as well as a core set of risk behaviour indicators to monitor the behavioral patterns of MARPs.

Following are the principal variables for which data were collected:

- **Socio-demographic variables:** age, gender, education, living arrangements, family information, income, migration status, employment, professional background and travel history both within Punjab and abroad.
- **Profession related variable:** number of clients, charges, types of services offered, etc.
- **Injecting risk behavior and practices:** Types of drugs used and their routes of administration, length of drug use and injecting careers, drug use in group, sharing of equipment and needles, type of syringe used (whether new or used) for last injection, frequency of drug use/injecting etc.

- **Sexual risk behaviors:** Age of initial sexual intercourse, number of sexual partners, regular and casual partners, condom use in anal, vaginal and oral sex, condom use in last sexual act and etc.
- **Knowledge and information about HIV and other STIs:** Knowledge about HIV and/or AIDS, routes of transmission, methods to prevent transmission, perception of self-risk, etc.
- **Others:** Donation of blood, health seeking behavior, availability and utilization of health services, etc.

2.8 Training on IBBS Tools & Data Collection

The field teams were required to participate in a three day workshop facilitated by Master Trainers, which focused on providing information and points of clarification to the interviewers on issues such as:

- Mapping
- Understanding HIV and/or AIDS: facts and myths
- Basic interviewing skills with special emphases on interviewing about sex and injecting drug use issues
- Implementing the consent form
- Maintaining an unbiased attitude during the interview process
- Sex, gender and HIV and/or AIDS, gender and rights issues related to HIV and collection of IBBS data, and the importance of collecting and analyzing sex-disaggregated data
- Values and attitudes

Different aspects of field work, accessing vulnerable groups, subject selection and recruitment process explaining the rationale and objectives of the study to the subjects, ethical issues including confidentiality, acquiring informed consent, collecting biological samples, debriefing and referral process.

In addition to lectures and training sessions, actual field visits by the trainees were included in the training workshop. Workshop participants included members of the data collection teams (including social mobilizers), data management personnel, field supervisors, and representatives of the NGO and research institutions, members of the PACP and Executive District Officer (Health) from the concerned districts.

“Code books” for the questionnaires as well as manuals for field activity were provided to help fieldworkers maintain uniformity and consistency in data collection and to provide them with hand on practice. The participants were provided training on HIV testing strategy, adopted for the IBBS survey.

2.9 Data Collection and Field Work

Venues were used for conducting interviews varied depending on the population being surveyed. HSWs were interviewed at their Deras, MSWs and IDUs interviewed at the central field office. FSWs were interviewed at their site of operation for home and Khoti Khana SWs and in central office for street based SWs.

2.10 Informed Consent

The consent form was read aloud to each eligible participant. This form provided participants with an overview of the objectives of the study, the confidential nature of the interview, the right of the participants to refuse to answer questions, as well as the right of subjects to end the interview at any time. Consent was also be taken to undertake rapid HIV testing.

2.11 Dealing with Refusals

If the participant agreed to provide questionnaire information, but not to undergo HIV test, only the questionnaire was administered and compensation provided. However, the participant was counted toward achieving the target sample size. Similarly, if a person refused to participate in the study, the reasons for non-participation were asked and noted down along with the gender and approximate age.

2.12 Debriefing with Referrals

After completing the interview, a debriefing session was held with participants so as to allow the interviewer to respond to any questions that the participants might have. Information was also provided to participants during this session on the modes of transmission and prevention of HIV and primary health care services.

As unlinked rapid HIV testing was conducted, the results were not shared with the individuals. Rather, all of the respondents are provided with an opportunity to know their HIV status through referral to the closest VCT and care and support services, provided either through NGOs or Provincial AIDS Control Programs.

2.13 HIV Testing – Biological Specimen Collection and Handling

Rapid tests is considered appropriate for linked confidential testing among hard-to-reach populations (e.g. injecting drug users IDUs, female sex workers, MSM) or geographically remote populations. In these populations, opportunities for provision of results may be limited after the initial encounter;

therefore, testing (screening and confirmatory) may need to be performed on site on the same day as specimen collection.

For the biological surveillance, WHO recommended guidelines, involving a two-test strategy was adopted^{xiv}. Specimens that were reported reactive by two rapid HIV tests, involving different antigens, were considered as HIV-positive. Since unlinked anonymous surveillance data is not used for individual diagnosis, no additional testing is recommended to confirm HIV sero-positivity in low-prevalence epidemic states or for discordant specimens, if any. Discordant specimens (Test 1 reactive/Test 2 non-reactive) were considered as non-reactive.

Both HIV Rapid test kits contained different antigens. The Rapid Test Kit 1 (Alere Determine HIV-1/2 Ag/Ab Combo) was highly sensitive (>99%) and the Rapid Test kit 2 (Uni-Gold HIV) was highly specific (>99%). The first test was screening test, so it is adopted to have a more sensitive test to detect all positive results. Because some false-positives may occur, the second test was highly specific to ensure that all truly negative test results are identified as negative.

For rapid tests that use whole blood from a finger-stick, the specimen is collected with a collection device and placed directly on the rapid test apparatus; thus, a second specimen must be collected for confirmation if the first test is reactive. Therefore, in such situations, two rapid tests were performed simultaneously and then analyzed sequentially.

For Rapid Testing, a finger-stick specimen was used. The technique adopted included:

- Massage of the finger (preferably the middle or ring finger), causing blood to accumulate at the tip of the finger;
- Cleansing the finger pad (not just the tip or side of the finger) with 70% isopropyl (rubbing) alcohol and wiping away the alcohol with a sterile gauze pad;
- Using a sterile lancet to firmly prick the finger pad.
- Wiping the first drop of blood off the finger with sterile gauze before collecting subsequent blood using a collection device to place on the rapid test device. If the original puncture is inadequate, the same site wasn't reused; another site or finger was used;
- Avoiding milking or squeezing the puncture as this may cause hemolysis of the specimen and invalidate the test result.

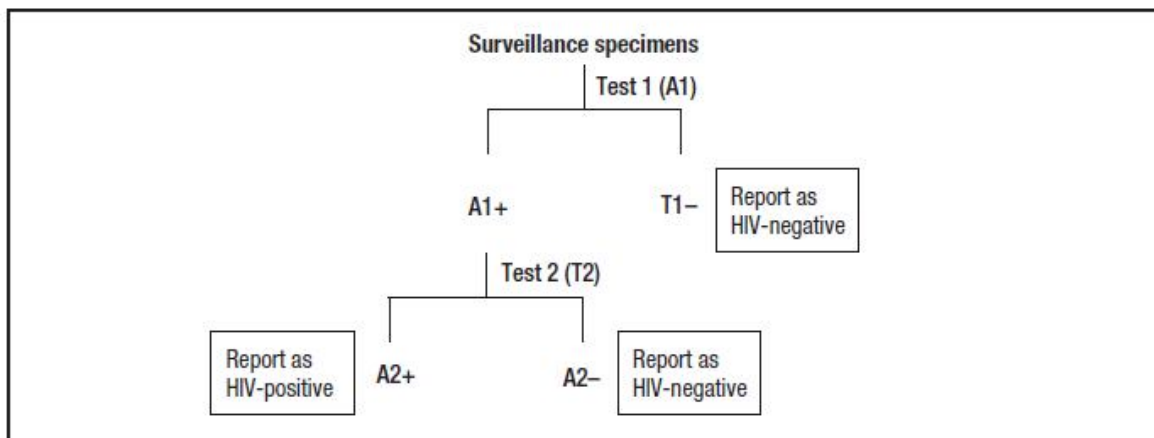


Figure 1 Testing Algorithm adopted during the Punjab IBBS Survey; 2014

2.14 Quality Assurance

2.14.1 Behavioral surveillance

At the field level, the city-coordinator in charge of data collection ensured eligibility, completeness and consistency of the completed questionnaires at the end of every day. Independent of the field team, quality assurance (QA) team was created and shall visit the field offices randomly on a daily basis. The team confirmed the sampling methodology and verified at least 10% of the questionnaires. Any questionnaires with significant errors was discarded. Overall twelve questionnaires were discarded, and the field teams were required to resubmit the questionnaire after necessary field work and required modifications.

2.14.2 Biological surveillance

The quality of biological surveillance was ensured, through adequate training of field staff, checking the expiry dates of the test kits, transportation and storage of test kits, in appropriate conditions. In addition, the field testing was supervised by skilled laboratory staff.

2.15 Organization of Field Work

Although the number of field teams varied depending on the most at risk populations targeted at different locations, a uniform team structure was maintained. The basic structure of each team comprises of a team leader, two community mobilizers and two interviewers.

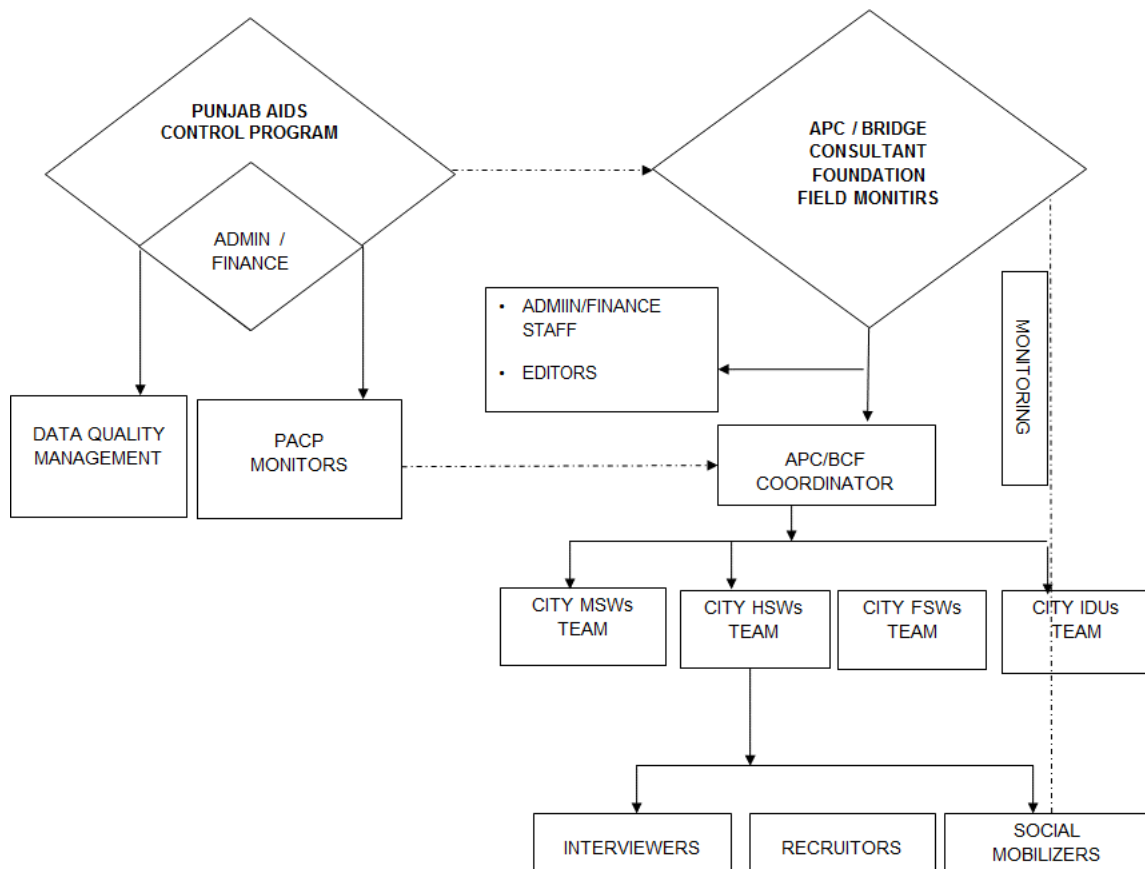


Figure 2 Structure of Field Team – Punjab IBBS Survey, 2014

2.16 Field Monitoring

All field data collection was monitored by the team leader, who reported to the city coordinator (depending on the team). Field staff members were provided with mobile phones to stay in contact with team supervisors. The site coordinator at each site worked under the technical supervision of APC/BCF technical staff and facilitated the data collection process. Random spot checks were performed by various senior members of the team including APC/BCF & PACP and ensured adherence to the protocol.

2.17 Data Management

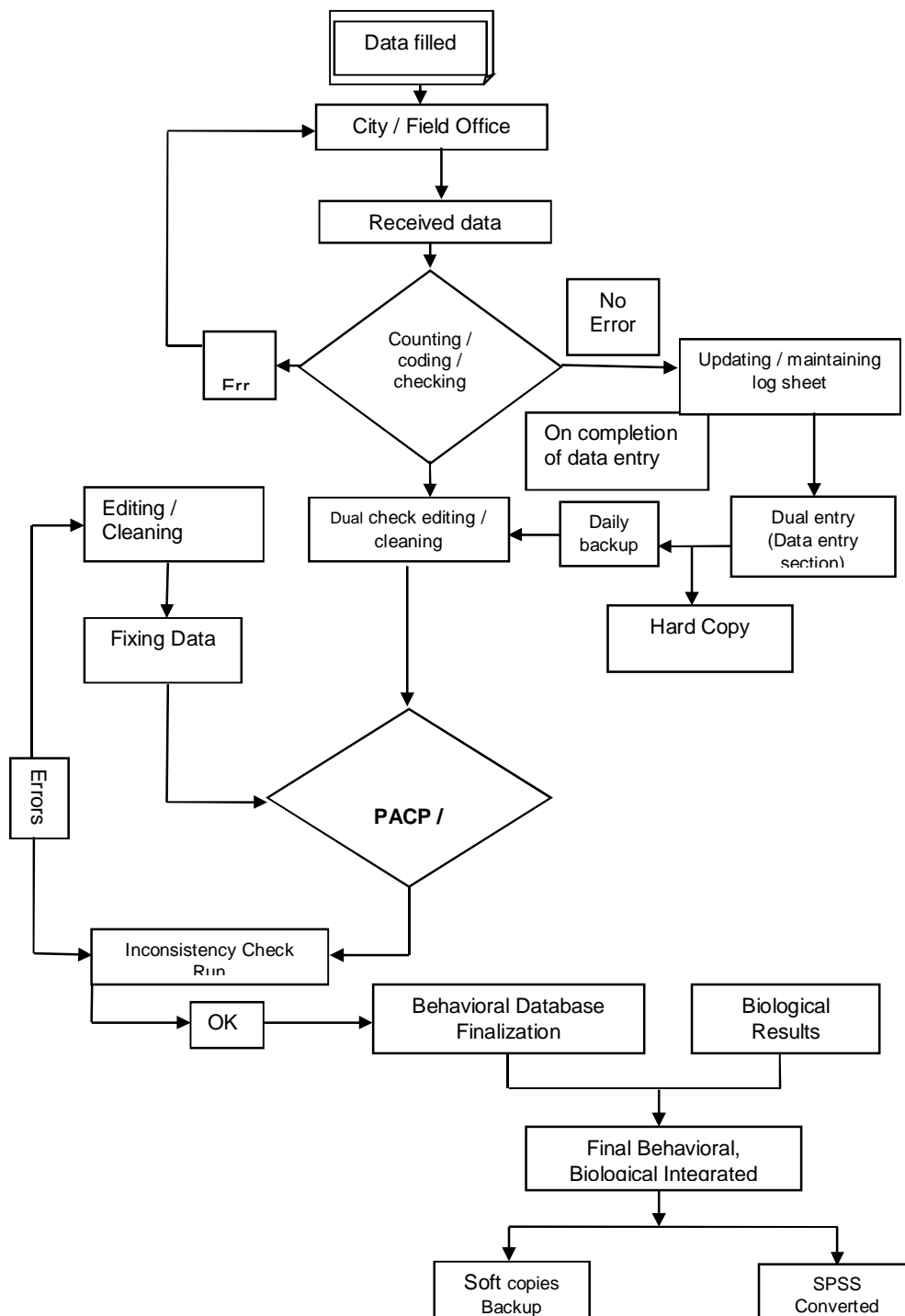
The data was managed at following levels:

- Field data management (APC & BCF)
- Punjab AIDS Control Program

In the field, the interviewer provided hard copies of the filled questionnaires to the relevant supervisor and to the Data Editor on a daily basis. Each site coordinator & Data Editor, checked the questionnaires

for completeness, appropriateness and responses to difficult questions. Detailed editing was conducted by the Data Editor who provided their feedback to the interviewers. Open ended responses were coded by editor provided. Completed hard copies of the final, corrected questionnaires were sent along with log sheet for data entry by trained staff into a Microsoft™ Access database specifically designed for surveillance data. A Data Base Administrator maintained an electronic log sheet and maintain coding list. The APC/BCF staff was responsible for conducting data entry error checks, validating and finalizing the database through dual data entry checks, performing inconsistency checks, limits value checks etc.

The final data set was converted to SPSS™ files for analysis. The electronic data was password protected and only authorized officials had access to the data files. All hardcopy data was stored in a secure room. at the PACP.



2.18 Ethical review

The study protocol were approved by an 'Ethical Review Committee' constituted for the mapping and IBBS survey, to meet the required ethical guidelines and standard, especially addressing the following issues.

2.18.1 Informed Consent and Voluntary Participation

Recruitment of participants was conducted only after describing the study procedures and obtaining informed consent. During the process of obtaining informed consent, prospective participants were clearly informed that participation is voluntary and that non-participation would have no negative consequences in terms of access to programs or services. Monetary compensation was provided to participants for their time commitment and inconvenience due to participation. The level of appropriate compensation for each sub-population was based on consultations with community members, with the objective of ensuring fairness.

2.18.2 Confidentiality

Considerable effort was taken to maintain the confidentiality of participants. This included non-disclosure of participants' identity and the use of a non-identifying coding system to track and link study data gathered. The electronic data was password protected and only authorized officials of APC/BCF & PACP had access to the data files maintained.

2.19 HIV Test Results

HIV test results were kept confidential from study personnel and not provided to participants. Instead, participants were advised that if they wanted to know their HIV status, the study personnel would facilitate this access through an official HIV counselling and testing service, at the nearby designated facility.

Key Findings

IBBS Punjab, 2014

Key Findings (IDUs)

Injecting Drug Users

3.0 INJECTING DRUG USERS (IDUs)

3.1 IDUs – Geographical Distribution & Estimates

The mapping survey estimated a total number of 27,840 (Minimum= 21,182; Maximum= 34,497) Injecting Drug Users (IDUs), spread over 3,934 spots, mapped among ten cities of Punjab. The highest number of IDUs was found in Faisalabad (N=10,389) approximately 37.3 percent of the total IDUs in Punjab; followed by Lahore (13.5 percent, N=3,774 and Gujrawala (11.5 percent, N=3,210), respectively. Gujrawala had the highest number of IDUs per spot (10.8 IDUs per spot) followed by Sialkot (9.8 IDUs per spot).

Cities	Zones	No of spots	IDUs (min)	IDU (max)	IDUs (avg)	IDU per spot	% IDUs
Lahore	29	656	3,121	4,426	3,774	5.8	13.55%
Faisalabad	18	1,502	6,981	13,797	10,389	6.9	37.3%
Multan	20	368	909	1,863	1,386	3.8	5.0%
Sargodha	10	256	1,680	2,066	1,873	7.3	6.7%
Gujranwala	6	296	2,189	4,231	3,210	10.8	11.5%
Sialkot	6	299	2,638	3,207	2,923	9.8	10.5%
Gujrat	5	122	377	736	557	4.6	2.0%
Sheikhupura	3	220	1,769	2,162	1,966	8.9	7.1%
Mandi Bahaudin	4	114	907	1,173	1,040	9.1	3.7%
DG Khan	7	101	611	836	724	7.2	2.6%
TOTAL	108	3,934	21,182	34,497	27,840	7.08	100.00%

Table 3 Estimated Number of IDUs in 10 Cities in Punjab – Punjab Mapping Study, 2014

3.2 Integrated Behavioural & Biological Surveillance (IBBS)

The IBBS, among IDUs in tens cities of Punjab, was participated by 3,840 respondents. The citywide, representation remained as follows;

City	Study Respondents
Lahore	386
Faisalabad	382
Multan	383
Sargodha	382
Gujranwala	381
Sialkot	382

Gujrat	385
Sheikhupura	389
Mandi Bahaudin	382
DG Khan	388
TOTAL	3,840

Table 4 Number of Study Respondent by City – Punjab IBBS; 2014

3.3 Socio-Demographic Characteristics

The study registered 97.3 percent (N=3,736) male respondents, while female IDUs were less frequent (2.3 percent; N=87), however, these numbers do not reflect the overall proportion of female IDUs, in Punjab. The study also registered 17 Transgender IDUs (0.40 percent). This is the first time that a surveillance round has included transgender IDUs as well – Table 5.

The average age of the study respondents was recorded as 31.01 years \pm SD7.542 (Median: 30.00). 46.5 percent (N=1,788) of the study respondent, were below 30 years of age. The highest proportion of IDUs (27.3 percent; N=1,050), were between the 25 – 29 years of age. Two third of the IDUs were recorded between 25 – 40 years (71.5 percent; N=2,747) – Table 5.

Even though majority (48.3 percent; N=1,853) of the study respondents were unmarried however, 33.7 percent (N=1,293) were married – Graph 3. 30.0 percent (N=1,228), of the IDUs had no formal education. More than half (59.0 percent; N=2,264) of the surveyed IDUs lived with their families and another 19.6 percent (N=757), lived on the streets – Table 5 & Graph 2.

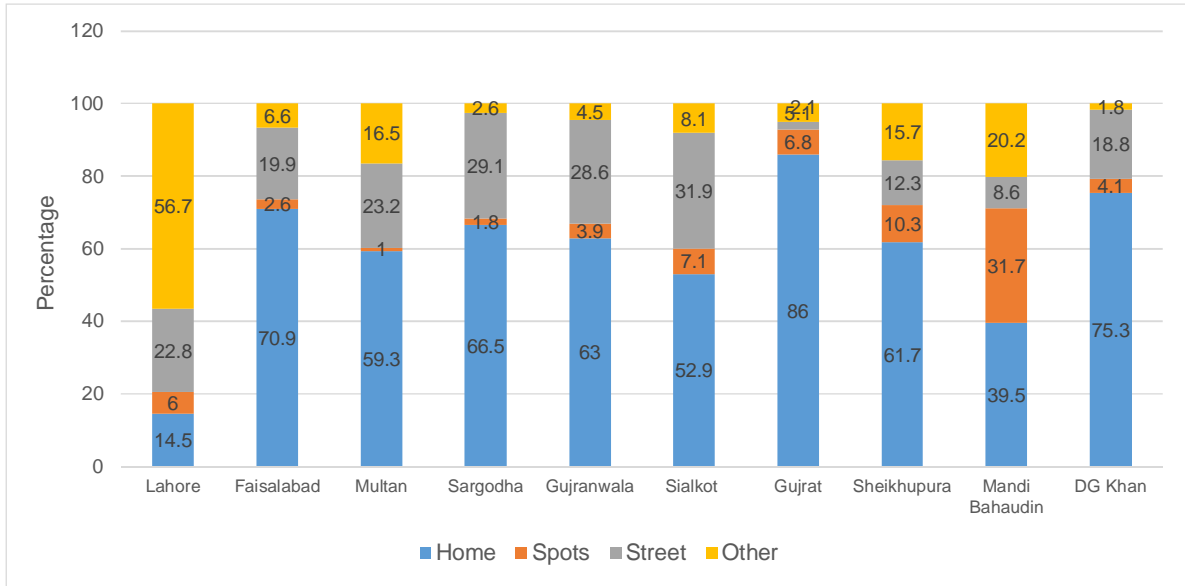
The median monthly income was PKR. 7,000.00 (mean = PKR. 6,783.23 / \pm SD3922.816). Education level, living arrangement and monthly income, vary significantly, across the province, among the study respondents – Table 5.

Characteristics	IDUs Percentage
Gender	
• Male	97.3 percent (N=3736)
• Female	2.30 percent (N=87)
• Transgender	0.40 percent (N=17)
Age	
• 13 – 19 Years	3.20 percent (N=122)
• 20 – 24 Years	
• 25 – 29 Years	16.0 percent (N=616)
• 30 – 34 Years	
• 35 – 40 Years	27.3 percent (N=1050)
• More than 40 Years	
• Average Age \pm SD (median) years	22.7 percent (N=872)

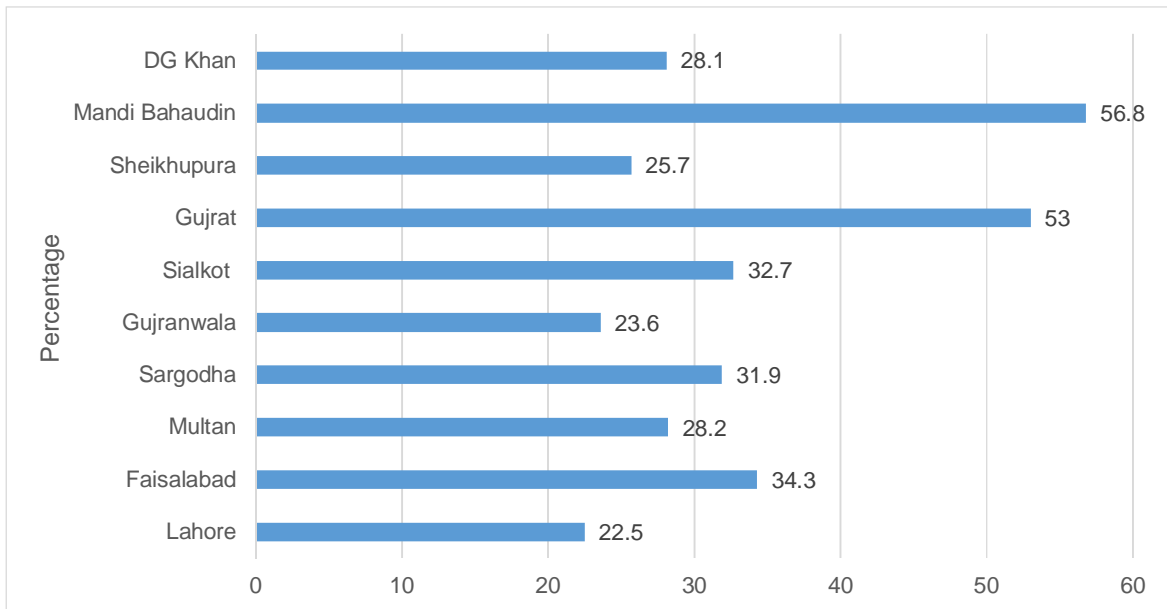
	21.5 percent (N=825)
	9.20 percent (N=355)
	31.01 \pm SD7.542 (Median: 30.00)
Marital Status	
<ul style="list-style-type: none"> • Unmarried 	48.3 percent (N=1853)
<ul style="list-style-type: none"> • Currently married 	33.7 percent (N=1293)
<ul style="list-style-type: none"> • Separated 	9.30 percent (N=358)
<ul style="list-style-type: none"> • Divorced 	5.70 percent (N=220)
<ul style="list-style-type: none"> • Widowed 	3.0 percent (N=116)
Year of Formal Education	
<ul style="list-style-type: none"> • Illiterate 	30.0 percent (N=1228)
<ul style="list-style-type: none"> • Primary 	29.8 percent (N=1144)
<ul style="list-style-type: none"> • Middle 	24.2 percent (N=929)
<ul style="list-style-type: none"> • Matric 	10.9 percent (N=419)
<ul style="list-style-type: none"> • Intermediate 	2.50 percent (N=95)
<ul style="list-style-type: none"> • Graduate 	0.50 percent (N=18)
<ul style="list-style-type: none"> • Quranic Education 	0.20 percent (N=6)
Living Arrangement	
<ul style="list-style-type: none"> • Lives at Home 	59.0 percent (N=2264)
<ul style="list-style-type: none"> • Lives at Spots 	7.50 percent (N=289)
<ul style="list-style-type: none"> • Lives Street 	19.5 percent (N=757)
<ul style="list-style-type: none"> • Other 	13.6 percent (N=525)
Income (PKR) (Mean / Median / SD)	
<ul style="list-style-type: none"> • Monthly Income (From all resources) 	PKR: 6,783.23 / 7,000.00 / \pm SD3922.816

Table 5. Socio-demographic characteristics of IDUs – Punjab IBBS; 2014

Overall, 2.1 percent (N=82) reported being physically abused, during the past six month, while 19.3 percent (N=741) were arrested during the same period and 9.0 percent (N=347) reported alcohol use, at the time of sex during the past six months. Some 4.7 percent (N=182) sold blood in exchange of money, during the past six months.

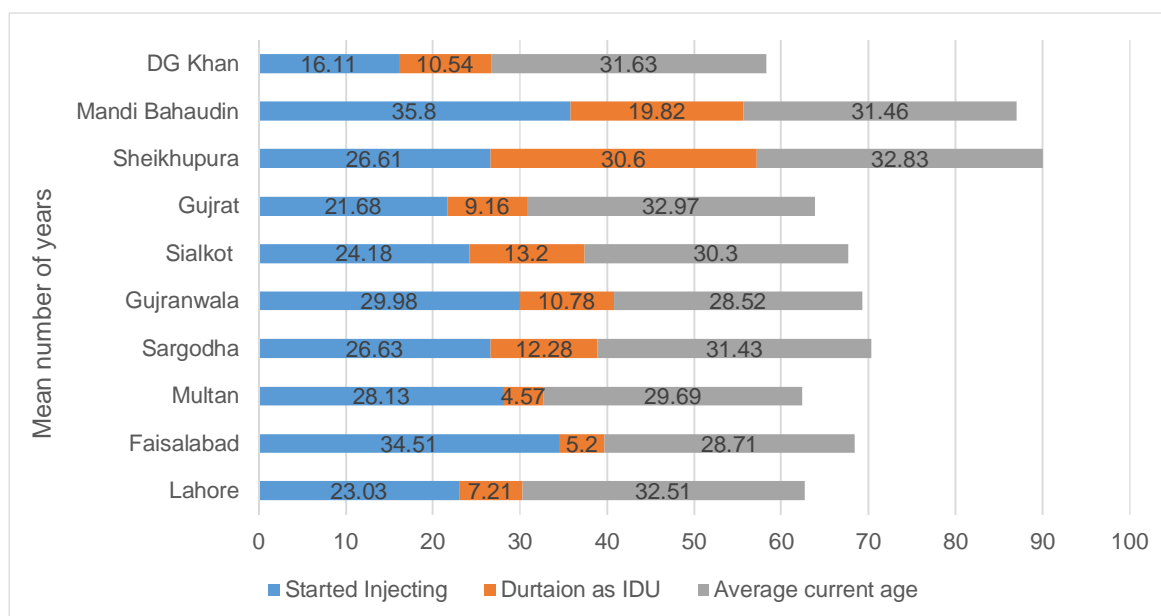


Graph 2. Proportion of IDUs living at home, spots, street and other – Punjab IBBS; 2014



Graph 3. Proportion of married IDUs by cities – Punjab IBBS; 2014

On an average, the IDUs started injecting at a median age of 20 years (\pm SD35.636) and had been injecting for a period of 12.37 years (\pm SD25.113), at the time of survey – Graph 4.



Graph 4. Average age of initiation of injecting drug use, duration of use, and average current age of IDUs – Punjab IBBS; 2014

3.4 Migration and Mobility

A significant proportion of IDUs belonged from the city of where they were interviewed (95.0 percent (N=3,648) and nearly half (55.4 percent; N=2,126) lived with their families. Among 4.70 percent (N=182) of IDUs who have migrated from other cities, 23.1 percent (N=42) were permanent settlers, while 76.9 percent (N=140) were visitors. The major reasons reported for migration were work/business (49.7 percent) and drugs (26.4 percent). Some 16.3 percent (N=624) of IDUs had travelled to other cities within the past year. Mobility of IDUs was inclined to large cities (Lahore=22.5 percent; Karachi=10.3 percent & Multan=6.30). A small fraction of IDUs (3.90 percent; N=150) reported to have travelled abroad; 51.3 percent (N=77) had been involved in sex work, during their travel abroad – Table 6.

Variable	IDUs Percentage
Migratory Pattern (In Migration) / Domestic	
Migration from other Cities / Towns	4.70 percent (N=182)
• Permanently Staying	23.1 percent (N=42)
• Visiting	76.9 percent (N=140)
Mobility Pattern (Out Migration)	
• Travelled to other City in the past 12 months	16.3 percent (N=624)
Most Common Cities Travelled in past 12 months	

<ul style="list-style-type: none"> • Lahore • Karachi • Multan • Islamabad • Faisalabad 	22.5 percent (N=140)
	10.3 percent (N=64)
	6.30 percent (N=39)
	5.80 percent (N=36)
	5.30 percent (N=33)
International Travel	
<ul style="list-style-type: none"> • Ever Travelled Abroad • Involved in Sex Work 	3.90 percent (N=150)
	51.3 percent (N=77)

Table 6. Migratory Pattern for IDUs – Punjab IBBS; 2014

3.5 Drug Injecting Practices

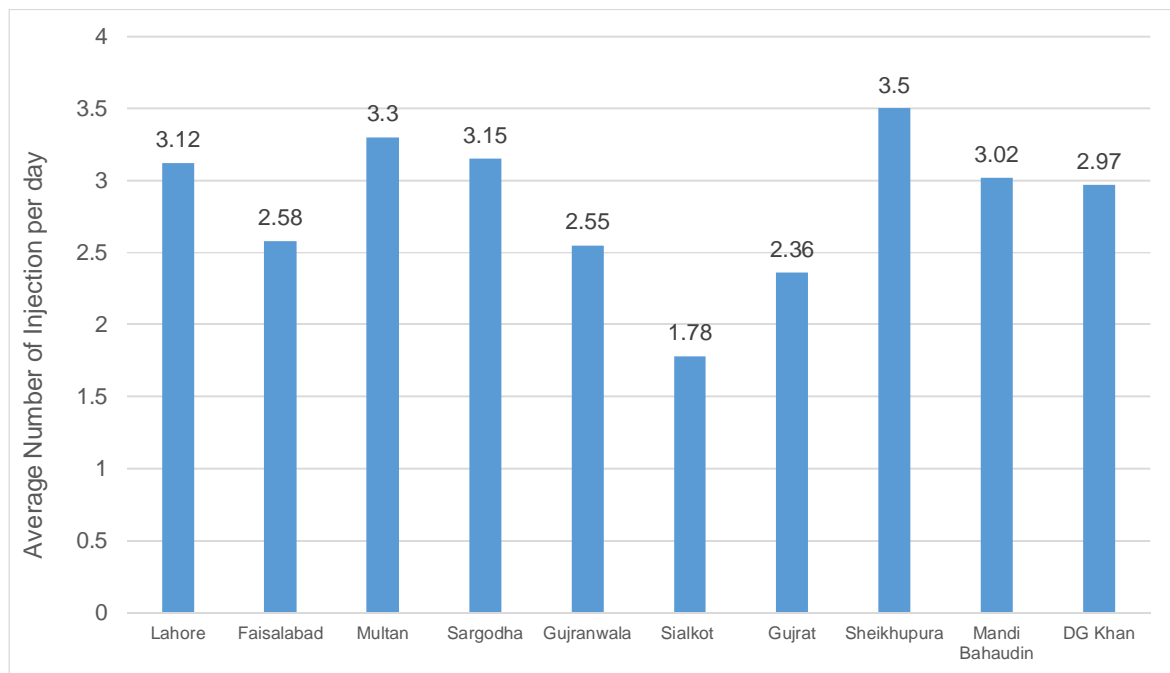
More than half of the study respondents (63.6 percent; N=2,444) were reported injecting 2 – 3 times a day, during the past month. Fewer (13.9 percent; N=532), reported injecting more than three times a day. Public spaces including parks, streets and/or open areas were most commonly cited as venues for the most recent injection with 79.5% of IDUs (N=3,049) reporting injecting in these spaces. The vast majority of the IDUs (72.7 percent; N=2,790) reported injecting with friends and/or acquaintances however 24.9 percent (N=1,070) reported injecting alone – Table 7.

The median number of injections per day was 2 injections per day, with Sheikhpura and Multan reporting the highest mean number of injections per day and Sialkot, the lowest mean number of injections per day – Graph 5.

Injection Practices during Last Month	IDUs Percentage
Number of Injections per Day in past one Month	
<ul style="list-style-type: none"> • Once • 2 – 3 times a day • More than 3 times a day 	22.0 percent (N=843)
	63.6 percent (N=2,444)
	13.9 percent (N=532)
Last Injection at	
<ul style="list-style-type: none"> • Park/street/open spaces • Home • Shrines/Darbar • Hotel/Shop 	79.5 percent (N=3,049)
	5.90 percent (N=225)
	8.90 percent (N=340)

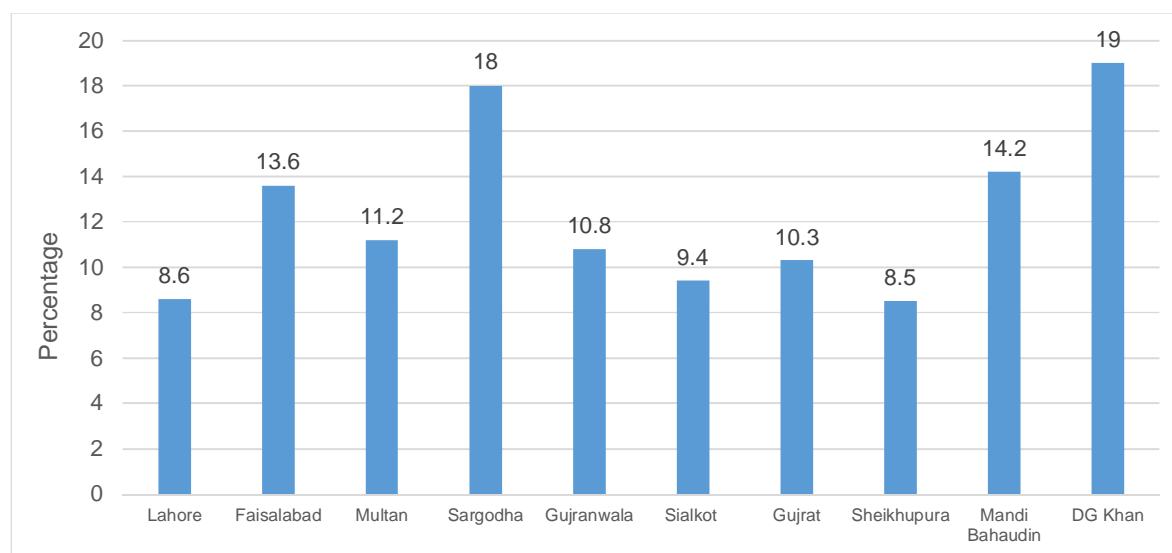
	2.80 percent (N=106)
Last Time Injected with	
<ul style="list-style-type: none"> • Family member(s) • Friends + acquaintances • Strangers • Alone 	1.0 percent (N=37)
	72.7 percent (N=2,790)
	1.0 percent (N=40)
	24.9 percent (N=958)
Injected by a Professional Injector during past one month	
<ul style="list-style-type: none"> • Always • Most of the Time • Some times • Never 	12.4 percent (N=475)
	25.5 percent (N=978)
	32.8 percent (N=1,257)
	27.9 percent (N=1,070)
Used a New Syringe for Injecting	
<ul style="list-style-type: none"> • Always used a New Syringe • Never 	57.8 percent (N=2,221)
	4.10 percent (N=159)

Table 7 Injecting practices of IDUs – Punjab IBBS; 2014



Graph 5 Average number of injection per day by city – Punjab IBBS; 2014

Almost 70.7 percent (N=2,710) of all IDUs reported that they had sought help in injecting from “professional injectors/street doctors²” during the past month. Of these, 12.4 percent (N=475) always got their injections from these professional injectors, another 58.3 percent occasionally sought help from a professional injector during last month. There was substantial variation between cities in the proportion of IDUs who reported always using the services of professional injectors – Graph 6.



Graph 6. Proportion of IDUs who always used services of a professional injector, during the past month by city – Punjab IBBS; 2014

Poly drug use was common in all cities and all types of opiates, anti-histamines, narcotic analgesics, psychoactive drugs and heroin were injected. Avil (injection containing antihistamine pheniramine maleate) was the drug of choice in most cities (82.4 percent; N=3,166), followed by Heroin (52.8 percent; N=2,026) and psychoactive drug Diazepam (29.6 percent; N=1,136). Various cities indicated substantial variations, in pattern of drug use – Table 8 & 9.

Drugs	IDUs Percentage
Tamgesic	21.1 percent (N=810)
Bupron	8.10 percent (N=310)
Sosegon	11.1 percent (N=426)
Avil	82.4 percent (N=3,166)
Phenergen	2.20 percent (N=83)
Marzine	7.30 percent (N=281)
Pentonil	1.30 percent (N=51)
Pentazogan	1.70 percent (N=64)
Diazepan	29.6 percent (N=1,136)
Restroil	1.50 percent (N=281)

² Street doctors or professional injectors are IDUs themselves, who are paid by other IDUs to inject drugs

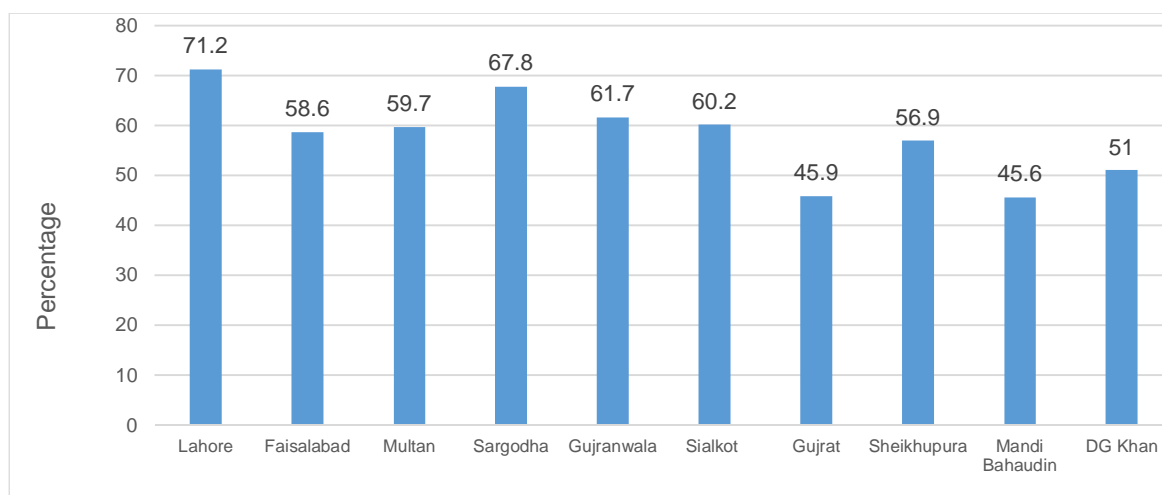
Heroin	52.8 percent (N=2,026)
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Table 8. Type of drugs injected at least once in past month by IDUs – Punjab IBBS; 2014

Drugs	IDUs Percentage									
	LHR	FBD	MLT	SGD	GUJ	SKT	GRT	SKP	MBDN	DGK
Tamgesic	10.4	37.5	0.3	1.6	55.4	61.0	34.3	1.0	9.7	1.0
Bupron	34.2	3.9	5.7	1.0	7.9	6.5	3.1	4.4	13.9	0.0
Sosegon	40.4	14.4	0.5	0.8	0.3	0.0	15.8	26.2	12.0	0.0
Avil	79.5	92.9	98.4	97.6	99.2	96.1	99.0	44.2	22.3	95.6
Phenergen	0.3	0.5	0.8	0.0	1.3	5.1	7.0	5.1	6.5	0.0
Marzine	0.0	1.3	0.5	0.0	39.4	27.2	0.5	0.0	4.7	0.0
Pentonil	0.5	0.0	1.3	0.0	0.3	0.0	2.9	0.8	7.6	0.0
Pentazogan	0.3	0.0	2.3	0.0	0.0	0.3	2.9	1.5	9.2	0.3
Diazepan	26.4	31.7	3.4	0.3	89.0	85.6	13.5	18.8	25.4	2.8
Restroil	0.8	0.0	0.3	0.0	6.6	0.0	0.0	0.0	5.5	0.0
Heroin	60.1	92.7	95.6	67.5	3.9	1.6	78.2	12.1	23.3	93.3

Table 9 Type of drugs injected at least once in past month by IDUs, by cities – Punjab IBBS; 2014

Overall, 57.8 percent (N=2,221) of IDUs reported that they always used a new syringe in the past month. However, responses varied substantially across cities with the highest reported proportion in Lahore (71.2 percent; N=275) followed by Sargodha (67.8 percent; N=259), and Sialkot (60.2 percent; N=230) Graph 7.



