
HIV and AIDS

Social and Behavioral Science Research (SBSR)

2011

HIV integrated biological and behavioural surveillance survey (IBBSS) 2010

Federal Ministry of Health

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Federal Ministry of Health

HIV Integrated Biological and Behavioural Surveillance Survey (IBBSS) 2010

HIV Integrated Biological
and Behavioural Surveillance
Survey (IBBSS)

2010

The 2010 Integrated Biological and Behavioural Surveillance Survey (IBBSS) was implemented by the HIV/AIDS Division of the Federal Ministry of Health in 2010. Family Health International (FHI) provided technical assistance through the GHAIN project, a PEPFAR-funded project in Nigeria providing support to the Government of Nigeria's HIV/AIDS prevention, care, treatment and support programs as well as its HIV surveillance efforts. Funding for the IBBSS was provided by the United States Agency for International Development (USAID) and the President's Emergency Fund for AIDS Relief (PEPFAR). Additional funding and technical assistance were provided by the Enhancing Nigeria's Response to HIV/AIDS project (ENR), a United Kingdom's Department for International Development (DFID)-funded HIV prevention and institutional strengthening program implemented by Society for Family Health and Population Council.

Additional information about the IBBSS may be obtained from the following organizations.

1. HIV and AIDS Division, Federal Ministry of Health. EDO HOUSE, second floor, plot 75, Ralph Sodeide Street, Central Business District, Abuja.
2. The National Agency for the Control of AIDS, Abuja, Nigeria. www.naca.gov.ng
3. FHI Country Office, GODAB Plaza, Plot 1073 J. S. Tarka Street, Garki, Area 3, P.M.B. 44, Abuja, Nigeria.
Tel: 234.94615555. www.fhi.org
4. Society for Family Health, 8 Port Harcourt Crescent, Area 11, Garki, Abuja.
09-4618823-9. www.sfhigeria.org
5. Population Council, Bassan Plaza, Block B, 3rd Floor, Plot 759, Central Business District Off Herbert Macaulay Way, Abuja, Nigeria.
Tel: +234 9 8706071

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Federal Ministry of Health (FMOH). Nigeria Integrated Biological and Behavioural Surveillance Survey 2010.

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ACRONYMS

AFPAC	Armed Forces Program on AIDS Control
AIDS	Acquired Immune Deficiency Syndrome
ANC	Ante-Natal Care
BBFSW	Brothel-Based-Female Sex Worker(s)
BSS	Behavioural Surveillance Survey
FCT	Federal Capital Territory
FHI	Family Health International
FMoH	Federal Ministry of Health
FSW	Female Sex Worker(s)
HCT	HIV Counseling and Testing
HIV	Human Immunodeficiency Virus
IBSSS	Integrated Biological and Behavioural Surveillance Survey
IDU	Injecting Drug User(s)
IEC	Information, Education and Communication
IRB	Institutional Review Board
MSM	Men who have Sex with Men
NACA	National Agency for the Control of AIDS
NARHS	National HIV and AIDS and Reproductive Health Survey
NASCP	National AIDS/STI Control Program
NBBFSW	Non-Brothel-Based female Sex Worker(s)
NDHS	Nigeria Demographic Health Survey
NGO	Non-Governmental Organization
NIMR	Nigerian Institute for Medical Research
NPC	National Population Commission
PACC	Police AIDS Control Program
PHSC	Protection of Human Subjects Committee
PLWHA	People living with HIV and AIDS
PPS	Probability Proportionate to Size
RDS	Respondent Driven Sampling
RDSAT	Respondent Driven Sampling Analysis Tool
SACA	State Action Committee on AIDS
SAPC	State AIDS Program Coordinator
SFH	Society for Family Health
SRS	Simple Random Sampling
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TA	Taca All
TC	Technical Committee
TLS	Time Location Sampling
TW	Transport Worker(s)
UNAIDS	Joint United Nations Program on HIV and AIDS
USAID	United States Agency for International Development
USG	United States Government
WHO	World Health Organization

Following the discovery of HIV and AIDS in Nigeria more than two decades ago, the Federal Government has put in place various programmes aimed at controlling and mitigating its impact. One of the key strategies to inform these programmes is the continuous monitoring of the HIV epidemic through clinic and population based surveillance.

Though the HIV epidemic in Nigeria is generalised, the first Integrated Biological and Behavioural Surveillance Survey (IBBSS) conducted in 2007 provided robust evidences on the burden of HIV infection and how it affects some groups within the society. In the 2007 IBBSS, probable drivers of HIV and AIDS epidemic and previously unrecognized high-risk groups were identified. Information from the survey has been very useful in the revision of the National HIV Prevention Plan.