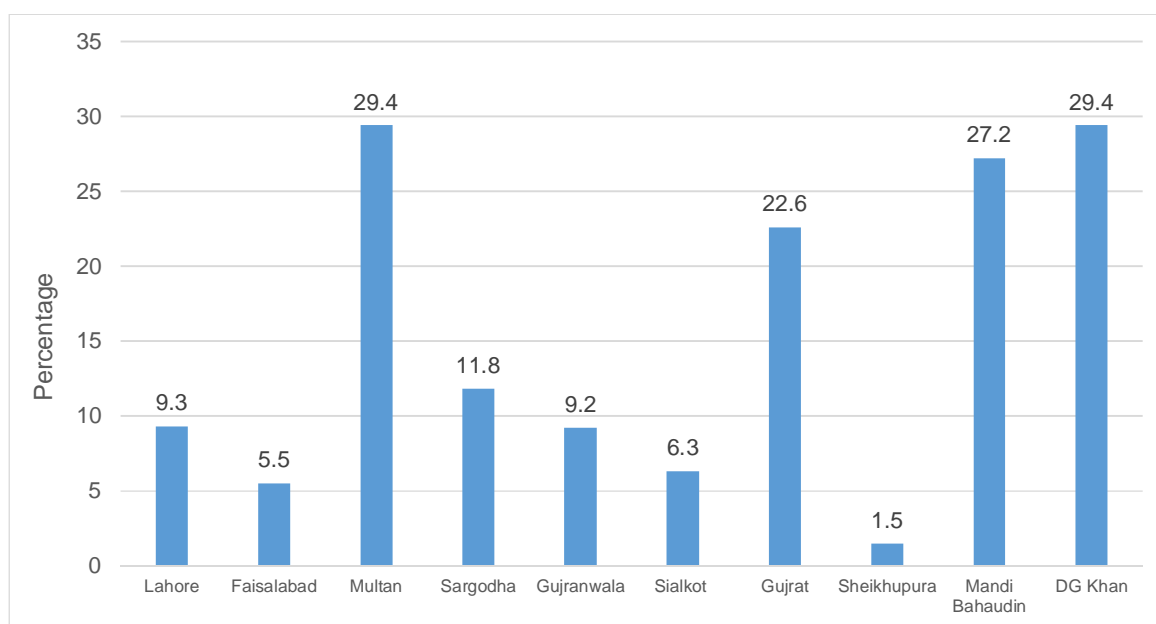
Graph 7 Proportion of IDUs always using a new syringe for injecting in past month by city – Punjab IBBS; 2014

Practices at Last Injection	IDUs Percentage
Sharing needle / syringes at last injection	15.2 percent (N=591)
Injected with a needle used by another IDUs	17.2 percent (N=660)
Passed a needle to another IDUs	16.3 percent (N=625)

Proportion of IDUS sharing same needle	
• One	5.50 percent (N=211)
• Two	6.10 percent (N=235)
• More than two	1.9 percent (N=74)
Used injection paraphernalia	17.0 percent (N=654)
Shared injection paraphernalia*	8.90 percent (N=58)
Injected by professional injector	40.1 percent (N=1,539)

Table 10 Injection practices for last injection – Punjab IBBS; 2014

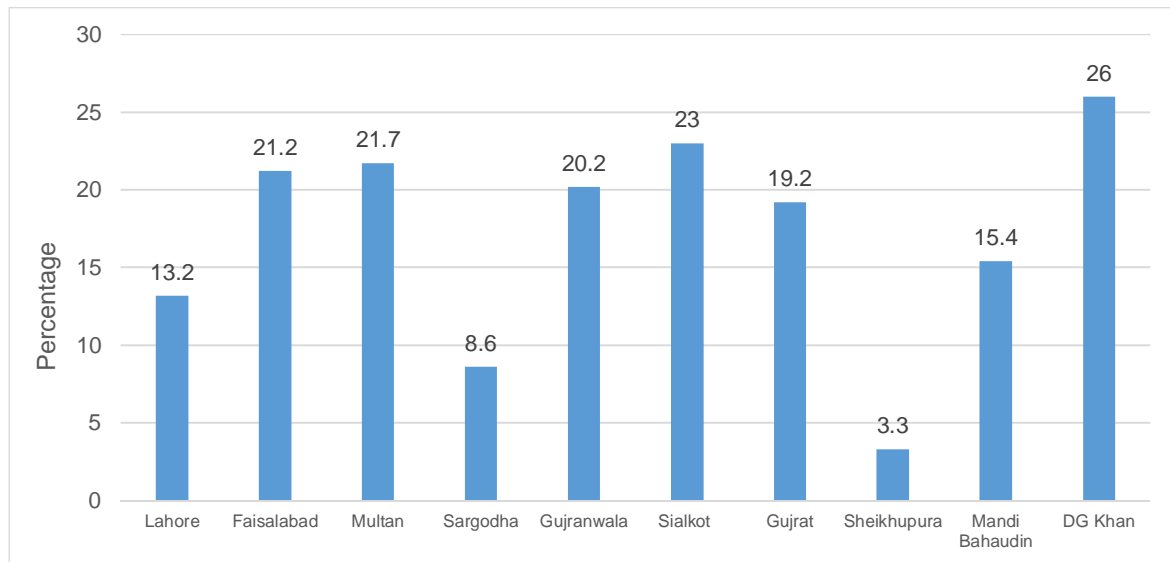
Of those who used paraphernalia for injection about 15.2 percent (N=591) of IDUs reported sharing their needle/syringe for their last injection. Among those who reported sharing; 16.3 percent (N=625) passed on their needle during the last injection. Sharing needle/syringe was most commonly reported from Multan (29.4 percent; N=112) followed by DG Khan (29.4 percent; N=114) and Mandi Bahaudin (27.2 percent; N=106). Graph 8.



Graph 8. Proportion of IDUs sharing syringes/needles, at last injections – Punjab IBBS; 2014

Approximately 17.2 percent (N=660) of the IDUs reported injecting with a used needle/syringe during their last injection. Among those who injected with a used needle/syringe, the main reasons reported for not using a new needle/syringe were: new syringe was not available at the time of injection, syringe was too expensive, and injection partner insisted to use the same and did not think that it was necessary

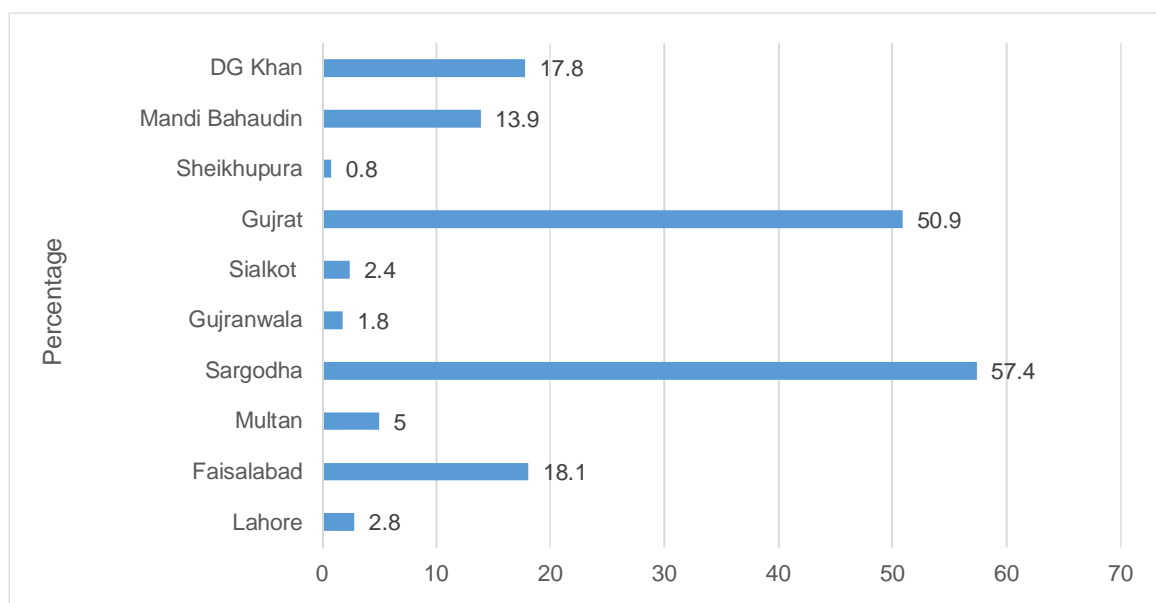
to use a new needle/syringe. DG Khan reported highest number of IDUs (26.0 percent; N=101) who injected with a used needle/syringe, followed by Sialkot (23.0 percent; N=89) – Graph 9.



Graph 9. Proportion of IDUs reporting used syringes/needles, on last injection by city – Punjab IBBS; 2014

The data for proportion of IDUs sharing the same syringe/needle was not significant – Table 10. Fewer 11.60 percent (N=446) sharing syringes/needles, among 1 – 2 IDUs; more insignificant (1.9 percent: N=74) for more than two IDUs sharing the syringe.

Approximately 17.0 percent (N=654) of IDUs reported that they had used injecting paraphernalia including a cooker, water, cotton, caps etc., out of which 8.90 (N=58) reported sharing one or more of these items – Graph 10. About 40.1 percent (N=1,539) sought help of professional injector, during their last injection – Table 10.



Graph 10. Proportion of IDUs reported using injecting paraphernalia – Punjab IBBS; 2014

3.6 Sexual Behaviors & Practices

Given the importance of IDUs networks in HIV transmission dynamics, sexual behaviours and practices, were assessed to evaluate the potential for epidemic expansion into other MARPs (FSWs, MSWs, and HSWs).

The median age at first sexual intercourse was reported to be 20.00 years (\pm SD35.636). A quarter of IDUs reported that they never had sex, most of them were less than 23 years of age. Approximately 30.0 percent (N=1,152) reported having sex with a regular female partner, which correlates to the proportion of married IDUs. Condom use with a regular partner during the last sexual encounter was reported by 31.0 percent (N=625) of IDUs – Table 11.

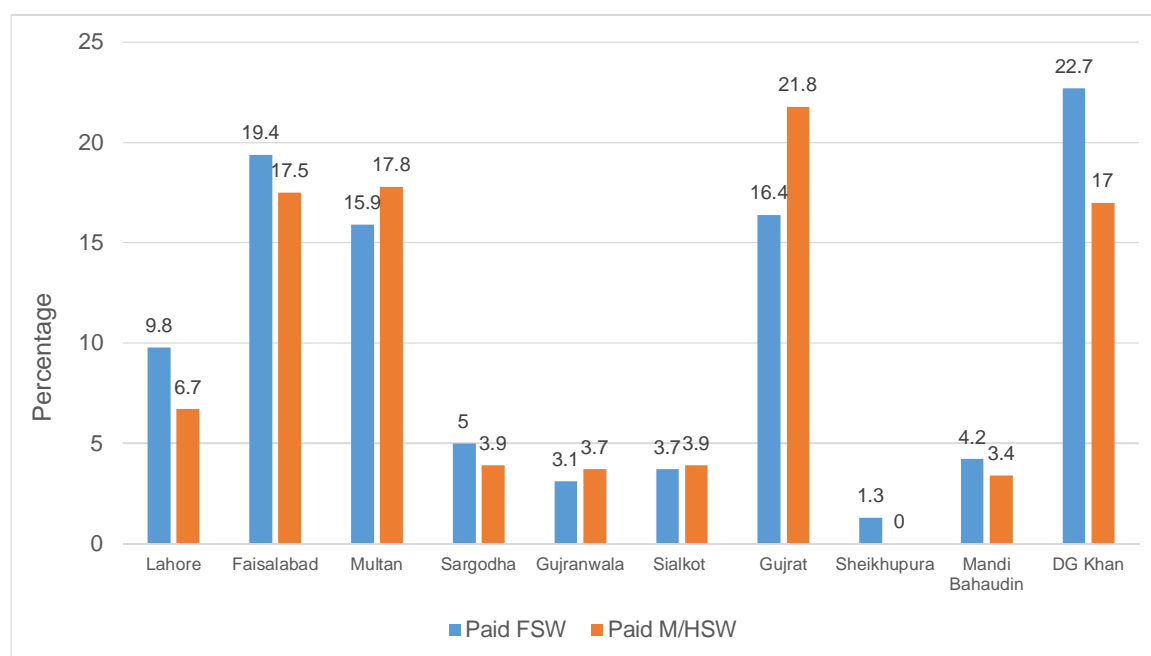
Nearly 10.2 percent (N=392) of IDUs reported having had sex with FSWs in the past six months. Among those reporting sex with a FSW, the median number of paid female sex partners was 2.0 (\pm SD31.035) in the last six months. Condom use in this instance was reported to be 19.0 percent (N=98) – Table 11.

9.60 percent (N=368) of IDUs reported sex with MSWs and/or HSWs in the past six months. Condom use during last sex with a MSW/HSW was 20.7 percent (N=78); with 5.1 (N=19) using some sort of a lubricant – Table 11. However, the main reasons for not using a condom during sexual encounters were: do not like condom, do not think it is necessary, and did not think of it.

Overall cities indicated, higher number of sexual transections, with FSWs as compared to HSWs/MSWs, except Gujrat – Graph 11.

Behaviours / Practices	IDUs Percentage
Age of first sexual intercourse (Median \pm SD)	20.00 years \pm SD35.636
Never had sexual intercourse	25.0 percent (N=961)
Regular female sex partners (last 6 months)	
<ul style="list-style-type: none"> Sexually active with regular female sex partner 	30.0 percent (N=1,152)
<ul style="list-style-type: none"> Condom use at last sex 	31.0 percent (N=364)
Had sex with FSWs (last 6 months)	10.2 percent (N=392)
<ul style="list-style-type: none"> Median number of paid female partners (Median, \pmSD) 	2.00 \pm SD31.035
<ul style="list-style-type: none"> Condom use in last sex paid female partners 	19.0 percent (N=98)
Had sex with a MSW or HSW (last 6 months)	9.60 percent (N=368)
<ul style="list-style-type: none"> Condom use in last sex with MSW/HSW 	20.7 percent (N=78)
<ul style="list-style-type: none"> Lubricant use in last sex with MSW/HSW 	5.1 percent (N=19)
Exchanged/sold sex for drugs/money (last 6 months)	14.3 percent (N=548)

Table 11. Sexual behaviors among IDUs – Punjab IBBS; 2014



Graph 11. Proportion of IDUs reporting paying for sex in past six months – Punjab IBBS; 2014. 3.7 HIV/STIs Related Knowledge & Practices

Approximately 73.9 percent (N=2,837) of IDUs had heard of HIV and/or AIDS (Table 12); 60.4 percent (N=1,716) believed that a healthy looking person can be infected with HIV. Among those IDUs who knew of HIV and/or AIDS, 54.9 percent (N=2,108) knew that HIV can be transmitted by sharp instruments/needle (syringe) and 47.2 percent (N=1,811) were aware of sexual intercourse as mode of HIV transmission. Slightly, fewer 28.1 percent (N=1,080) knew that transfusion of infected blood can also cause HIV – Table 12.

Information collected on how HIV transmission can be prevented, revealed that 55.0 percent (N=2,113) of IDUs knew that using a clean needle/syringe for injections protects against HIV transmission, 38.5 percent (N=1,479) knew that using condoms is an effective method of HIV prevention, while 29.5 (N=1,132) believed that sexual abstinence is a mode of HIV prevention – Table 12.

49.3 percent (N=1,400) believed that they were at a risk of acquiring HIV, yet 71.4 percent (2,025) knew of a place where they could be tested for HIV, while 70.8 percent (N=2,010) had been tested for HIV in the past. Among those who had been tested, fewer (20.0 percent; N=403) knew of their HIV status – Table 12. Further analysis showed that among those who knew of their HIV status, 5.1 percent (N=103) were recorded positive in comparison to 14.9 percent (N=300) who reported negative at the time of the test, while remaining (80 percent; N=1,607) didn't know their status.

More than one third (33.2 percent; N=1,269) of IDUs were aware that other infections can be transmitted sexually. Among those IDUs who knew about sexually transmitted infections (STIs), fewer 13.8 percent (N=177) reported being infected with a STIs in past six months, of which a more than half (59 percent; N=111) had received treatment – Table 12.

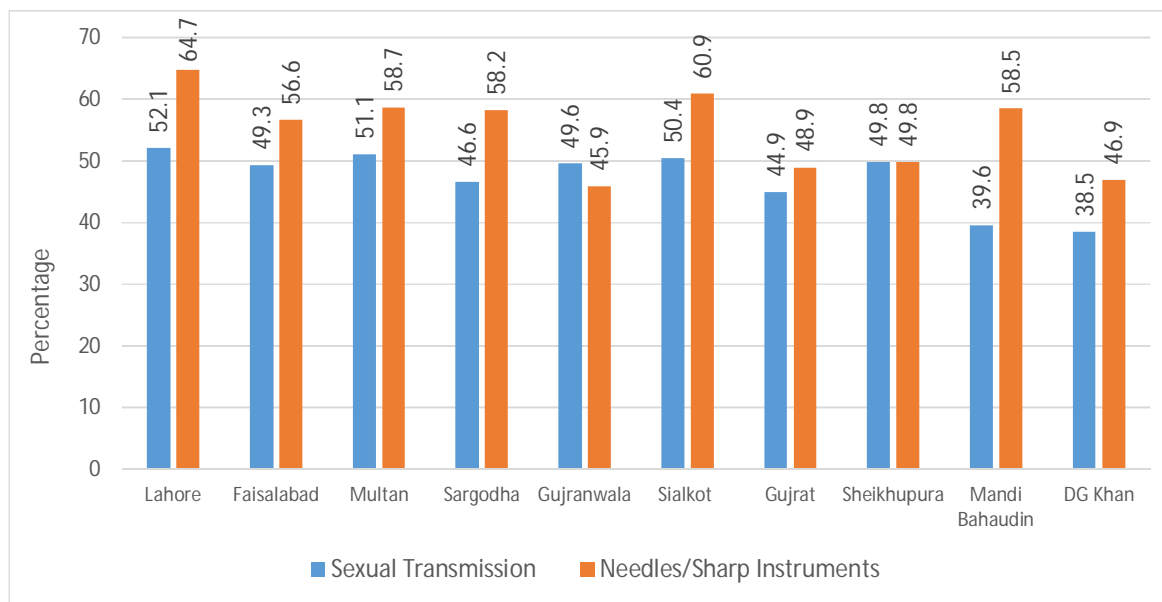
Knowledge Areas	IDUs Percentage
Knowledge of HIV and /or AIDS	
Ever heard of HIV and/or AIDS	73.9 percent (N=2,837)
• Health looking person can have HIV/AIDS*	60.4 percent (N=1,716)
• HIV transmitted by sharp instrument/needle*	54.9 percent (N=2,108)
• HIV transmitted by sexual intercourse*	47.2 percent (N=1,811)
• HIV transmitted by blood transfusion*	28.1 percent (N=1,080)
• Clean needle/syringes can prevent HIV transmission*	55.0 percent (N=2,113)
• Condoms can prevent HIV Transmission*	38.5 percent (N=1,479)
• Sexual abstinence to prevent HIV transmission*	29.5 percent (N=1,132)
• Self-perception of risk for HIV*	49.3 percent (N=1,400)
• Know where to receive HIV test*	71.4 percent (N=2,025)
• Ever tested for HIV*	
• Knows test result*	

	70.8 percent (N=2,010)
	20.0 percent (N=403)
Sexually Transmitted Infections	
• Self-reported of STIs, in past 6 months	13.8 percent (N=177)
• Received treatment for reported STIs	59.0 percent (N=102)

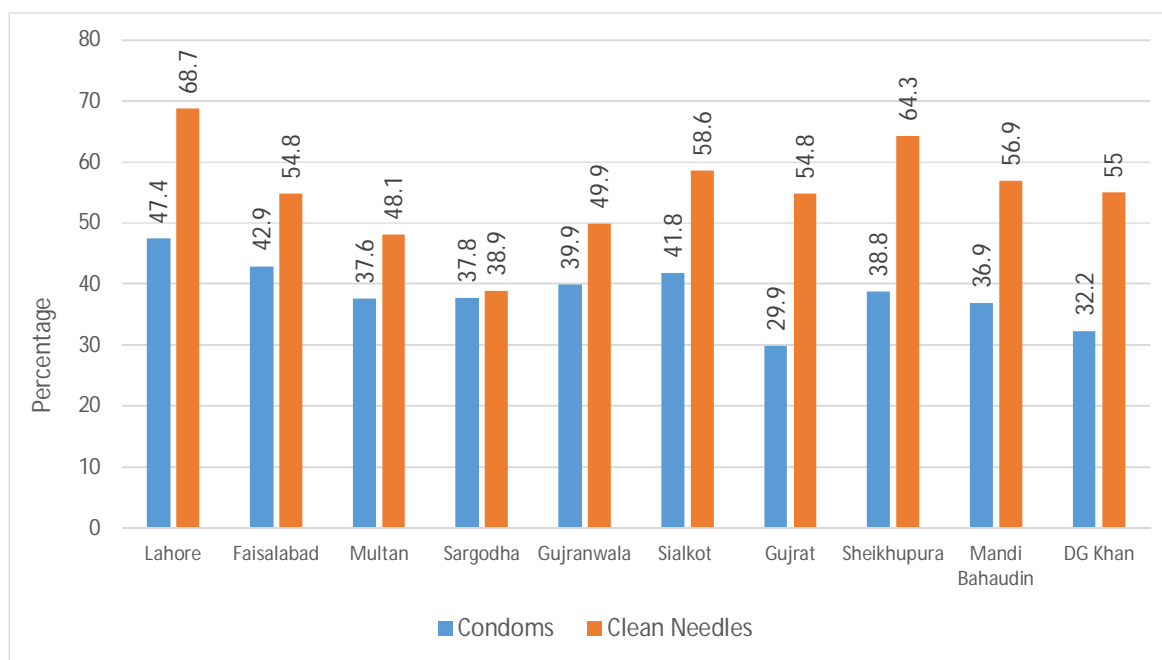
*Positive response to initiate question.

Table 12 HIV & STIs related knowledge among IDUS – Punjab IBBS; 2014

Further analysis of knowledge of HIV transmission and prevention, revealed slightly higher proportion for the study respondents, for knowledge related to HIV transmission and prevention through clean needles/syringes, as compared to the sexual transmission and prevention of HIV – Graphs 12 & 13.



Graph 12 Knowledge of mode of HIV transmission, among IDUs who have heard of HIV/AIDS by city – Punjab IBBS; 2014



Graph 13 Knowledge of HIV preventive measures among IDUs who have heard of HIV/AIDS by city – Punjab IBBS; 2014

3.8 Service Delivery Utilization

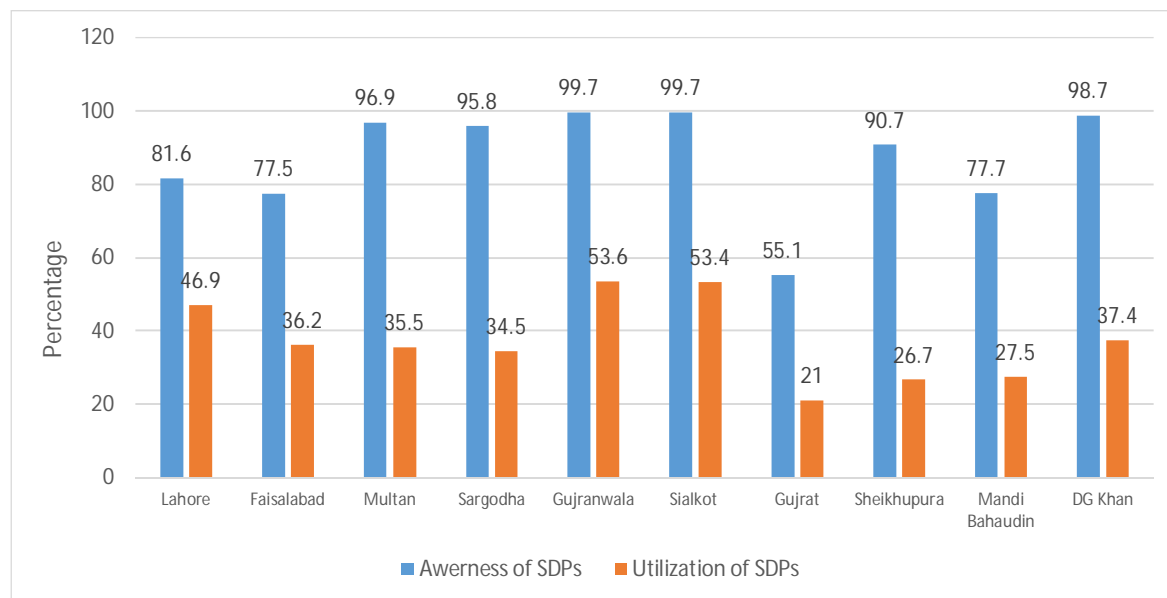
86.1 percent (N=3,306) of IDUs were aware of the HIV prevention programs in their city. Among those IDUs who participated in these preventive programs, approximately 74.5 percent (N=2,296) utilized the services more than once a week – Table 13.

Knowledge Area	IDUs Percentage
Ever heard of HIV prevention programs	86.1 percent (N=3,306)
Number of times SDP* services were availed	
• More than once a week	74.5 percent (N=2,296)
• Once in a week	16.2 percent (N=499)
• After two weeks	5.40 percent (N=165)
• Once in a month	3.30 percent (N=101)
• Less than once a month	0.50 percent (N=16)
• Never	0.10 percent (N=4)
Received free syringes/needles in past 12 month	87.3 percent (N=3,354)

*Service Delivery Program

Table 13. Knowledge and Utilization of Preventive Programs among IDUs – Punjab IBBS; 2014

The knowledge and utilization of HIV SDPs was reported highest by IDUs from Sialkot, Gujrawala, and Multan. Awareness and utilization of these services was lowest in Gujrat – Graph 14.

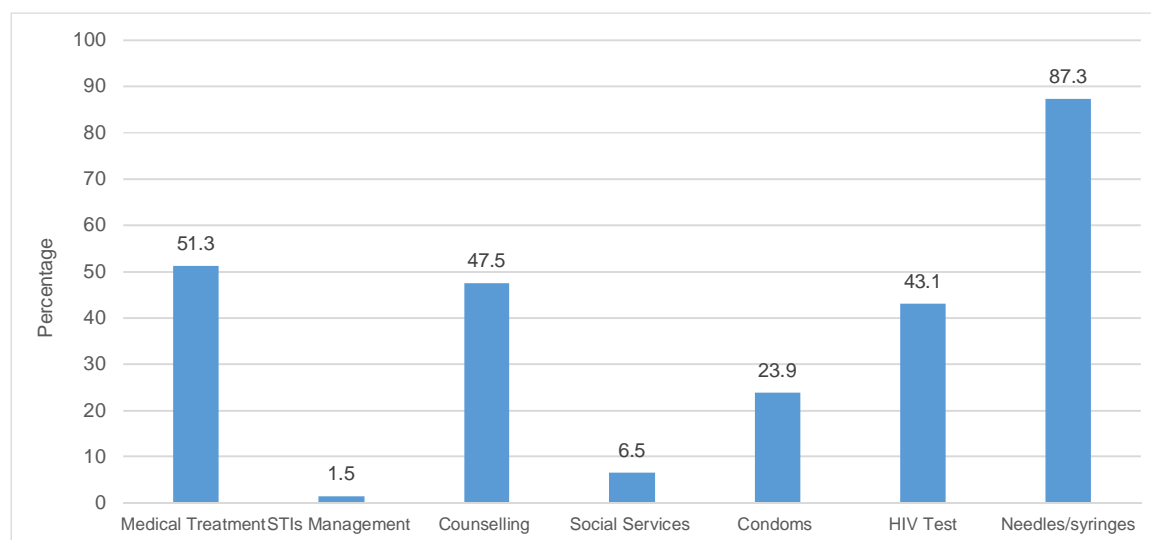


Graph 14. Knowledge and utilization of SDPs among IDUs by city – Punjab IBBS; 2014

The vast majority of IDUs who accessed SDPs in the past six months visited these programs to obtain new syringes (87.3 percent; N=3,354). Approximately half of the IDUs (51.3 percent; N=1,970) came for treatment and medicine, fewer (6.50 percent; N=251) availed social services, and 43.1 percent (N=1,655) requested HIV testing – Table 14 & 15 and Graph 15.

Services	IDUs Percentage
Medical Treatment	51.3 percent (N=1,970)
STIs Management	1.50 percent (N=58)
Counselling	47.5 percent (N=1,824)
Social Services	6.50 percent (N=251)
Condoms	23.9 percent (N=918)
HIV Test	43.1 percent (N=1,655)
Needles/syringes	87.3 percent (N=3,354)

Table 14. Utilization of HIV Prevention Programs services among IDUs – Punjab IBBS; 2014



Graph 15. Common services utilized by SDPs in past 6 months, among IDUs who utilized these programs – Punjab IBBS; 2014

Services	IDUs Percentage									
	LHR	FBD	MLT	SGD	GUJ	SKT	GRT	SKP	MBDN	DGK
Medical Treatment	61.7	66.0	5.0	48.7	94.8	95.8	21.8	90.5	2.9	26.0
STIs Management	2.1	0.5	0.0	0.5	6.0	2.4	1.8	0.8	1.0	0.0
Counselling	62.5	48.1	45.5	67.9	62.7	57.9	53.6	11.3	13.1	52.4
Social Services	44.6	17.8	0.7	0.5	0.0	0.8	1.0	0.0	0.3	0.0
Condoms	10.4	20.3	59.9	15.4	19.5	10.7	19.3	10.6	13.5	42.8
HIV Test	48.1	46.1	34.0	24.2	68.0	87.2	23.1	18.2	20.3	62.1
Needles/syringes	95.9	74.9	98.4	97.4	99.7	100	66.5	95.1	46.6	98.7

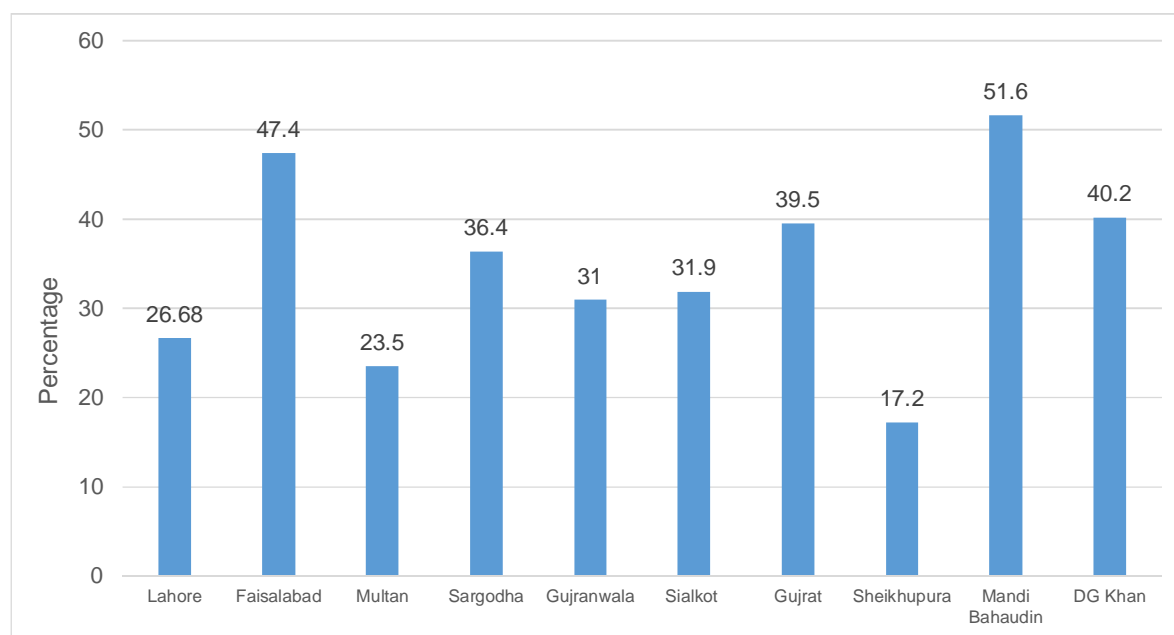
Table 15. Utilization of HIV Prevention Programs among IDUs, by cities – Punjab IBBS; 2014

3.9 HIV Prevalence

The overall, weighted sero-prevalence of HIV among IDUs was recorded 36.8 percent, un-weighted prevalence was 34.5 percent (N=1,361), with variation between cities. The highest prevalence was among IDUs from Mandi Bahaudin (51.6; N=197), followed by Faisalabad (47.4 percent; N=181) and D G Khan (40.2 percent; N=156) – Table 16 & Graph 16.

City	Tested	Positive	Prevalence (95% CI)
Lahore	382	139	26.7 percent (22.25; 31.12)
Faisalabad	382	181	47.4 percent (42.35; 52.41)
Multan	383	90	23.5 percent (19.23; 27.76)
Sargodha	382	139	36.4 percent (31.54; 41.23)
Sialkot	382	122	31.9 percent (27.24; 36.63)
Gujranwala	381	118	31.0 percent (26.31; 35.63)
Gujrat	385	152	39.5 percent (34.58; 44.38)
Sheikhupura	389	67	17.2 percent (13.45; 20.99)
Mandi Bahaudin	382	197	51.6 percent (46.54; 56.60)
DG Khan	388	156	40.2 percent (35.31; 45.11)
Overall Prevalence			34.5 percent

Table 16. HIV prevalence among IDUs by City – Punjab IBBS; 2014



Graph 16. HIV prevalence among IDUs by City – Punjab IBBS; 2014

The following table indicates data collected between successive IBBS Rounds (2011 & 2014) for IDUs (Table 17)

Sr.	Indicator	Value		
		IBBS 2011	Punjab IBBS 2014	
Socio-Demographic Characteristics				
1	Mean age of study respondents	30.4 years	31.01 years	
2	Marital Status			
	<ul style="list-style-type: none"> • Unmarried • Married 	<ul style="list-style-type: none"> • 56.9 percent • 33.8 percent 	<ul style="list-style-type: none"> • 48.3 percent • 33.7 percent 	
3	Education Status			
	<ul style="list-style-type: none"> • Illiterate • Primary • Middle • Intermediate 	<ul style="list-style-type: none"> • 57.1 percent • 18.4 percent • 22.2 percent • 19 percent 	<ul style="list-style-type: none"> • 30.0 percent • 29.8 percent • 24.2 percent • 2.50 percent 	
	4	Living with		
		<ul style="list-style-type: none"> • Living alone • Family 	<ul style="list-style-type: none"> • 18.4 percent • 45.7 percent 	<ul style="list-style-type: none"> • 21.2 percent • 55.4 percent

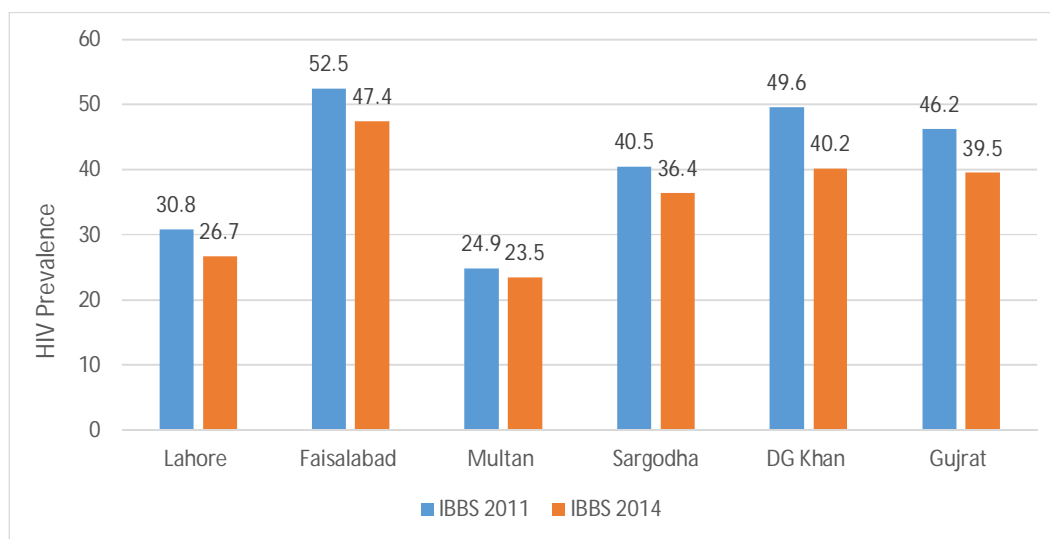
	<ul style="list-style-type: none"> Friends 	<ul style="list-style-type: none"> 35.5 percent 	<ul style="list-style-type: none"> 21.8 percent
5	<p>Current living arrangement</p> <ul style="list-style-type: none"> Home Street 	<ul style="list-style-type: none"> 45.4 47.6 	<ul style="list-style-type: none"> 59.0 percent 19.5 percent
6	Mean Income per month	PKR. 6,000	PKR: 6,783.23
Migration and Mobility			
7	<p>Migration from other cities</p> <ul style="list-style-type: none"> Permanent staying Visiting 	<ul style="list-style-type: none"> 9.2 percent 10.5 percent 89.5 percent 	<ul style="list-style-type: none"> 4.7 percent 23.1 percent 76.9 percent
8	Out migration	16.9 percent	16.3 percent
9	International Travel	3.60 percent	3.90 percent
10	Involved in sexual activity	43.7 percent	51.3 percent
Drug Injecting Practices			
11	<p>Number of injection per day</p> <ul style="list-style-type: none"> Once a day 2-3 times a day More than three times a day 	<ul style="list-style-type: none"> 6.2 percent 71.5 percent 21.1 percent 	<ul style="list-style-type: none"> 22.0 percent 63.6 percent 13.9 percent
12	<p>Last time Injected at</p> <ul style="list-style-type: none"> Park/street/open places Home Shrines/Darbar Hotel/shop 	<ul style="list-style-type: none"> 90.5 percent 4.6 percent 2.6 percent 1.3 percent 	<ul style="list-style-type: none"> 79.5 percent 5.9 percent 8.9 percent 2.8 percent
13	<p>Last time injected with</p> <ul style="list-style-type: none"> Family member Friends/acquaintances Stranger Alone 	<ul style="list-style-type: none"> 0.9 percent 80.9 percent 0.2 percent 18.0 percent 	<ul style="list-style-type: none"> 1.0 percent 72.7 percent 1.0 percent 24.9 percent
14	<p>Used a new syringe for injecting</p> <ul style="list-style-type: none"> Always used a new syringe Never 	<ul style="list-style-type: none"> 38.6 percent 2.5 percent 	<ul style="list-style-type: none"> 57.8 percent 4.1 percent
15	Sharing needle at last injection	39.2 percent	15.2 percent
16	Injected by a needle used by another IDU	31.2 percent	17.2 percent
17	Passed a needle to another IDU	22.6 percent	16.3 percent
18	<p>Proportion of IDUs sharing same needle</p> <ul style="list-style-type: none"> One Two More than two 	<ul style="list-style-type: none"> 0 percent 9.7 percent 6.2 percent 	<ul style="list-style-type: none"> 5.5 percent 6.1 percent 1.9 percent
Sexual Behaviours and Practices			
19	Mean age of first sexual intercourse	17.4 years	20.0 years

20	Regular female sex partners <ul style="list-style-type: none"> Sexually active with regular female sex partner Condom use at last sex 	<ul style="list-style-type: none"> 26.4 percent 25.8 percent 	<ul style="list-style-type: none"> 30 percent 31 percent
21	Had sex with FSWs (Last 6 months) <ul style="list-style-type: none"> Mean no. of paid female partners Condom use at sex with female sexual partner 	<ul style="list-style-type: none"> 13.9 percent 4.6 28.4 percent 	<ul style="list-style-type: none"> 10.2 percent 2 19 percent
22	Had sex with MSW/HSW (last 6 months) <ul style="list-style-type: none"> Condom use in last sex with MSW/HSW Lubricant use in last sex with MSW/HSW 	<ul style="list-style-type: none"> 7.1 percent 16.3 percent 40.1 percent 	<ul style="list-style-type: none"> 9.6 percent 20.7 percent 5.1 percent
23	Exchanged/sold sex for drugs or money (last 6 months)	15.3 percent	14.3 percent
HIV/STIs related Knowledge			
24	Ever heard of HIV and/or AIDS	86.7 percent	73.9 percent
25	Healthy looking can have HIV/AIDS	73.4 percent	60.4 percent
26	HIV transmitted by <ul style="list-style-type: none"> Sharp needles/syringes Sexual intercourse Blood transfusion 	<ul style="list-style-type: none"> 87.2 percent 83.8 percent 23.5 percent 	<ul style="list-style-type: none"> 54.9 percent 47.2 percent 28.1 percent
27	HIV transmission can be prevented by <ul style="list-style-type: none"> Clean syringes/needles Condoms Sexual abstinence 	<ul style="list-style-type: none"> 79.3 percent 68.8 percent 38.4 percent 	<ul style="list-style-type: none"> 55.0 percent 38.5 percent 29.5 percent
28	Self-perception risk of HIV	64.1 percent	49.3 percent
29	Know where to receive HIV test	32.8 percent	71.4 percent
30	Ever test for HIV	25.1 percent	70.8 percent
31	Knew the result	71.8 percent	20.0 percent
32	Awareness of STIs	71.5 percent	33.2 percent
33	Self-reported STIs in past 6 months	4.6 percent	13.8 percent
34	Received treatment for STIs	84.3 percent	59.0 percent
Service Delivery Program Exposure and utilization			
35	Ever heard of HIV prevention program	44 percent	86.1 percent
36	No. of times SDPs services were availed; <ul style="list-style-type: none"> More than once in a week Once in a week After two weeks 	<ul style="list-style-type: none"> 74.6 percent 	<ul style="list-style-type: none"> 74.5 percent

	<ul style="list-style-type: none"> Once in a month Less than once in a month Never 	<ul style="list-style-type: none"> 11.7 percent 5.5 percent 2.7 percent 4.4 percent 1.1 percent 	<ul style="list-style-type: none"> 16.2 percent 5.40 percent 3.30 percent 0.50 percent 0.1 percent
37	Received syringes in past one month	45.1 percent	87.3 percent
HIV prevalence			
38	Overall HIV prevalence	40.7*	<ul style="list-style-type: none"> 35.6 percent** 34.5 percent

*, *** HIV Prevalence, among cities, which were included in successive IBBS Rounds (2011 & 2014)

Table 17. Comparison of Indicators, IBBS 2011 & 2014 for IDUs – Punjab IBBS; 2014



Graph 17 HIV Prevalence, among IDUs by cities (IBBS 2011 & Punjab IBBS 2014)

Key Findings (FSWs)

Female Sex Workers

4.0 FEMALE SEX WORKERS (FSWs)

4.1 Geographical Distribution and Estimates

Female sex workers are broadly defined as “females who receive money or financial benefits in exchange for sexual services, either regularly or occasionally”. Despite strong social, cultural, religious and legal sanctions, sex work continues throughout the province. There is a thriving sex industry and they are the largest most at risk population for acquiring HIV and other STIs in the country.

A dual approach of mapping including, geographical and network mapping was used to estimate the size of FSWs as well as to gather information on the operational networks within which FSWs function. The survey estimated 44,160 FSWs in four cities mapped – Minimum= 34,444, Maximum= 53,875). The highest number of FSWs were found in Lahore (58.23 percent, N=3,798) followed by Faisalabad (17.11 percent, N=7,556). Approximately 7,038 NWOs were identified in four cities, with the largest number in Lahore (3,798) – Table 18

City	No. of Spots	FSW Min.	FSW Max.	FSW Aver	No. NWOs	% FSWs
Lahore	2,699	21,685	29,746	25,716	3,798	58.23%
Faisalabad	1,021	5,500	9,612	7,556	636	17.11%
Multan	731	4,272	8,850	6,561	916	14.86%
Sargodha	284	2,987	5,667	4,327	1,688	9.80%
TOTAL	4,735	34,444	53,875	44,160	7,038	100%

Table 18. Estimated FSWs & Network Operators – Punjab Mapping Study, 2014

4.2 Typologies of FSWs, across Cities

Following operational typologies of FSWs were observed during the study:

4.2.1 Home-based FSWs (HBSWs)

Home-based FSWs live in their homes with families, and rely mostly on network operators/pimps for soliciting clients, as well as for the place where sexual activity takes place.

4.2.2 Kothikhana based FSWs (KKSWS)

“kothikhana” is a colloquial expression for a sex work venue that literally means “grand house”. However, kothikhana are generally small premises, which are rented by a madam and/or network operators in a residential area, and where a small number of FSWs live and entertain clients.

4.2.3 Brothel based sex work (BBSW)

Being the oldest variant of female sex work in Punjab, originating from a time when the sex work was mainly housed in brothels located in designated red light areas and the industry provided sexual services to clients under cover of singing and dancing. A legal ban on brothels in 80s displaced sex workers and their families and the sex then spread out into residential areas across the province, thus lowering the numbers of this typology substantially.

4.2.4 Street based sex workers (SBSW)

'Street based sex workers' (SBSW) tend to work alone and from nonspecific locations, soliciting clients from various 'pick up points', for example streets market places, and bus stops.

4.2.5 Cell phone based FSWs (CPBSW)

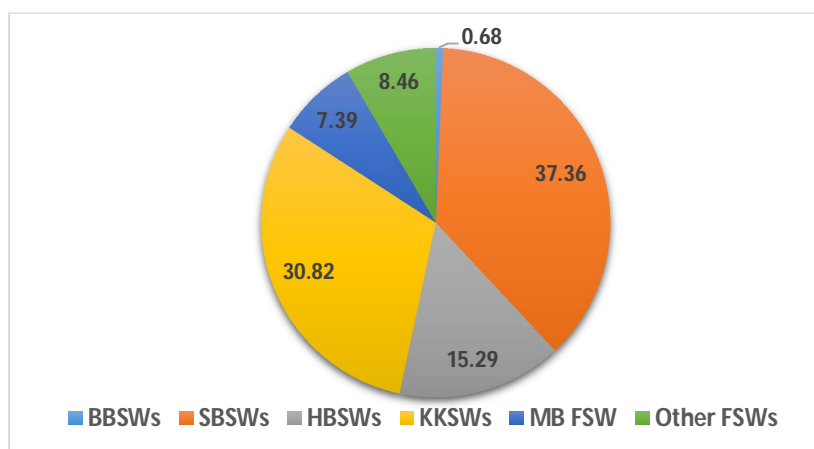
'Cell phone based FSWs', use cell phones as the major way of acquiring clients were also identified by this mapping.

4.2.6 Other forms of sex workers

The study also highlighted a few 'other forms of sex workers' including hotel based FSWs, massage parlor based FSWs and beggars.

4.3 FSWs Functional Typologies among the Cities Mapped

Wide variation in typology of FSWs among the cities mapped. Street based FSWs (37.4 percent, N=16,499) were found to be in highest proportion, followed by the Kothikhana based FSWs (30.8 percent, 13,608) – Graph 18.



Graph 18. FSWs Operational Typologies among Cities Mapped – Punjab Mapping Study, 2014

Following table describes a wide variation in various typologies of FSWs across the cities mapped. Street based, home based and KK based FSWs were reported to be a regular feature of female sex work in Punjab across all cities, while brothel based FSWs were only reported in two out of four cities mapped – Table 19.

City	BBSWs	SBSWs	HBSWs	KKSWS	MB FSW	Other FSWs	Total
Faisalabad	-	3,147	1,365	1,172	352	1,520	7,556
Lahore	187	11,315	1,945	7,320	2,758	2,191	25,716
Multan	53	1,261	2,703	2,418	126	-	6,561
Sargodha	60	776	741	2,698	26	26	4,327
TOTAL	300	16,499	6,754	13,608	3,262	3,737	44,160

Table 19. Estimated numbers of FSWs in 4 cities of Punjab by typology – Punjab Mapping Study, 2014

4.4 Integrated Behavioural & Biological Surveillance (IBBS)

In the four cities of Punjab 1,540 FSWs participated in IBBS. The citywide, representation was as follows:

City	Study Respondents
Lahore	392
Faisalabad	382
Multan	383
Sargodha	383
TOTAL	1,540

Table 20. Number of Study Respondent by City – Punjab IBBS; 2014

4.5 Socio-Demographic Characteristics

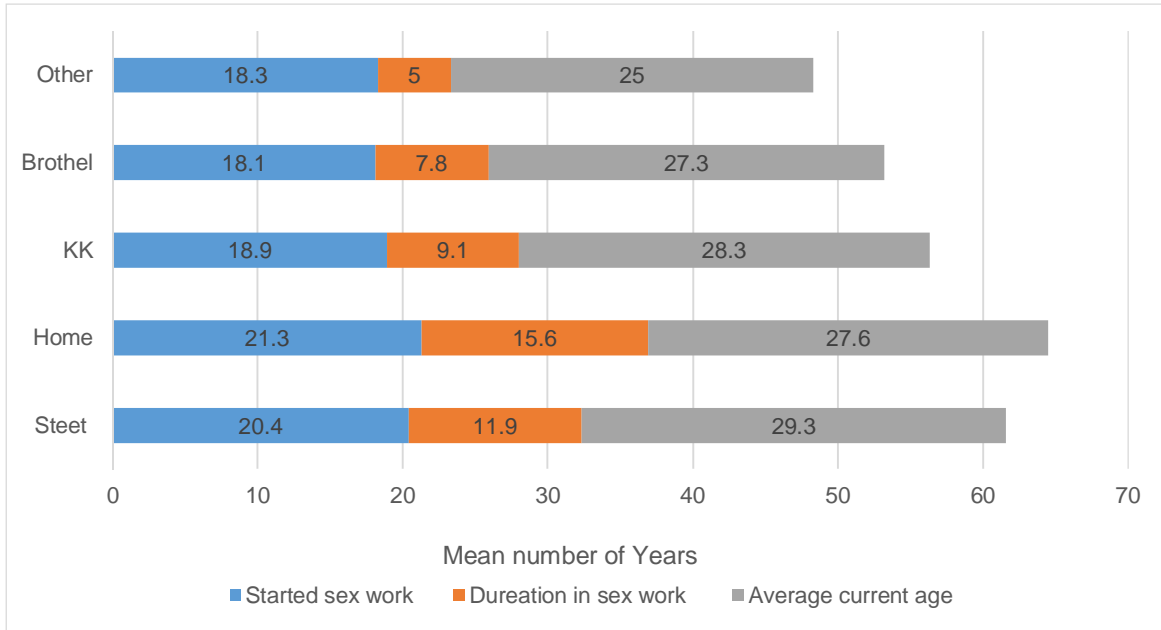
Of all 1,540 FSWs interviewed, the average age of FSWs was 27.95 \pm SD5.384 (Median: 28.00) years, with little variation between different types of FSWs. Overall, 22.4 percent (N=345) of FSWs were aged 13-19 years, with the highest proportion of FSWs who were in age group of 25-29 years (35.9 percent (N=553) – Table 21. Overall, study participants have been working as a sex worker for an average of 9.14 years (median 4.00; \pm SD18.168), starting sex work while 18.91 years (Median 18.00; \pm SD8.709) old – Table 21.

Characteristics	FSWs Percentage
Age	
<ul style="list-style-type: none"> • 13 – 19 Years 	4.9 percent (N=76)
<ul style="list-style-type: none"> • 20 – 24 Years 	22.4 percent (N=345)
<ul style="list-style-type: none"> • 25 – 29 Years 	35.9 percent (N=553)
<ul style="list-style-type: none"> • 30 – 34 Years 	23.5 percent (N=362)
<ul style="list-style-type: none"> • 35 + Years 	13.2 percent (N=204)
<ul style="list-style-type: none"> • Average Age \pmSD (median) years 	27.95 \pm SD5.384 (Median: 28.00)
Marital Status	
<ul style="list-style-type: none"> • Unmarried 	36.5 percent (N=562)
<ul style="list-style-type: none"> • Currently married 	41.0 percent (N=632)
<ul style="list-style-type: none"> • Separated 	8.0 percent (N=123)
<ul style="list-style-type: none"> • Divorced 	9.7 percent (N=150)
<ul style="list-style-type: none"> • Widowed 	4.6 percent (N=71)
Number of children	
<ul style="list-style-type: none"> • None 	19.3 percent (N=188)
<ul style="list-style-type: none"> • 1 – 2 children 	50.3 percent (N=490)
<ul style="list-style-type: none"> • 2 – 4 children 	24.9 percent (N=242)
<ul style="list-style-type: none"> • 5 and above 	3.0 percent (N=29)
Year of Formal Education	
<ul style="list-style-type: none"> • Illiterate 	28.1 percent (N=432)
<ul style="list-style-type: none"> • Primary 	30.3 percent (N=466)
<ul style="list-style-type: none"> • Middle 	23.9 percent (N=368)
<ul style="list-style-type: none"> • Matric 	
<ul style="list-style-type: none"> • Intermediate 	23.9 percent (N=368)
<ul style="list-style-type: none"> • Graduate 	
<ul style="list-style-type: none"> • Quranic Education 	12.9 percent (N=199)

	4.2 percent (N=65)
	0.2 percent (N=3)
	0.0 percent (N=0)
Living Arrangement	
• Lives at Home	65.0 percent (N=1001)
• Lives at Kothi Khana	30.2 percent (N=465)
• Lives Hostel/Guest House	1.6 percent (N=24)
• Other	0.4 percent (N=6)
Living with	
• Friends	25.4 percent (N=391)
• Family	59.5 percent (N=917)
• Lives alone	4.4 percent (N=68)
• Sexual Partner	5.5 percent (N=84)
Income (PKR) (Mean / Median / SD)	
• Mean Monthly Income (From all resources)	PKR: 28,410.96 / 26,000 \pm SD16547.421
• Mean Monthly Income from Sex work	PKR: 25,528.89 / 24,000 \pm SD14983.013

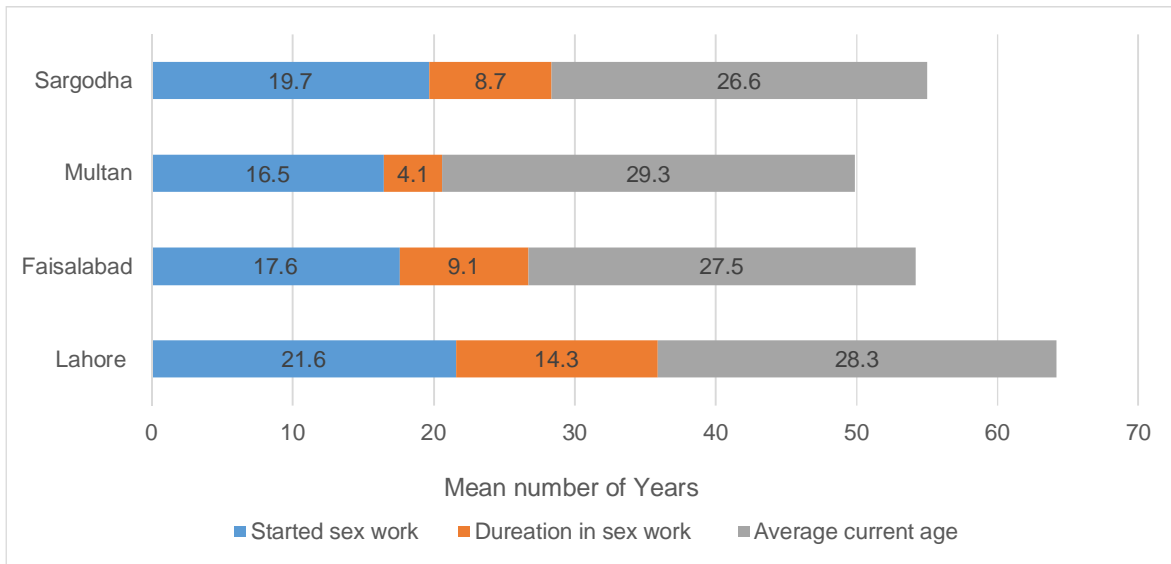
Table 21. Socio-demographic characteristics of FSWs – Punjab IBBS, 2014

FSWs who worked in brothels initiated sex work at a younger age (mean 18.1 years; \pm SD8.689), while home based FSWs were younger and worked for longer period (mean 15.6 years; \pm SD20.239) than other types of sex workers – Graph 19.



Graph 19. Average age of sex work initiation, duration sex work, and average current age by typology – Punjab IBBS, 2014

FSWs in Multan started sex work at a younger age (Mean = 16.5 years; +SD2.029), while FSWs at Lahore recorded worked for longer duration (Mean = 14.3 years; +SD25.808) – Graph 20.



Graph 20. Average age of sex work initiation, duration sex work, and average current age by cities – Punjab IBBS, 2014

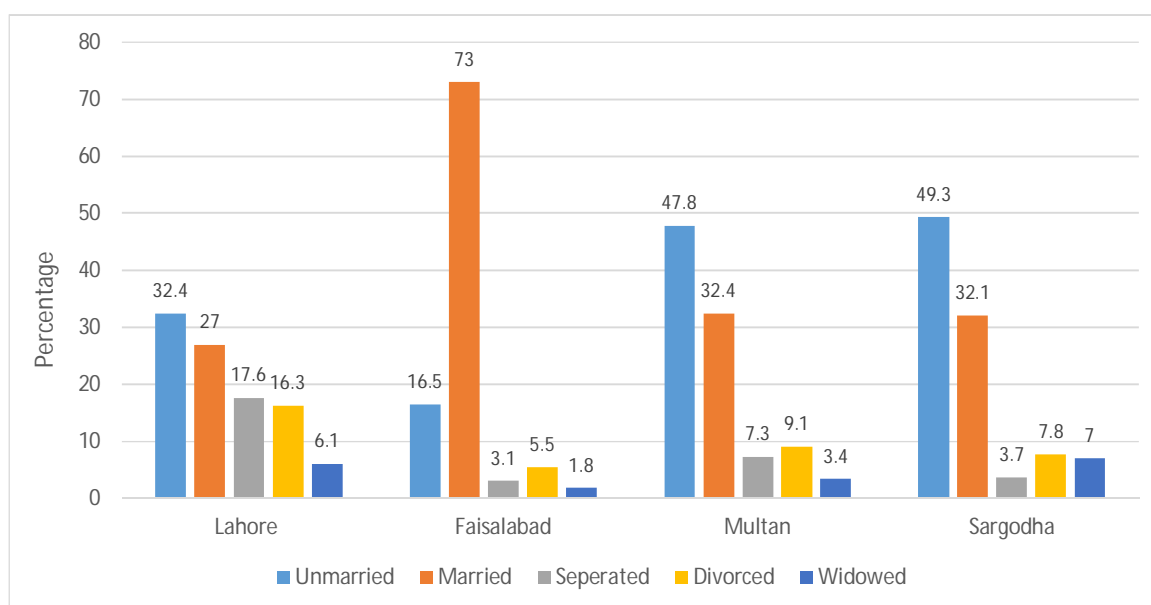
Characteristics	FSWs Percentage					
	All FSWs	Street	Brothel	Home	Kothi khana	Other FSWs
Age						

• 13 – 19 Years	4.9	2.4	6.5	3.0	3.2	6.20
• 20 – 24 Years						
• 25 – 29 Years	22.4	15.8	23.3	30.3	23.5	22.4
• 30 – 34 Years						
• 35 + Years	35.9	31.2	39.1	31.8	32.5	45.0
• Average Age \pm SD (median)	23.5	32.4	19.1	24.2	27.5	14.1
	13.2	18.2	12.0	10.6	13.3	12.0
	27.9	29.3	27.3	27.6	28.3	25.0
Marital Status						
• Unmarried	36.5	19.0	40.5	51.5	36.5	35.0
• Currently married						
• Separated	41.0	54.2	40.1	22.7	37.6	49.5
• Divorced						
• Widowed	8.0	10.3	5.9	4.5	11.7	8.0
	9.7	11.9	9.1	12.1	9.3	6.2
	4.6	4.3	4.4	9.1	4.5	1.0
Number of Children						
• None	19.3	22.9	14.5	37.5	23.9	0.8
• 1 – 2 children						
• 2 – 4 children	50.3	49.7	52.2	40.6	48.3	60.0
• 5 and above						
	24.9	23.4	27.5	12.6	22.3	36.0
	3.0	1.0	3.6	9.4	2.5	0.5
Year of Formal Education						
• Illiterate	28.1	28.6	30.1	24.2	27.7	29.8
• Primary						
• Middle	30.3	30.0	31.0	30.3	28.8	32.0
• Matric						
• Intermediate	23.9	22.6	18.6	28.8	22.9	26.6
• Graduate						
• Quranic Education	12.9	13.0	12.7	9.1	14.4	12.6
	4.2	5.9	2.8	7.6	5.6	0.0
	0.2	0.8	0.1	0.0	0.0	0.0
	0.0	0.0	0.0	0.0	0.0	0.0
Living Arrangement						
• Lives at Home	65.0	33.6	67.5	74.5	64.4	65.0
• Lives with relatives/families						
• Lives with friends	59.5	62.7	55.6	48.8	54.5	74.4
• Lives alone						
• Lives with sexual partners	25.4	3.3	89.5	1.8	5.40	25.6
	4.4	2.5	3.7	7.4	2.9	5.6
	5.5	5.1	4.4	9.5	3.1	5.4

Monthly Income						
• Average Monthly Total Income	28,410	22,421	31,433	27,872	25,738	30,000
• Average Monthly Income from Sex Work	25,528	18,623	29,377	23,222	29,946	20,000

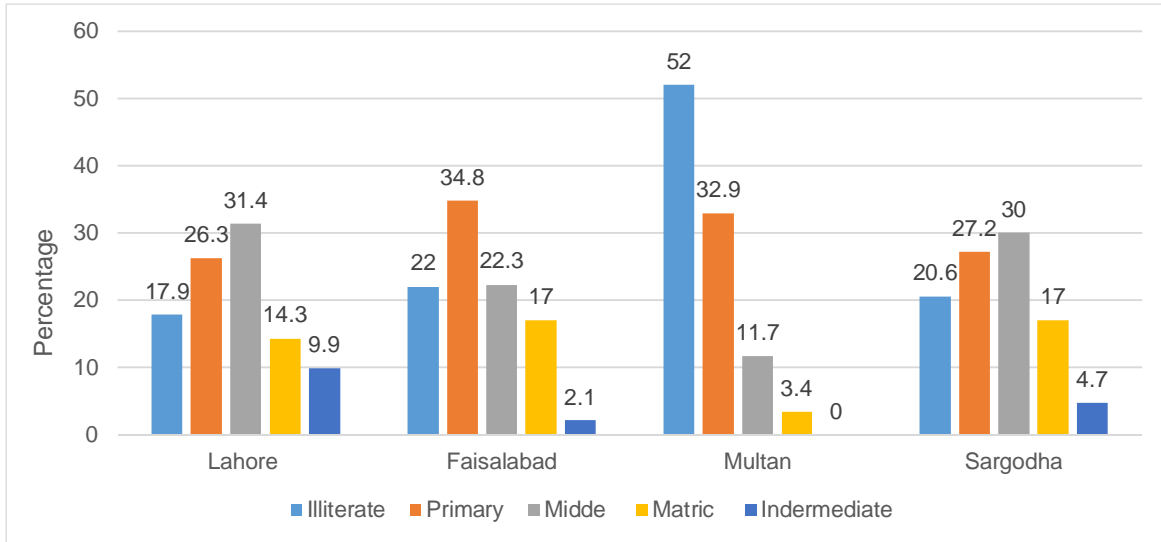
Table 22. Socio-demographic characteristics of FSWs by Typologies – Punjab IBBS, 2014

The majority of FSWs (41.0 percent; N=632) were married, while 36.5 percent (N=562) were unmarried. Among unmarried FSWs, the majority (51.5 percent; N=34) were home based FSWs - Table 22. There was substantial variation in the family situation of FSWs between the cities surveyed. The largest percent of unmarried FSWs resided in Sargodha (49.3 percent; N=189) followed by Multan (47.8 percent; N=183); Faisalabad had the lowest proportion of unmarried FSWs (16.5 percent; N=63). Similarly Faisalabad recorded highest number of married FSWs (73 percent; N=279), while lowest number of married FSWs were recorded at Lahore (27 percent; N= 106) – Graph 21. The majority (78.2 percent; N=761) of FSWs had children, with over fifty percent (50.3 percent; N=490) reporting at least five children – Table 21 & 22.



Graph 21. Marital status of FSWs by Cities – Punjab IBBS, 2014

Majority of FSWs (67.1 percent; N=1,033) were found to have attained up to ten years of schooling. Illiteracy alone was recorded more common among FSWs in brothels (30.1 percent; N=254) – Table 21 & 22. Less than five percent of FSWs had more than ten years of education. Illiteracy levels varied substantially by city, with the high illiteracy among FSWs in Multan (52 percent; N=199), and the lowest among FSWs in Lahore (17.9 percent; N=70) – Graph 22.

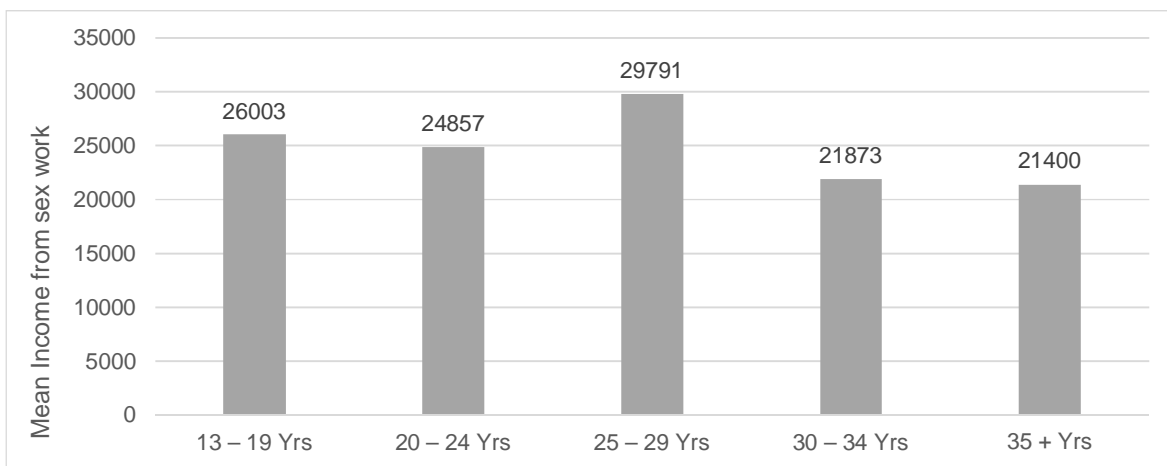


Graph 22. Illiteracy/literacy among FSWs by cities – Punjab IBBS, 2014

The majority of FSWs of all types and in all cities lived at home (65.0 percent; N=1,001) and/or with other family members (59.5 percent; N=917) – Table 21 & 22

Only 28.2 percent (N=434) of all FSWs had a source of income other than sex work, with kothikhana-based FSWs most likely to have other sources of income (43.5 percent; N=163) and brothel-based FSWs being the least likely to have other sources of income (18.2; N=154), - Table 21 & 22.

The monthly median income reported among all FSWs was PKR: 28,410.96 / 26,000 +SD16547.421. When limited to sex work alone, the reported monthly median income was PKR: 25,528.89 / 24,000 ±SD14983.013. The highest median income was reported among brothel based FSW (PKR. 31,433; ±SD18596) followed by others, home-based, kothikhana-based FSWs and street based FSWs – Table 21 & 22. Income from sex work was recorded highest with FSWs between 25 to 29 years with an average monthly income of PKR 29,791 (±SD18797) - Graph 23.



Graph 23. Average monthly income related to Sex Work, by age groups – Punjab IBBS, 2014

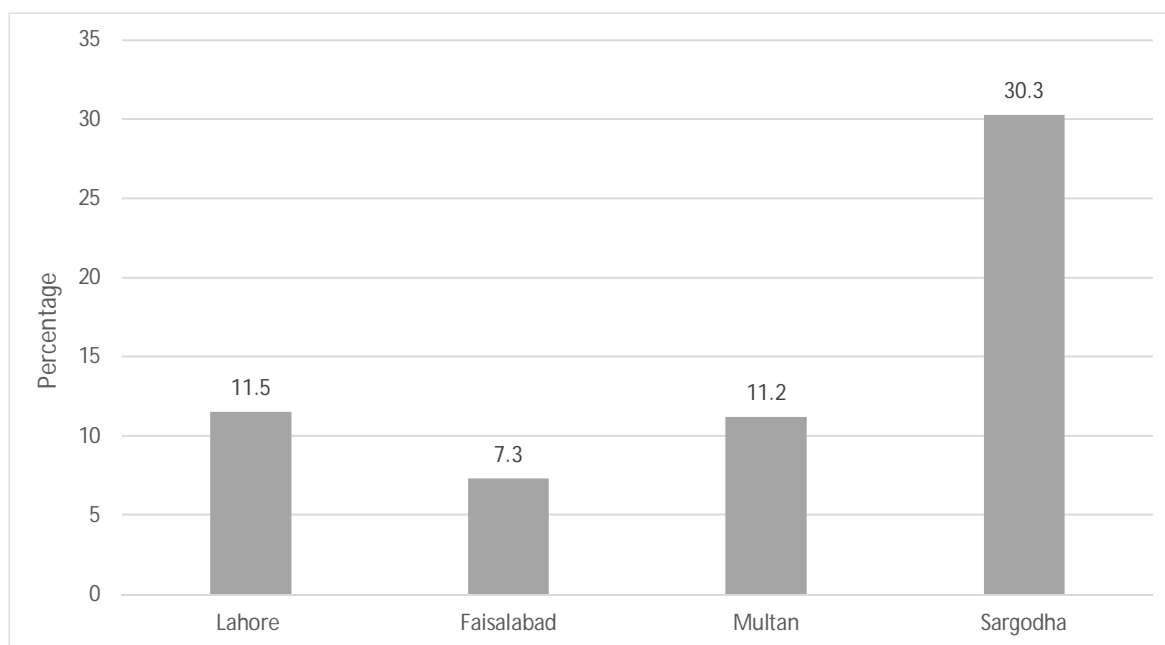
Approximately 10.9 percent ((N=168) of FSWs had been arrested in the past 6 months, another 1.8 percent (N=27) had sold their blood for money in the same time period. Kothi Khana based FSW experienced the highest arrest (12.8 percent; N=48) and sold blood for money (1.9 percent; N=7) than any other FSWs typology.

4.6 Migration and Mobility

Approximately 15.1 percent (N=232) of FSWs interviewed did not belong to the city of interview – Table 23. About 30.3 percent (N=113) of FSWs interviewed in Sargodha, did not belong to the city in contrast to 7.3 percent (N=28) of FSWs in Faisalabad – Graph 24. Of these individuals, approximately 36.3 percent (N=68) planned to permanently live in their new city with the highest proportion of these being among street-based FSWs (60.7; N=17). Majority of respondents (63.4 percent; N=118) reported visiting for an extended period of time. Approximately 61.3 percent (N=147) of the FSWs reported to have moved to the city specifically for sex work (Table 23) and of these the vast majority (90.9 percent; N=10) were home-based – Table 23.

Variable	FSWs Percentage					
	All FSWs	Street	Brothel	Home	Kothi Khana	other
Migratory Pattern (In Migration) / Domestic						
Migration from other Cities/Towns	15.1	7.1	63.4	2.9	1.2	1.0
• Permanently Staying	36.6	60.7	28.1	18.2	51.5	24.5
• Visiting	63.4	39.3	71.9	81.8	48.5	75.5
Migrated especially for sex work	61.3	16.7	74.8	90.9	50.0	74.0
Mobility Pattern (Out Migration)						
• Travelled to other City in the past 12 months	24.1	12.3	30.3	25.8	17.9	34.0
Most Common Cities Travelled in past 12 months						
• Lahore	22.6	22.6	21.9	11.8	28.4	28.5
• Rawalpindi						
• Karachi	12.2	6.4	17.6	12.1	12.5	12.2
• Multan						
• Faisalabad	8.1	6.5	8.6	11.8	6.0	7.5
	4.6	4.0	6.3	6.0	1.5	5.0
	4.3	7.2	2.0	11.3	1.0	0.0
International Travel						
• Ever Travelled Abroad	4.2	2.4	5.8	7.6	1.3	3.8
• Involved in Sex Work	87.9	91.4	91.8	80.0	85.0	91.0

Table 23. Migratory Pattern for FSWs – Punjab IBBS, 2014



Graph 24. Proportion of migrants by cities – Punjab IBBS, 2014

Overall, 24.1 percent (N=371) of FSWs reported having travelled to other cities in the past one year with Lahore followed by, Rawalpindi, and Karachi being most commonly cited as in-migration cities – Table 23.

Approximately 4.2 percent (N=62) of all FSWs reported travelling abroad with the highest proportion of travel abroad, while out of those travelled abroad 87.9 percent (N=58), were involved in the sex work – Table 23.

4.7 Risk Behaviours and Practices

4.7.1 Sexual Partners

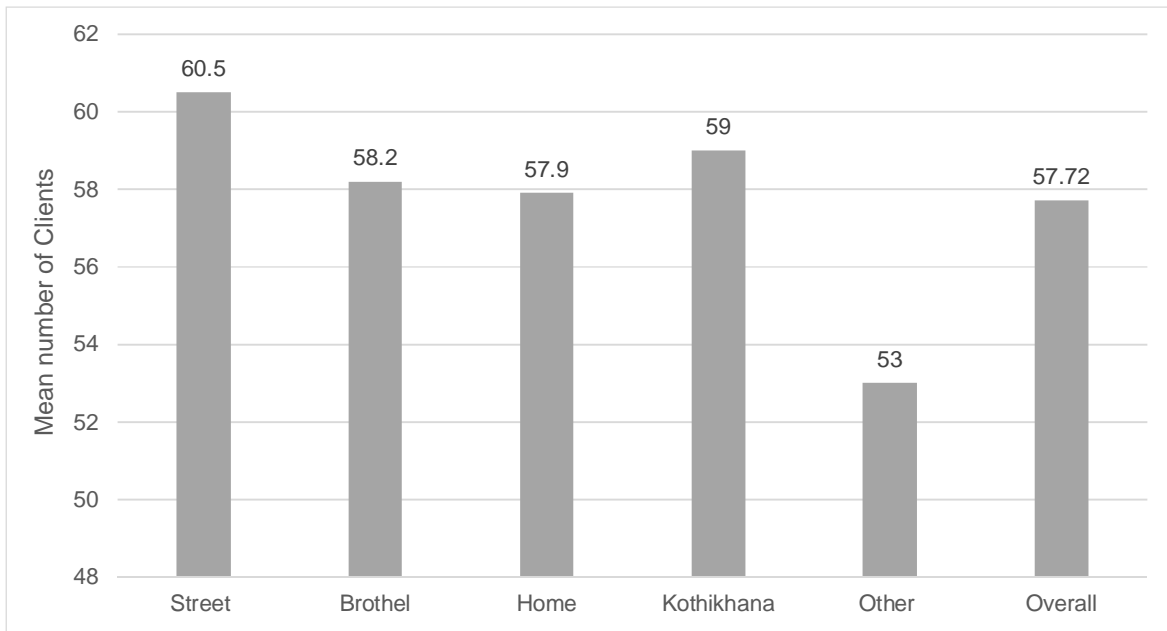
Most FSWs (48.4 percent; N=742) still relied on a “madam” as their main source of clients. Personal telephone contact (19.1 percent; N=294), informal contacts (“roaming around”) (17.3 percent; N=266), and referrals from other clients (12.6 percent; N=194) were also important client sources for all types of FSWs – Table 24.

Behaviour / Practice	FSWs Percentage					
	All FSWs	Street	Brothel	Home	Kothi Khana	Other
<ul style="list-style-type: none"> • Madam • Personal telephone • Roaming around • Clients referrals 	48.4	6.9	79.6	63.6	45.8	45.9
	19.1	41.2	2.5	21.2	29.9	0.5

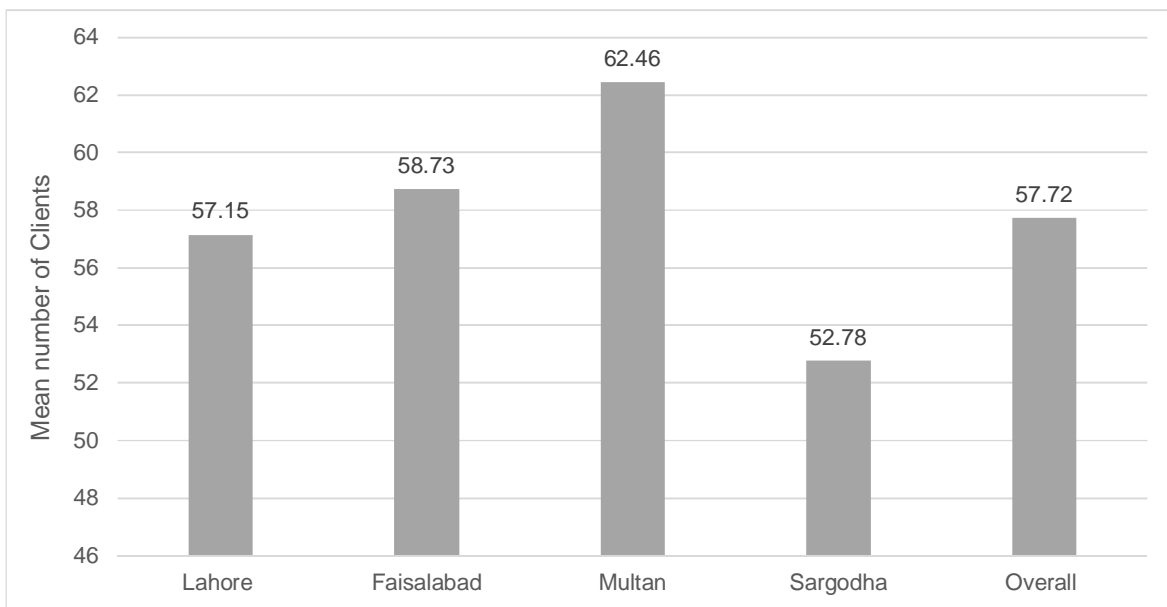
• Others	17.3	55.9	4.3	4.5	7.3	14.5
	12.6	42.5	8.3	6.1	5.1	1.2
	0.8	2.1	0.5	1.0	0.3	0.1
Number of Clients						
Mean Client per day (\pm SD)	2.86 \pm SD0.7	2.65 \pm SD0.1	3.02 \pm SD0.8	2.62 \pm SD0.5	2.71 \pm SD0.6	3.0 \pm SD0.1
Mean Client per month (\pm SD)	57.72 \pm SD26	60.5 \pm SD22	58.2 \pm SD27	57.9 \pm SD28	59.0 \pm SD22	53.0 \pm SD1.1
Non Paid Partners						
At least one non paid partner last month	63.8	56.1	69.58	63.9	60.8	68.3
Consistent Condom Use						
• Paid Clients	35.6	25.3	28.4	40.9	48.6	34.8
• Non Paid Partner	15.1	9.50	17.4	18.2	15.3	14.9
Condom use at last intercourse						
• Vaginal	70.1	66.2	71.7	68.4	74.4	69.8
• Anal	19.1	15.2	26.2	16.0	23.0	15.0
• Oral	16.5	12.3	25.1	14.3	14.6	15.8
Alcohol / Drug used during sex in past 6 months	29.7	20.9	29.8	31.8	35.2	30.8
Injected drugs in past the past six months	2.1	3.2	1.7	4.5	1.9	0.1
Had sex with IDUs in past six months	2.5	2.0	2.0	3.0	3.7	1.6
Physically forced to have sex in last months	12.0	9.9	10.2	21.2	16.0	2.8
Arrested in past six months	10.9	5.6	12	12.1	12.8	10.9
Sold blood for money in past six months	1.8	2	1.7	1.5	1.9	1.8

Table 24. Sexual behaviours and practices of FSWs – Punjab IBBS, 2014

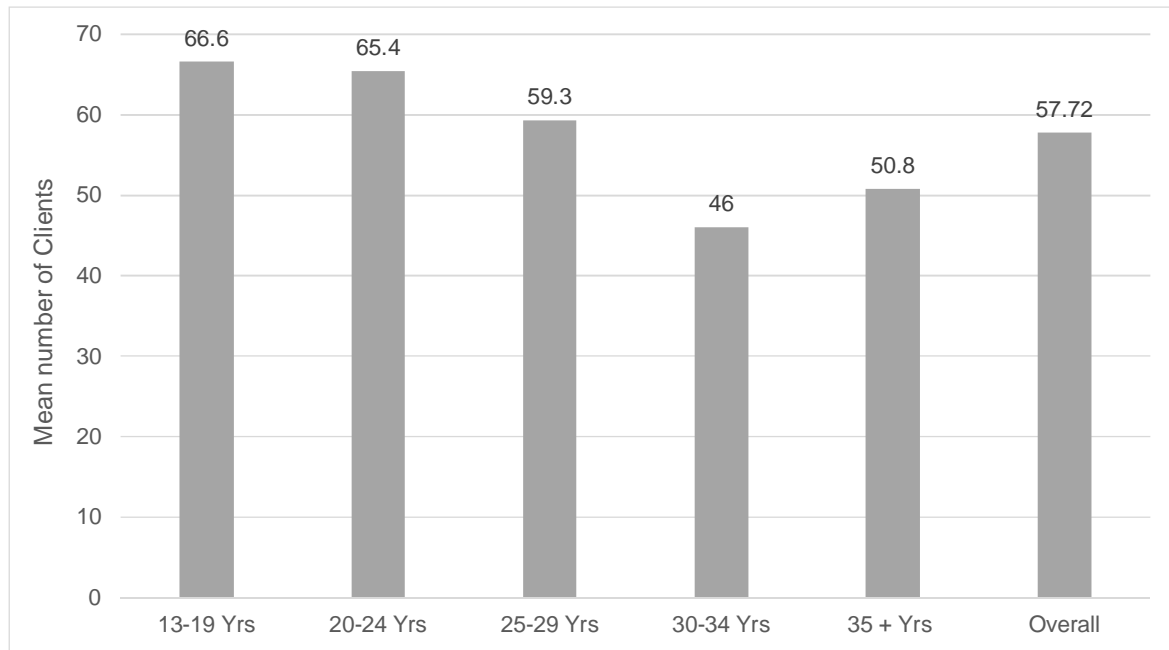
Overall, FSWs report that on days that they work they have an average of 2.86 clients a day (\pm SD0.7). Per month, an average of 57.7 (\pm SD26) clients were reported – Graph 25. There was not much variation by typology. Comparing these data to the daily client volumes, it is evident that regardless of venue, the number of clients seen on a daily basis does not significantly vary across typologies – Table 23. Monthly client volume varies between different cities, with highest average number of clients recorded at Multan (62.46; \pm SD29.48) – Graph 26. Client volume also varies by age, with younger FSWs having the highest client volume – Graph 27.



Graph 25. Mean number of paying clients in past one month for FSWs by Typology – Punjab IBBS, 2014



Graph 26. Mean number of paying clients in past one month for FSWs by Cities – Punjab IBBS, 2014



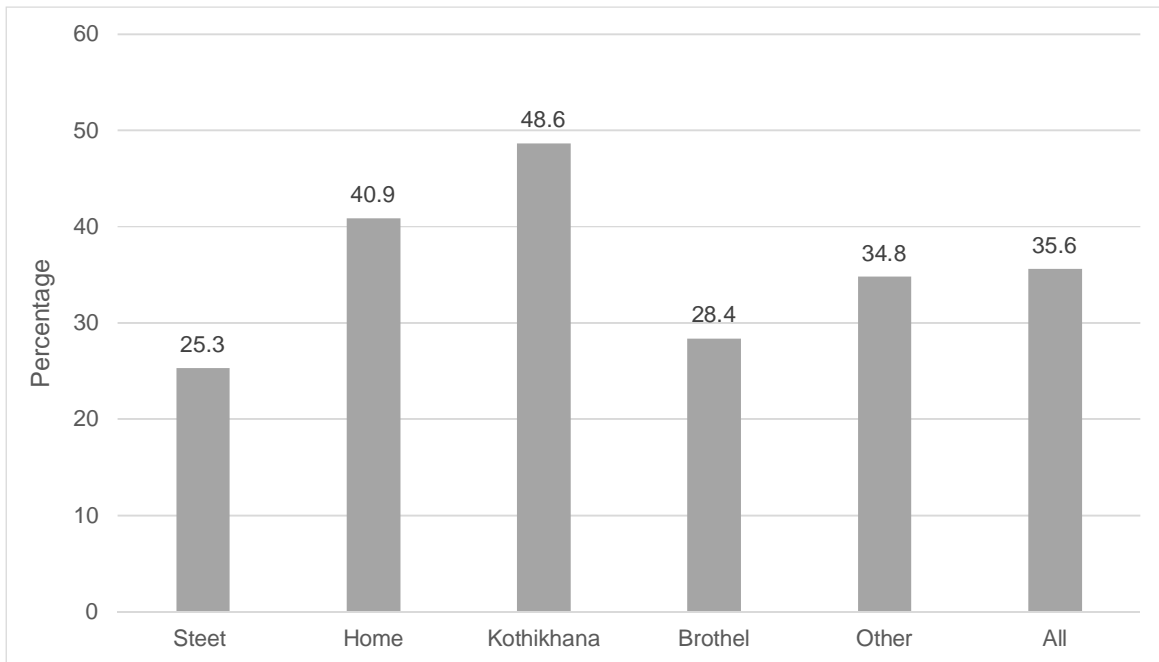
Graph 27. Mean number of paying clients in past one month for FSWs by Age Groups – Punjab IBBS, 2014

4.7.2 Condom Use

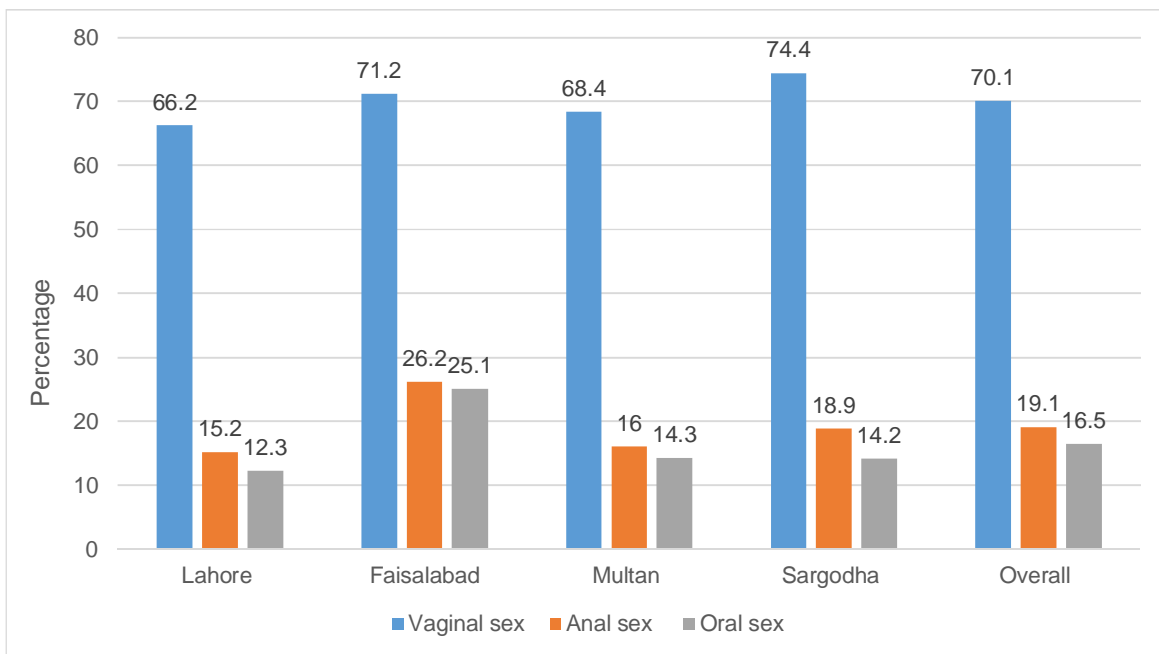
35.6 percent (N=548) of FSWs reported that they always used a condom with their clients in the last month, while another 15.1 percent (N=233) reported consistent condom use with non-paid partners – Table 24. Kothikhana-based FSWs reported substantially more condom use than the other types of sex workers, with 48.6 percent (N=27) of them reporting consistent condom use – Graph 28; with the paid clients and 18.2 percent (N=12) of Home-based FSWs reported regular condom use with non-paid sex partners in the past month – Table 24.

Overall, 34.2 percent (N=526) of FSWs reported having engaged in anal sex in the last one month, yet corresponding proportions for vaginal sex and oral sex were 95.1 percent (N=1,464) and 32.7 percent (N=504), respectively.

A substantial number (70.1 percent; N=848) of FSW reported using a condom during their last vaginal intercourse – Table 24 & Graph 28. The highest proportion of FSWs reporting consistent condom use during the last intercourse was among Kothikhana-based FSWs (74.4 percent; N=147), followed by Brothel-based (71.7 percent; N=140) and Home-based (68.4 percent; N=105) FSWs – Table 24. Brothel-based FSWs recorded highest (26.2 percent; N=117) condom use during last anal sex, followed by Kothikhana-based FSWs (23.0 percent; N=97) – Table 24. Overall, condom use during anal sex was higher than that reported during oral sex – Graph 29.