The 2010 IBBSS results presented in this report have further brought out sexual behavioural linkages that exist between the high-risk groups and the general population. With improved understanding of this linkages and findings of other national HIV and AIDS research such as mode of transmission (MOT) study, stakeholders can begin to mount appropriate intervention strategies to break the transmission chains and reverse the trends of HIV and AIDS epidemic in the high-risk groups and the general population.

To this end, I hereby recommend this 2010 IBBSS report for elucidation of dynamics of HIV and AIDS transmission among high-risk groups and for the design of appropriate HIV and AIDS intervention-response strategies.



L.N. Awute, mni

Permanent Secretary

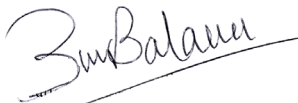
The Federal Ministry of Health acknowledges the efforts of all that contributed to the successful conduct of the 2010 Integrated Bio-Behavioural Surveillance Survey (IBBSS) among selected high-risk groups in Nigeria.

The contributions of the State HIV/AIDS Programme Coordinators (SACPs), staff of NPC in the states where the survey was conducted and the efforts of the survey team members including the supervisors, interviewers and counsellor-testers in the generation of high quality data is highly appreciated. We also commend the efforts and cooperation of members of the high-risk groups studied and their organizations to the successful conduct of the survey.

Our special appreciation goes to the members of the survey technical committee whose technical oversight functions guided the survey. The cooperation and support of the ten participating State Ministries of Health, the National Population Commission (NPC) and their state offices involved in the survey are highly appreciated.

The logistic and technical support of the US government through Family Health International/ Global HIV/AIDS Initiative in Nigeria and Society for Family Health (SFH) with Population Council/Enhancing National Response to HIV/AIDS (ENR) of the United Kingdom AIDS for International Development is worthy of commendation.

It is hoped that the findings in this report will assist in advocacy and programme planning towards appropriate and improved interventions for HIV/AIDS response in Nigeria.



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Nigeria has the second highest number of People Living with HIV (PLWH) in sub-Saharan Africa after South Africa. Current estimates from the Ante Natal Care (ANC) HIV sero-prevalence survey conducted in the country in 2010, puts the HIV prevalence at 4.1%. Among the most at risk populations, the 2007 Integrated Biological and Behavioural Surveillance Survey (IBBSS) and 2010 round whose findings are discussed in this report show that Female Sex Workers (FSW) continue to record the highest HIV prevalence (above 20.0%) followed by men who have sex with men (MSM) (above 13.0%). While the mode of transmission study conducted in the country attributed 23% of new cases of HIV to the high-risk groups including FSW, MSM and injecting drug users (IDU), there is plan to conduct a population size estimate of the high-risk groups to understand their contribution to the HIV and AIDS epidemic in Nigeria.

As the highest policy making body on health in Nigeria, the Federal Ministry of Health recognizes the need for research especially in the areas of health including HIV and AIDS and has so far engaged in such. The Ministry has instituted mechanisms for continuous monitoring of HIV epidemic in the country. The mechanisms have included periodic survey among the general population and the most at risk population sub-groups. A main survey being conducted among the high-risk groups is the Integrated Biological and Behavioural Surveillance Survey (IBBSS) whose findings for the 2010 round of the survey (i.e. 2010 IBBSS) are discussed in this report. The findings are very revealing; it has confirmed the high level of HIV infection among members of the high-risk groups as well as the sexual interaction of the groups with the general population. If interpreted in relations to other relevant data, the findings from the 2010 IBBSS will contribute to a better understanding of the HIV and AIDS epidemic in Nigeria.

While I commend the efforts of individuals, organizations and development partners including FHI/GHAIN and ENR that contributed to the successful conduct of the 2010 IBBSS, I hereby recommend this report for use by governments at all levels, development partners, academia, research institutions, Civil Society Organizations (CSOs), Faith Based Organizations (FBOs) and other stakeholders to plan improved interventions among the high-risk groups in Nigeria.



Dr. Mansur Kabir

Head, Department of Public Health.