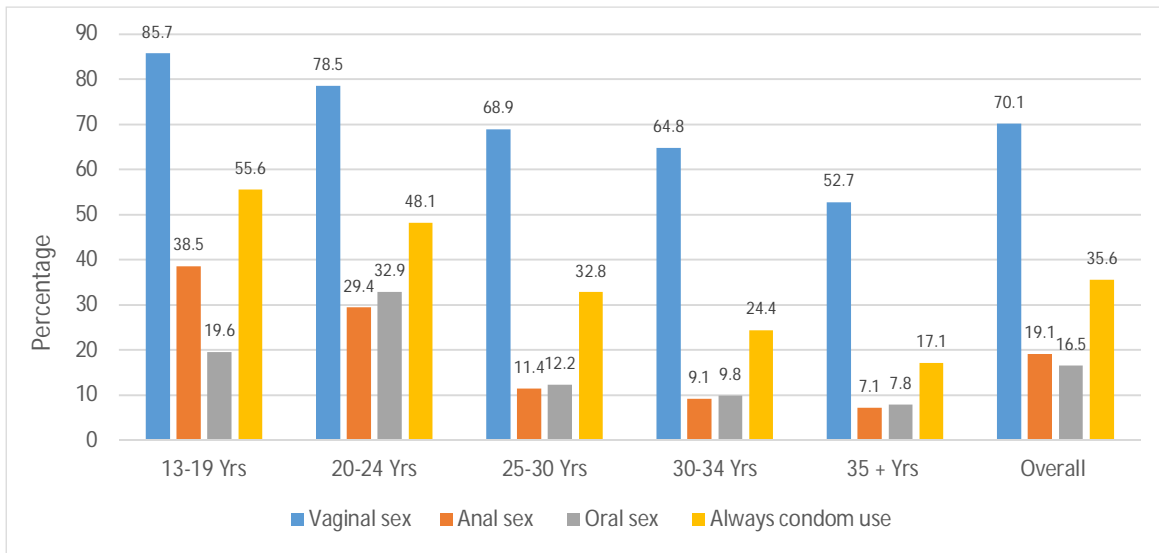


Graph 28. Consistent condom use, with paid clients, among FSWs by Typology – Punjab IBBS, 2014



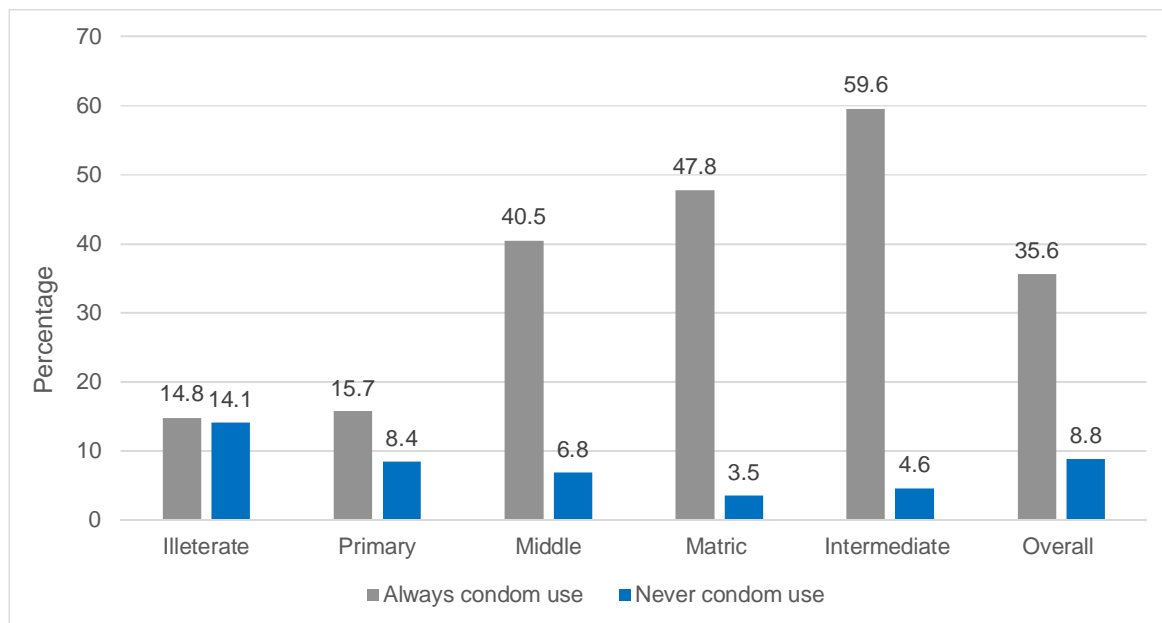
Graph 29. Consistent condom use by FSWs at last sexual intercourse – Punjab IBBS, 2014

Overall, condom use seemed to decline with age. The exception however was in the context of oral sex where a higher proportion of younger FSWs (age 20-24 years) reported using a condom when compared to other age groups – Graph 30.



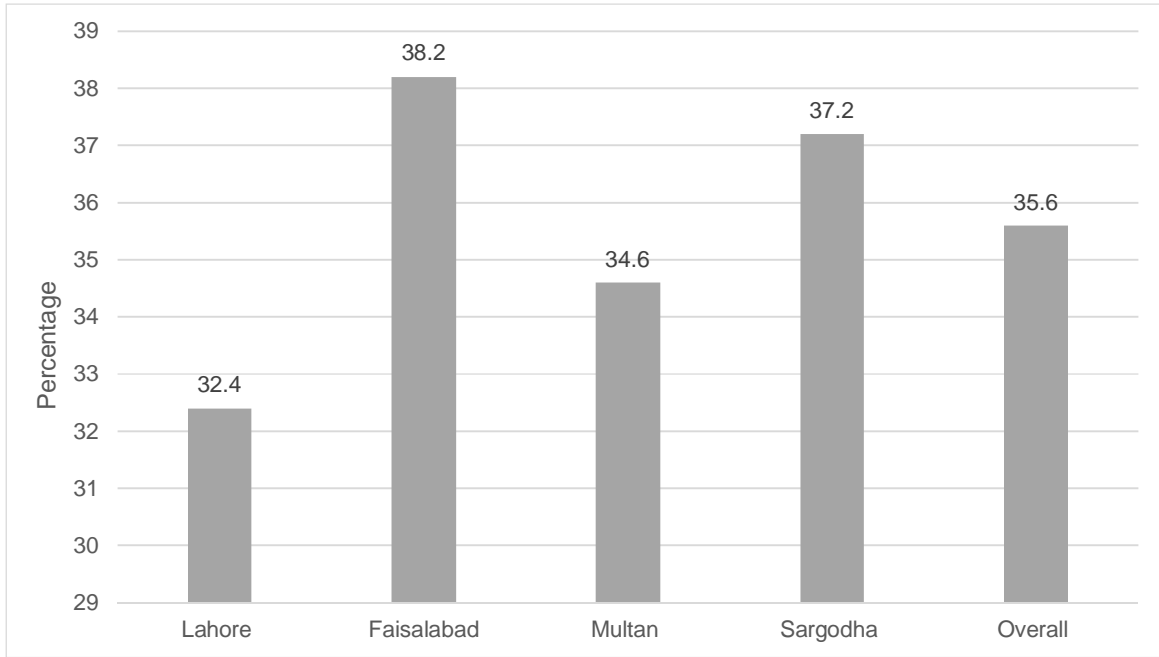
Graph 30. Condom use by FSWs at last paid sexual intercourse by age groups – Punjab IBBS, 2014

The relationship between education and consistent condom use was significant; the longer the number of years in school, the more consistent the condom use – Graph 31.



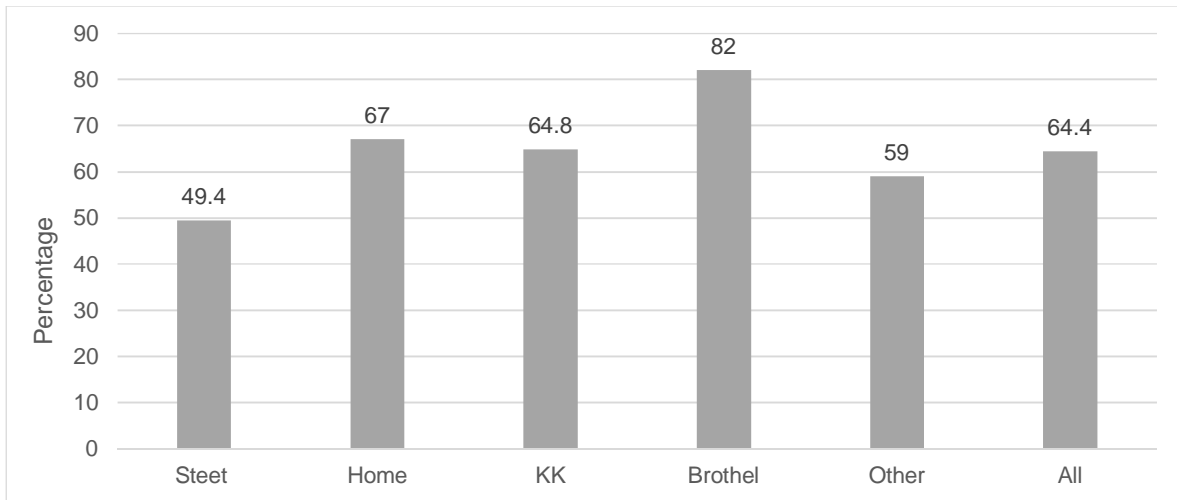
Graph 31. Consistent condom use by FSWs with paid clients, in past one month, by education status – Punjab IBBS, 2014

There was significant geographic variation in the consistency of condom use. Condom use varies by city. Reported condom use was highest among FSWs residing in Faisalabad (38.7 percent; N=224) while, the lowest rates of consistent condom use were reported among FSWs in Lahore (32.4 percent; N=114) – Graph 32.



Graph 32. Consistent condom use by FSWs with paid clients by cities – Punjab IBBS, 2014

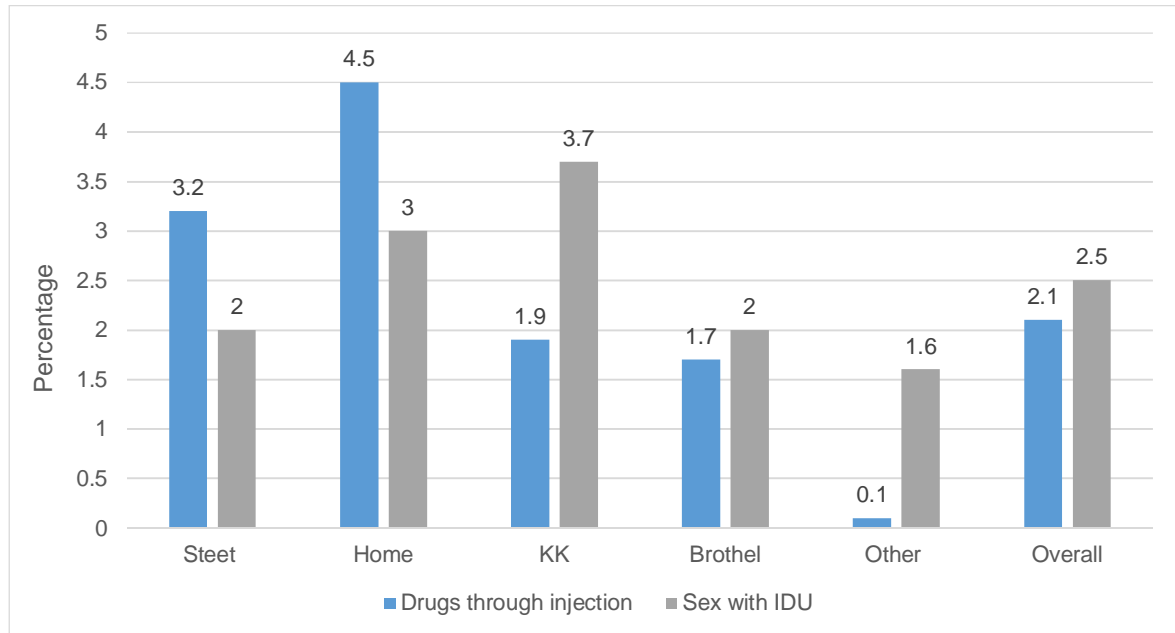
A significant percentage of FSWs were carrying a condom at the time of the survey interview. Consistent with self-reported condom use, brothel-based FSWs were much more likely to be carrying a condom (82 percent; N=608) than other types of FSWs – Graph 33.



Graph 33. Proportion of FSWs who were reported carrying a condom, at the time of interview by Typology – Punjab IBBS, 2014

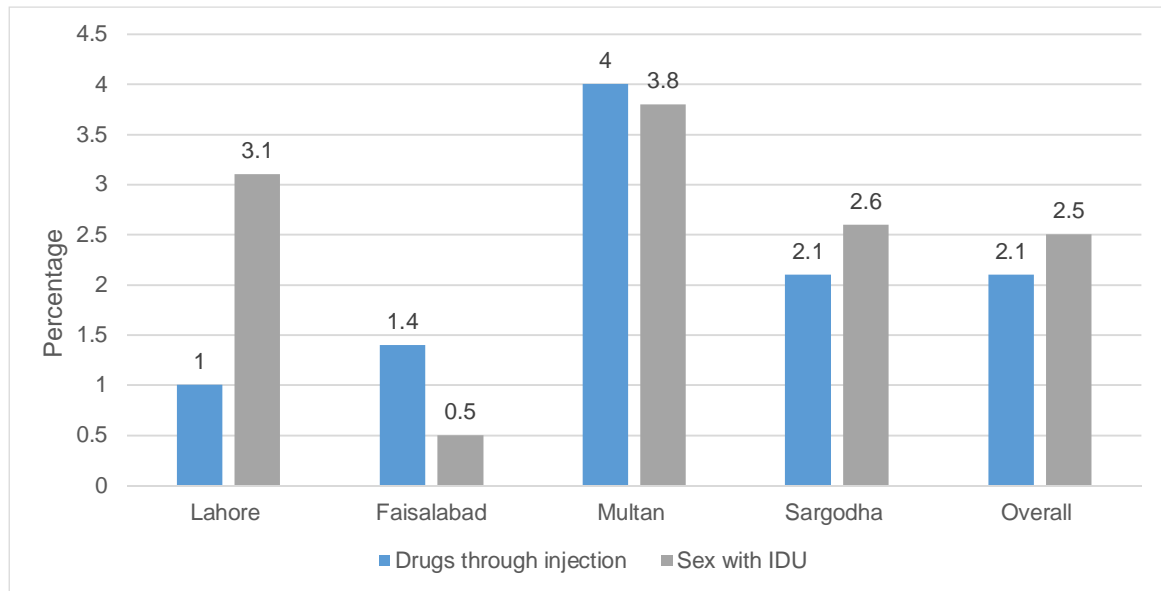
4.8 Injection use among FSWs

Overall 2.1 percent (N=32) of FSWs reported injecting drugs in the past six months and 2.5 percent (N=38) reported having sex with an IDU in the same time period – Table 24. Both injecting drugs and having sex with an IDU were highest among home-based FSWs (4.5 percent and 3 percent respectively), followed by street-based FSWs (3.2 percent and 2 percent, respectively) – Graph 34.



Graph 34. Proportion of FSWs, injecting drugs and having sex with IDUs, by Typology – Punjab IBBS, 2014

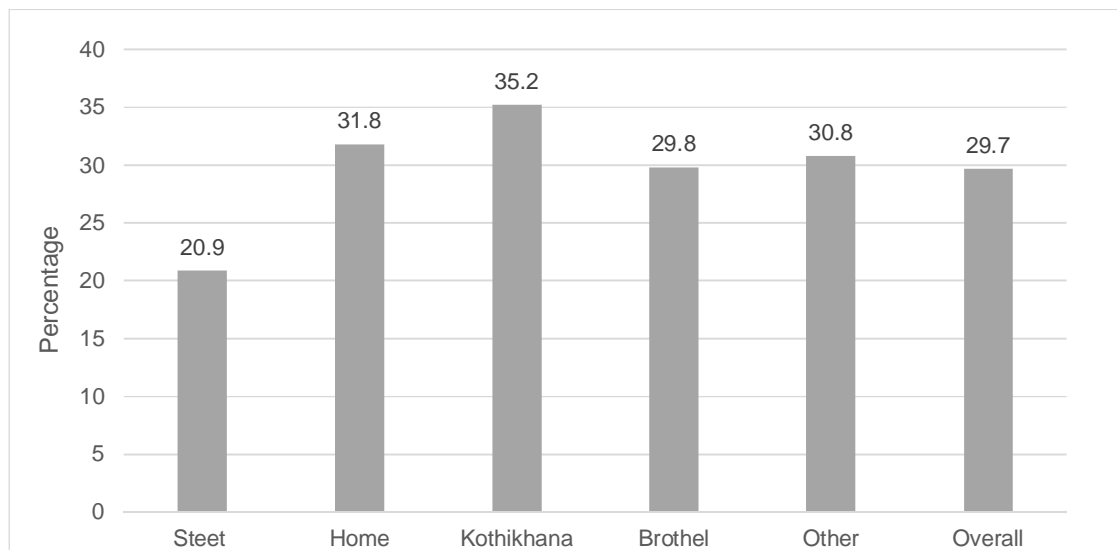
The highest proportion of FSWs reporting injecting drug use (4 percent) and reported having sex with an IDU resided in Multan (3.8 percent) – Graph 35.



Graph 35. Proportion of FSWs, injecting drugs and having sex with IDUs, by cities – Punjab IBBS, 2014

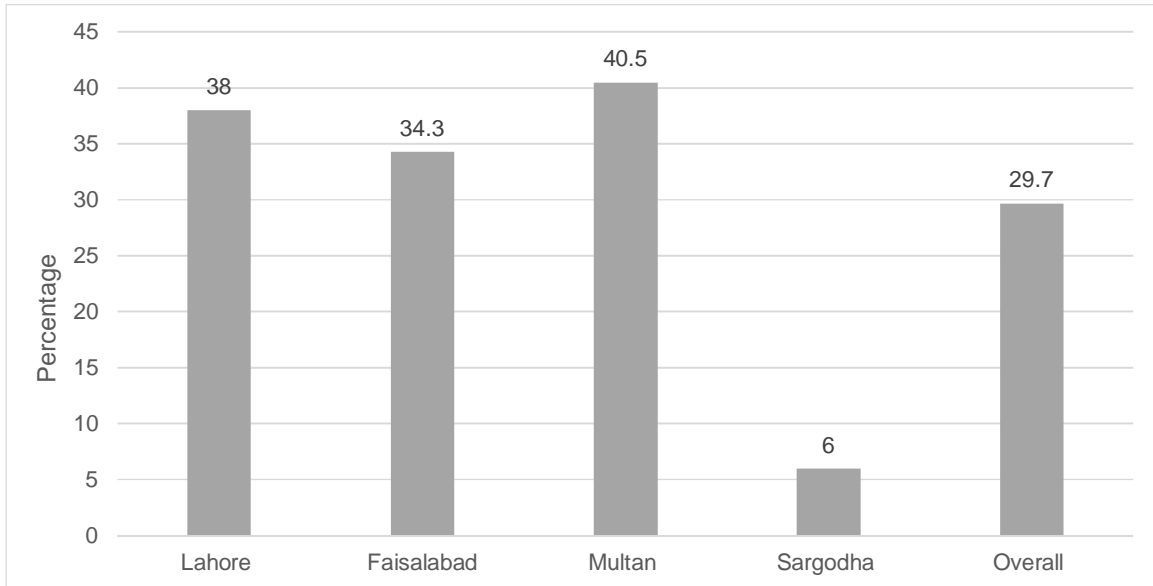
4.9 Other Risk Behaviour

Overall, 29.7 percent (N=458) of FSWs reported taking alcohol and or drugs in the context of sex in the past six months – Table 24. The use of alcohol in sexual encounters was more commonly reported among Kothi Khana-based FSWs (35.2 percent; N=132) followed by Home-based FSWs (31.8 percent; N=21) – Graph 36.



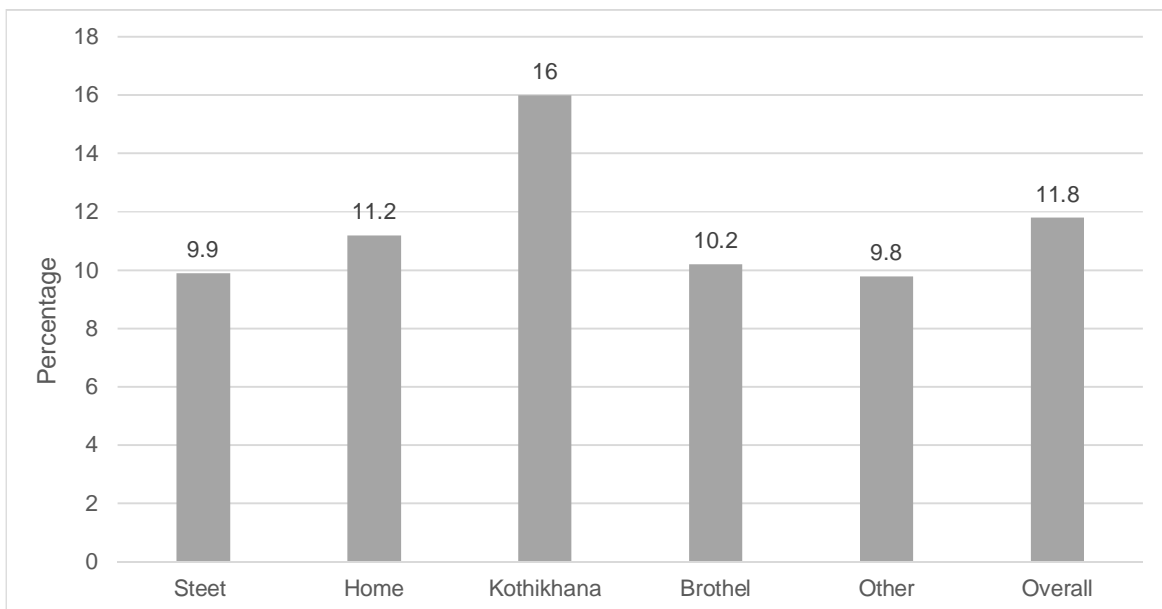
Graph 36. Use of alcohol by FSWs in the context of sex, during past 6 months, by Typology – Punjab IBBS, 2014

Use of alcohol in the context of sex, notable varied across geographically, with the highest proportions being reported in Multan (40.5 percent; N=155) followed by Lahore (38 percent; N=149) and the lowest proportion (6 percent; N=23) recorded at Sargodha – Graph 37.



Graph 37. Use of alcohol by FSWs in the context of sex, during past 6 months, by cities – Punjab IBBS, 2014

Approximately 11.8 percent (N=185) of FSWs reported physical abuse in the context of sex with the highest proportion of this abuse being reported among FSWs in public spaces; 16.0 percent of Kothikhana-based FSWs and 11.2 percent of Home-based FSWs reported being physically forced to have sex in the past six months – Table 24 & Graph 38.



Graph 38. Proportion of FSWs experiencing physically abused or forced to have sex by Typology – Punjab IBBS, 2014

Overall, 10.9 percent (N=168) of FSWs reported being arrested in the past six months with kothi khana-based FSWs reporting the highest (12.8 percent; N=48) proportion of arrests. A minority (1.8 percent; N=27) of FSWs reported selling blood for money during the past six months – Table 24.

4.10 HIV and STI Related Knowledge

Approximately 87.3 percent (N=1,344) of FSWs had ever heard of HIV and/or AIDS, with brothel based sex workers reporting the highest level of awareness (91.4; N=772), - Table 25. Of those who had heard about HIV and/or AIDS, 64.7 percent (N=871), believed that a healthy looking person can be living with HIV and/or AIDS. Most FSWs (84.8 percent; N=1,088) who had heard about HIV and/or AIDS knew that HIV can be transmitted by sexual intercourse, but more than half (67.1 percent; N=860) knew that HIV can be transmitted through injuries by sharp instruments or needles/syringes, yet only 47.5 percent (N=608) knew about mother to child transmission of HIV – Table 25. Overall, among FSWs who had heard of HIV and/or AIDS, brothel-based FSWs had the highest levels of knowledge with respect to HIV transmission – Graph 38.

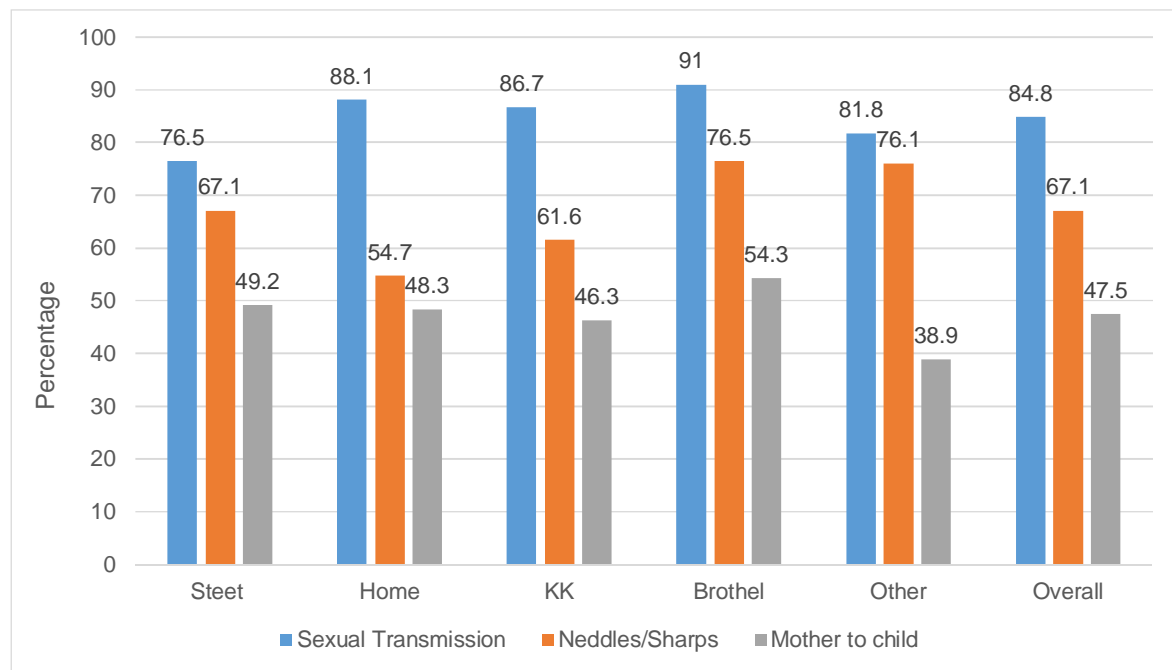
Knowledge Area	FSWs Percentage					
	All FSW	Street	Brothel	Home	Kothi Khana	Other
Knowledge of HIV and /or AIDS						
Ever heard of HIV and/or AIDS	87.3	86.6	91.4	87.7	84.4	
• Health looking person can have HIV/AIDS*	64.7	61.5	69.9	55.8	65.8	
• HIV transmitted by sexual intercourse*	84.8	76.5	91.0	88.1	86.7	
• HIV transmitted by sharp needle*	67.1	67.2	76.5	54.7	61.6	86.2
• HIV transmitted from mother to child*	67.1	67.2	76.5	54.7	61.6	70.5
• Condoms can prevent HIV Transmission*	67.1	67.2	76.5	54.7	61.6	81.8
• Sexual abstinence to prevent HIV trans.*	47.5	49.2	54.3	48.3	46.3	76.1
• Clean syringes can prevent HIV trans.*	47.5	49.2	54.3	48.3	46.3	38.9
• Self-perception of risk for HIV*	47.5	49.2	54.3	48.3	46.3	79.8
• Know where to receive HIV test*	86.3	79.4	92.7	89.6	90.1	44.8
• Ever tested for HIV*	86.3	79.4	92.7	89.6	90.1	77.0
• Knows test result*	40.5	25.8	43.5	44.7	43.7	55.8
	60.0	48.9	67.2	48.9	58.5	88.7
	65.9	75.1	61.4	78.2	59.1	55.3
	75.8	66.5	84.5	66.9	72.5	48.8
	55.9	46.6	66.9	57.7	52.4	
	60.0	74.3	58.6	64.5	53.8	
• Aware of Sexually Transmitted Infections	84.4	86.2	88.0	82.7	80.1	84.2
• Self-reported of STIs, in past 6 months	84.4	86.2	88.0	82.7	80.1	35.0
						96.2

• Received treatment for reported STIs	35.5	35.5	34.7	33.3	39.0	
	96.8	92.5	97.1	100	98.2	

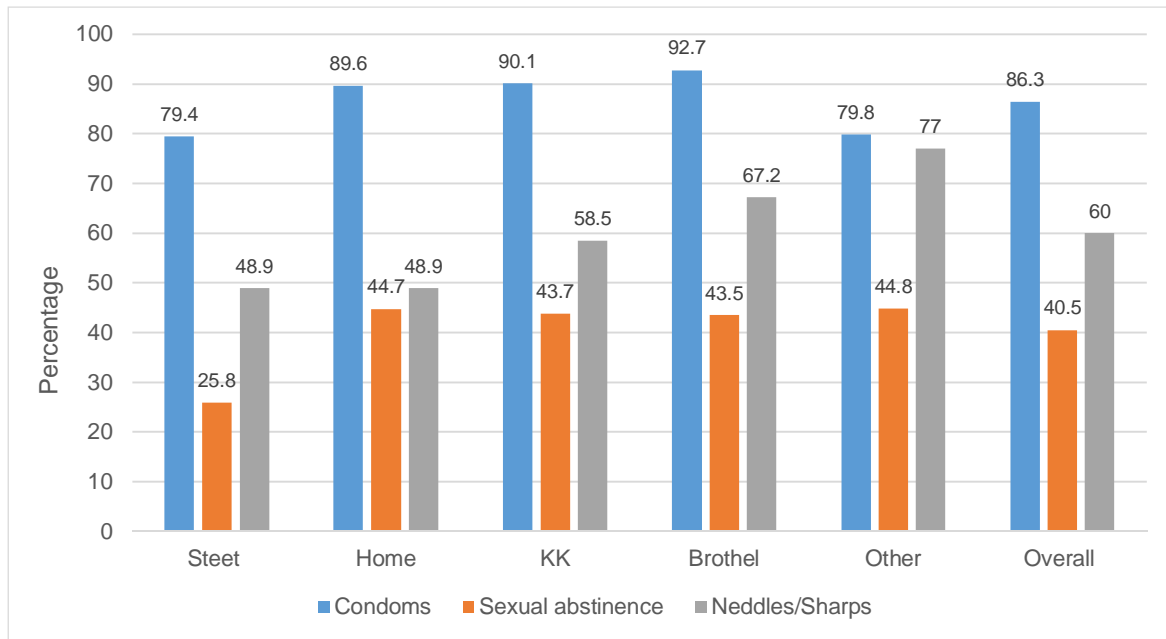
*Positive response to initiate question.

Table 25. HIV & STIs related knowledge among FSWs – Punjab IBBS, 2014

Approximately 86.3 percent (N=1,105) of those who had heard of HIV and/or AIDS were aware that condom use is a method to prevent HIV transmission, while 40.5 percent (N=519) believed that sexual abstinence is an HIV prevention method – Table 25 & Graph 40.

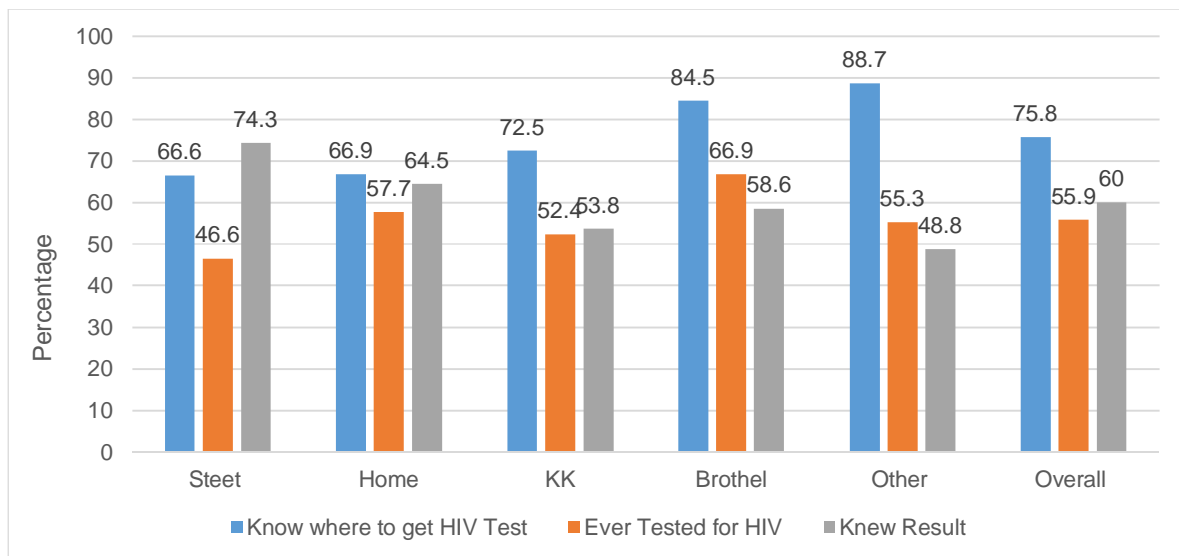


Graph 39. Proportion of FSWs with knowledge of modes of HIV transmission by Typology – Punjab IBBS, 2014



Graph 40. Proportion of FSWs with knowledge of modes of HIV prevention by Typology – Punjab IBBS, 2014

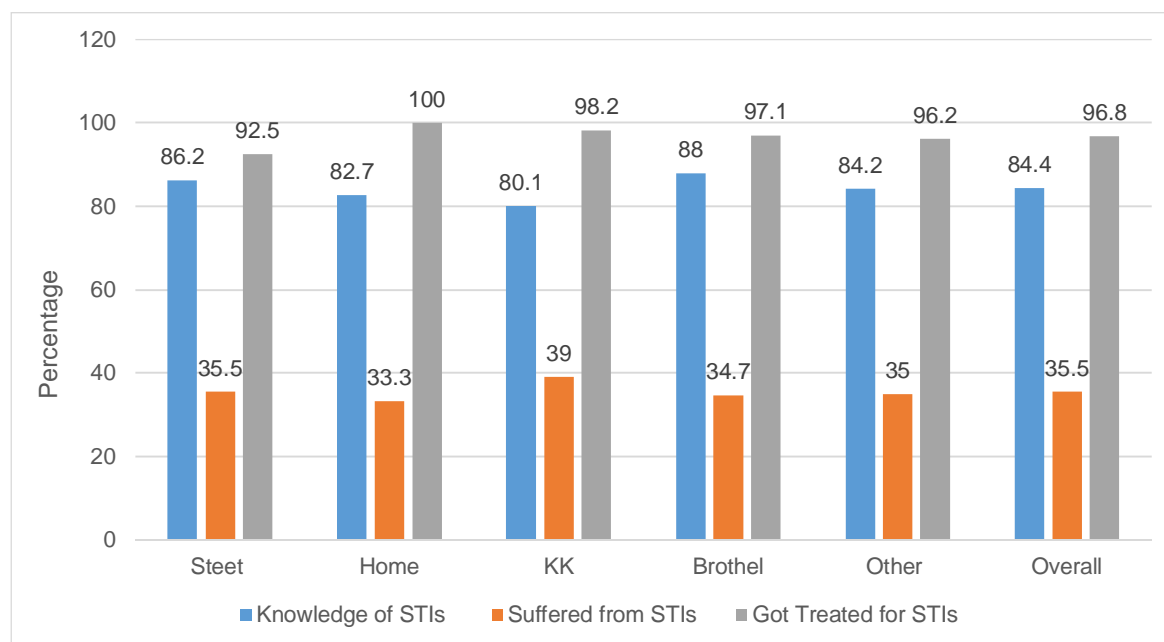
Overall, 75.8 percent (N=1,019) knew where HIV testing services were offered, whereas 55.9 percent (N=752) had ever been tested for HIV, while 60.0 percent (N=448), reportedly knew about their result, out of those screened for HIV – Table 25 & Graph 41.



Graph 41. Proportion of FSWs with Knowledge, ever tested and knew about the HIV test result by Typology – Punjab IBBS, 2014

More than half quarter (65.9 percent: N=1,015) who had heard of HIV and/or AIDS believed that they were at risk for acquiring HIV infection – Table 25. With respect to other STIs, a high proportion of respondents (84.4 percent; N=1,299) were aware of such infections, 35.5 percent (N=461) reported

having had an STI in the past six months, and 96.8 percent (N=427) reported being treated for the infection, out of those who suffered from STIs – Table 25 & Graph 42.



Graph 42. Proportion of FSWs, aware, suffering and got treatment for STIs, by Typology – Punjab IBBS, 2014

4.11 Program Exposure and Utilization.

Almost, three quarters, 74.3 percent (N=1,144) of FSWs were aware of HIV prevention programs (SDPs) in their city, however, awareness of SDPs was relatively high among brothel-based FSWs at 84.1 (N=711). Among those FSWs who were aware of these services, the majority (23.8 percent; N=366) used the services fortnightly. Approximately 3.0 percent (N=35) of the FSWs never used the SDP services – Table 26.

Knowledge Area	All FSWs	FSWs Percentage				
		Street	Brothel	Home	Kothi Khana	Other
Ever heard of HIV prevention programs	74.3	68.9	84.1	83.9	68.8	65.3
Number of times SDP* services were availed						
• More than once a week	1.9	1.2	1.9	4.1	1.1	1.2
• Once in a week						
• After two weeks	16.7	22.5	19.8	19.1	12.8	9.5
• Once in a month						

• Less than once a month	31.9	35.9	29.8	27.9	36.5	28.8
• Never	28.3	23.7	29.5	23.8	31.8	32.7
	17.6	19.8	16.6	17.9	16.9	16.8
	3.0	3.2	2.8	3.8	2.1	2.9
Received free condom in past 12 month	73.1	64.5	84.8	70.9	67.1	78.2

*Service Delivery Program

Table 26. Knowledge and Utilization of Preventive Programs among FSWs – Punjab IBBS, 2014

Participation in programs was much higher among brothel based FSWs than any other types; approximately 84 percent (N=710) of brothel-based FSWs had received a free condom in the past month – Table 26.

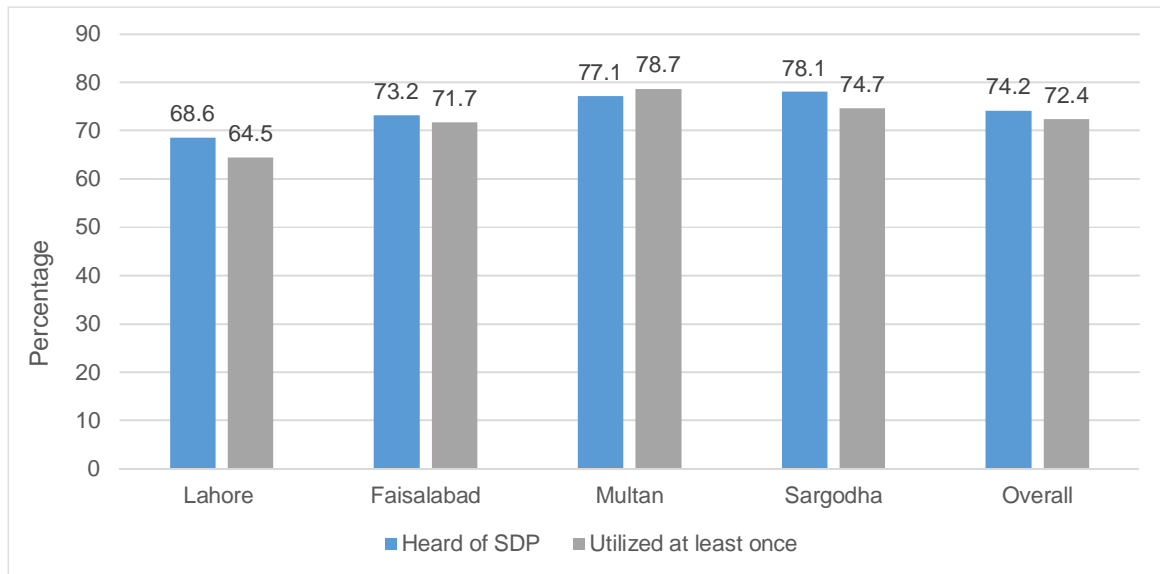
Services	FSWs Percentage
Medical Treatment	62.9 percent (N=968)
STIs Management	15.4 percent (N=237)
Counselling	33.9 percent (N=522)
Social Services	0.3 percent (N=4)
Condoms	67.5 percent (N=574)
HIV Test	37.3 percent (N=242)
Lubricants	1.9 percent (N=29)
Physical Examination	11.8 percent (N=182)

Table 27. Knowledge and Participation of HIV Prevention Programs among FSWs, by cities – Punjab IBBS, 2014

Drugs	FSWs Percentage			
	Lahore	Faisalabad	Multan	Sargodha
Medical Treatment	15.1 percent	88.2 percent	94.3 percent	55.1 percent
STIs Management	3.3 percent	10.2 percent	43.9 percent	4.4 percent
Counselling	7.1 percent	66.2 percent	42.6 percent	20.4 percent
Social Services	0.0 percent	0.5 percent	0.3 percent	0.3 percent
Condoms	17.1 percent	92.9 percent	86.2 percent	75.2 percent
HIV Test	7.1 percent	28.3 percent	63.2 percent	51.2 percent
Lubricants	4.3 percent	3.1 percent	0.0 percent	0.0 percent
Physical Examination	14.0 percent	0.3 percent	32.6 percent	0.3 percent

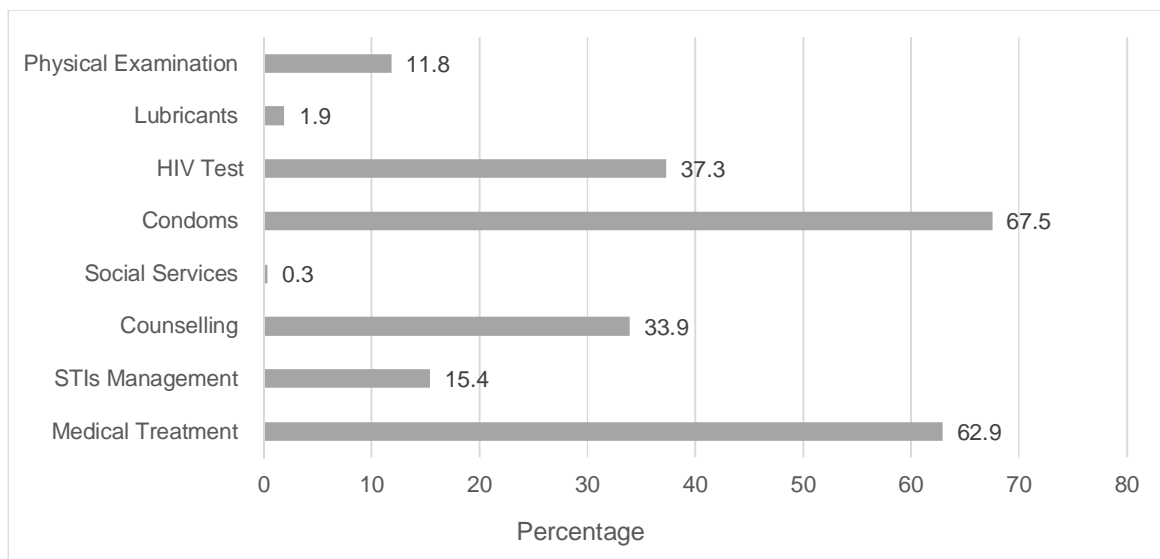
Table 28. Knowledge and Participation of HIV Prevention Programs among FSWs, by services

Awareness and utilization of SDPs among FSWs was further analyzed across the different cities. With the exception of Lahore, where both awareness and utilization was less than a quarter (68.6 percent & 64.5 percent, respectively); the remaining cities recoded more than seventy percent awareness and utilization – Table 28 & Graph 43.



Graph 43. Knowledge and utilization of HIV preventive programs by FSWs, by cities – Punjab IBBS, 2014

Further analysis of various services availed by FSWs in the past six months showed that obtaining condoms (67.5 percent; N=1,040) from the SDP was the most utilized service across all cities followed by medical treatment (62.9 percent; N=968), while social services were rarely utilized / available (0.3 percent; N=4) – Table 27 & Graph 44.



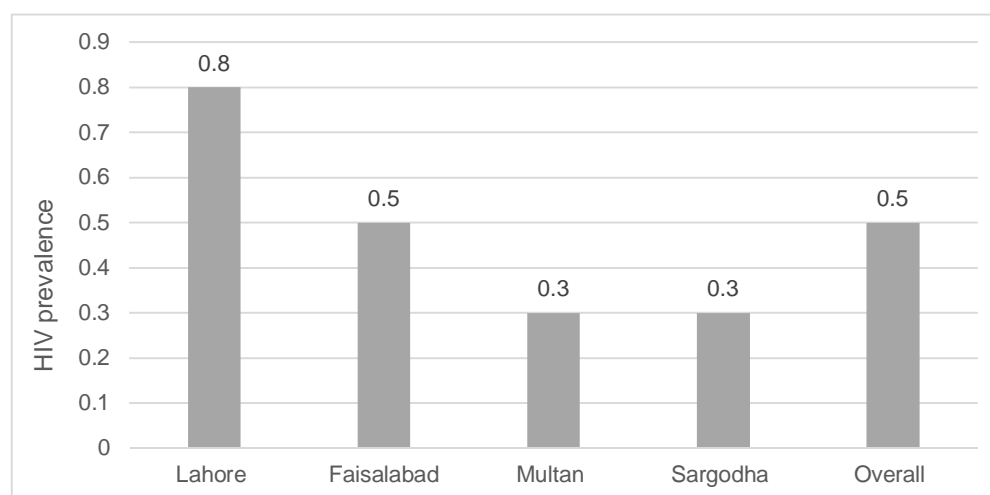
Graph 44. HIV preventive common services, utilized at SDPs during past 6 months by FSWs, who have heard of these service delivery programs – Punjab IBBS, 2014

4.12 HIV Prevalence

The prevalence of HIV among FSWs was recorded low – Table 29. A total of 7 FSWs tested HIV-positive, for an overall weighted prevalence of 0.6 percent (Un-weighted overall prevalence = 0.5 percent). Lahore reported the highest prevalence of HIV among FSWs (0.8 percent; N=3), followed by Faisalabad (0.5 percent; N=2) – Graph 45 & 46.

City	Tested	Positive	Prevalence (95% CI)
Lahore	392	3	0.80 percent (-1.0; 1.63)
Faisalabad	382	2	0.50 percent (-2.0; 1.25)
Multan	382	1	0.30 percent (0.25; 0.77)
Sargodha	383	1	0.30 percent (0.25; 0.77)
Overall Prevalence			0.50 percent

Table 29. HIV prevalence among FSWs, by cities – Punjab IBBS, 2014



Graph 45. HIV prevalence among FSWs, by cities – Punjab IBBS, 2014

The following table indicates data collected between successive IBBS Rounds (2011 & 2014) for FSWs (Table 30)

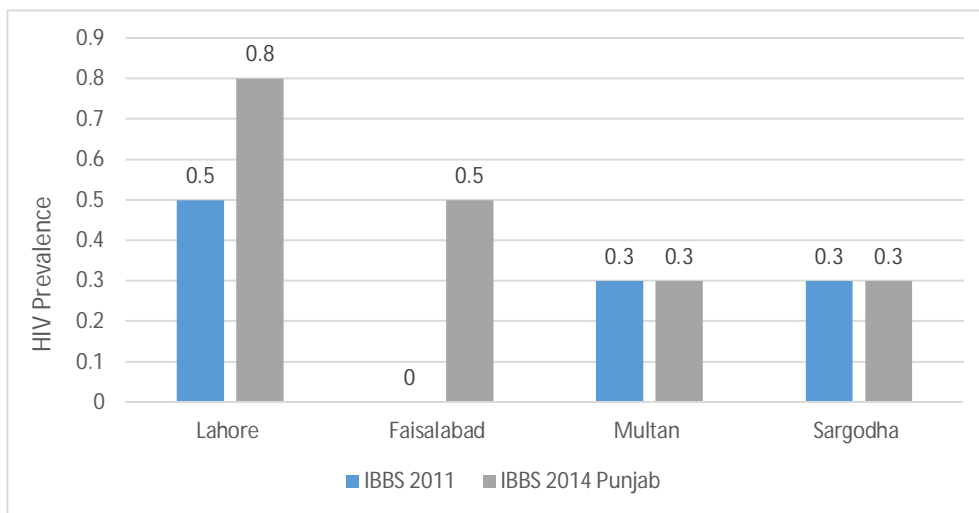
Sr.	Indicator	Value	
		IBBS 2011	Punjab IBBS 2014
Socio-Demographic Characteristics			
1	Mean age of study respondents	26.9 years	27.9 years
2	Marital Status <ul style="list-style-type: none"> Unmarried Married 	<ul style="list-style-type: none"> 24.8 percent 63.7 percent 	<ul style="list-style-type: none"> 36.5 percent 41 percent
3	Number of Children		

	None 1 to 2 3 to 4 5 and above	<ul style="list-style-type: none"> • 14.6 percent • 37.7 percent • 29.5 percent • 18.2 percent 	<ul style="list-style-type: none"> • 19.3 percent • 50.3 percent • 24.9 percent • 3.0 percent
4	Education Status <ul style="list-style-type: none"> • Illiterate • Primary • Middle • Intermediate 	<ul style="list-style-type: none"> • 50.6 percent • 18.3 percent • 24.8 percent • 4.4 percent 	<ul style="list-style-type: none"> • 28.1 percent • 30.3 percent • 23.9 percent • 4.2 percent
5	Living arrangement <ul style="list-style-type: none"> • Living at home • Living at relative/family • Living with friends • Living alone 	<ul style="list-style-type: none"> • 84.3 percent • 77.1 percent • 11.1 percent • 5.8 percent 	<ul style="list-style-type: none"> • 66.9 percent • 59.5 percent • 25.4 percent • 4.4 percent
6	Other source of income	23.5 percent	28 percent
7	Median Income per month from all source	PKR. 16,000	PKR. 26,000
8	Median Income per month from sex work	PKR. 15,000	PKR. 24,000
Migration and Mobility			
9	Migration from other cities <ul style="list-style-type: none"> • Permanent staying • Visiting 	<ul style="list-style-type: none"> • 20.5 percent • 5.6 percent • 44.1 percent 	<ul style="list-style-type: none"> • 15.1 percent • 36.6 percent • 63.4 percent
10	Migrated specially for sex work	54.6 percent	61.3 percent
11	Out migration	17.7 percent	24.1 percent
International Travel			
12	Ever travelled abroad Involved in sex work	<ul style="list-style-type: none"> • 4.0 percent • 77.1 percent 	<ul style="list-style-type: none"> • 4.2 percent • 87.9 percent
Sexual Risk Behaviours and Practices			
13	Main source of clients <ul style="list-style-type: none"> • Madam • Personal telephone • Roaming around • Clients referrals 	<ul style="list-style-type: none"> • 43.1 percent • 24.7 percent • 22.3 percent • 9.6 percent 	<ul style="list-style-type: none"> • 48.4 percent • 19.1 percent • 17.3 percent • 12.6 percent
14	Number of clients <ul style="list-style-type: none"> • Average clients / day • Average clients / month 	<ul style="list-style-type: none"> • 3.0 • 50.0 	<ul style="list-style-type: none"> • 2.8 • 57.7
15	Consistent condom use with <ul style="list-style-type: none"> • Paid clients 	<ul style="list-style-type: none"> • 33.2 percent 	<ul style="list-style-type: none"> • 35.6 percent

	<ul style="list-style-type: none"> • Non-paid clients 	<ul style="list-style-type: none"> • 20.6 percent 	<ul style="list-style-type: none"> • 15.1 percent
16	Condom use during at last intercourse <ul style="list-style-type: none"> • Vaginal sex • Anal sex • Oral sex 	<ul style="list-style-type: none"> • 50.0 percent • 37.0 percent • 21.3 percent 	<ul style="list-style-type: none"> • 70.1 percent • 19.1 percent • 16.5 percent
17	Alcohol / drug use during sex in past 6 months	39.0 percent	29.7 percent
18	Had sex with IDUs in past 6 months	10.8 percent	2.5 percent
19	Injected drugs in past 6 months	4.9 percent	2.1 percent
20	Physically forced to have sex in past 6 months	21.2 percent	12 percent
HIV/STIs related Knowledge			
21	Ever heard of HIV and/or AIDS	80.4 percent	87.3 percent
22	Healthy looking can have HIV/AIDS	63.9 percent	64.7 percent
23	HIV transmitted by <ul style="list-style-type: none"> • Sexual intercourse • Sharp needles/syringes • Mother to child 	<ul style="list-style-type: none"> • 94.3 percent • 32.6 percent • 13.4 percent 	<ul style="list-style-type: none"> • 84.8 percent • 67.1 percent • 47.5 percent
24	HIV transmission can be prevented by <ul style="list-style-type: none"> • Condoms • Sexual abstinence 	<ul style="list-style-type: none"> • 73.2 percent • 63.2 percent 	<ul style="list-style-type: none"> • 86.3 percent • 40.5 percent
25	Self-perception risk of HIV	45.1 percent	65.9 percent
26	Know where to receive HIV test	22.5 percent	75.8 percent
27	Ever test for HIV	15.7 percent	55.9 percent
28	Knew the result	NA	60.0 percent
29	Awareness of STIs	79.9 percent	84.4 percent
30	Self-reported STIs in past 6 months	31.2 percent	35.5 percent
31	Received treatment for STIs	43.1 percent	96.8 percent
Service Delivery Program Exposure and utilization			
32	Ever heard of HIV prevention program	18.9 percent	74.3 percent
33	No. of times SDPs services were availed; <ul style="list-style-type: none"> • More than once in a week • Once in a week • After two weeks • Once in a month • Less than once in a month • Never 	<ul style="list-style-type: none"> • 11.3 percent • 11.9 percent • 12.8 percent • 36.6 percent • 22.1 percent • 5.3 percent 	<ul style="list-style-type: none"> • 1.9 percent • 16.7 percent • 31.9 percent • 28.3 percent • 17.6 percent • 3.0 percent
34	Received condoms in past one month	24.6 percent	73.1 percent
HIV prevalence			
35	Overall HIV prevalence <ul style="list-style-type: none"> • Weighted prevalence 	<ul style="list-style-type: none"> • 0.8 percent 	<ul style="list-style-type: none"> • 0.6 percent

	• Un-weighted prevalence	• 0.6 percent	• 0.5 percent
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Table 30. Comparison of IBBS indicators: 2011 & 2014 – Punjab IBBS, 2014



Graph 46. HIV Prevalence, among FSWs by cities (IBBS 2011 & Punjab IBBS 2014)

Key Findings (MSWs)

Male Sex Workers

5.0 MALE SEX WORKERS (MSWs)

5.1 Geographical Distribution and Estimates of MSWs

The term relates to 'males who provide sexual services i.e. anal or oral, to other males in return of money or other financial benefits'. MSWs operate in the same manner as female sex workers, and usually are young boys, who provide sexual services to male clients. The term MSW is of course, different from the term 'MSM' (men who have sex with men), which denotes all men who have sex with other men as a matter of preference or practice, regardless of their sexual identity or orientation.

Geographical mapping was conducted in four cities. The survey estimated an average of 5,436 MSWs (Minimum =3,792 & Maximum = 7,078), spread over 1,610 spots, in four cities. Faisalabad reported the highest number of MSWs (50.7 percent), followed by Lahore (28.37 percent) – Table 31.

Survey City	No of Zones	No of spots	MSWs			MSWs per spot	% MSWs
			(min)	(max)	(avg)		
Lahore	29	507	1,263	1,820	1,542	3.0	28.37%
Faisalabad	18	781	1,681	3,831	2,756	3.5	50.70%
Multan	20	222	379	723	551	2.5	10.14%
Sargodha	10	100	469	704	587	5.9	10.80%
TOTAL	77	1,610	3,792	7,078	5,436	3.7	100%

Table 31. Estimated Number of MSWs, in four cities of Punjab – Punjab Mapping Study, 2014

The spots for MSWs, 'pick up points' or 'cruising sites', are specific locations where MSWs cruise and solicit clients for sex work, which usually takes place at a different location. The average spot size (number of MSWs at each spot) was quite small and only 3.7 MSWs were found to operate at each spot. The highest MSWs per spot was reported in Sargodha (5.9 MSWs per spot). The number of MSWs operating through spots in other cities was lesser, probably because of fewer prime locations and public places in these cities, which can be used for solicitation and client pick up – Table 31.

5.2 Integrated Behavioural & Biological Surveillance (IBBS)

In IBBS, 1,528 MSWs participated in four cities of Punjab – Table 32. The citywide representation remained as follows;

City	Study Respondents
Lahore	380
Faisalabad	380
Multan	380
Sargodha	388
TOTAL	1,528

Table 32. Number of Study Respondent by City – Punjab IBBS; 2014

5.3 Socio-Demographic Characteristics

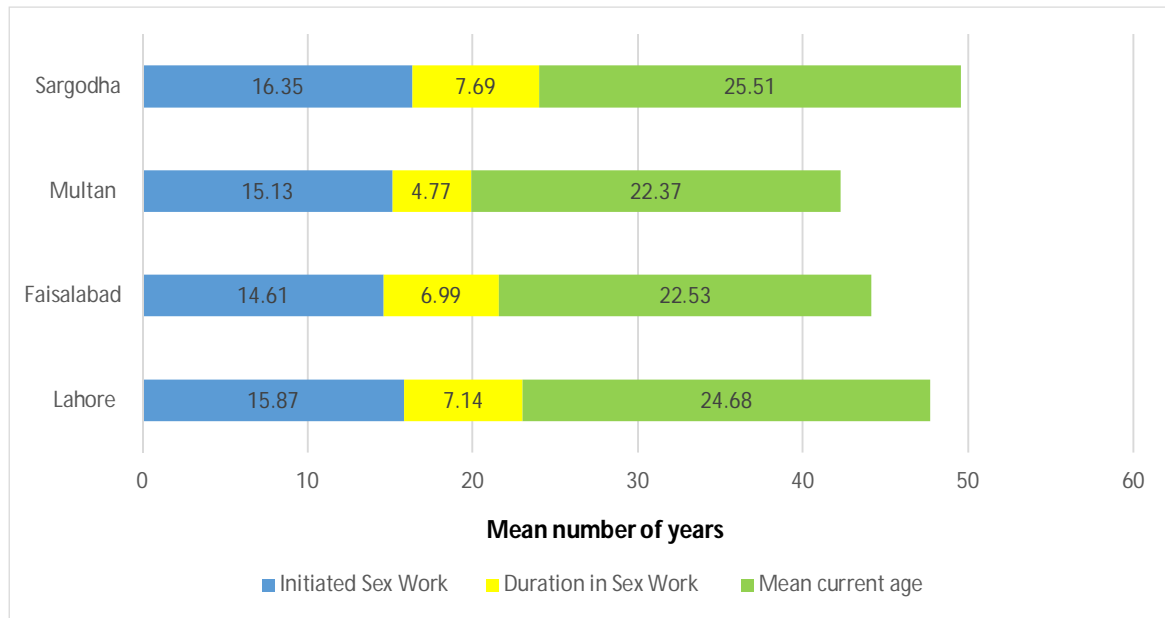
The mean age of all MSWs interviewed was $23.78 \pm SD 4.969$ (Median: 23.00). Approximately 87.1 percent (N=1,332) of MSWs were less than 30 years of age, with the highest proportion (39.2 percent; N=599) between 20 to 24 years of age – Table 33.

Characteristics	MSWs Percentage
Age	
• 13 – 19 Years	20.0 percent (N=306)
• 20 – 24 Years	39.2 percent (N=599)
• 25 – 29 Years	27.9 percent (N=427)
• 30 – 34 Years	9.20 percent (N=141)
• 35 + Years	3.60 percent (N=55)
• Average Age \pm SD (median) years	$23.78 \pm SD 4.969$ (Median: 23.00)
Marital Status	
• Unmarried	75.4 percent (N=1152)
• Currently married	
• Separated	

<ul style="list-style-type: none"> • Divorced • Widowed 	19.8 percent (N=302) 1.10 percent (N=17) 2.30 percent (N=35) 1.40 percent (N=22)
Year of Formal Education	
<ul style="list-style-type: none"> • Illiterate • Primary • Middle • Matric • Intermediate • Graduate • Quranic Education 	17.9 percent (N=273) 22.1 percent (N=338) 29.5 percent (N=450) 20.4 percent (N=311) 7.90 percent (N=120) 2.20 percent (N=33) 0.20 percent (N=2)
Living Arrangement	
<ul style="list-style-type: none"> • Lives at Home • Lives at Dera • Lives Street • Other 	84.8 percent (N=1289) 10.2 percent (N=155) 0.10 percent (N=1) 4.50 percent (N=68)
Living with	
<ul style="list-style-type: none"> • Friends • Family • Lives alone • Sexual Partner 	10.5 percent (N=160) 74.0 percent (N=1129) 5.80 percent (N=88) 9.70 percent (N=148)
Other source of income	
<ul style="list-style-type: none"> • Additional source of income 	65.3 percent (N=998)
Income (PKR) (Mean / Median / SD)	
<ul style="list-style-type: none"> • Mean Monthly Income (From all resources) • Mean Monthly Income from Sex work 	PKR: 18,477.12 / 18,000 \pm SD7548.228 PKR: 11,121.09 / 9,000 \pm SD6942.269

Table 33. Socio-demographic characteristics of MSWs – Punjab IBBS; 2014

MSWs in Multan were the youngest (mean = 22.37 years; \pm SD4.078) whereas those in Sargodha were oldest (mean = 25.51 years; \pm SD4.654) – Graph 47.



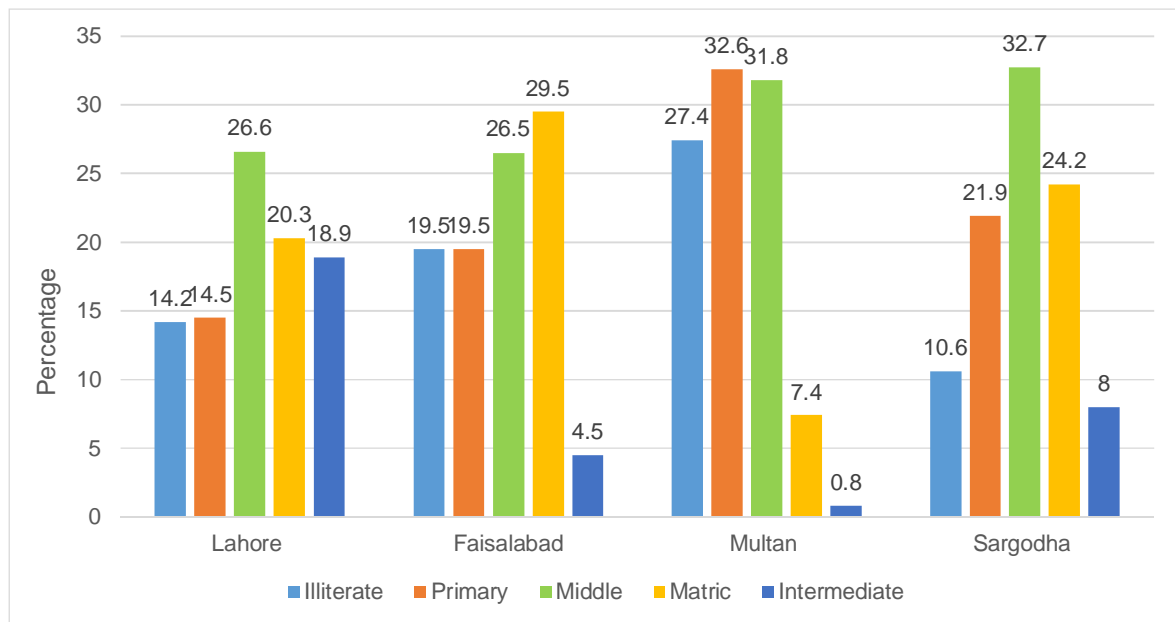
Graph 47. Mean age of initiation, duration and mean current age of MSWs by Cities – Punjab IBBS; 2014.

MSWs started sex work at the mean age of 15.4 (+SD1.953) years and had been in sex work for approximately 9.2 years (+SD19.717). The age of initiation into sex work was lowest in Faisalabad (mean = 14.6 years; +SD1.931) while those in Sargodha began sex work at a relatively older age (mean = 16.3; (+SD1.721) Table 33 & Graph 47.

MSWs in Sargodha were involved in sex work for the longest period (mean = 7.6 years; (\pm SD33.317) where as those in Multan were in sex work for shortest period (mean 4.7 year; \pm SD3.229) – Graph 47.

Vast majority of MSWs interviewed were recorded unmarried (75.4 percent; N=1,152); only 19.8 percent (N=302), reported to be currently married – Table 33.

Approximately 17.9 percent (N=273) of MSWs had received no formal education – Table 33. The highest proportion of illiteracy was reported by MSWs from Multan (27.4 percent; N=104), followed by Faisalabad (19.5 percent; N=74) – Graph 48. More than 84 percent (N=1,289) of MSWs lived at home with their families –Table 33.



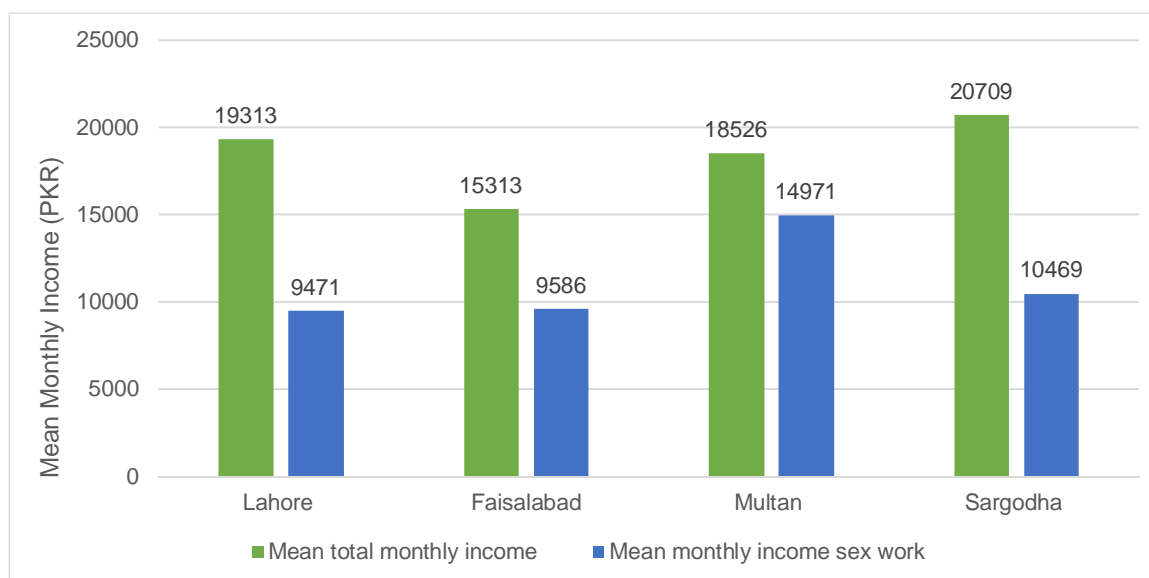
Graph 48. Literacy among MSWs by Cities – Punjab IBBS; 2014

Approximately 11.5 percent (N=175) of MSWs had been arrested in the past 6 months and 1.8 percent (N=28) had sold their blood for money in the same time period. In addition to sex work, 65.3 percent (N=998) of MSWs reported an additional source of income.

Tailors, labourers, malishi (masseurs), shopkeepers and dancers, were most commonly reported occupations, while a substantial number of MSWs also worked as factory workers and hotel waiters; also a considerable proportion of study respondents reported themselves as student.

The median monthly income was approximately PKR: 18,477.12 / 18,000 \pm SD7548.228, with the largest proportion of which generated from sex work at a median of approximately PKR: 11,121.09 / 9,000 \pm SD6942.269 – Table 33.

Highest mean monthly income, from sex work was recorded at Multan (PKR. 14,971; \pm SD6318.01) while the lowest was recorded at Lahore (PKR. 9,471; \pm SD6931.14) – Graph 49.



Graph 49. Mean monthly total & sex work income, of MSWs, by cities – Punjab IBBS; 2014

5.4 Migration and Mobility

A substantial number of MSWs belonged to the city where they were interviewed. Among those 12.7 percent (N=194) of MSWs who had migrated from another city, approximately 25.7 percent (N=49) were permanent immigrants, while 74.3 percent (N=142) were visitors. Nearly 24 percent (N=47) of those who had migrated from another city, moved specifically for sex work exclusively. Lahore had the highest proportion of in-migration (26.4percent; N=70), followed by Murree (11.7 percent; N=31), Islamabad (8.7 percent; N=23), and Faisalabad/Karachi (5.7 percent; N=15). In all of the remaining cities, the numbers were fairly low – Table 34.

Variable	MSWs Percentage
Migratory Pattern (In Migration) / Domestic	
Migration from other Cities / Towns	12.7 percent (N=194)
<ul style="list-style-type: none"> • Permanently Staying • Visiting 	25.7 percent (N=49)
	74.3 percent (N=142)
Migration for sex work	
<ul style="list-style-type: none"> • Migrated specially for sex work 	24.2 (N=47)
Most Common Cities Travelled in past 12 months	
<ul style="list-style-type: none"> • Lahore • Murree • Islamabad • Karachi • Faisalabad 	26.4 percent (N=70)
	11.7 percent (N=31)
	8.70 percent (N=23)

	5.70 percent (N=15)
	5.70 percent (N=15)
Mobility Pattern (Out Migration)	
• Travelled to other City in the past 12 months	17.3 percent (N=265)
International Travel	
• Ever Travelled Abroad	0.60 percent (N=9)
• Involved in Sex Work	77.8 percent (N=7)

Table 34. Migratory Pattern for MSWs – Punjab IBBS; 2014

While, 17.3 percent (N=265) of the MSWs had traveled to other cities within the past year; the anticipated, results showed that MSWs from smaller cities traveled to larger cities within the province – Graph 50. Infrequent (0.6 percent; N=9) had travelled internationally and of these, while 77.8 percent (N=7) of the study respondents travelled abroad, had it for sex work, during the past one year – Table 34.



Graph 50. Proportion of migrants MSWs by cities – Punjab IBBS; 2014.

5.5 Risk Behaviours and Sexual Practices

5.5.1 Sexual Partners

MSWs pick up their clients by roaming around in public places like bus stops and markets, which formed the largest mechanism of getting clients (45 percent; N=697) – Table 35. While, a large proportion (34.5

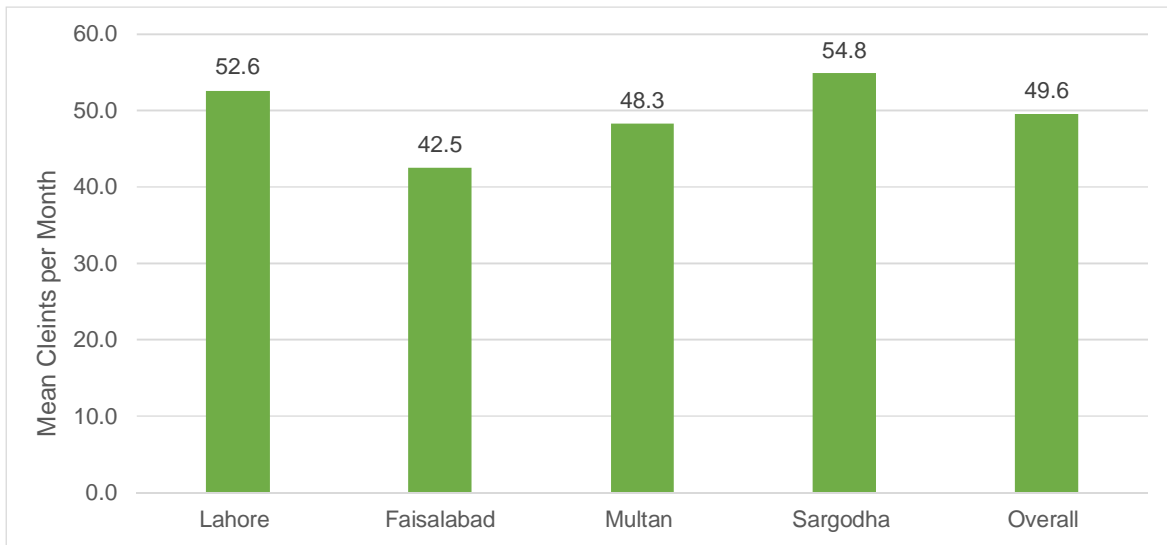
percent; N=526) used cell phones to access clients. In addition, referral through old clients (17.9 percent; N=273) was also mentioned – Table 35

MSWs on an average, entertained 3.12 (2.00 \pm SD10.695) clients per day, considering many MSWs do not work every day, the average number of clients per month was 49.56 (26.00) \pm SD107.359) – Table 35.

Behaviour / Practice	MSWs Percentage
Main Source of Clients	
<ul style="list-style-type: none"> Pimp / Guru 	1.80 percent (N=27)
<ul style="list-style-type: none"> Roaming Around 	45.7 percent (N=697)
<ul style="list-style-type: none"> Cell Phone contact 	34.5 percent (N=526)
<ul style="list-style-type: none"> Client referral 	17.9 percent (N=273)
<ul style="list-style-type: none"> Other sources 	0.10 percent (N=2)
Number of Clients	
<ul style="list-style-type: none"> Average Client per day (Median \pmSD 	3.12 (2.00 \pm SD10.695)
<ul style="list-style-type: none"> Average Client per month (Median \pmSD 	49.56 (26.00) \pm SD107.359)
Non Paid Partners	
<ul style="list-style-type: none"> At least one non paid partner last month 	74.2 percent (N=1,134)
Consistent Condom Use	
<ul style="list-style-type: none"> Paid Clients 	53.5 percent (N=818)
<ul style="list-style-type: none"> Non Paid Partners 	18.5 percent (N=283)
Lubricant use during last anal sex	2.85 percent (N=44)
Paid anyone for anal sex in past month	34.6 percent (N=529)
Paid a FSW in the past month	42.1 percent (N=643)
Alcohol / Drug used during sex in past 6 months	26.2 percent (N=400)
Injected drugs in past 6 months	0.90 percent (N=13)
Had sex with IDUs in past six months	5.0 percent (N=77)

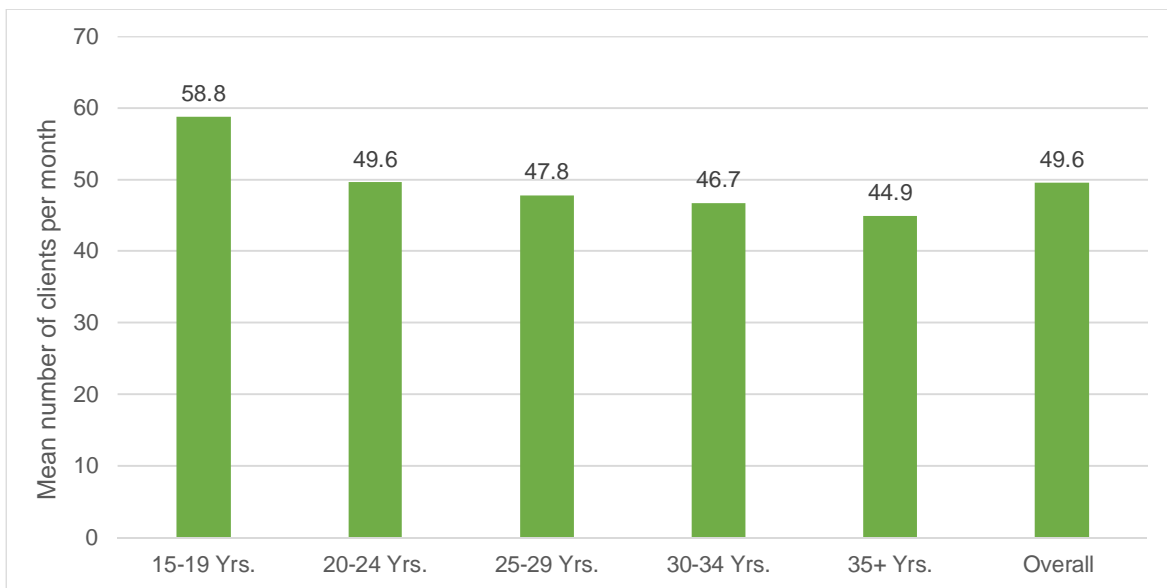
Table 35. Sexual behaviours and practices of MSWs – Punjab IBBS; 2014

The client volume varied considerably across cities, ranging from 54.8 clients/month (+SD201.61) in Sargodha to 42.5 clients/month (+SD16.853) in Faisalabad – Graph 51.



Graph 51. Mean number of clients in past month, for MSWs by cities – Punjab IBBS; 2014

The mean number of clients per month indicated a slight decrease with age (58.8 clients per month for MSWs aged 15-19 years vs. to 44.9 client per month for MSWs aged 35+ years) - Graph 52.



Graph 52. Mean number of clients in the past month for MSWs, by age groups – Punjab IBBS; 2014

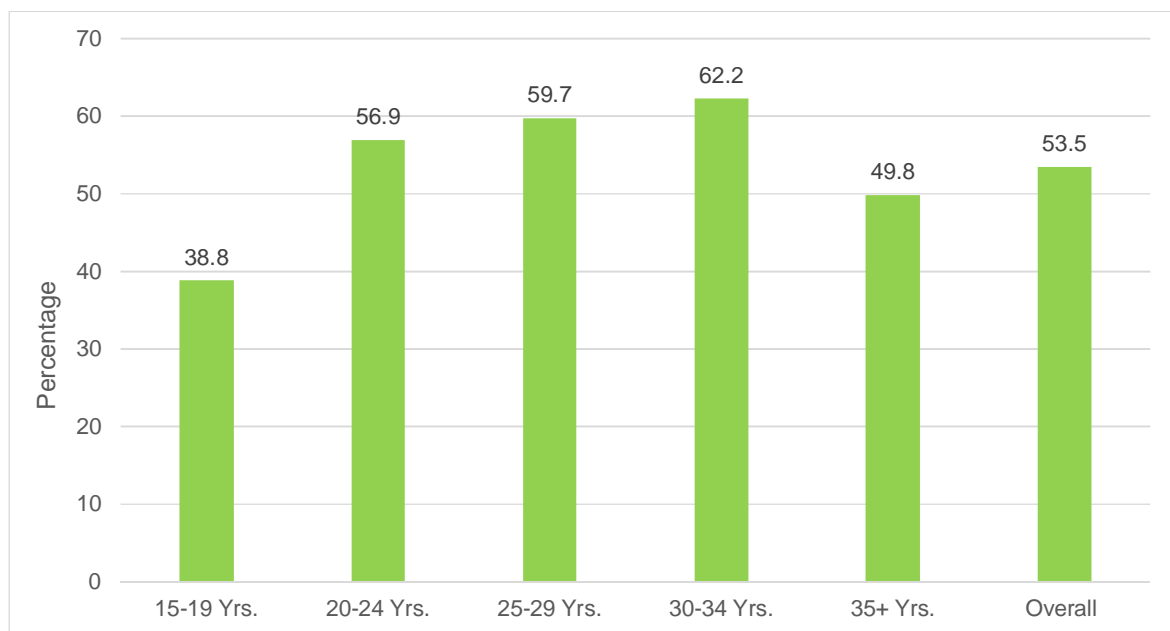
Approximately 74.2 percent (N=1,134) of MSWs reported having at least one regular, non-paying sex partner, in addition to paid clients – Table 35.

34.6 percent (N=529) of MSWs, in addition to selling anal sex, reported paying other MSWs for anal sex, while, approximately 42.1 percent (N=643) of MSWs, reported bisexual behaviour, where a female was paid for sex – Table 35.

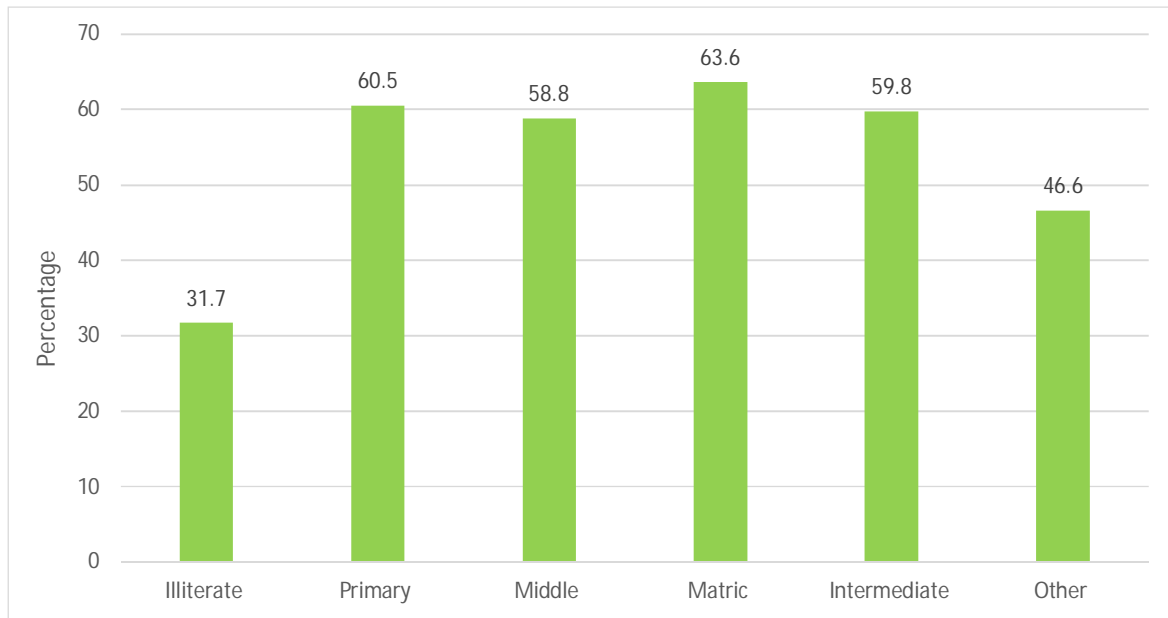
5.5.2 Condom use

Consistent condom use was nearly 53.5 percent (N=818) reported with the paid clients; however the proportion was lower (18.5 percent; N=283) with non-paid sex partners – Table 35. Partners' objection, do not like condoms, do not think that it was necessary and did not think of it, were some of the responses recorded for low consistent condom use.

Consistent condom use showed an association with both age and education. Condom use during the past month varied significantly by age with younger MSWs less likely to use condoms when compared to MSWs belonging to older age groups – Graph 53. Consistent condom use also varied with education levels – Graph 54.

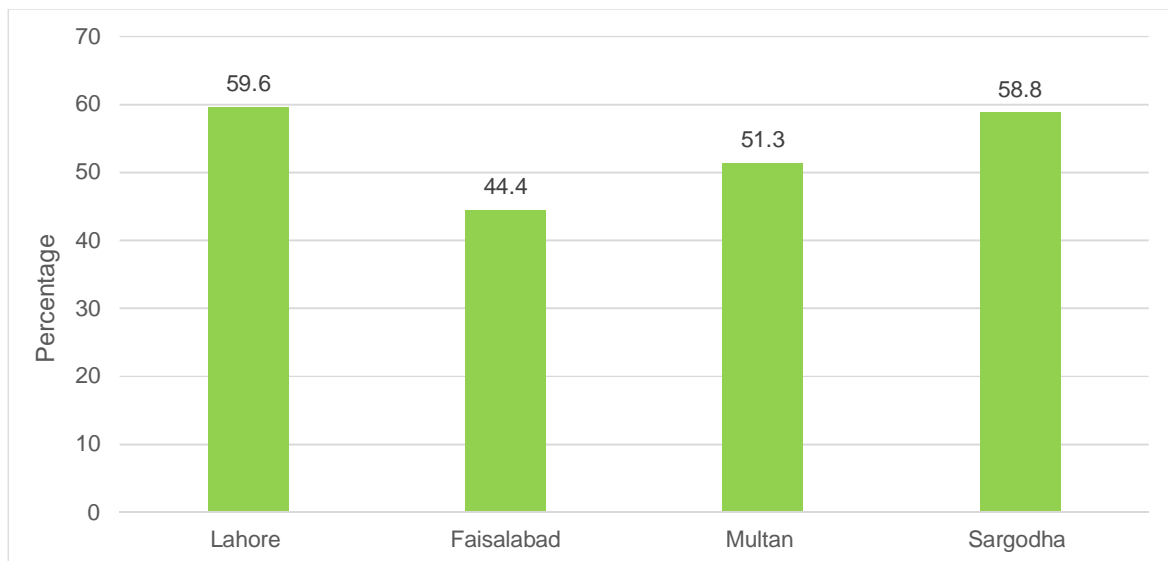


Graph 53. Consistent condom use by MSWs with clients, by age groups – Punjab IBBS; 2014



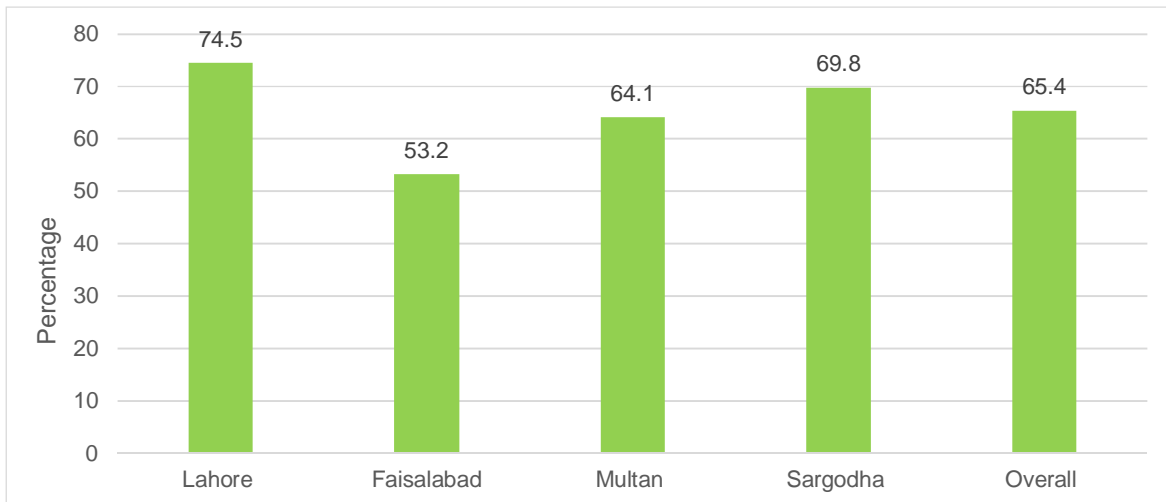
Graph 54. Consistent condom use by MSWs with clients, by education – Punjab IBBS; 2014

Consistent condom use varied across cities, with highest proportion of consistent condom use reported in Lahore (59.6 percent; N=228) and the lowest from Faisalabad (44.4 percent; N=169) – Graph 55.



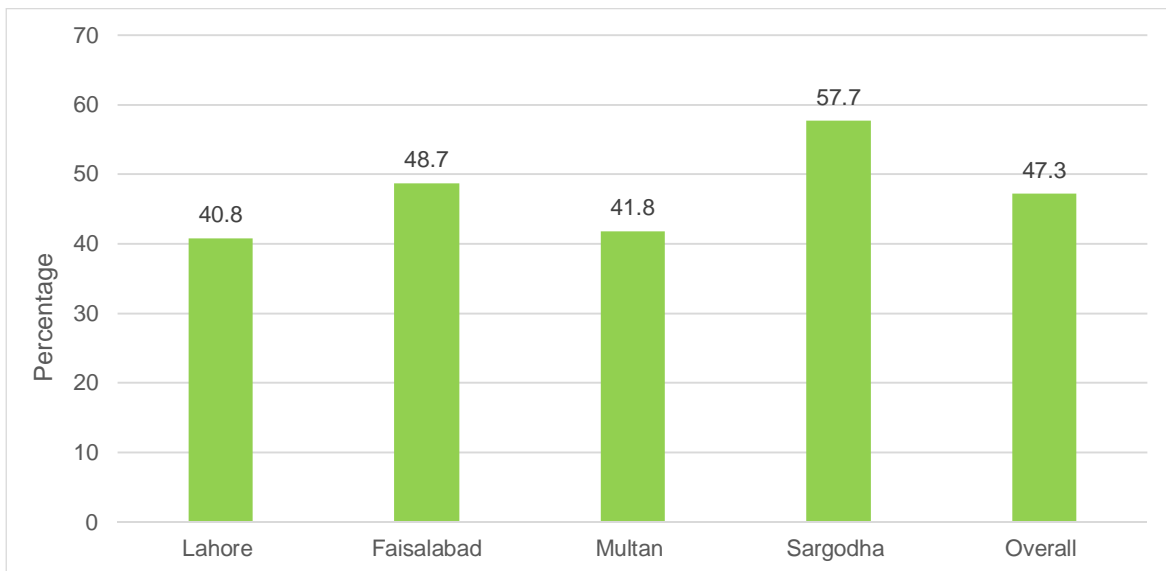
Graph 55. Consistent Condom Use by Cities – Punjab IBBS 2014 – Punjab IBBS; 2014

Last anal sex with clients showed considerable geographical variations, in terms of condom use, with highest condom use in Lahore (74.5 percent; N=284) and lowest at Faisalabad (53.2 percent; N=202) – Graph 56.



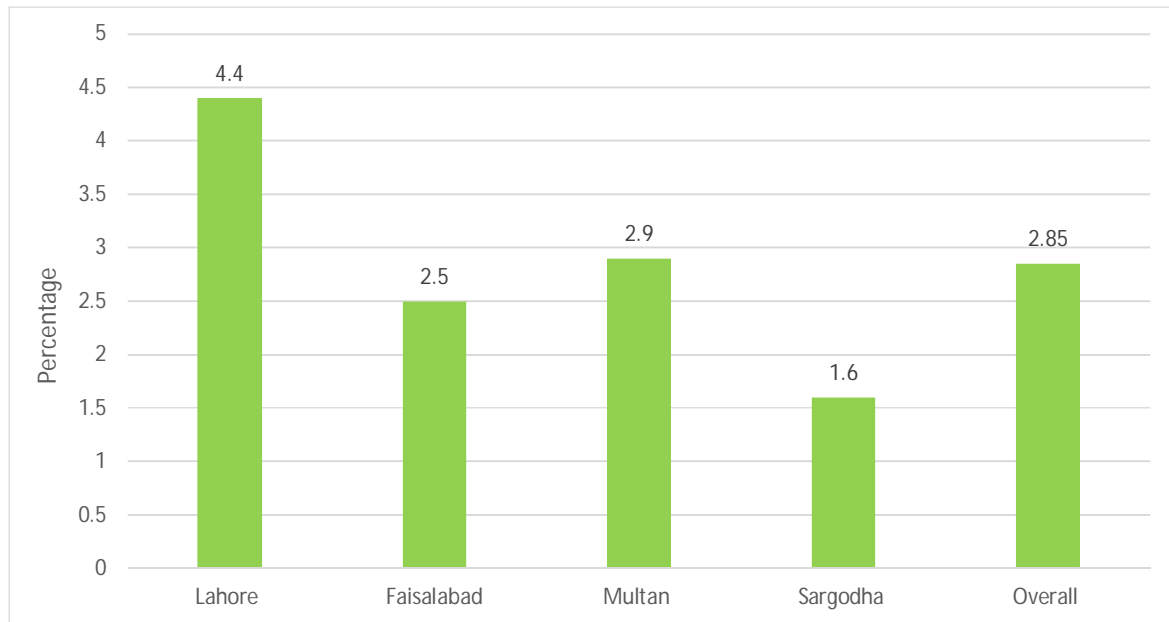
Graph 56. Condom use by MSWs, at the last anal sex with clients, by cities – Punjab IBBS; 2014

A substantial of MSWs, 47.3 percent (N=723) were reported carrying a condom at the time of interview, with the highest proportions of condom carriage was reported from Sargodha (57.7 percent; N=224) and lowest from Lahore (40.8 percent; N=155) – Graph 57.