VII EXECUTIVE SUMMARY

This report highlights the findings of an integrated biological and behavioural surveillance survey (IBBSS) in Nigeria among groups whose behaviours or occupations often place them at higher risk of contracting sexually transmitted infections (STI), including HIV. The groups surveyed were brothel-based female sex workers (BBFSW), and non-brothel-based female sex workers (NBBFSW), men who have sex with men (MSM), injecting drug users (IDU), transport workers (TW) and men and women in the uniformed services (Armed Forces and the Police). The study took place in nine states (Anambra, Benue, Cross River, Edo, Kaduna, Kano, Lagos, Nassarawa and Oyo) and the Federal Capital Territory (FCT). The main objectives of the study were to assess the knowledge and beliefs of high-risk groups about STI and HIV, determine the prevalence of HIV infection among these groups and obtain data that will permit identification of trends over time. In line with international best practices, different sampling methods were used for different groups, based on factors including the ability to map or obtain lists of group members, peak times and locations where they can be found and interviewed, and other visibility and accessibility considerations. A sample size of 14,987 was achieved, which yielded reliable state-level estimates for most variables of interest.

The highest HIV prevalence of 27.4% was observed among BBFSW, followed by 21.7% and 17.2% among NBBFSW and MSM respectively. The rates in the predominantly male occupational groups and IDU were less than 5%, ranging from 2.4% among TW, 2.5% in the Armed Forces, 2.6% among the Police to 4.2% among the IDU.

The observed prevalences showed a general fall for each of the survey groups between 2007 and 2010, with the Armed Forces, Police and TW each having HIV prevalence below that of the general population, estimated from the 2010 ANC sentinel survey. Although the prevalence among the FSW showed a fall over the 2007 figure, they were still more than five times higher than that of the general population.

Among FSW, boyfriend partnership remained at high level (above 60.0%), while both girlfriend and multiple non-marital partnerships fell among the Armed Forces, Police and TW. There were however state level variations. Consistent condom use with clients remained high among the FSW (90.5% for BBFSW and 76.3% for NBBFSW); however condom use during last sex with boyfriends was low (29.7% and 45.4% respectively) representing a decrease from 2007 finding.

Among the Armed Forces, Police and TW, condom use during last sex fell between 2007 and 2010. Although awareness of HIV and AIDS was high among these groups, however, correct identification of specific ways of prevention of and misconceptions about HIV transmission/prevention (UNGASS Indicator 14) is low and appeared not to have changed over the 2007 baseline. Preventive behaviour like condom use with boy/girlfriends was equally low.

The high rate of consistent condom use with clients by FSW and reduction in multiple non-marital sex partners by the male dominant groups may have contributed to the falling HIV prevalence observed. However, low condom use during sex with boyfriend among FSW represents a potential bridge for transmission of HIV infection to the general population. There was a general increase in exposure to interventions like education on safe sex, since 2007.

In conclusion it is recommended that the results of this survey should be used to inform the design of interventions for the prevention of transmission and mitigation of impacts of HIV and other STI among these populations. A synthesis of findings from other national surveys such as the sentinel HIV prevalence survey among women attending ANC and population based studies (NARHS, NDHS) will greatly assist in characterizing the determinants and deterrents of the HIV epidemic in Nigeria.