Graph 57. Proportion of MSWs carrying a condom at the time of survey – Punjab IBBS; 2014

Fewer lubricant use (2.85 percent; N=44) by the MSWs, during anal sex with last client was recorded – Table 35. 4.4 percent (N=17) of the MSWs interviewed, at Lahore, reported use of a lubricant during last anal sex – Graph 58.

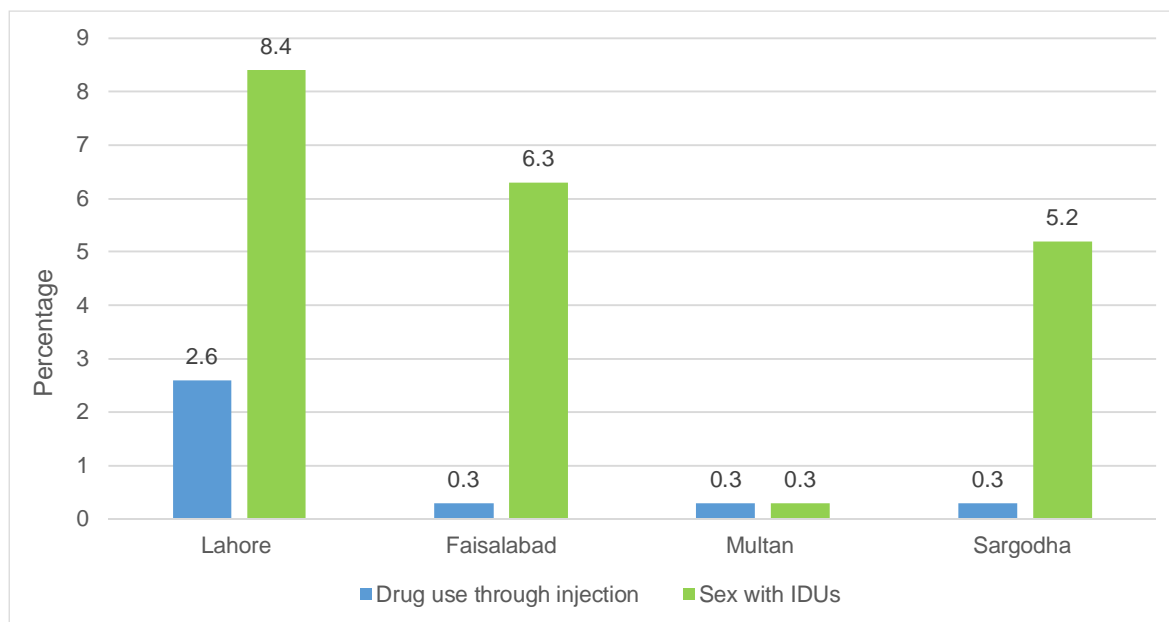


Graph 58. Use of lubricants, at the last anal sex by MSWs by cities – Punjab IBBS; 2014

5.6 Injecting Drug Use

Fewer MSWs reported injecting drugs, as just 0.9 percent; (N=13) of MSWs reported injecting drugs in the six months, another 26.2 percent (N=400) reported using alcohol or drug, while having sex in the past six months. Approximately 5 percent of MSWs reported having had sex with an injecting drug user (IDU) in the past six months – Table 35.

Further analysis indicated, injecting drugs and having sex with an IDU was high in Lahore (2.6 percent and 8.4 percent, respectively); however both were considerably low at Multan (0.3 percent & 0.3 percent respectively – Graph 59.



Graph 59. City wise distribution of MSWs injecting drugs and having sex with an IDU – Punjab IBBS; 2014

5.7 HIV/AIDS and STIs Related Knowledge

Considerably high proportion of MSWs (78.1 percent; N=1,194) had heard of HIV and/or AIDS and among those who had heard of HIV and/or AIDS, 61.3 percent (N=937) believed that a healthy looking person can have the disease.

Knowledge of sexual transmission as a mode of HIV transmission was reported in 61.2 percent (N=935) of MSWs, whereas 57.5 percent (N=878) knew that HIV can be transmitted through sharp instrument/syringe.

Approximately 70.5 percent (N=1,077) of those who had heard of HIV knew that HIV transmission can be prevented by using a condom during sex, and 31.1 percent (N=475) believed that sexual abstinence can prevent HIV transmission. While 46.5 percent (N=710) knew that the use of clean needles/syringes could prevent HIV transmission – Table 36.

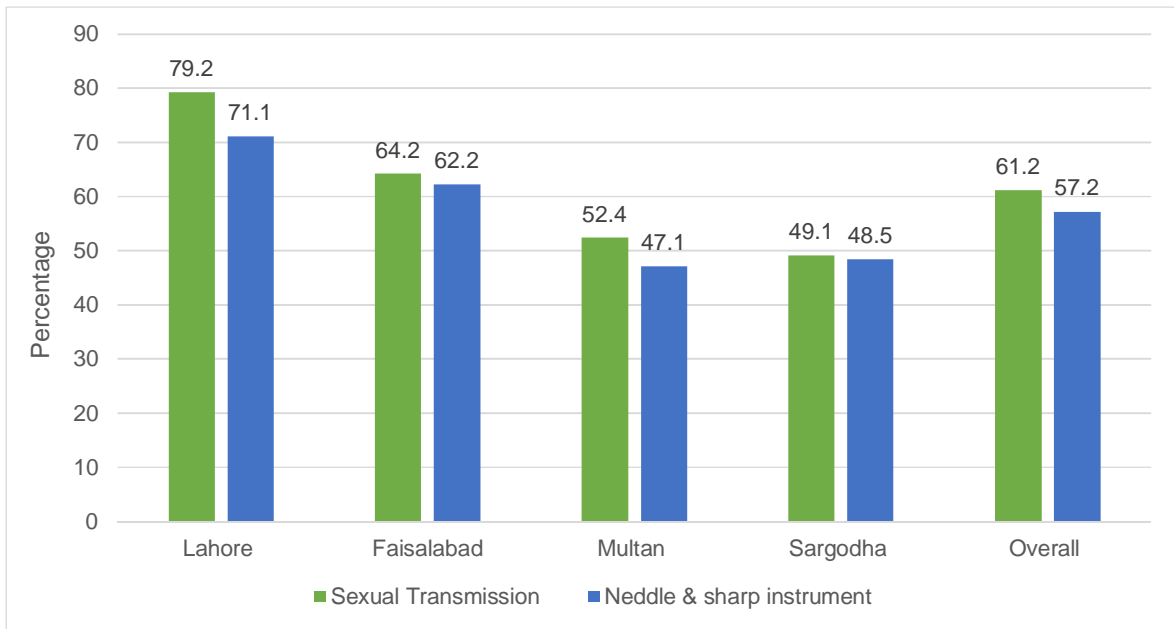
(It is important to note that the percentages that are provided in the table are a sub-group analysis of those MSWs who had ever heard of HIV and/or AIDS.)

Knowledge Area	MSWs Percentage
Knowledge of HIV and /or AIDS	
Ever heard of HIV and/or AIDS	78.1 percent (N=1,194)
• Health looking person can have HIV/AIDS*	61.3 percent (N=937)
• HIV transmitted by sexual intercourse*	61.2 percent (N=935)
• HIV transmitted by sharp instrument/needle*	57.5 percent (N=878)
• HIV transmitted by blood transfusion*	54.2 percent (N=828)
• Condoms can prevent HIV Transmission*	70.5 percent (N=1,077)
• Sexual abstinence to prevent HIV transmission*	31.1 percent (N=475)
• Clean needle/syringes can prevent HIV transmission*	46.5 percent (N=710)
• Self-perception of risk for HIV*	62.6 percent (N=748)
• Know where to receive HIV test*	89.1 percent (N=1,064)
• Ever tested for HIV*	79.1 percent (N=944)
• Knows test result*	41.5 percent (N=389)
Sexually Transmitted Infections	
• Aware of Sexually Transmitted Infections (STIs)	66.0 percent (N=1,008)
• Self-reported of STIs, in past 6 months	26.7 percent (N=271)
• Received treatment for reported STIs	99.3 percent (N=266)

*Positive response to initiate question.

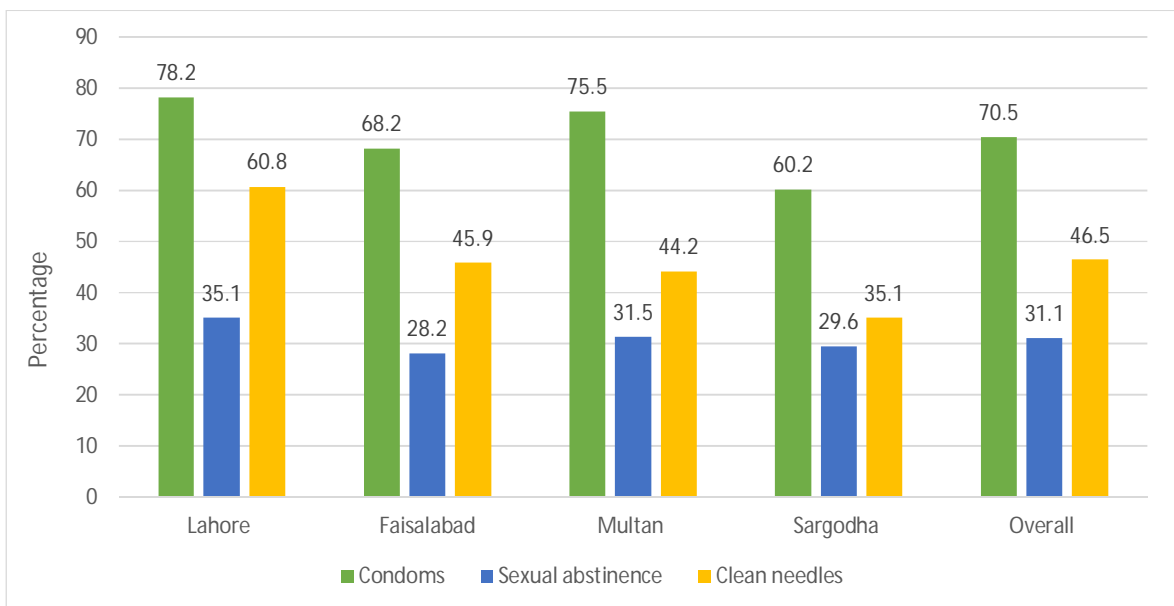
Table 36 HIV & STIs related knowledge among MSWs – Punjab IBBS; 2014

Further analysis on the knowledge of mode of HIV transmission by city among MSWs, who had heard of HIV and/or AIDS suggested that a considerable high proportion of MSWs knew about sexual transmission and HIV transmission through needle/syringe in all cities – Graph 60.



Graph 60. Knowledge of mode of HIV transmission among MSWs who have heard of HIV and/or AIDS by cities – Punjab IBBS; 2014

Likewise, when knowledge about HIV prevention was analyzed, a higher proportion of MSWs who had heard of HIV and/or AIDS knew of condom and use of sterile needles as modes of HIV prevention, in comparison to sexual abstinence as a protective element – Graph 61.



Graph 61. Knowledge of HIV preventive measures among MSWs who have heard of HIV and/or AIDS by cities – Punjab IBBS; 2014

More than half, 62.6 percent (N=748) of MSWs felt they were at risk of acquiring HIV infection. 89.1 (N=1,064) of MSWs interviewed, knew about the place for getting the HIV test, while 79.1 percent (N=944) of MSWs had ever been tested for HIV and 41.5 percent (N=389) confirmed about knowing the test result.

A slightly higher proportion were aware of other STIs (66 percent; N=1,008) and 26.7 percent (N=271) reported being diagnosed with an STI in the past six months, while 99.3 percent (N=266) of those reported for STIs, got treatment for it – Table 36.

5.8 Service Delivery Program Exposure and Utilization

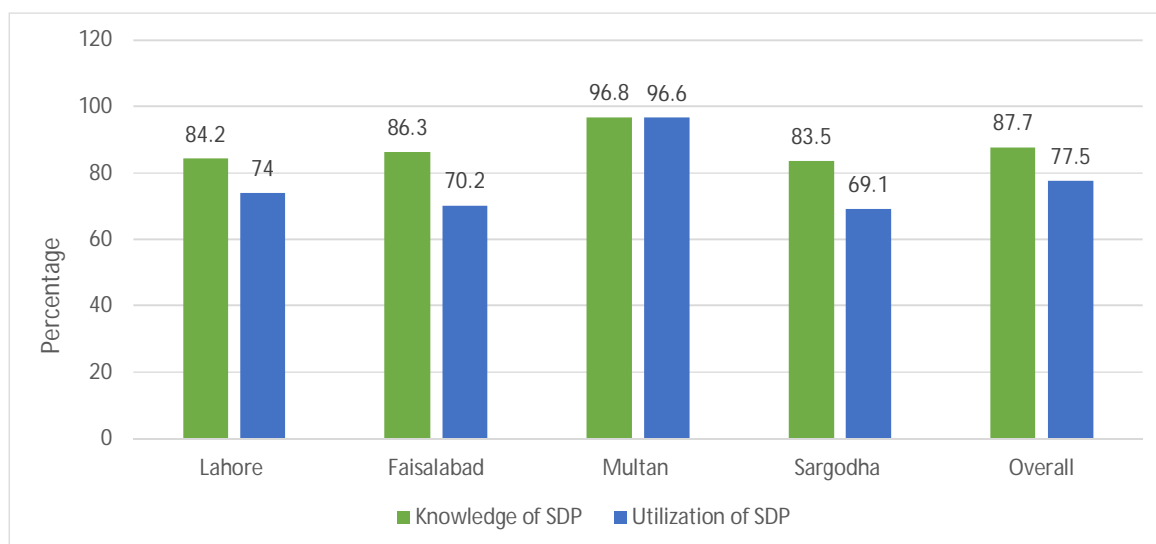
Over 87.7 percent (N=1,339) of MSWs were aware of a HIV prevention program (SDP) in their city. Among those who utilized the SDP, over two third (67.2 percent; N=747) used the services less than once a month and 69.4 percent (N=1,059) received free condoms – Table 37.

Knowledge Area	MSWs Percentage
Ever heard of HIV prevention programs	87.7 percent (N=1,339)
Number of times SDP* services were availed	
• More than once a week	26.4 percent (N=293)
• Once in a week	16.8 percent (N=187)
• After two weeks	13.6 percent (N=151)
• Once in a month	10.4 percent (N=116)
• Less than once a month	2.50 percent (N=114)
• Never	22.5 percent (N=250)
Received free condom in past 12 month	69.4 percent (N=1,059)

*Service Delivery Program

Table 37. Knowledge and Utilization of Preventive Programs among MSWs – Punjab IBBS; 2014

Provision of comprehensive HIV preventive service packages had been top priority of Punjab AIDS Control Program, and to this end, a wide variety of services are provided by HIV prevention programs, currently implemented throughout the province. Regarding knowledge and utilization of SDPs, a considerable proportion of MSWs, among all the cities, were recorded aware of SDPs, and actually utilized these services – Graph 62.



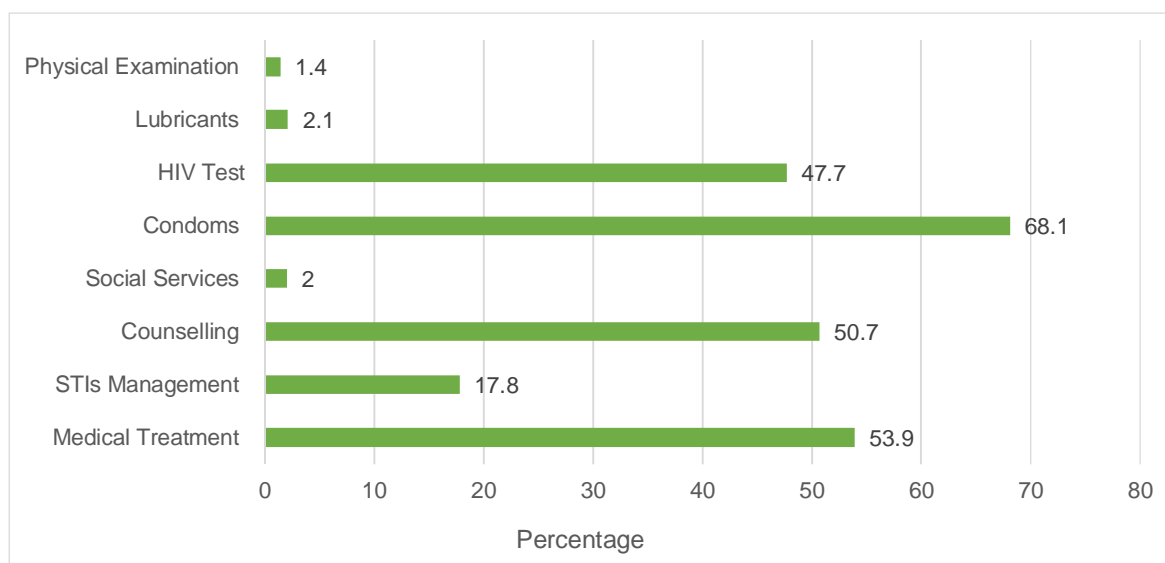
Graph 62. Knowledge and utilization of SDPs among MSWs – Punjab IBBS; 2014

Analysis of various services utilized by MSWs in past six months showed that getting condoms from the SDP was the most utilized service (68.1 percent; N=1,041), followed by obtaining medicines (53.9 percent; N=824) and getting counselling (50.7 percent; N=775) – Table 38.

Other service reported utilized by MSWs included; getting HIV Test (47.7; N=729); STIs management (17.8 percent; N=272) and less frequently availed services included; lubricants (2.1 percent; N=164) and utilizing social services (2.0 percent; N=31) were also reported by MSWs – Table 38 & Graph 63.

Services	MSWs Percentage
Medical Treatment	53.9 percent (N=824)
STIs Management	17.8 percent (N=272)
Counselling	50.7 percent (N=775)
Social Services	2.0 percent (N=31)
Condoms	68.1 percent (N=1,041)
HIV Test	47.7 percent (N=729)
Lubricants	2.10 percent (N=47)
Physical Examination	1.40 percent (N=22)

Table 38. Utilization of HIV Prevention Programs among MSWs, by services – Punjab IBBS; 2014



Graph 63. Utilization of HIV Prevention Programs among MSWs, by services – Punjab IBBS; 2014

The following shows utilization of various services rendered by SDPs by cities.

Drugs	MSWs Percentage			
	Lahore	Faisalabad	Multan	Sargodha
Medical Treatment	27.9 percent	59.2 percent	77.6 percent	51.0 percent
STIs Management	3.90 percent	0.50 percent	61.3 percent	5.70 percent
Counselling	72.5 percent	46.8 percent	45.9 percent	34.7 percent
Social Services	0.30 percent	7.90 percent	0.00 percent	0.00 percent
Condoms	42.4 percent	67.6 percent	96.6 percent	66.0 percent
HIV Test	30.8 percent	34.2 percent	84.7 percent	41.2 percent
Lubricants	6.10 percent	2.30 percent	0.00 percent	0.00 percent
Physical Examination	2.90 percent	2.60 percent	0.00 percent	0.30 percent

Table 39. Utilization of HIV Prevention Programs among MSWs, by cities – Punjab IBBS; 2014

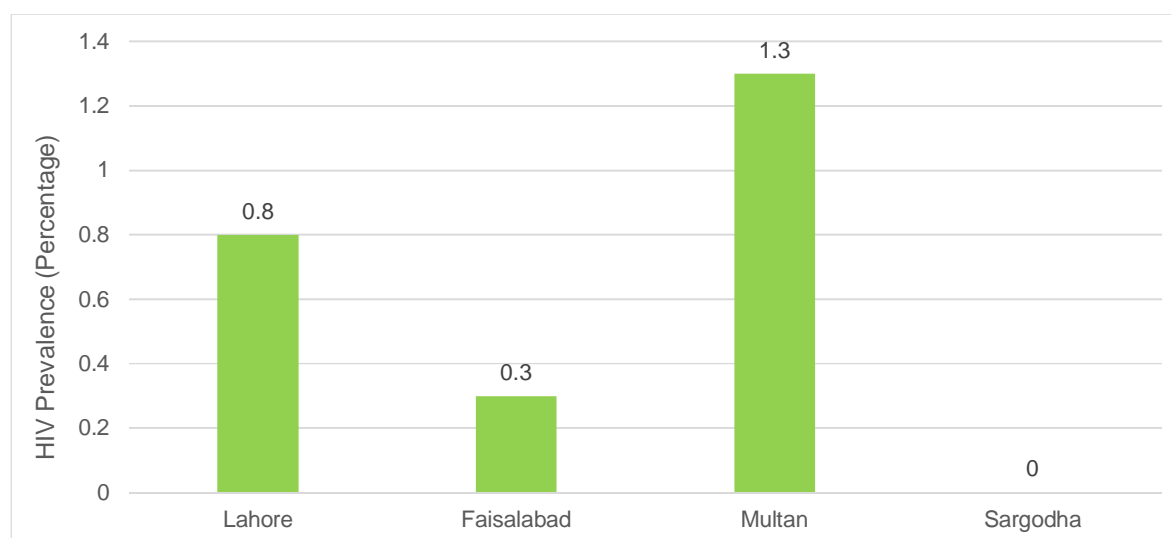
5.9 HIV Prevalence

Among 1,528 MSWs who were tested for HIV the overall HIV prevalence was recorded as 0.6 percent (N=9), with the highest prevalence reported in Multan (1.3 percent; N=5) followed by Lahore (0.8 percent; N=3) – Table 40 & Graph 64 & 65.

City	Tested	Positive	Prevalence (95% CI)
Lahore	392	3	0.8 percent (-1.0; 1.63)
Faisalabad	380	1	0.3 percent (-2.0; 1.25)

Multan	380	5	1.3 percent (0.4; 1.72)
Sargodha	380	0	0.0 percent
Overall Prevalence			0.60 percent

Table 40. HIV prevalence among FSWs, by cities – Punjab IBBS, 2014



Graph 64. HIV prevalence among MSWs by cities – Punjab IBBS; 2014

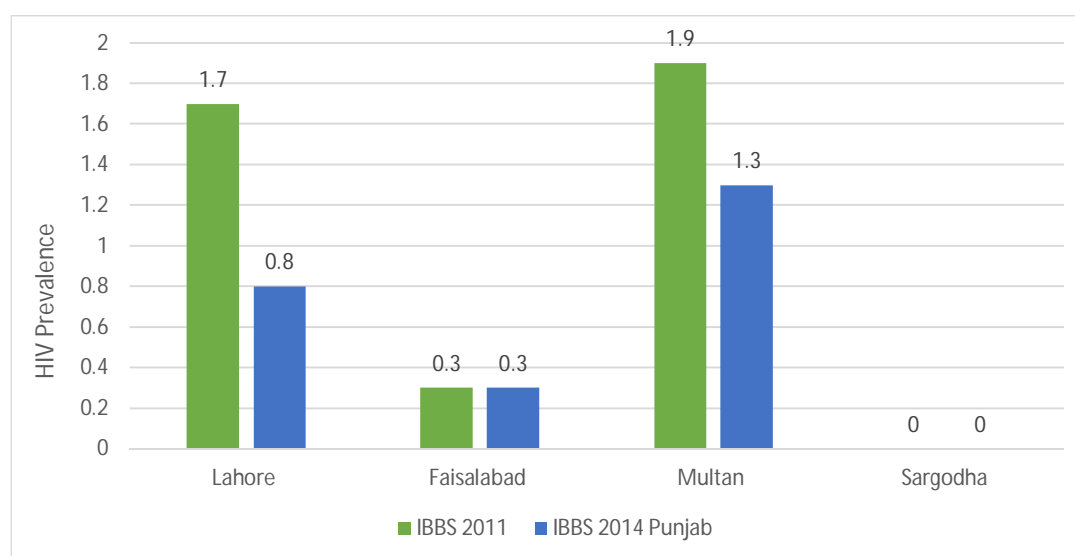
The following table indicates data collected between successive IBBS Rounds (2011 & 2014) for MSWs (Table 41)

Sr.	Indicator	Value	
		IBBS 2011	Punjab IBBS 2014
Socio-Demographic Characteristics			
1	Mean age of study respondents	21.4 years	23.7 years
2	Marital Status	• 83.6 percent	• 75.4 percent
		• 15.5 percent	• 19.8 percent
3	Education Status	• 40.0 percent	• 17.9 percent
		• 21.2 percent	• 22.1 percent
		• 33.3 percent	• 29.5 percent
		• 5.3 percent	• 7.90 percent
4	Living arrangement	• 80.9 percent	• 84.8 percent
		• 3.5 percent	• 10.2 percent
		• 5.1 percent	• 5.80 percent
5	Median Income per month from all source	PKR. 9,000	PKR. 18,000

6	Median Income per month from sex work	PKR. 6,000	PKR. 9,000
Migration and Mobility			
7	Migration from other cities <ul style="list-style-type: none"> Permanent staying Visiting 	<ul style="list-style-type: none"> 13.7 percent 39.7 percent 60.3 percent 	<ul style="list-style-type: none"> 12.7 percent 25.7 percent 74.3 percent
8	Migrated specially for sex work	41.0 percent	24.2 percent
9	Out migration	11.6 percent	17.3 percent
International Travel			
10	<ul style="list-style-type: none"> Ever travelled abroad Involved in sex work 	<ul style="list-style-type: none"> 3.0 percent 79.2 percent 	<ul style="list-style-type: none"> 0.6 percent 77.8 percent
Sexual Risk Behaviours and Practices			
11	Main source of clients <ul style="list-style-type: none"> Pimp/Guru Roaming around Cell phone contacts Clients referrals 	<ul style="list-style-type: none"> 0.8 percent 57.6 percent 30.4 percent 10.8 percent 	<ul style="list-style-type: none"> 1.8 percent 45.7 percent 34.5 percent 17.9 percent
12	Number of clients <ul style="list-style-type: none"> Average clients / day Average clients / month 	<ul style="list-style-type: none"> 2.3 40.0 	<ul style="list-style-type: none"> 3.12 49.5
13	Non-paid partners	43.9 percent	74.2 percent
14	Consistent condom use with <ul style="list-style-type: none"> Paid clients Non-paid clients 	<ul style="list-style-type: none"> 13.0 percent 10.9 percent 	<ul style="list-style-type: none"> 53.5 percent 18.5 percent
15	Paid anyone for anal sex in the past month	4.6 percent	34.6 percent
16	Paid a FSW in the past month	39.5 percent	42.1 percent
17	Alcohol/drug used during sex in the past six months	52.5 percent	26.2 percent
18	Injected drugs in the past 6 months	1.7 percent	0.9 percent
19	Had sex with IDUs in past 6 months	10.1 percent	5 percent
HIV/STIs related Knowledge			
20	Ever heard of HIV and/or AIDS	76.9 percent	78.1 percent
21	Healthy looking can have HIV/AIDS	62.4 percent	61.3 percent
22	HIV transmitted by <ul style="list-style-type: none"> Sexual intercourse Sharp needles/syringes 	<ul style="list-style-type: none"> 94.5 percent 46.2 percent 	<ul style="list-style-type: none"> 61.2 percent 57.5 percent
23	HIV transmission can be prevented by <ul style="list-style-type: none"> Condoms Sexual abstinence Clean syringes/needles 	<ul style="list-style-type: none"> 69.8 percent 70.2 percent 27.3 percent 	<ul style="list-style-type: none"> 70.5 percent 31.1 percent 46.5 percent
24	Self-perception risk of HIV	55.0 percent	62.6 percent

25	Know where to receive HIV test	22.0 percent	89.1 percent
26	Ever test for HIV	17.4 percent	79.1 percent
27	Knew the result	NA	41.5 percent
28	Awareness of STIs	65.9 percent	66.0 percent
29	Self-reported STIs in past 6 months	36.1 percent	26.7 percent
30	Received treatment for STIs	NA	99.3 percent
Service Delivery Program Exposure and utilization			
31	Ever heard of HIV prevention program	12.7 percent	87.7 percent
32	No. of times SDPs services were availed;		
	• More than once in a week	• 5.2 percent	• 26.4 percent
	• Once in a week	• 3.9 percent	• 16.8 percent
	• After two weeks	• 3.4 percent	• 13.6 percent
	• Once in a month	• 28.9 percent	• 10.4 percent
	• Less than once in a month	• 57.8 percent	• 2.50 percent
	• Never	• 0.7 percent	• 22.5 percent
33	Received condoms in past one month	8.8 percent	69.4 percent
HIV prevalence			
34	Overall HIV prevalence		
	• Weighted prevalence	• 3.1 percent	• 0.6 percent
	• Un-weighted prevalence	• 1.6 percent	• 0.5 percent

Table 41. Comparison of IBBS Indicator 2011 and 2014 – Punjab IBBS; 2014



Graph 65. HIV Prevalence, among MSWs by cities (IBBS 2011 & Punjab IBBS 2014)

Key Findings (HSWs)

Hijra Sex Workers / Transgender (TG)

6.0 HIJRA SEX WORKERS (HSWS) / TRANSGENDER (TG)

6.1 Geographical Distribution and Estimates

Two major typologies of hijras are identified in Punjab including 'khusra'; (eunuch; individuals who have been castrated or, rarely, born with a sexual deformity) and 'Zanana' (transgender; a biological male who identifies as a female). Hijra communities are extremely well defined and close-knit groups governed by a 'guru' (literally meaning a teacher or a spiritual leader) who adopts and takes up a hijra as his 'chela'(student) to include in the hijra community. The chela usually lives under supervision of the guru, shares his income with the guru, and overtime becomes a guru himself.

The mapping survey conducted prior to IBBS, estimated, a total number of 13,209 hijra sex workers (HSW) in four cities. In addition to the HSWs the mapping survey also estimated 1,454 gurus in the said cities. The highest number of HSWs were estimated in Faisalabad (38.9 percent, N=5,147), followed by Lahore (32.93 percent, N=4,350) and Multan (21.89, N=2,891) respectively.

City	No. of Gurus	Spots	HB HSW (avg)	DB HSW (avg)	Total HSW (avg)	% HSWs
Lahore	735	591	3,460	890	4,350	32.93%
Faisalabad	381	1,014	4,428	719	5,147	38.97%
Multan	231	356	1,717	1174	2,891	21.89%
Sargodha	107	126	263	588	821	6.22%
TOTAL	1,454	2,087	9,868	3,371	13,209	100.00%

Table 42. Estimated number of HSWs in four cities of Punjab – Punjab Mapping Study, 2014

Two major types i.e., home based HSWs and dera based HSWs were identified, based on the ways in which they operate. Although every hijra is associated with a guru and a dera, nearly 10,426 HSWs were found to live in their homes (most often with families), and only visited deras for socializing with community members and/or sex work. On the other hand a much smaller number of HSWs i.e., 2,783, were living in deras.

The extent of the HSW network was analyzed according to the linkages between HSWs, gurus and deras. Unique among sex workers communities in Punjab, the hijra community is strongly linked in most cities, and each guru knew of several other gurus and HSWs. It was also observed in field work that hijra network is quite strong and connected to each other.

6.2 Integrated Behavioural & Biological Surveillance (IBBS)

In IBBS 1,521 HSWs participated in four cities of Punjab. The citywide, representation remained as follows – Table 43;

City	Study Respondents
Lahore	390
Faisalabad	375
Multan	378
Sargodha	378
TOTAL	1,521

Table 43. Number of Study Participant by City – Punjab IBBS; 2014

6.3 Socio-Demographic Characteristics of HSWs.

The mean age of HSWs interviewed was 26.76 \pm SD7.734 (Median: 25.00) for the 1,521 HSWs interviewed. Approximately 10.5 percent (N=159) of HSWs were aged 15-19 years, while the highest proportion (36.9 percent; N=561) was between the ages of 20-24 years, followed by age group of 25-29 years with a proportion of 27.0 percent (N=410). Overall 74.4 percent (N=1,130) fall below the age of 30 years – Table 43.

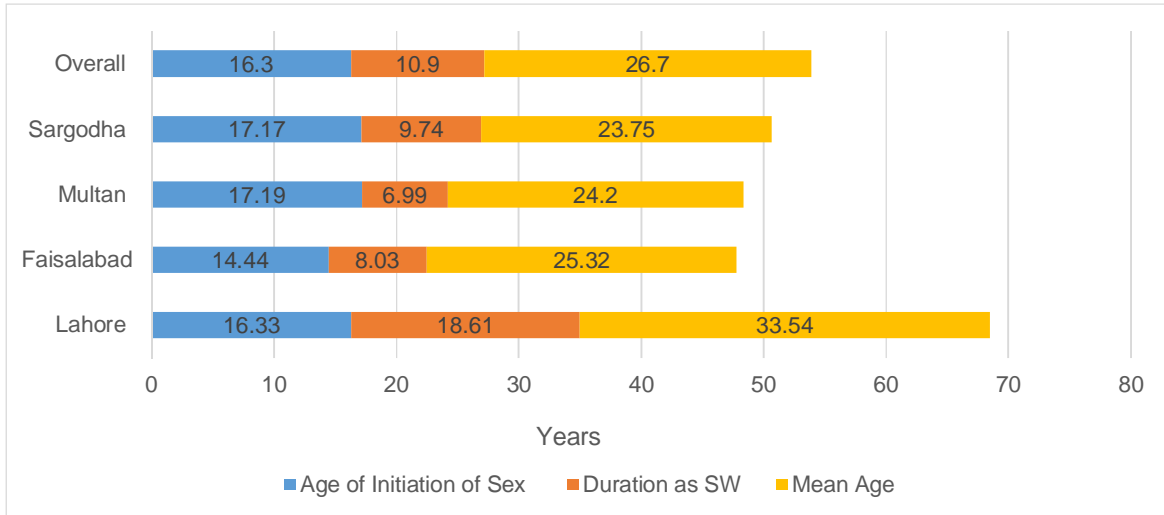
Characteristics	HSWs Percentage
Age	
• 13 – 19 Years	10.5 percent (N=159)
• 20 – 24 Years	36.9 percent (N=561)
• 25 – 29 Years	27.0 percent (N=410)
• 30 – 34 Years	11.9 percent (N=181)
• 35 – 40 Years	7.80 percent (N=118)
• More than 40 Years	6.0 percent (N=92)
• Average Age \pm SD (median) years	26.76 \pm SD7.734 (Median: 25.00)
Marital Status	
• Unmarried	75.0 percent (N=1140)
• Currently married	23.2 percent (N=353)
• Separated	0.80 percent (N=12)
• Divorced	0.80 percent (N=12)
• Widowed	0.30 percent (N=4)
Year of Formal Education	
• Illiterate	31.3 percent (N=476)
• Primary	36.1 percent (N=549)
• Middle	
• Matric	
• Intermediate	

<ul style="list-style-type: none"> • Graduate • Quranic Education 	24.7 percent (N=376)
	6.40 percent (N=98)
	0.70 percent (N=10)
	0.20 percent (N=3)
	0.50 percent (N=8)
Living Arrangement	
<ul style="list-style-type: none"> • Lives at Home • Lives at Dera • Lives Street • Other 	28.0 percent (N=428)
	68.3 percent (N=1039)
	0.20 percent (N=3)
	2.80 percent (N=42)
Living with	
<ul style="list-style-type: none"> • Friends • Family • Lives alone • Sexual Partner 	43.7 percent (N=664)
	27.9 percent (N=425)
	5.10 percent (N=77)
	19.1 percent (N=290)
Income (PKR) (Mean / Median / SD)	
<ul style="list-style-type: none"> • Mean Monthly Income (From all resources) • Mean Monthly Income from Sex work 	PKR: 19,727.09 / 19,000 \pm SD9652.451
	PKR: 11,494.62 / 10,000 \pm SD9018.138

Table 44. Socio-demographic characteristics of HSWs – Punjab IBBS; 2014

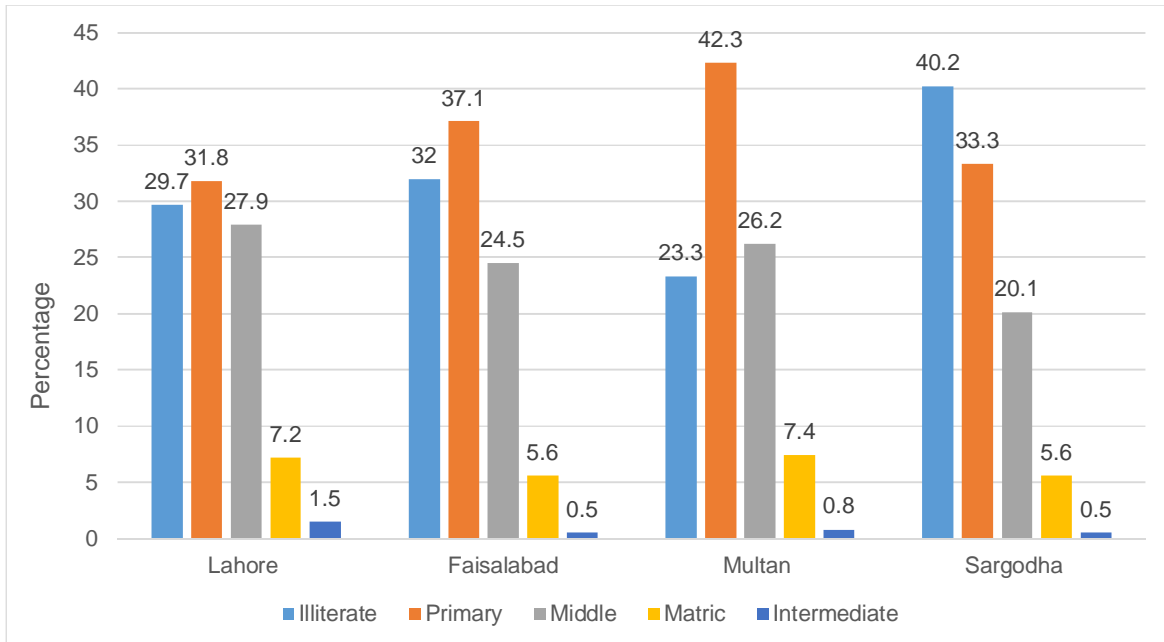
On an average, HSWs started sex work at the age of 16.29 years (\pm SD6.032) and were involved in sex work for approximately 10.91 years (\pm SD13.480), while the mean age of HSWs, by city, ranged between 23.75 (\pm SD4.215) years at Sargodha to 30.6 years at Lahore (33.54 years; \pm SD10.523) – Graph 66.

Age of initiation into sex work was lowest in Faisalabad (mean = 14.44 years; \pm SD1.701), while those in Multan began sex work at a slightly older age (mean = 17.19.years; \pm SD7.369). HSWs in Lahore were involved in sex work for the longest period (mean = 18.61 years; \pm SD14.260), whereas those in Multan were in sex work for a shortest time period (mean = 6.99 years; \pm SD3.407) – Graph 66.



Graph 66. Mean age of initiation, duration and mean age of HSWs by cities – Punjab IBBS; 2014

Majority of HSWs (75.0 percent; N=1,140) were unmarried, while 23.2 percent (N=353) reported to be currently married. Approximately one-quarter (31.3 percent; N=476) of the HSWs were illiterate, while 67.2 percent (N=1,023) had completed between 5 and 10 years of education – Table 44. Illiteracy was highest among HSWs in Sargodha (40.2 percent; N=152) followed by Lahore (29.7 percent; N=116) – Graph 67.



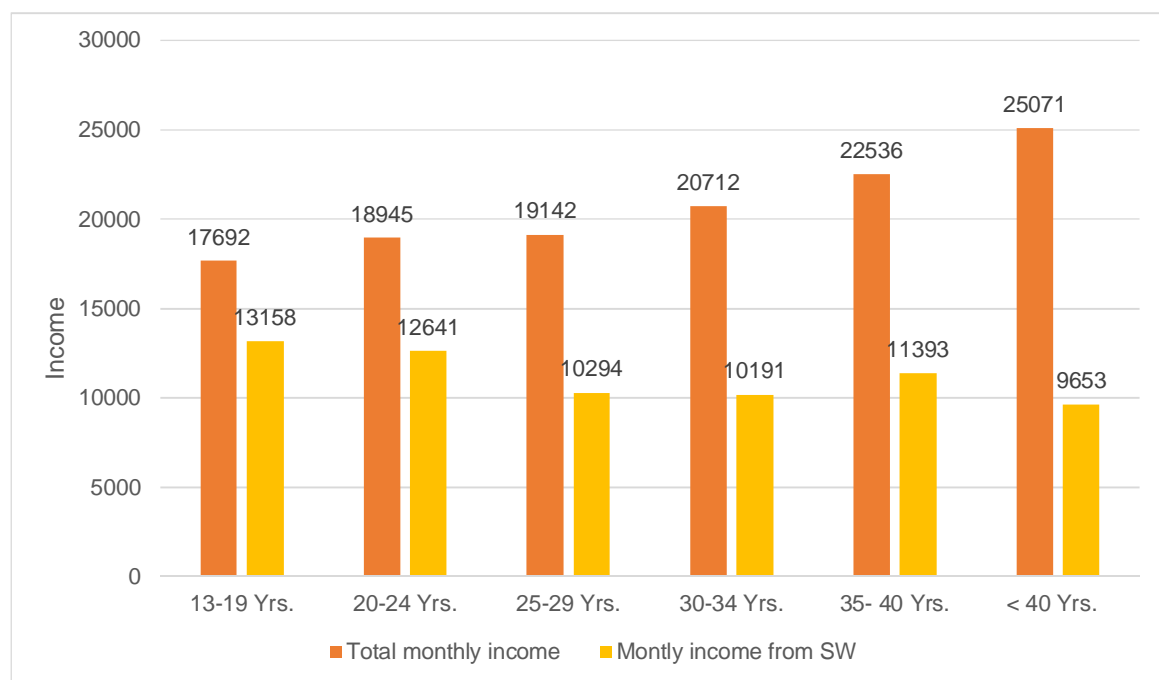
Graph 67. Educational status of the study respondents by cities – Punjab IBBS; 2014

Approximately, 68.3 percent (N=1,039) of HSWs reported living in Deras, another 27.9 percent (N=425) of HSWs lived in their family home – Table 44.

In addition to sex work, approximately 72.8 percent (N=1,108) of HSWs reported an additional source of income; Dancing (37.8 percent; N=572) begging (8.7 percent; N=131), laborer (3.6 percent; N=55) and hotel waiters (2.4 percent; N=36), were most commonly reported occupations.

The median total monthly income was PKR 19,000 (\pm SD9652.451) whereas the median monthly income from sex work alone was approximately PKR 10,000 (\pm SD9018.138) – Table 44. The mean income from sex work peaked at age 13-19 years of age at PKR 13,158 and subsequently decreased with age to PKR 9,635 at 40+ years of age – Graph 68.

Approximately 8.7 percent (N=133) of HSWs had been arrested in the past 6 months and 5.2 percent (N=79) had sold their blood for money in the same time period.



Graph 68. Average total monthly and sex work income by cities – Punjab IBBS; 2014

6.4 Migration and Mortality

Study encompassed a significant proportion of HSWs interviewed did not belong to the city of interview (19.6 percent; N=298), however, of these respondents, approximately 41.9 percent (N=119) planned to permanently live in their new city, and more than one-half (58.9 percent; N=165) reported that they were

visiting for an extended period of time – Table 45. On average, they planned to stay in the city for 3.4 years (\pm SD1.517). Approximately 33.1 percent (N=502) of the migrant HSWs reported to have moved to the city for sex work specifically – Table 45.