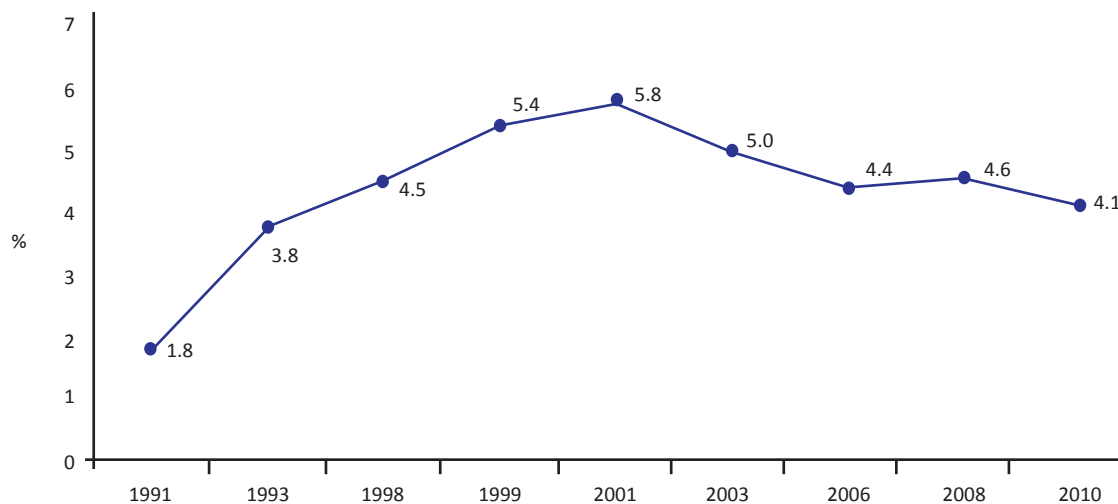
1.1 HIV/AIDS in Nigeria

One of the earliest national responses to the HIV and AIDS epidemic in Nigeria was the setting up of a surveillance system to determine the magnitude of the HIV epidemic, as well as monitor trends of the epidemic. The surveillance involved prevalence for HIV and syphilis among various groups such as women attending antenatal clinics, blood donors, transport workers and patients attending sexually transmitted infections (STI) and tuberculosis (TB) clinics. Later in 2003, behavioural surveillance survey was added on a larger scale to determine and monitor the knowledge, attitudes and behaviour associated with HIV and STI infections among the general population and selected groups of interest.

The Federal Ministry of Health (FMoH), Nigeria, in recognition of the need for continuous monitoring of HIV among populations with higher risk behaviours commissioned the first Integrated Biological and Behavioural Surveillance Survey (IBBSS) in 2007¹.

The 2010 IBBSS provided critical information to track the progress of the HIV epidemic in the selected high-risk groups, by comparing information gathered in 2007 IBBSS among same high-risk groups. It surveyed 14, 987 members of selected high risk groups for HIV. The high risk groups sampled included Female Sex Workers (FSW), Men who have Sex with Men (MSM), Injecting Drug Users (IDU), Transport Workers (TW), members of the Nigerian Armed Forces and members of the Nigerian Police just like the 2007 IBBSS². The HIV knowledge, attitudes and risk behaviours were studied, as well as HIV prevalence. Sample sizes were sufficient to allow reliable state-level estimates for most variables of interest.

Figure 1: HIV prevalence trend in Nigeria (1991-2010)



¹The 2002 and 2005 behavioural surveillance surveys were conducted on a smaller number of groups and did not include the biologic component; the 2007 survey included biological testing.

²HIV/STI Integrated Biological and Behavioural Surveillance Survey (IBBSS) 2007. FMoH.

In Nigeria with a population of approximately 140 million, adult HIV prevalence as monitored through antenatal HIV Sentinel Surveillance among pregnant women, increased from 1.8% in 1991 to 5.8% in 2001, before dropping to 5.0% in 2003, 4.4% in 2005, 4.6 in 2008 and 4.1 in 2010³ (figure 1). Over the last two decades, the HIV epidemic in Nigeria has gone from affecting only a few populations with higher-risk behaviours ('concentrated' epidemic), to a 'generalized' epidemic in all states. The state of the epidemic in Nigeria varies from state to state, suggesting the importance of collecting state level data to improve the response to HIV programming at the state level.

1.2 Rationale

The HIV pandemic has received unprecedented support from donor agencies and it has become imperative to monitor and evaluate the various interventions aimed at controlling the spread of HIV infection. WHO/UNAIDS^{4,5} advocate for the use of second generation surveillance systems to monitor changes in the epidemic in each country. Second generation surveillance systems include HIV and STI biological and risk behaviour surveillance, using resulting data to warn of or explain changes in the levels of infection.

In concentrated epidemics where HIV is over five percent in any sub-population at higher risk of infection (such as drug injectors, FSW, men who have sex with men), surveillance systems monitor infection in those groups and pay particular attention to behavioural links between them and the general population. The 2007 IBBSS provided information on MSM and IDU for the first time and also gave insight into which populations new HIV infections may be coming from.

Considerable gaps remain in the quantity and quality of information available in Nigeria on HIV/AIDS to help understand the underlying dynamics of the HIV epidemic and its likely future course. In particular, data that provide insights into the following questions are needed:

- What are the determinants of new HIV infections in the various at-risk populations? Are there geographic patterns that should influence the response?
- How well is the current response addressing new HIV infections? Is the coverage adequate? Has the response had an impact over time, both in terms of behaviour change and HIV/STI biological markers?
- Where is the HIV/AIDS epidemic likely to go? How has the epidemic changed over time? Does the response need to be adapted to fit evolving patterns of risk and incidence? What are the relative benefits of alternative prevention and care resource allocations in terms of averted infections and costs? What are the long-term impacts of the epidemic?

This study was planned and implemented as a follow up to the 2007 survey by collecting biological and behavioural data from the seven groups previously assessed, and by generating reliable state-level estimates. The survey is designed to be conducted biennially.