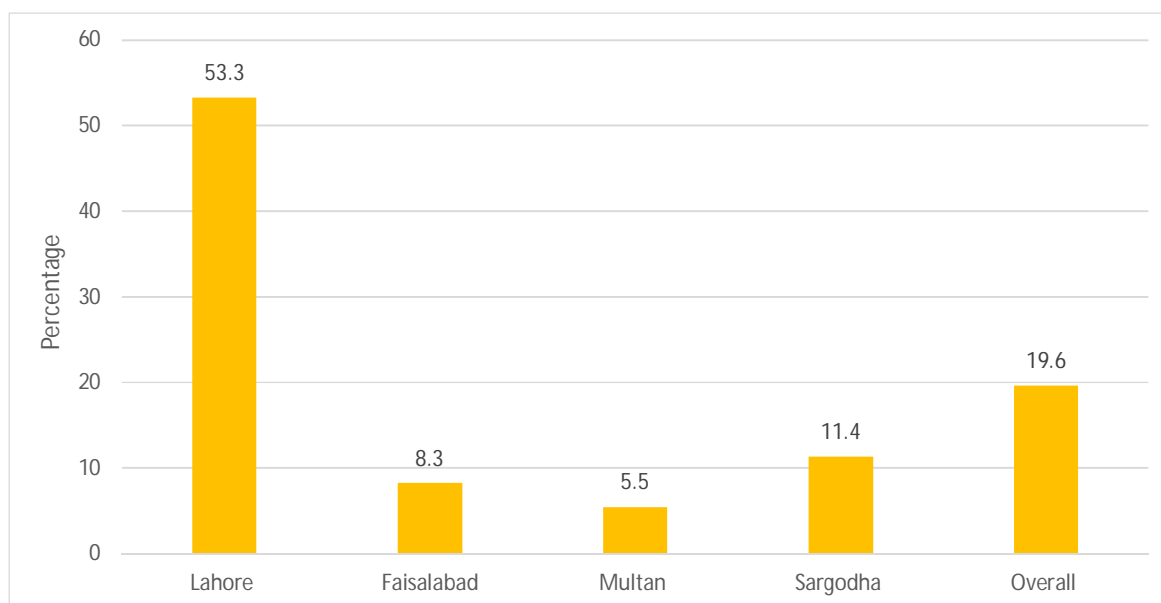
Variable	HSWs Percentage
Migratory Pattern (In Migration) / Domestic	
Migration from other Cities / Towns	19.6 percent (N=298)
<ul style="list-style-type: none"> • Permanently Staying • Visiting 	41.9 percent (N=119)
	58.1 percent (N=165)
Mobility Pattern (Out Migration)	
<ul style="list-style-type: none"> • Travelled to other City in the past 12 months 	33.1 percent (N=502)
Most Common Cities Travelled in past 12 months	
<ul style="list-style-type: none"> • Lahore • Murree • Rawalpindi • Khushab • Islamabad • Karachi 	14.3 percent (N=72)
	13.9 percent (N=70)
	8.50 percent (N=43)
	7.10 percent (N=36)
	6.70 percent (N=34)
	3.20 percent (N=16)
International Travel	
<ul style="list-style-type: none"> • Ever Travelled Abroad • Involved in Sex Work 	0.70 percent (N=10)
	60.0 percent (N=6)

Table 45. Migratory Pattern for HSWs – Punjab IBBS; 2014

The most common destination cities for migrant HSWs, were reported as; Lahore (14.3 percent; N=72) followed by Murree (13.9 percent; N=70), Rawalpindi (8.50 percent; N=43 and Khushab (7.1 percent; N=36) – Table 45.

While, approximately, 0.7 percent (N=10) reported they had ever travelled abroad; among those who travelled abroad, 60.0 percent (N=6) of the total study respondents, were involved in sex work – Table 45.

Large city recorded the highest number of migrant (14.3 percent; N=72), while the Multan reported, the lowest numbers (5.5 percent; N=14) – Graph 69.



Graph 69. Proportion of Migrants HSWs by cities – Punjab IBBS; 2014

6.5 Risk Behaviours and Sexual Practices

6.5.1 Sexual Partners

Prominent source to contact clients remained; 41.6 percent (N=632) got their clients through pimps or gurus; followed by roaming around (23.1 percent; N=350) and 22.4 percent (N=340) HSWs relied on personal cell phones to contact clients.

A higher proportion of HSWs rely on gurus for clients, reflecting their dependency on their guru for sexual partnering, remained a significant feature of dynamics sex work, among HSWs in Punjab – Table 46.

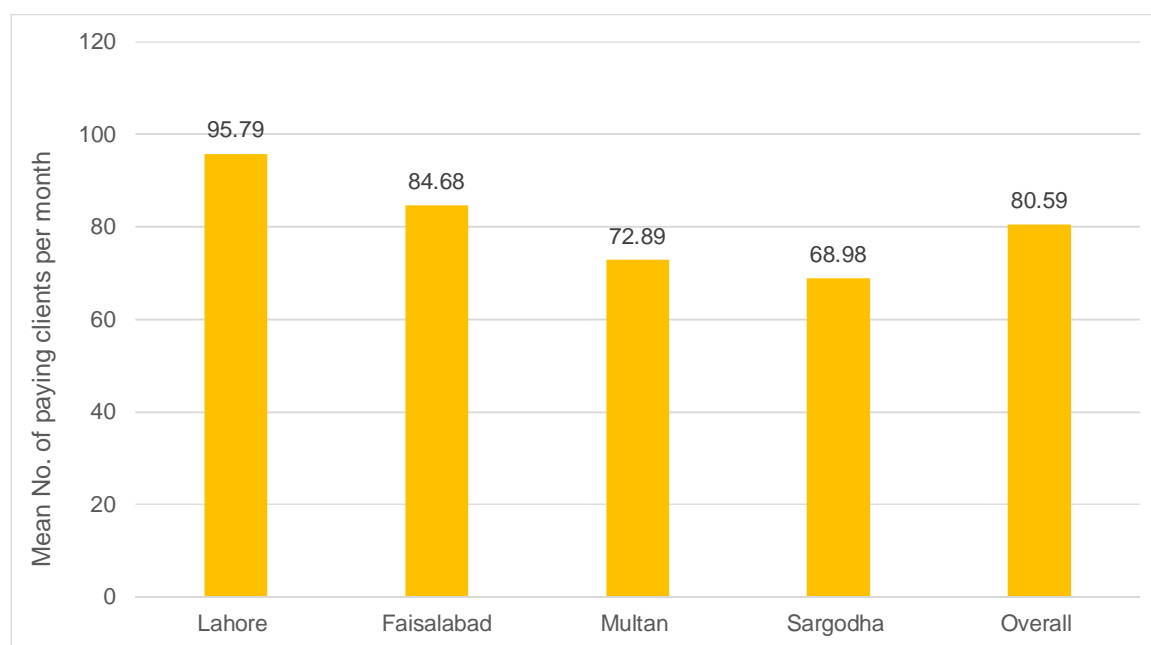
Behaviour / Practice	HSWs Percentage
Main Source of Clients	
• Pimp / Guru	41.6 percent (N=632)
• Roaming Around	23.1 percent (N=350)
• Cell Phone contact	22.4 percent (N=340)
• Client referral	11.7 percent (N=178)
• Other sources	1.20 percent (N=17)
Number of Clients	
• Average Client per day (Median \pm SD)	5.56 (2.00 \pm SD38.214)
• Average Client per month (Median \pm SD)	80.59 (45.00 \pm SD177.806)
Non paid partners	

• At least one partner last month	31.7 percent (N=481)
Consistent Condom Use	
• Paid Clients	58.5 percent (N=890)
• Non Paid Partners	17.1 percent (N=260)
Condom use during last anal sex	66.35 percent (N=1,009)
Lubricant use during last anal sex	3.9 percent (N=59)
Alcohol / Drug used during sex in past 6 months	43.9 percent (N=667)
Injected drugs in past 6 months	2.10 percent (N=32)
Had sex with IDUs in past six months	9.0 percent (N=136)

Table 46. Sexual behaviours and practices of HSWs – Punjab IBBS; 2014

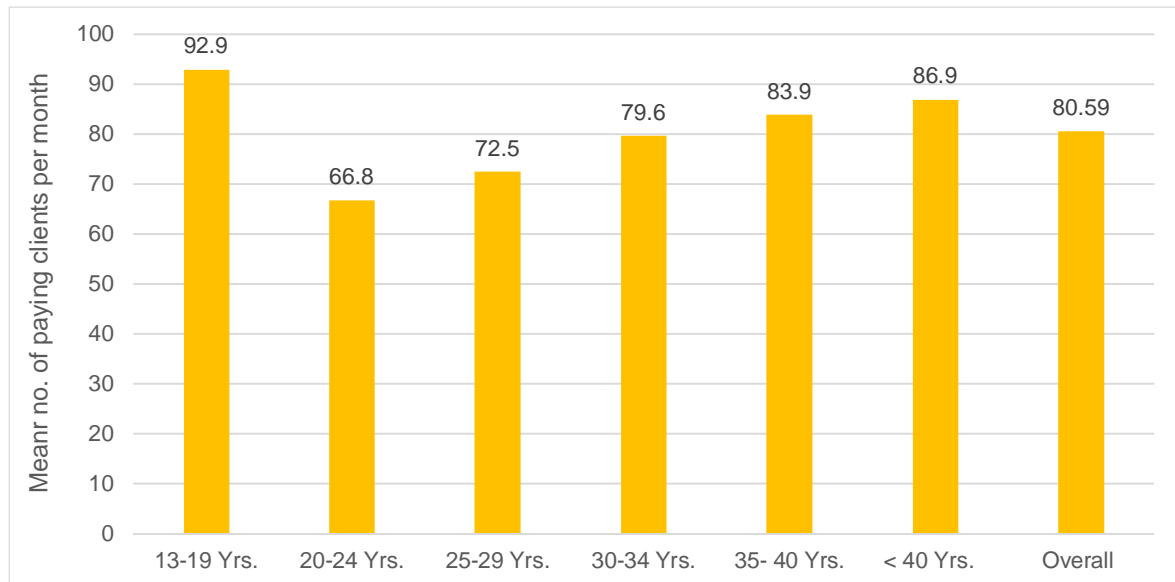
HSWs, on an average, entertained 5.56 clients per day ($2.00 \pm SD 38.214$) and 80.59 clients per month ($45.00 \pm SD 177.806$), while approximately 31.7 percent (N=481) of HSWs also reported having at least one regular, non-paying partner in the past month – Table 46.

The volume of paying clients, however, varied across cities, ranging from a mean of 68.9 clients per month in Sargodha, to 95.7 clients per month in Lahore – Graph 70.



Graph 70. Mean number of paying clients in the past month by cities – Punjab IBBS; 2014

Mean number of was reported at peak in the age group of 13 -19 years (92.9 paying clients per months), followed by age bracket of <40 years (86.9 paying clients per month), however the lowest number of paying clients (66.8 per month) were recorded in the age group of 20 – 24 year – Graph 71.

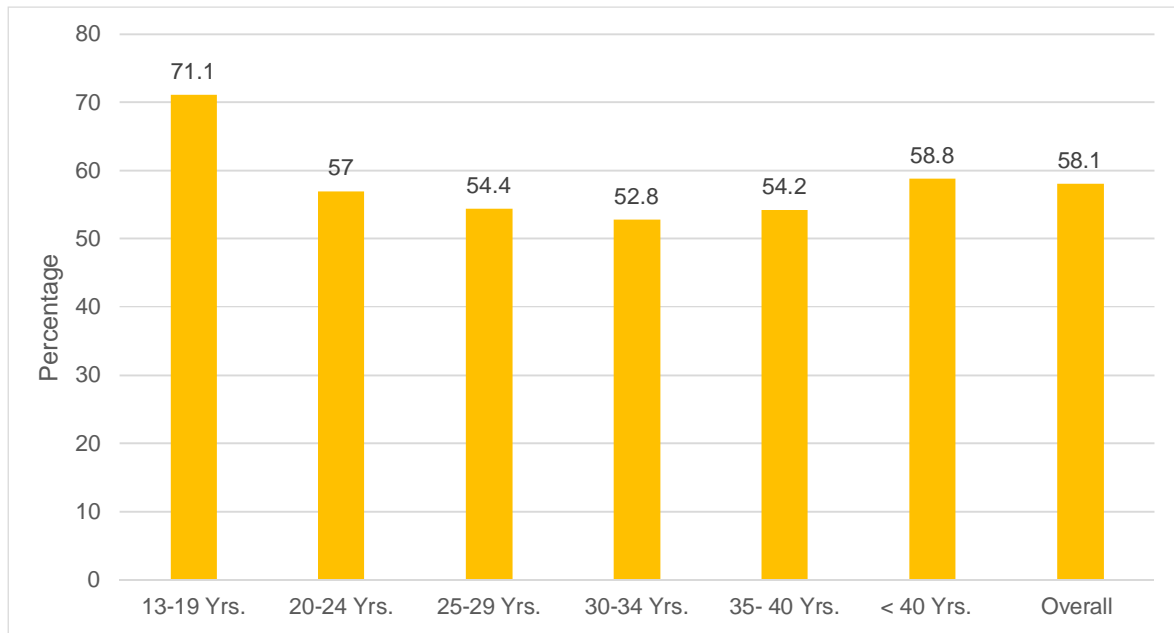


Graph 71. Mean number of paying clients, in the past month, by age groups – Punjab IBBS; 2014

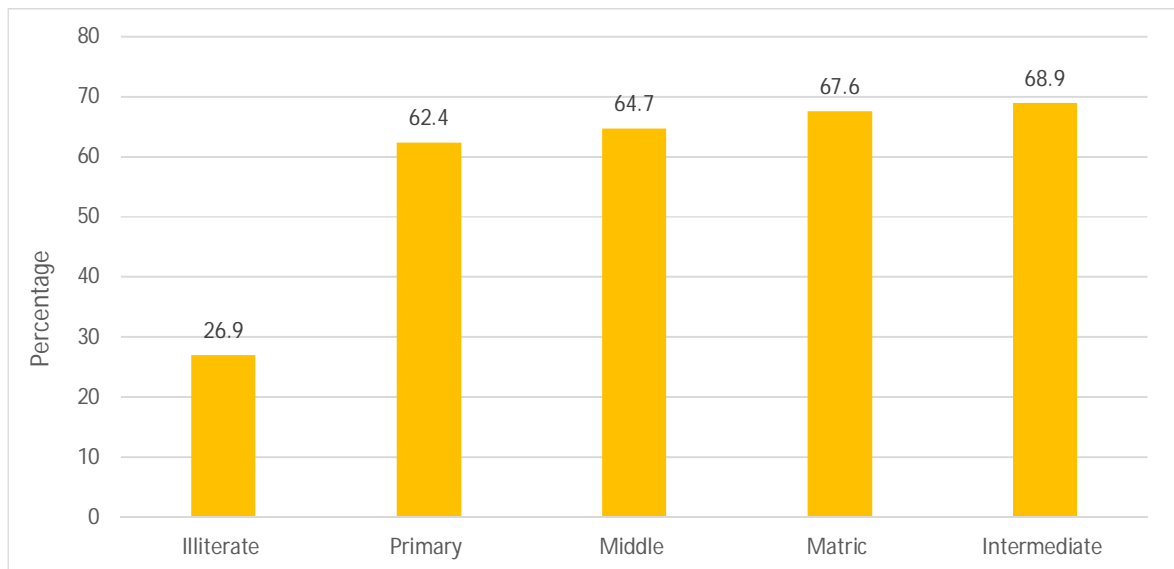
6.5.2 Condom Use

Consistent use of condom was recorded was significantly improved as compared to previous round (IBBS 2011) – Table 51; as 58.5 percent (N=890) of HSWs reported that they always used a condom with paid clients in the past month; however the proportion was even lower with regular non-paying partners at 17.1 percent (N=260) – Table 45 & Graph 72. Partners' objection (40.0 percent; N=608), did not like condom (14.7 percent; N=224), did not think that it was necessary (9.0 percent; N=137) and do not think of them (4.3 percent; N=137), were among the major reasons cited by those not using condom.

No statistically significant difference in consistent condom use with clients was observed between different age groups; yet a strong association between consistent condom use and education was quite evident – Graph 72 & 73.

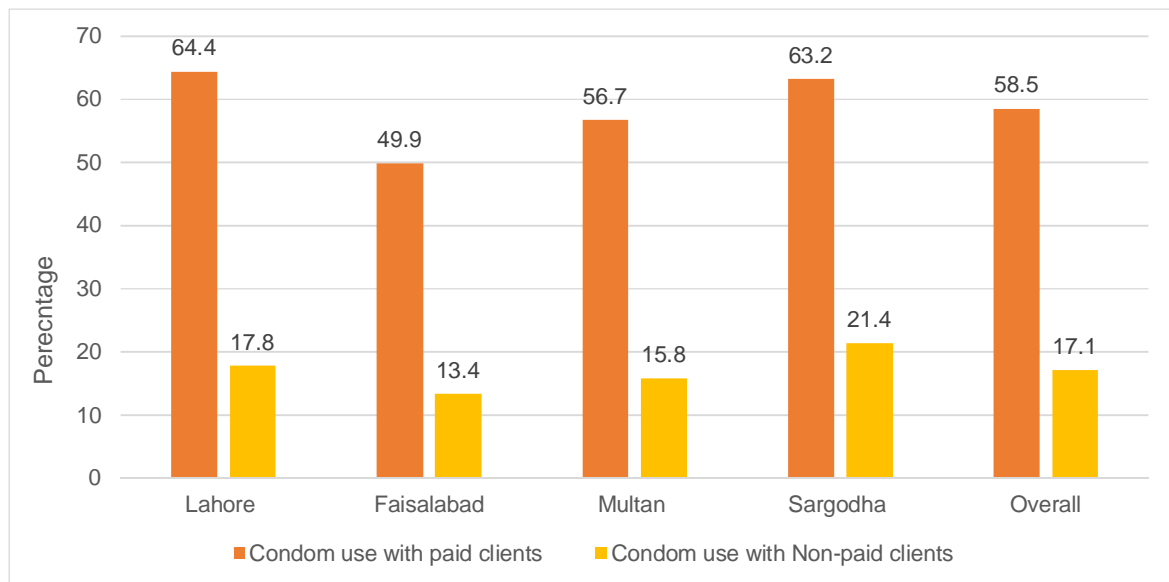


Graph 72. Consistent condom use among HSWs by Age groups – Punjab IBBS; 2014



Graph 73. Proportion of HSWs consistently using condoms with the clients, in the past month by education – Punjab IBBS; 2014

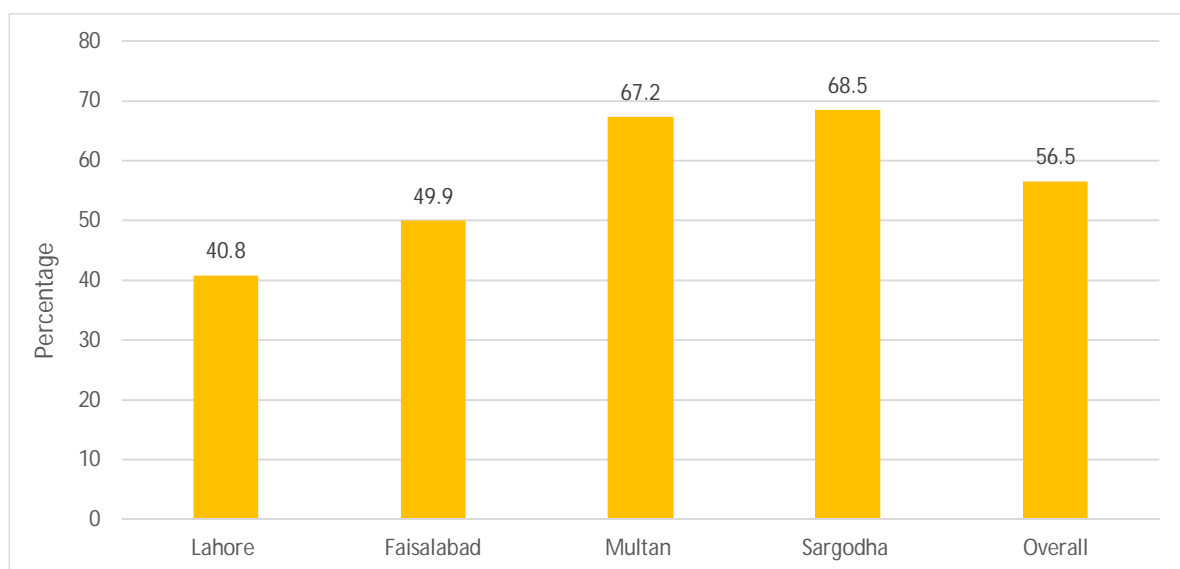
Consistent condom use varied considerably across cities, with the highest proportion of consistent condom use reported among HSWs in Lahore (64.4; N=980), and the lowest in Faisalabad (49.9 percent; N=759). Across all cities, consistent condom use was higher with paying clients compared to regular (non-paid) partners – Graph 74.



Graph 74. Consistent condom use among HSWs by cities – Punjab IBBS; 2014

HSWs 'carrying a condom' at the time of interview, was recorded as 56.5 percent (N=859), with the highest proportion of HSWs carrying a condom was in Sargodha (68.5 percent; N=259) followed by Multan (67.2 percent; N=254), while the lowest was in Lahore (40.8 percent; N=159), Graph 75.

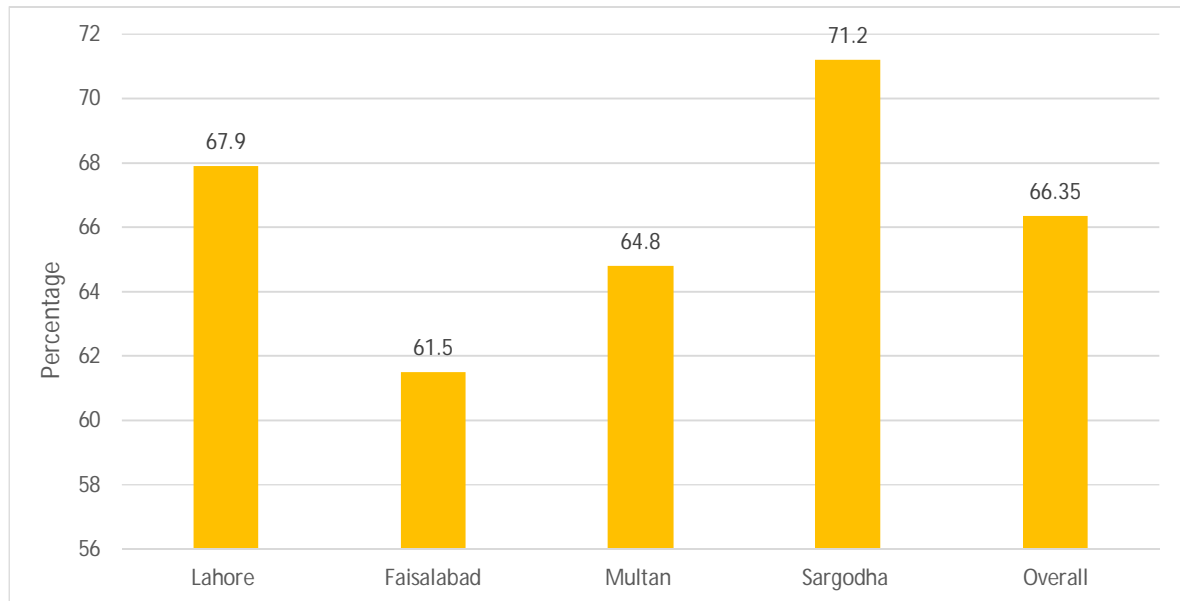
The proportion of study respondents carrying a condom was in accordance with the proportion reporting their use, while the condom carriage as a proxy for 'condom practice' might bias the results as it is heavily dependent on the place of interview.



Graph 75. Proportion of HSWs carrying a condom, at the time of study – Punjab IBBS; 2014

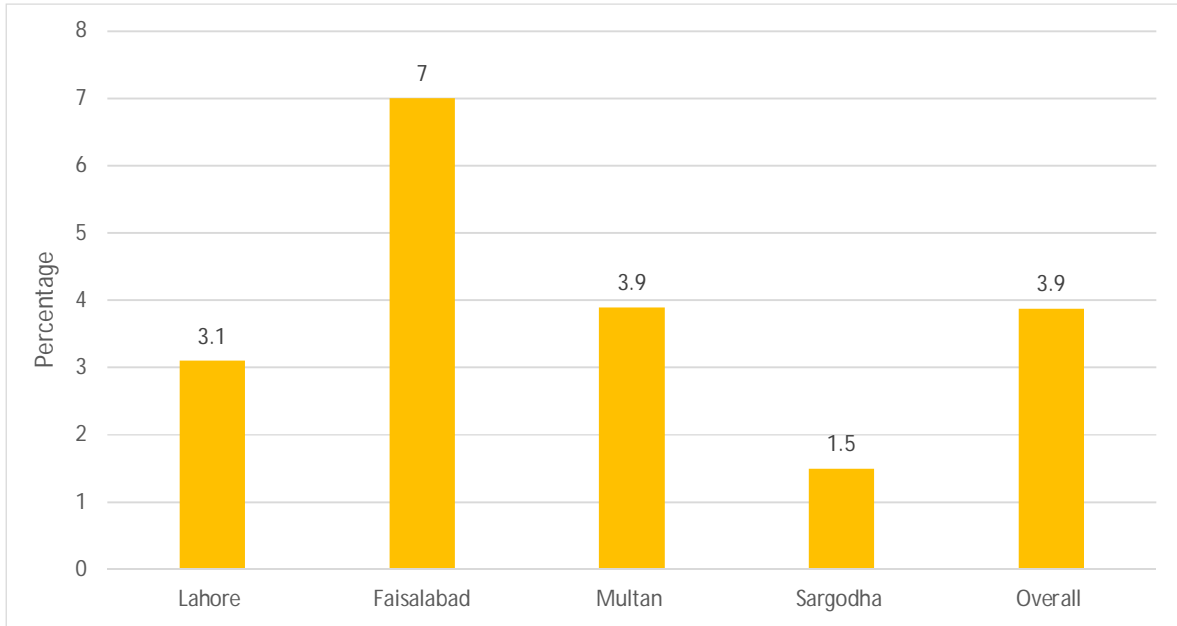
Condom use at the last anal sex was recorded significantly higher; approximately 66.35 percent (N=1,009) of HSWs reported using condom during the last anal sex – Table 46.

HSWs from Sargodha (71.2 percent; N=269) reported highest condom use at the last anal encounter, while Faisalabad (61.5 percent; N=230) reported lowest use – Graph 76.



Graph 76. Proportion of HSWs using condom during last anal sex by cities – Punjab IBBS; 2014

Lubricant use during the last anal sex remained quite low, as approximately 3.9 percent (N=59) of all HSWs reported using lubricants during last anal sex – Table 46. The highest proportion of lubricant use was reported among HSWs in Faisalabad (7; N=106), while the lowest (1.5 percent; N=23) was reported from Sargodha – Graph 77.

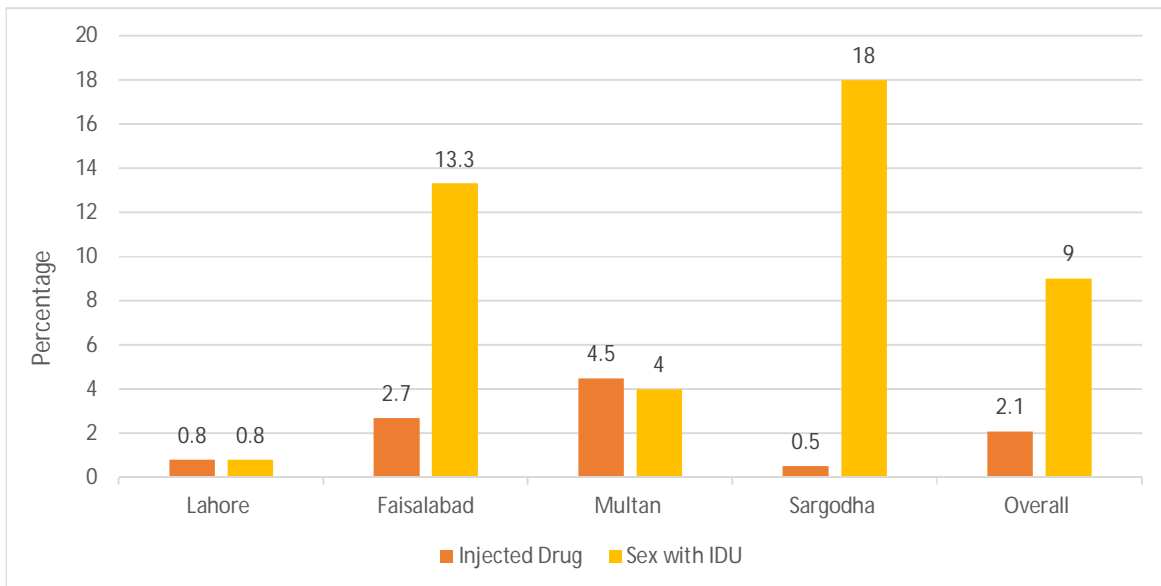


Graph 77. Proportion of HSWs using lubricant during last anal sex by cities – Punjab IBBS; 2014

6.6 Injection Drug Use among HSWs

Sex with an IDU, in the past six months was reported in 9.0 percent of HSWs (N=136), whereas 2.1 percent of HSWs (N=32) reported that they had been injecting drugs in the same time period Table 46.

The proportion of HSWs reporting injecting drug use was highest in Multan (4.5 percent; N=17) whereas reported sex with an IDU was highest in Sargodha (18.0 percent; N=68) – Graph 78.



Graph 78. Injecting drug use and having sex with an IDU, by cities – Punjab IBBS; 2014

Alcohol and/or drugs during sexual intercourse, in the past six months, was reported by 43.9 percent (N=667) of HSWs – Table 46.

6.7 HIV/AIDS and STIs related knowledge

A vast majority of study respondents (82.9 of HSWs; 1,260), had heard of HIV and/or AIDS; while among those individuals who had heard of HIV/AIDS, 82.6 percent (N=1,041) believed that a healthy looking person can have the disease, another 75.3 percent (N=1,145) were aware that HIV can be transmitted by sexual intercourse and 66.9 percent (N=1,018) knew that HIV can be transmitted through a sharp instrument/syringe – Table 47.

Those with knowledge about HIV/AIDS, 75.3 percent (N=1,145) were aware that condoms can prevent HIV transmission, 60.1 percent (N=914) knew that abstinence from sex could prevent HIV transmission and 52.9 percent (N=804) were aware that the use of clean needles were important in preventing HIV transmission – Table 47.

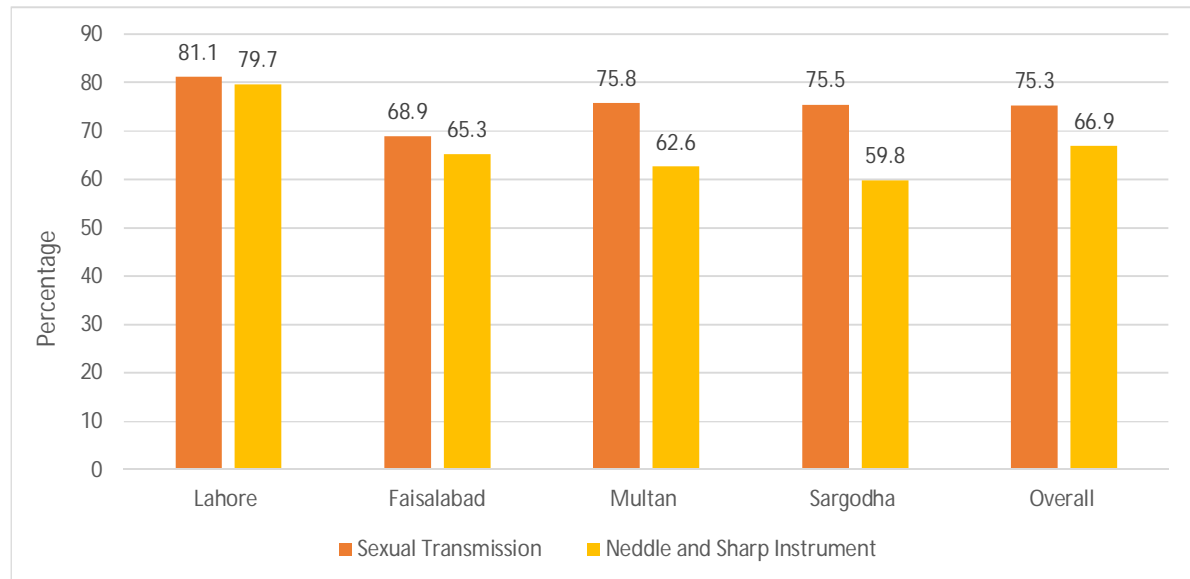
Knowledge Area	HSWs Percentage
Knowledge of HIV and /or AIDS	
Ever heard of HIV and/or AIDS	82.9 percent (N=1,260)
• Health looking person can have HIV/AIDS*	82.6 percent (N=1,041)
• HIV transmitted by sexual intercourse*	75.3 percent (N=1,145)
• HIV transmitted by sharp instrument/needle*	75.3 percent (N=1,145)
• HIV transmitted by blood transfusion*	66.9 percent (N=1,018)
• Condoms can prevent HIV Transmission*	66.9 percent (N=1,018)
• Sexual abstinence to prevent HIV transmission*	66.9 percent (N=1,018)
• Clean needle/syringes can prevent HIV transmission*	56.4 percent (N=858)
• Self-perception of risk for HIV*	56.4 percent (N=858)
• Know where to receive HIV test*	75.3 percent (N=1,145)
• Ever tested for HIV*	75.3 percent (N=1,145)
• Knows test result*	60.1 percent (N=914)
	52.9 percent (N=804)
	64.5 percent (N=813)
	89.7 percent (N=1,132)
	74.5 percent (N=940)
	85.3 percent (N=802)
Sexually Transmitted Infections	
• Aware of sexually transmitted infections (STIs)	79.5 percent (N=1,208)
• Self-reported of STIs, in past 6 months	23.8 percent (N=288)
• Received treatment for reported STIs	23.8 percent (N=288)

96.8 percent (N=279)

Positive response to initiate question.

Table 47. HIV & STIs related knowledge among HSWs – Punjab IBBS; 2014

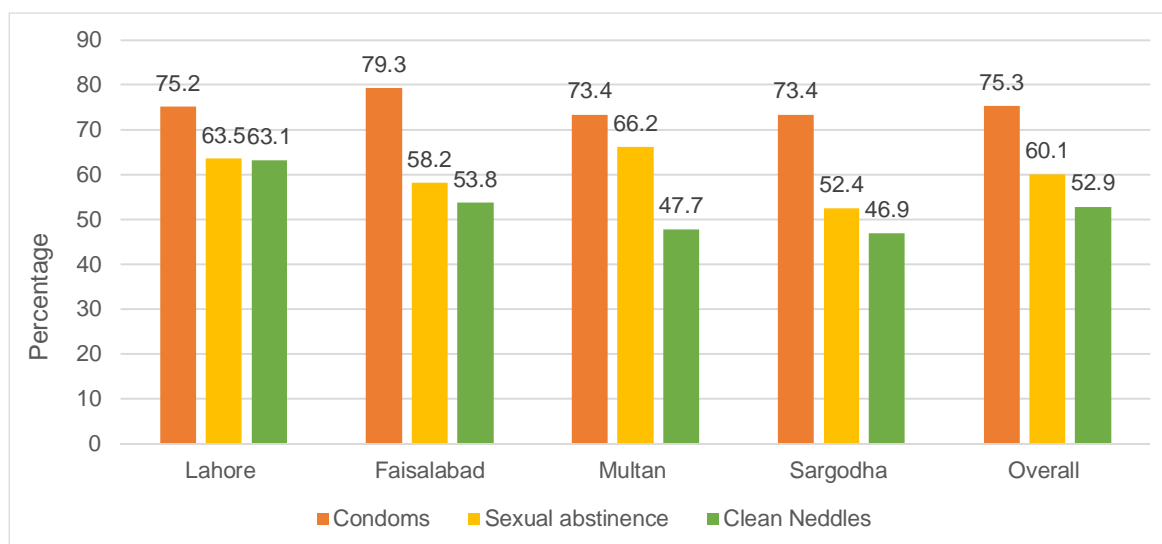
Micro analysis regarding knowledge about HIV transmission by city showed that a considerably high proportion of HSWs in all cities were aware about 'sexual transmission of HIV', while the knowledge of HIV transmission through sharp needle/syringe was also recorded high across the cities – Graph 79.



Graph 79 Knowledge of mode of HIV transmission among HSWs, who have heard of HIV and/ or AIDS by cities – Punjab IBBS; 2014

A considerable high proportion of HSWs knew of condoms, sexual abstinence and use of sterile needles as modes of HIV prevention, as protection – Graph 80.

Knowledge about clean needles as a preventive measure for HIV transmission was slightly lower among the cities surveyed, as compared to condoms and sexual abstinence – Graph 77.



Graph 80. Knowledge of HIV preventive measures, among HSWs, who have heard of HIV and/or AIDS by cities – Punjab IBBS; 2014

89.7 percent (N=1,132) of HSWs knew where to go to access HIV testing, while 74.5 percent (N=940) of HSWs had ever been tested for HIV and out of those tested 85.3 percent; (N=802) knew HIV Test result. 64.5 (N=813) reported feeling at risk for HIV infection – Table 47.

Slightly more than three quarters (79.4 percent; N=1,208) of the HSWs were aware of sexually transmitted infections (STIs); while 23.6 percent (N=288) reported being diagnosed with an STI in the past six months and 96.8 percent (N=279) of those diagnosed, reported having received treatment for STIs – Table 47.

6.8 Service Delivery Exposure and Utilization

Knowledge about existence of HIV prevention programs (SDPs) in their city, was expressed by 86.5 percent (N=1,316) of HSWs, while fewer study respondents (1.7 percent; N=18) of these HSWs never utilized these services; while among those HSWs who utilized the SDP services, almost 35.1 percent; (N=378) used the services once a month – Table 48.

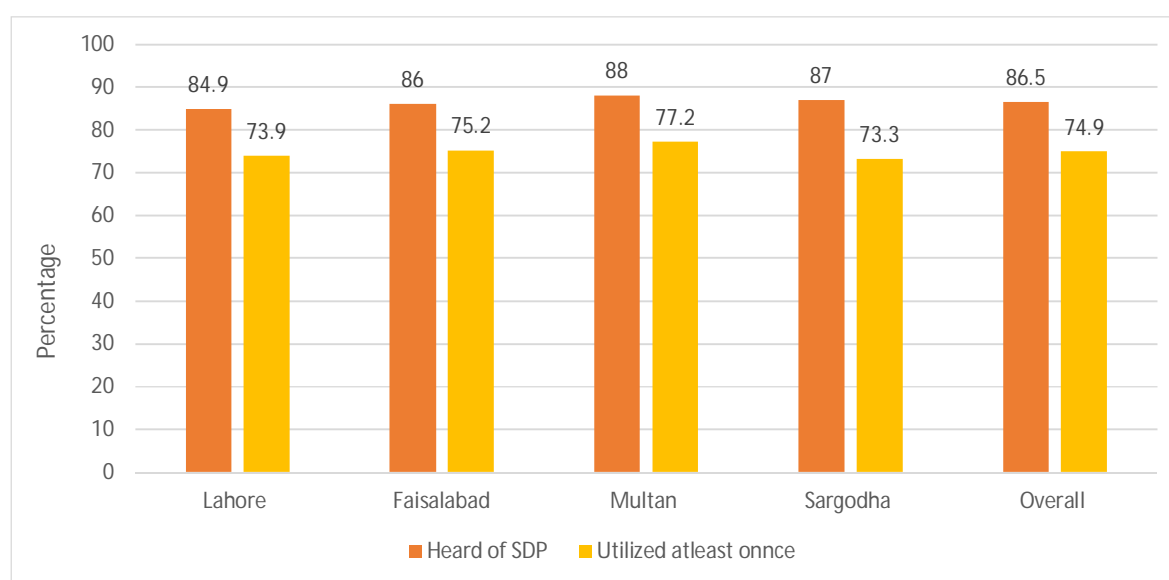
Knowledge Area	HSWs Percentage
Ever heard of HIV prevention programs	86.5 percent (N=1,316)
Number of times SDP* services were availed	
<ul style="list-style-type: none"> • More than once a week • Once in a week • After two weeks • Once in a month • Less than once a month • Never 	<p>20.7 percent (N=223)</p> <p>21.7 percent (N=234)</p> <p>15.9 percent (N=171)</p>

	35.1 percent (N=378)
	5.0 percent (N=54)
	1.7 percent (N=18)
Received free condom in past 12 month	73.2 percent (N=1,113)

*Service Delivery Program

Table 48. Knowledge and Utilization of Preventive Programs among HSWs – Punjab IBBS; 2014

Further data analysis, related to ‘awareness of SDPs & utilization’, among HSWs across the different cities, indicated knowledge & utilization, recorded over 70 percent, among all the cities surveyed – Graph 81.



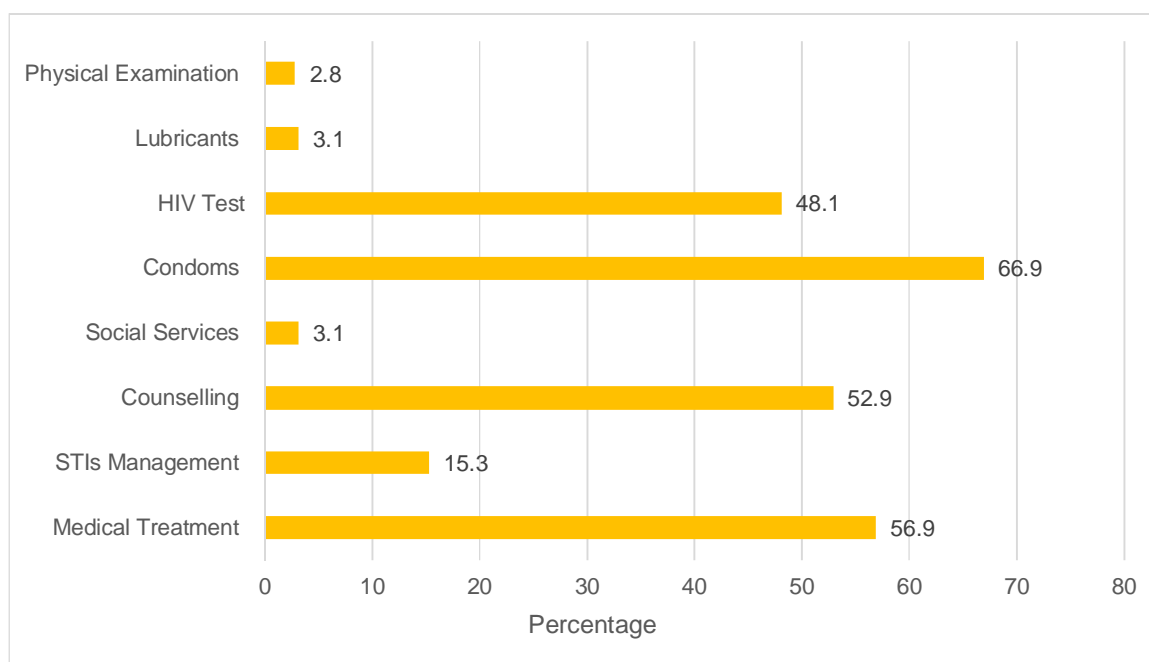
Graph 81. Knowledge and utilization of HIV prevention programs among HSWs, by cities

Regarding utilization of various services by HSWs in the past six months, indicated; obtaining condoms from the SDP was as the most utilized service (66.9 percent; N=1,018), followed by obtaining medications (56.9 percent; N=865), and counselling (52.9 percent; N=805) – Table 49 & Graph 82.

Services	HSWs Percentage
Medical Treatment	56.9 percent (N=865)
STIs Management	15.3 percent (N=232)
Counselling	52.9 percent (N=805)
Social Services	3.10 percent (N=47)
Condoms	66.9 percent (N=1018)

HIV Test	48.1 percent (N=732)
Lubricants	3.10 percent (N=47)
Physical Examination	2.80 percent (N=42)

Table 49. HIV Prevention Programs utilization, among HSWs, by services – Punjab IBBS; 2014



Graph 82. HIV Prevention Programs utilization, among HSWs, by services – Punjab IBBS; 2014

Drugs	HSWs Percentage			
	Lahore	Faisalabad	Multan	Sargodha
Medical Treatment	37.9 percent	69.3 percent	62.4 percent	58.5 percent
STIs Management	12.8 percent	5.10 percent	38.6 percent	4.50 percent
Counselling	67.9 percent	53.7 percent	43.8 percent	46.1 percent
Social Services	0.00 percent	10.4 percent	1.30 percent	0.80 percent
Condoms	47.4 percent	74.1 percent	75.1 percent	71.7 percent
HIV Test	32.1 percent	40.0 percent	75.1 percent	45.8 percent
Lubricants	4.70 percent	2.90 percent	0.50 percent	0.30 percent
Physical Examination	3.10 percent	6.40 percent	1.60 percent	0.00 percent

Table 50. HIV Prevention Programs, utilization, among HSWs, by cities – Punjab IBBS; 2014

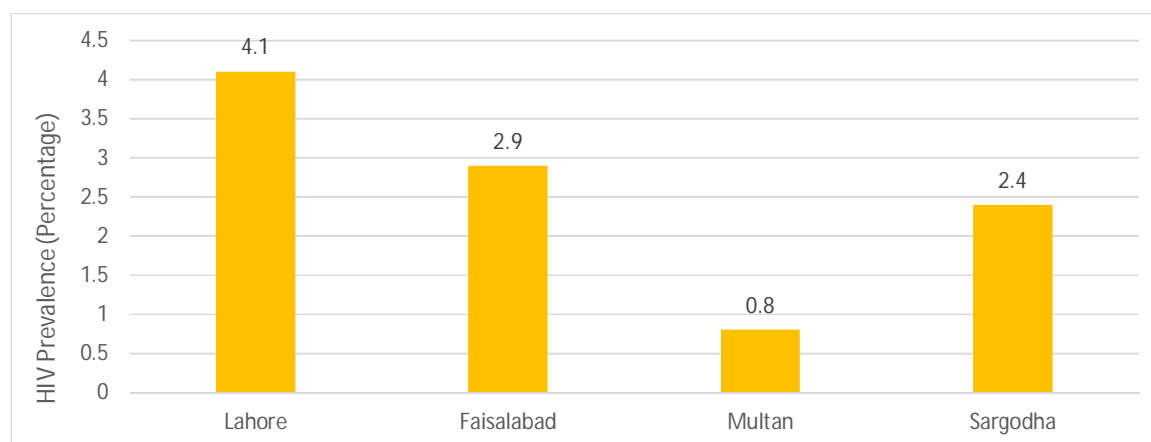
6.9 HIV Prevalence

Among 1,521 HSWs who were tested for HIV the overall weighted HIV prevalence was recoded as 3.1 percent; while un-weighted HIV prevalence was recoded as 2.6 percent, with the highest prevalence

reported in Lahore (4.1 percent; N=16) followed by Faisalabad (2.9 percent; N=11) and Sargodha (2.4 percent; N=9); all other cities had less than 5% prevalence – Table 51 & Graph 83 & 84.

City	Tested	Positive	Prevalence (95% CI)
Lahore	390	16	4.10 percent (2.13; 6.08)
Faisalabad	375	11	2.90 percent (1.22; 4.65)
Multan	375	3	0.80 percent (-1.0; 1.69)
Sargodha	378	9	2.40 percent (0.84; 3.92)
Overall Prevalence			2.60 percent

Table 51. HIV prevalence among HSWs, by cities – Punjab IBBS; 2014



Graph 83. HIV prevalence among HSWs, by cities – Punjab IBBS; 2014

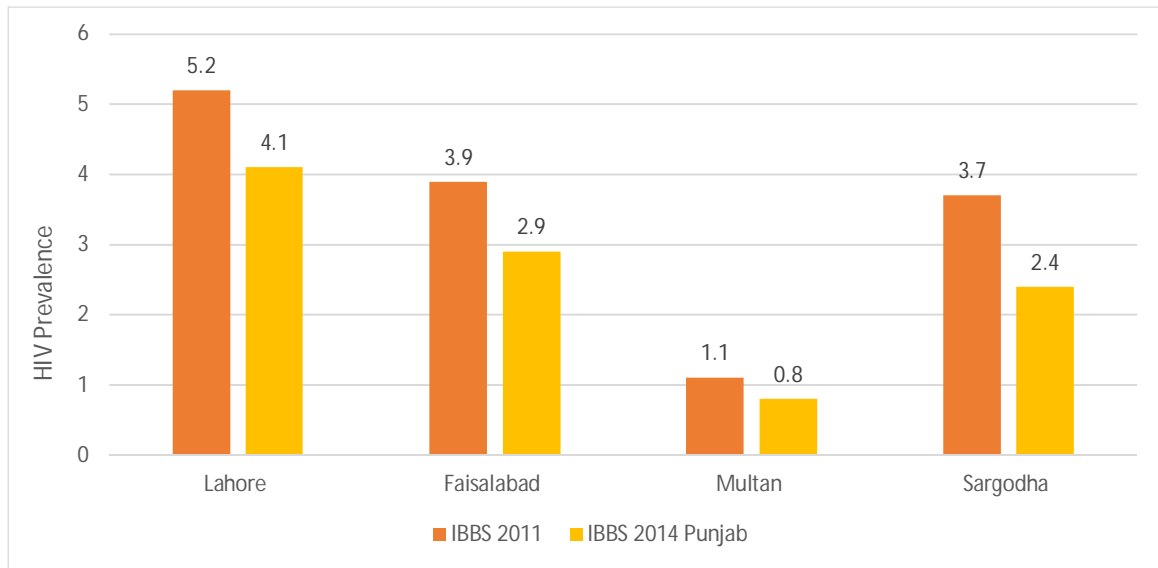
The following table indicates data collected between successive IBBS Rounds (2011 & 2014) for HSWs (Table 52)

Sr.	Indicator	Value	
		IBBS 2011	Punjab IBBS 2014
Socio-Demographic Characteristics			
1	Mean age of study respondents	27.6 years	26.7 years
2	Marital Status <ul style="list-style-type: none"> Unmarried Married 	<ul style="list-style-type: none"> 85.1 percent 13.0 percent 	<ul style="list-style-type: none"> 75 percent 23.2 percent
3	Education Status <ul style="list-style-type: none"> Illiterate Primary Middle Intermediate 	<ul style="list-style-type: none"> 42.4 percent 27.2 percent 26.3 percent 3.9 percent 	<ul style="list-style-type: none"> 31.3 percent 36.1 percent 24.7 percent 0.7 percent
4	Living arrangement <ul style="list-style-type: none"> Living at Dera 	<ul style="list-style-type: none"> 70.6 percent 	<ul style="list-style-type: none"> 68.3 percent

	<ul style="list-style-type: none"> Living at home 	<ul style="list-style-type: none"> 29.1 percent 	<ul style="list-style-type: none"> 28 percent
5	Living with <ul style="list-style-type: none"> Friends Family Alone Sexual partner 	<ul style="list-style-type: none"> 24.5 percent 30.4 percent 12.3 percent 15.7 percent 	<ul style="list-style-type: none"> 43.7 percent 27.9 percent 5.1 percent 19.1 percent
6	Other source of income	68.2 percent	79.2 percent
7	Median Income per month from all source	PKR. 12,000	PKR. 19,000
8	Median Income per month from sex work	PKR. 7,000	PKR. 10,000
Migration and Mobility			
9	Migration from other cities <ul style="list-style-type: none"> Permanent staying Visiting 	<ul style="list-style-type: none"> 22.7 percent 40.7 percent 59.3 percent 	<ul style="list-style-type: none"> 19.6 percent 41.9 percent 58.1 percent
10	Migrated specially for sex work	51.8 percent	33.0 percent
11	Out migration	25.8 percent	33.1 percent
International Travel			
12	Ever travelled abroad Involved in sex work	<ul style="list-style-type: none"> 3.2 percent 62.0 percent 	<ul style="list-style-type: none"> 0.7 percent 60 percent
Sexual Risk Behaviours and Practices			
13	Main source of clients <ul style="list-style-type: none"> Pimp/Guru Roaming around Cell phone contacts Clients referrals 	<ul style="list-style-type: none"> 10.7 percent 38.0 percent 44.4 percent 6.5 percent 	<ul style="list-style-type: none"> 41.6 percent 23.1 percent 22.4 percent 11.7 percent
14	Number of clients <ul style="list-style-type: none"> Average clients / day Average clients / month 	<ul style="list-style-type: none"> 2.2 40.0 	<ul style="list-style-type: none"> 5.56 80.5
15	Non-paid partners	40.1 percent	31.7 percent
16	Consistent condom use with <ul style="list-style-type: none"> Paid clients Non-paid clients 	<ul style="list-style-type: none"> 23.6 percent 18.1 percent 	<ul style="list-style-type: none"> 58.5 percent 17.1 percent
17	Condom use during the last anal sex	30.2 percent	66.35 percent
18	Lubricant use during the anal sex	66.5 percent	3.90 percent
19	Alcohol / drug use during sex in past 6 months	55.3 percent	43.9 percent
20	Had sex with IDUs in past 6 months	10.1 percent	2.1 percent
21	Injected drugs in past 6 months	3.4 percent	9 percent
HIV/STIs related Knowledge			
22	Ever heard of HIV and/or AIDS	90.9 percent	82.9 percent
23	Healthy looking can have HIV/AIDS	65.9 percent	82.6 percent
24	HIV transmitted by		

	<ul style="list-style-type: none"> Sexual intercourse Sharp needles/syringes 	<ul style="list-style-type: none"> 94.5 percent 34.3 percent 	<ul style="list-style-type: none"> 75.3 percent 66.9 percent
25	HIV transmission can be prevented by <ul style="list-style-type: none"> Condoms Sexual abstinence Clean syringes/needles 	<ul style="list-style-type: none"> 72.7 percent 54.6 percent 20.6 percent 	<ul style="list-style-type: none"> 75.3 percent 60.1 percent 52.9 percent
26	Self-perception risk of HIV	55.6 percent	64.5 percent
27	Know where to receive HIV test	35.8 percent	89.7 percent
28	Ever tested for HIV	32.6 percent	74.5 percent
29	Knew the result	NA	85.3 percent
30	Awareness of STIs	78.9 percent	79.5 percent
31	Self-reported STIs in past 6 months	19.7 percent	23.8 percent
32	Received treatment for STIs	53.2 percent	96.8 percent
Service Delivery Program Exposure and utilization			
33	Ever heard of HIV prevention program	31.6 percent	86.5 percent
34	No. of times SDPs services were availed; <ul style="list-style-type: none"> More than once in a week Once in a week After two weeks Once in a month Less than once in a month Never 	<ul style="list-style-type: none"> 5.8 percent 9.0 percent 6.6 percent 23.0 percent 47.9 percent 7.8 percent 	<ul style="list-style-type: none"> 20.7 percent 21.7 percent 15.9 percent 35.1 percent 5.0 percent 1.7 percent
35	Received condoms in past one month	21.8 percent	73.2 percent
HIV prevalence			
36	Overall HIV prevalence <ul style="list-style-type: none"> Weighted prevalence Un-weighted prevalence 	7.2 percent 5.2 percent	<ul style="list-style-type: none"> 3.1 percent 2.6 percent

Table 52. Comparison of IBBS Indicators; 2011 and 2014



Graph 84. HIV Prevalence, among HSWs/TGs by cities (IBBS 2011 & Punjab IBBS 2014)

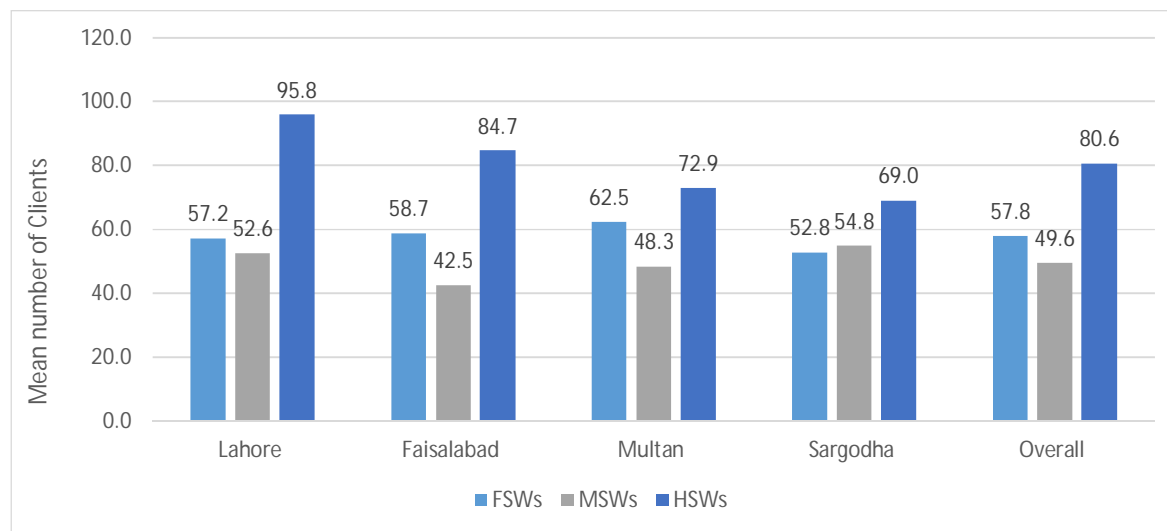
Transmission Dynamics among Most at Risk Populations

7.0 TRANSMISSION DYNAMIC AMONG MARPS

7.1 Bridging Populations

The sexual partners of most at risk populations act as ‘bridging population’, which is an important element, while considering the transmission dynamics and the potential for the epidemic to spread further to the other most at risk groups. The estimated number of sexual partners of each most at risk group, can be determined by aggregating the estimates of most at risk population and the number of their sexual partners

MSWs, HSWs, and FSWs showed substantial variation, in terms of monthly sexual clients/partners and across the cities surveyed as well – Graph 85, which indicates a substantial potential for epidemic expansion within cities and provide guidance about the importance of scaling up program across cities.



Graph 85. Estimated number of monthly sexual partners, among FSWs, MSWs, and HSWs, by cities; Punjab, IBBS 2014

Overall, the HIV epidemic appeared to be well established among HSWs, compared to other MARPs groups. The high HIV prevalence, coupled with high number of sexual partners with the potential for

relatively large sexual network of HSWs, indicated an urgent need for effective targeted prevention among HSWs, across the cities. While it is important to understand the level of overlap between these populations and the relative size of the sexual networks of HSWs and MSWs.

7.2 Sexual Network Interactions

In cities where the epidemic is established among IDUs, there is a danger of further spread of HIV through sex with paid and/or non-paid sex partners. The surveillance data, from Punjab IBBS 2014, suggest some significant interactions between IDUs and Sex Workers. To prevent the spread of HIV, it is important to understand the extent and pattern of these interactions.

Overall, 0.9 percent (N=13) of MSW, 2.1 percent (N=32) of HSWs and 2.1 percent (N=32) of FSW reported injecting drugs in the past six months. Furthermore, 9.6 percent (N=368) and 10.2 percent (N=392) of IDUs reported having sex with M/HSWs and FSWs, respectively, in the past six months. 9 percent (N=136) of HSWs, 2.5 percent (N=38) of FSWs, and 5 percent (N=77) of MSWs reported having sex with IDUs during the same time period. However, sexual and injecting drug use networks between the various key populations differ geographically.

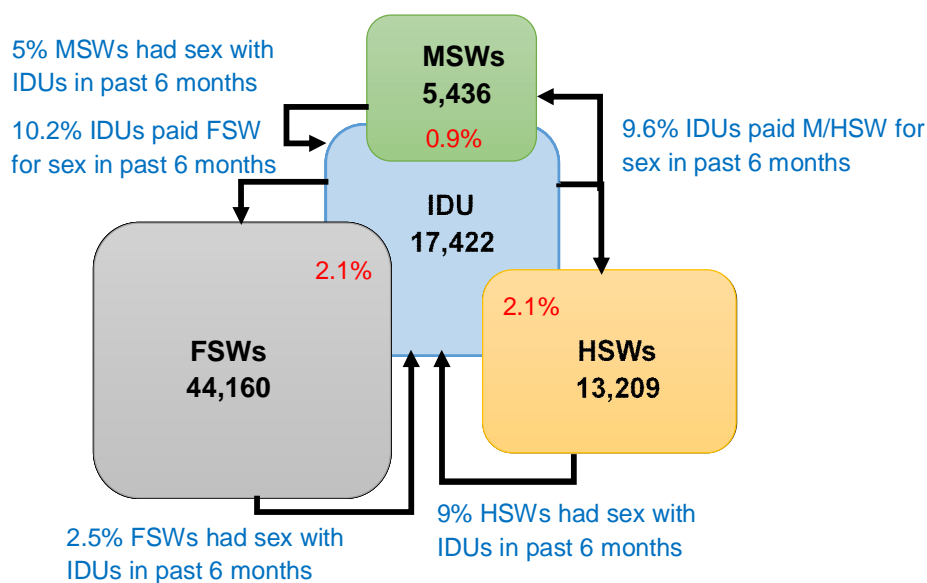


Figure 4. Overall interaction between IDUs, FSWs MSWs and HSWs; Punjab IBBS, 2014

Sexual and injecting drug use networks, between the various most at risk populations, geographically, is indicated below.

7.2.1 Lahore

5.6 percent (N=22) of FSWs, 2.6 percent (N=10) of MSWs and 0.8 percent (N=3) of HSWs reported injecting drugs during the past six months. Approximately 6.7 percent (N=26) and 9.8 percent (N=38) of IDUs paid M/HSWs and FSWs respectively, for sex in the past 6 months. Around 6.1 percent (N=24) FSWs, 8.4 percent (N=32) of MSWs and 0.8 percent (N=3) HSWs reported having sex with IDUs, during the past 6 months.

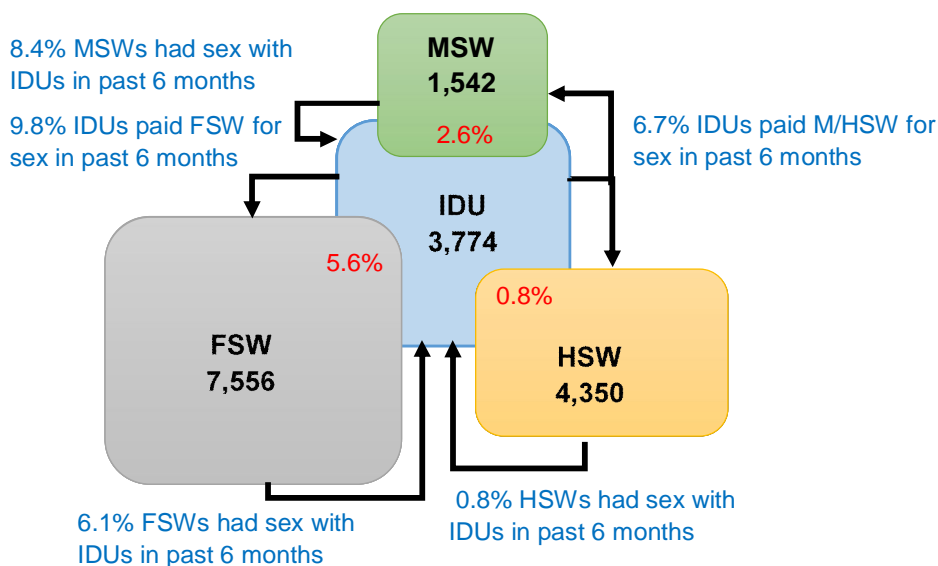


Figure 5. Interaction between IDUs, FSWs MSWs and HSWs - Lahore; Punjab IBBS, 2014

7.2.2 Faisalabad

1.6 percent (N=6) of FSWs, fewer 0.3 percent (N=1) of MSWs and 2.7 percent (N=10) of HSWs reported injecting drugs during the past six months. A higher proportion of study respondent; 17.5 percent (N=67) and 19.4 percent (N=74) of IDUs paid M/HSWs and FSWs respectively, for sex in the past 6 months. Approximately, 0.5 percent (N=2) FSWs, 6.3 percent (N=24) of MSWs and 13.3 percent (N=50) HSWs, reported having sex with IDUs, during the past 6 months.

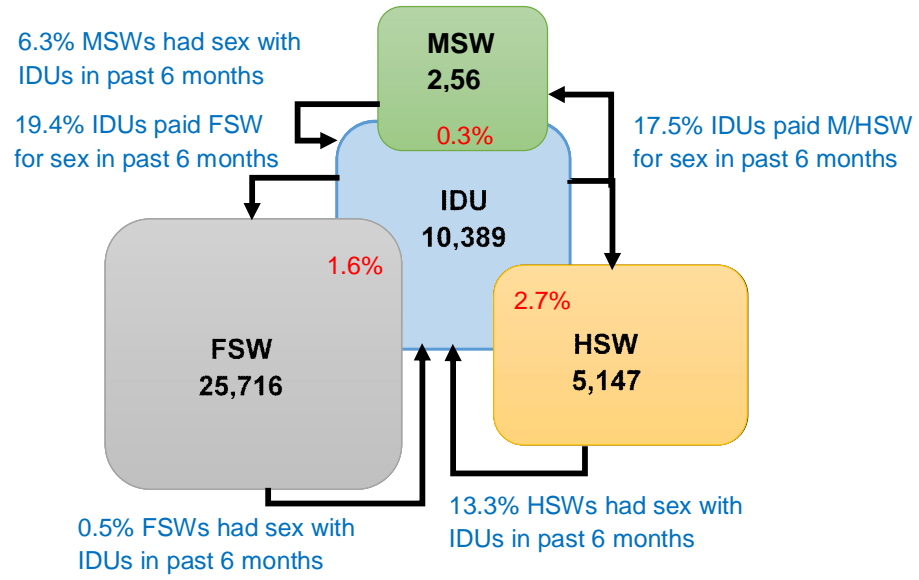


Figure 6. Interaction between IDUs, FSWs MSWs and HSWs - Faisalabad; Punjab IBBS, 2014

7.2.3 Multan

Fewer 1 percent (N=4) of FSWs, 0.3 percent (N=1) of MSWs and 4.5 percent (N=17) of HSWs reported injecting drugs during the past six months. Considerably higher; 17.8 percent (N=68) and 43.9 percent (N=168) of IDUs paid M/HSWs and FSWs respectively, for sex in the past 6 months. Approximately, 3.1 percent (N=12) FSWs, 0.3 percent (N=1) of MSWs and 4 percent (N=15) HSWs reported having sex with IDUs, during the past 6 months.

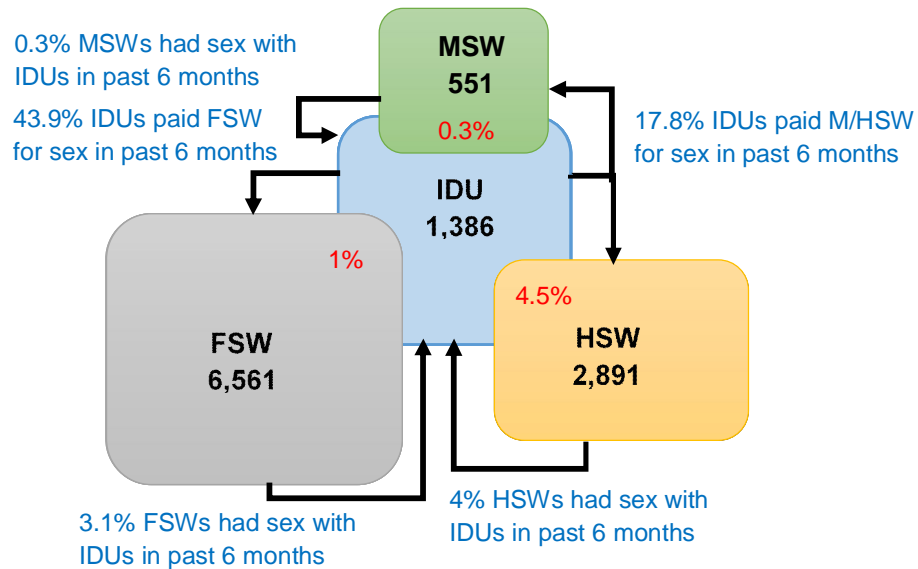


Figure 7. Interaction between IDUs, FSWs MSWs and HSWs - Multan; Punjab IBBS, 2014

7.2.4 Sargodha

Fewer 0.3 percent (N=1) of MSWs and 0.5 percent (N=2) of HSWs reported injecting drugs during the past six months, while no data was recorded among FSWs. Approximately, 3.9 percent (N=15) and 5 percent (N=19) of IDUs paid M/HSWs and FSWs respectively, for sex in the past 6 months. Another, 5.2 percent (N=20) of MSWs and 18 percent (N=68) HSWs reported having sex with IDUs, during the past 6 months, yet no data was recorded for FSWs.

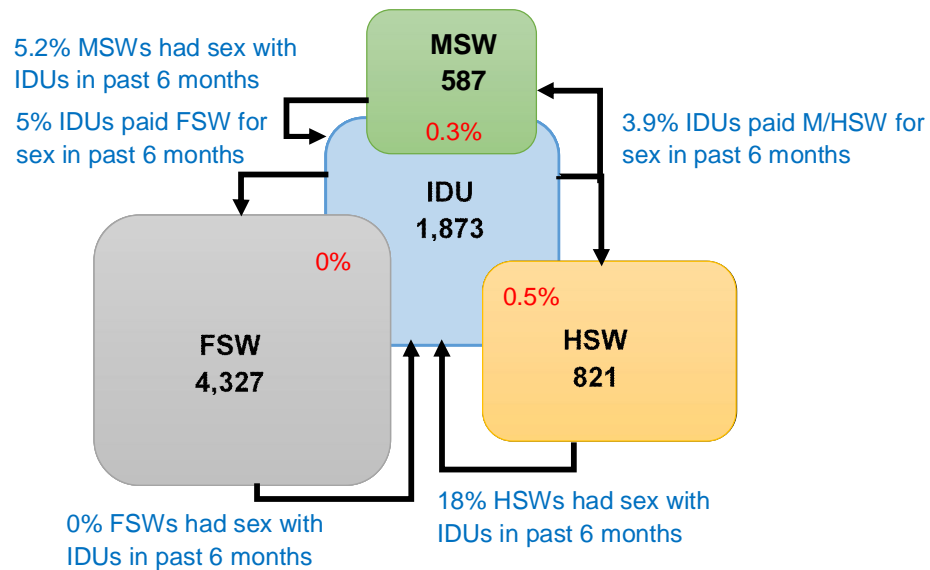


Figure 8. Interaction between IDUs, FSWs MSWs and HSWs - Sargodha; Punjab IBBS, 2014

Gender and Human Rights

8.0 GENDER AND HUMAN RIGHTS

Lack of respect for human rights and the transmission of HIV are interrelated. HIV infection is unparalleled in human history in terms of the stigma and discrimination attached to it, even in places where preventive services are widely available. People living with HIV (PLHIV) and the MARPs, are often rejected by their families and communities and experience discrimination by employers, schools, landlords, and health providers, thus belong to excluded and/or de-valued groups in the society. Violations of human rights undermine HIV prevention programs and often contribute to the transmission of HIV.

Many of the most at risk populations, are highly marginalized and criminalized. Thus, stigma, discrimination, gender inequality, violence and criminalization remained major barriers to the provision, uptake and adherence to prevention and support programs.

In order to address HIV/AIDS, it is imperative to move beyond socio-demographic factors & risk behaviours and reduce key gender-based inequalities & issues related to human and fundamental rights, in order to address various underlying social, cultural and economic factors that make individuals at substantial risk of HIV infection.

In the subsequent sections, key gender-based inequalities and issues related to human and fundamental rights of MARPs, have been discussed. Three factors; ever having been arrested, experience of sexual violence, and control over their money, have been considered, to reflect these inequities, for the Sex Workers (FSWs, MSWs and HSWs). However, for IDUs, the association between ever having been arrested and experience of sexual violence is imperative. Factors associated with HIV infection broadly included 'socio-demographic factors (ex: age, sex work typology, marital status)', and other factors comprising of risk behaviours and access to services, were also assessed.

IDUs: A significantly higher proportion of male than female IDUs (19.3 percent; N=741) reported being arrested in the past six months. Sexual violence was reported 2.1 percent (N=82) of IDUs.

Among those IDUs who reported being arrested in the past six months, a higher proportion reported among local residents of the city, being unmarried, having lower incomes (PKR >7,500), having purchased sex from male/hijras, did not report condom use during the last sexual intercourse, were HIV negative and used SDP services for at least once.

Similarly, with respect to sexual violence, a higher proportion of IDUs were local resident, had purchased sex from F/M/HSWs, and had shared used needles – Table 53.

Factors	Arrested in past 6 months	Experience of sexual violence
Sex		
Male	18.6 percent	2.1 percent
Female	0.5 percent	2.2 percent
Transgender	0.2 percent	0.0
Migration status		
Migrated from other cities	1.2 percent	0.1 percent
Local	18.1 percent	2 percent
Marital Status		
Unmarried	9.7 percent	0.9 percent
Married	6.7 percent	1.1 percent
Separated / divorced	2.3 percent	0.1 percent
Widowed	0.5 percent	0.0
Education		
Illiterate	7.4 percent	0.52 percent
Quranic education	0.0	0.0
Up to 5 years	6.1 percent	0.7 percent
06-10 years	5.5 percent	0.8 percent
>10 years	0.1 percent	0.0
Monthly income		
PKR <3999	4.7 percent	1.1 percent
PKR 4000-5999	2.8 percent	0.1 percent
PKR 6000-7499	4.9 percent	0.4 percent
>7500	6.6 percent	0.6 percent
Purchasing sex		
With female		
Yes	2.9 percent	0.7 percent
No	11.4 percent	0.9 percent
With male/hijras		
Yes	2.9 percent	0.8 percent
No	16.1 percent	1.3 percent
Needle passed		
Yes	4.2 percent	1 percent
No	10.6 percent	0.8 percent
Condom use last sex		
Yes	0.3 percent	0.2 percent
No	1.8 percent	0.2 percent
HIV status		
Positive	8.3 percent	1 percent
Negative	10.9 percent	1 percent
Access to SDPs		

At least once	11.6 percent	0.2 percent
Never	0.0	0.0

Table 53. Percentage of male, female & TGs IDUs experiencing arrest or sexual violence by socio-demographic status, HIV risk factors, and access to services; Punjab IBBS, 2014

FSW: Overall 10.1 percent (N=168) experienced arrest, during the past six months, while another 10.1 percent (N=185) were subjected to physical/sexual violence, during the same period. 21 percent (N=324) expressed no control over their money.

Brothel-based FSWs who were 35 years and above, illiterate and unmarried and relying on “aunties” to access their clients, accessed SDPs at least once and who were HIV negative; were more likely to report ever being arrested. Brothel-based FSWs, between age group of 25-29 years, illiterate, unmarried and relying on “aunties” to access their clients, accessed SDPs at least once and who were HIV negative; reported having experienced sexual violence – Table 54.

Control over money was highest among the brothel-based FSWs. Monetary control also increased with age, was lower among the unmarried FSWs, but also higher among those who were HIV negative or had accessed HIV services at least once.

Factors	Ever having been arrested	Experience of sexual violence	Control of money (Percentage)	
			Keep myself	Give all
Typology				
Home based SW	0.5 percent	0.9 percent	3.8 percent	0.5 percent
Brothel based SW	6.6 percent	5.6 percent	39 percent	15.9 percent
Street based SW	0.7 percent	1.6 percent	15 percent	1.4 percent
KK SW	3.1 percent	3.9 percent	21 percent	3.3 percent
Age				
Less than 20 years	0.5 percent	0.3 percent	4 percent	0.8 percent
20-24 years	1.5 percent	2.4 percent	19 percent	3.5 percent
25-29 years	3 percent	3.6 percent	25.5 percent	10.3 percent
30-34 years	2.3 percent	2.7 percent	19.8 percent	3.8 percent
35 and above	3.6 percent	2.9 percent	10.7 percent	2.5 percent
Education				
Illiterate	5.2 percent	4.9 percent	20 percent	23.7 percent
Quranic education	0.0 percent	0.0 percent	0.0 percent	0.0 percent
Up to 5 years	3.1 percent	3.7 percent	23.4 percent	7 percent
06-10 years	1.4 percent	1.5 percent	20.5 percent	3.53 percent
>10 years	0.9 percent	1.4 percent	11.2 percent	1.8 percent
Marital status				
Unmarried	3.6 percent	4.2 percent	25.2 percent	10.3 percent

Married	3.1 percent	4 percent	34.3 percent	6.7 percent
Separated/divorced	2.9 percent	2.9 percent	14.4 percent	3.3 percent
Widowed	1.3 percent	0.8 percent	4 percent	0.6 percent
Client contact				
Aunty/guru	6.1 percent	5.3 percent	33 percent	15.2 percent
Cell phone	2.7 percent	3.9 percent	1.6 percent	2.5 percent
Roaming around	1.3 percent	1.2 percent	15.5 percent	1.8 percent
Through old clients	0.6 percent	1.3 percent	11.3 percent	1.3 percent
Access to services				
At least once	2.7 percent	2 percent	9 percent	4 percent
Never	0.3 percent	0.4 percent	1.9 percent	0.4 percent
HIV Status				
Positive	0.1 percent	0.2 percent	0.4 percent	0.06 percent
Negative	10.7 percent	11.8 percent	78.6 percent	21 percent

Table 54. Percentage of FSWs experiencing arrest or sexual violence, and extent of monetary control by socio-demographic status, HIV risk factors, and access to services; Punjab IBBS, 2014

MSWs. Among MSWs approximately 11.5 percent (N=175) were arrested, during the past six months, slightly higher (15.8 percent; N=241) experienced physical/sexual violence, while fewer (6.1 percent; N=93) reported shared their earning.

A higher proportion of younger (being less than 20 years or between 20 and 24 years), unmarried MSWs who did not use condoms during the last sexual intercourse and relied on contacting clients on the streets, or cell phones; reported experiencing arrest and sexual violence. It were the younger, single MSWs who reported having full control over their money – Table 55.

Factors	Ever having been arrested	Experience of sexual violence	Control of money (Percentage)	
			Keep myself	Give all
Age				
Less than 20 years	1.4 percent	6.5 percent	19.6 percent	0.4 percent
20-24 years	4.3 percent	6.4 percent	37.1 percent	2 percent
25-29 years	3.9 percent	2.6 percent	26.2 percent	1.7 percent
30-34 years	1.2 percent	0.4 percent	7.9 percent	1.4 percent
35 and above	0.7 percent	0.6 percent	3 percent	0.6 percent
Marital status				
Unmarried	8 percent	15.3 percent	72.5 percent	2.8 percent
Married	1.9 percent	0.08 percent	16.9 percent	2.9 percent
Separated/divorced	0.9 percent	0.2 percent	1.1 percent	2.3 percent

Widowed	0.6 percent	0.0 percent	1.3 percent	0.1 percent
Education				
Illiterate	2.7 percent	3.6 percent	16.6 percent	1.3 percent
Quranic education	0.0 percent	0.1 percent	0.0 percent	0.0 percent
Up to 5 years	2.6 percent	4.6 percent	21 percent	1.2 percent
06-10 years	3.7 percent	5.3 percent	27.2 percent	2.2 percent
>10 years	2.1 percent	1.8 percent	19.1 percent	1.2 percent
Client contact				
Aunty/guru	0.4 percent	0.3 percent	1.3 percent	0.5 percent
Cell phone	4.4 percent	7.3 percent	32.5 percent	2 percent
Roaming around	4.1 percent	7.3 percent	43.7 percent	2 percent
Through old clients	2.6 percent	0.9 percent	16.2 percent	1.7 percent
Condom use during last				
Anal Sex	2.6 percent	3 percent	8.3 percent	0.4 percent
Access to services				
At least once	2.2 percent	4.3 percent	24 percent	2.3 percent
Never	0.1 percent	0.3 percent	2.7 percent	0.3 percent
HIV Status				
Positive	0.1 percent	0.1 percent	0.5 percent	0.1 percent
Negative	11.3 percent	15.6 percent	93.4 percent	6 percent

Table 55. Percentage of MSWs experiencing arrest or sexual violence, and extent of monetary control by socio-demographic status, HIV risk factors, and access to services; Punjab IBBS, 2014

HSWs:

Among this population, a higher proportion of younger HSWs and those not using condoms during the last anal sex reported ever being arrested. Younger MSWs were also more likely to report sexual violence. Consistent with this, those who relied on established sexual contacts, gurus and dera networks to solicit clients were less likely to report previous sexual abuse. Control over money seemed to peak among the 20-29 year age group, and was highest among unmarried HSWs, those who reported condom use during last anal sex, and those relying on Gurus, to make additional client contacts – Table 56.

Factors	Ever having been arrested	Experience of sexual violence	Control of money (Percentage)	
			Keep myself	Give all
Age				
Less than 20 years	0.3 percent	2.1 percent	6.1 percent	4.2 percent
20-24 years	3.7 percent	4.9 percent	19.7 percent	17.1 percent
25-29 years	2.4 percent	3.2 percent	18.1 percent	8.8 percent

30-34 years	1.2 percent	0.8 percent	9.8 percent	2.1 percent
35 and above	0.8 percent	0.3 percent	6.8 percent	0.9 percent
Education				
Illiterate	3.2 percent	2.5 percent	20 percent	11.3 percent
Quranic education	0.0 percent	0.06 percent	0.3 percent	0.3 percent
Up to 5 years	3 percent	3.8 percent	23.8 percent	12.3 percent
06-10 years	2 percent	4.2 percent	16.7 percent	8 percent
>10 years	0.5 percent	0.9 percent	4.6 percent	1.8 percent
Marital status				
Unmarried	6.7 percent	9.5 percent	46.3 percent	28.6 percent
Married	1.6 percent	1.7 percent	18 percent	5.1 percent
Separated/divorced	0.3 percent	0.3 percent	0.8 percent	0.1 percent
Widowed	0.0 percent	0.06 percent	0.3 percent	0.0 percent
Client contact				
Aunty/Guru	4.3 percent	5.6 percent	20.6 percent	20.9 percent
Cell phone	1.4 percent	2.8 percent	15.6 percent	6.8 percent
Roaming around	1.6 percent	2.5 percent	19.1 percent	3.8 percent
Through old clients	1.4 percent	0.7 percent	9.8 percent	1.9 percent
Condom use during last				
Anal Sex	2.5 percent	5.9 percent	17.1 percent	14.2 percent
Access to services				
At least once	2 percent	3.5 percent	10 percent	5.4 percent
Never	0.1 percent	0.1 percent	0.9 percent	0.2 percent
HIV status				
Positive	0.3 percent	0.06 percent	2.1 percent	0.4 percent
Negative	8.5 percent	11.5 percent	64 percent	33.4 percent

Table 56. Percentage of HSWs experiencing arrest or sexual violence, and extent of monetary control by socioeconomic status, HIV risk factors, and access to services; Punjab IBBS, 2014

In summary, the relationship between sexual violence, arrest and control over their resources and the socio-demographic factors (e.g.: age, sex work typology, marital status) is quite complex phenomenon. Being associated with a network operator, dera or other sex work network seemed to protect sex workers from violence and arrest but to also remove their control over their resources.

The direction for HIV programs would be to promote prevention through network operators and also provide them with training and assist them to include more sex workers under their influence, while also promote the rights of sex workers, which could be quite challenging in the local context.

9.0 CONCLUSION

Punjab is experiencing a concentrated, yet a severe HIV epidemic among IDUs. In the ten cities surveyed in Punjab, the prevalence recorded is >5 percent, clearly a worrisome figure. Surveillance data indicate that HIV is getting well established among IDUs, throughout the province and due to effective preventive efforts, the infection rates have steadied – as evidenced by comparison among six cities, which were part of successive IBBS Rounds – Graph 17. Not only the overall prevalence has increased, but the number of sites with advanced epidemics has also expanded – Table 3.

Besides, the rise in HIV prevalence among IDUs in Punjab, there has been some improvement in the risky behaviors. Proportion of IDUs reported sharing needle/syringe has come down substantially from 39.2 percent in 2011 to 15.2 percent during the current round. Similarly those who reported passing needle/syringe to another IDU, has come down from 31.2 percent in the previous round to 17.2 percent in 2014. Coupled, with it, there has been improvement in the condom use, indicated in the current round. Other significant improvement since the previous IBBS round is in service delivery utilization. It has been evident during successive rounds that >80 percent have reported that they were aware of and utilized services of preventive programs, established by PACP – Table 17.

FSWs formed the largest proportion among MARPs in Punjab. Their close link with the general population through a large bridging population warrants close monitoring of this group to ensure prevention of HIV transmission. However, the prevalence among FSWs has remained almost static; from 0.6 percent in 2011 to 0.5 percent during IBBS 2014. Notable in this round is improvement in consistent condom use, with paid clients, slightly elevated from 33.2 percent to 35.6 percent. A substantial enhancement in knowledge and utilization of HIV preventive service delivery by the FSWs, provide evidence on the effectiveness of existing preventive HIV service delivery for FSWs in Punjab – Table 30.

The HIV prevalence among the MSWs indicated a significant downward trend from 5.2 percent in 2011 to 2.6 percent in 2014. The consistent use of condoms, with the sexual partners improved noticeably from 13 percent in 2011 to 53.5 percent in IBBS 2014, yet there exists a potential of spreading the epidemic through male and bisexual network via the bridging population. There is an overall increase in knowledge and utilization of HIV preventive service delivery among the cities surveyed in 2014, indicating optimal utilization of HIV preventive service delivery programs established for the MSWs, in the province – Table 41.

HIV prevalence among HSWs showed a downward trend and became halved, from the 5.2 percent in 2011 to 2.6 percent during IBBS 2014, Punjab. Consistent condom use increased from 23.6 percent, with paid clients, to 58.5 percent during IBBS 2014, Punjab, and condom use at last anal sex elevated from 30.2 percent (IBBS – 2011) to 66.35 percent recorded during IBBS 2014, Punjab. Knowledge and utilization of HIV preventive programs also recorded a notable improvement, during successive rounds – Table 52.

Overall, IBBS 2014, Punjab, has resulted in enhanced understanding of the dynamics of HIV and of the underlying sexual and injection behavior determinants of HIV, transmission, in Punjab. The dimensions of the HIV epidemic are increasingly apparent and the epidemic is highly heterogeneous and showing wider diversity across the province and within cities. The epidemic is largely centered among networks of injecting drug users, with a strong evidence of epidemic expanding among FSWs, MSW and Hijra communities.

HIV preventive service delivery programs, has significantly contributed in keeping the HIV prevalence, down among sex workers. However, HIV prevalence among IDUs is still significant, with a potential to spread to sex workers. The future of current epidemic will largely depend on the coverage and effectiveness of HIV prevention programs for injection drug users and their sexual partners – Figure 4.

Adopting a community based approach, the HIV preventive service delivery should address the underlying socio-economic determinants of the epidemic and particularly address reducing stigma and discrimination towards people with high risk behaviors, as well as people living with HIV.

10.0 RECOMMENDATIONS

Separate set of recommendations have been developed for IDUs and the Sex Workers:

Injecting Drug Users

- Evidence suggests that injecting drug use begins at adolescence and among young people under 30 years of age, leaving these youth vulnerable to the associated risks, including HIV transmission. HIV and STI prevention programs need to reach these young adolescents and youth when they are starting risky behaviors as new drug users;
- Although there has been improvement in the injecting behavior of IDUs over the years, there are IDUs who inject with pre-used needles and/or share injecting equipment. Strategic behavioral change communication to promote safer injecting behavior should continue and be strengthened. Comprehensive prevention interventions must be promoted;
- Data suggests that ever tested for HIV has increased among IDUs over time, even then only half of the IDUs have been tested for HIV. This indicates the importance of continued education to IDUs, through outreach and counseling about the importance of regular screening and knowing their HIV status.
- The increasing trend for HIV testing should be maintained by strengthening access to information for IDUs, particularly focusing on risk perception and increasing knowledge on the importance of HIV testing;
- About one third of the IDUs are married and about one quarter of them are having sex with sex workers, which increases the risk of transmission between SWs and IDUs and their sex partners. Programs on safer sex should be strengthened to reach IDUs and their sexual partners;
- Exposure to multiple risks is observed such as having unsafe sex with SWs and frequent alcohol consumption. A comprehensive package should be designed to include all components of risk reduction through prevention of sexual transmission and harm reduction of their sexual partners.
- Holistic programs of drug treatment and rehabilitation are the need of the hour and must be initiated as soon as possible in order to avoid relapse among IDUs. The time is ripe to introduce comprehensive buprenorphine treatment and vocational capacity building for IDUs to make them drug free.

Sex Workers

- Exposure to multiple risks is observed such as injecting drugs, frequent alcohol consumption and/or sex partners with IDUs. Hence, SWs with multiple risks need to be identified by programs and a comprehensive package should be designed to include components to reduce the risk of HIV e.g. prevention of sexual transmission, harm reduction etc.;
- SWs are more vulnerable to various forms of violence likely to be subjected to forceful sex and physically abused. Prevention, treatment and care programs designed for SWs must be made available, along with access to legal services;
- Although knowledge on HIV and STI is high, the health seeking behavior of SWs is comparatively low especially for the uptake of STI services. Outreach education and referral to services should be strengthened and a comprehensive package on SRH needs of FSWs should be developed;
- Condom carrying behavior is still low among SWs. This implies that greater emphasis is required on the importance of condom-carrying through improved outreach education and communication and negotiation skills for SWs. Strengthened efforts are required to create an enabling environment for condom-carrying behavior;
- Consistent condom use is reasonably low among FSWs with their paying and occasional partners and is even lower among their non-paying regular partners i.e. husbands and boyfriends. This puts them and their partners at risk of HIV and STI. The emphasis on current consistent condom use practices and focus on improved communication and negotiation among couples, especially non-paying regular partners, should be targeted through continuous education and outreach. Also condom distribution should be adequate for the need;
- Almost half of the SWs are currently married, and HIV prevalence was seen among those married, which means their husbands are also at risk of HIV infection if safer sex is not always practiced. SWs reported terminated pregnancies, an indication of unwanted pregnancies and the need for family planning counseling. There is a need to provide education on HIV and STI to these SWs, along with the importance of consistent and correct 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 is of utmost importance. Those who are using other forms of contraception need to know and use condoms for HIV and STI protection.

11.0 STUDY LIMITATIONS

- The research included the “mappable population” at a specific period in time depending on the frequency with which people visit the sites. The mapping occurred, during a one-week time period, it might have captured the majority of people who visit the sites that week, but is likely to miss the people who visit less frequently because field teams typically do not spend more than one week at any given site;
- Most of the study questions were related to exposures that took place in the past leading to potential recall bias. In order to minimize recall bias, interviewers were well trained in probing techniques.
- Information collected from the study subjects was entirely based on self-reported data. Although research has shown that self-reported data when obtained under non-threatening conditions is reliable, an association between self-reported HIV risk behaviors and socially desirable responding has been documented in the literature. Steps taken to minimize social desirability bias in the study include:
 - Providing private and confidential areas for interviewing,
 - Stressing the confidential nature of the survey,
 - Using interviewers who are experienced in working with vulnerable populations
 - Establishing rapport, and conducting risk behavior counseling/debriefing after each interview.

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