³FMoH Technical report, 2010 National HIV Sero-prevalence Sentinel Survey among Pregnant Women Attending Ante-Natal Clinics in Nigeria, HIV Estimates and Projections

⁴WHO 2008

⁵UNAIDS 2007

1.3 Goal

The main goal of this study is to obtain serological and behavioural information on high risk/vulnerable population groups which will guide HIV prevention program planning suited to their context.

1.3.1 Specific Objectives

1.3.1.1 Generate behavioural data to:

- Assess knowledge and beliefs of high-risk groups about STI's and HIV and AIDS
- Determine the current risk behaviours
- Assess population-level trends in risk behaviours over time
- Identify higher-risk sub-populations among these high-risk groups

1.3.1.2 Generate biological data to:

- Determine the prevalence of HIV infection among the high risk groups
- Determine population-level trends of HIV sero-prevalence among high risk groups over time

1.3.1.3 Design and implement a surveillance system that:

- Obtains data in a standardized format to permit comparisons with previous rounds of behavioural surveillance studies carried out in Nigeria and other countries
- Provides information to guide future program planning
- Establishes a sustainable, cost-effective surveillance platform for future monitoring of behavioural and biological indicators across high-risk groups over time.

1.3.1.4 Provide opportunities for appropriate follow-up for clinical and social support services such that:

- Members of the high risk group have access to sustainable, non-stigmatising HIV prevention services (i.e., counseling and testing, STI services and “prevention with positives” support) including referrals.

2 METHODS

The same methodology as used in the previous round of IBBSS was essentially used for this round. Number of states sampled was increased due to additional funding from DFID through the enabling national response (ENR) project.

2.1 Study Sites and Target Populations

2.1.1 Study sites

The IBBSS was conducted among seven sub-populations at risk of HIV in nine selected states and the Federal Capital Territory (FCT) of Nigeria. These sub-populations were the female sex workers (FSW) (both brothel-based and non-brothel-based), men who have sex with men (MSM), injecting drug users (IDU), members of the Armed Forces, Police, and transport workers (TW).

Figure 2: Map of Nigeria showing states sampled during the IBBSS

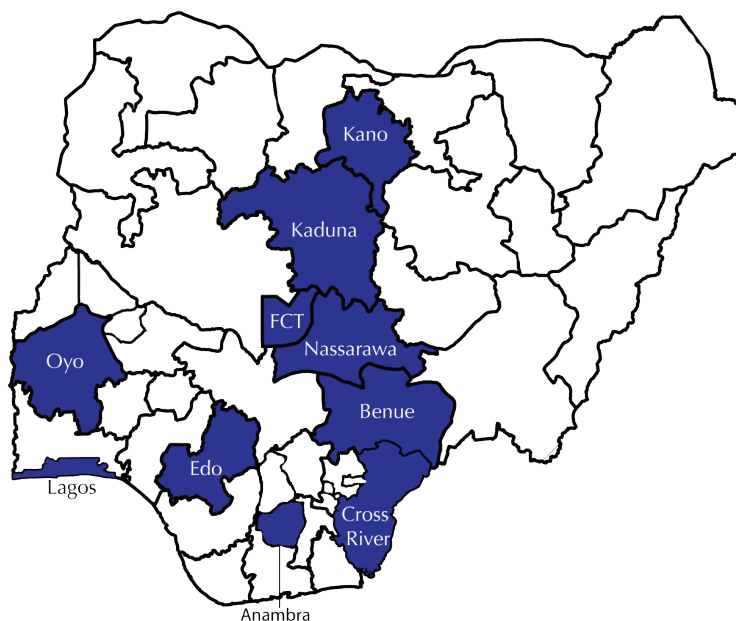


Table 1: Target groups and states

Target Group	States
Brothel-based FSW	Lagos, Kano, Kaduna, Benue, Nasarawa, Edo, Anambra, Cross River, FCT
Non-Brothel based FSW	Lagos, Kano, Kaduna, Benue, Nasarawa, Edo, Anambra, Cross River, FCT
MSM	Lagos, Kano, Cross River, Kaduna, FCT, Oyo
IDU	Lagos, Kano, Cross River, Kaduna, FCT, Oyo
Transport Workers	Lagos, Kano, Kaduna, Benue, Nasarawa, Edo, Anambra, Cross River, FCT
Armed Forces	Lagos, Kano, Kaduna, Benue, Nasarawa, Edo, Anambra, Cross River, FCT
Police	Lagos, Kano, Kaduna, Benue, Nasarawa, Edo, Anambra, Cross River, FCT

Note: The 2010 surveys among MSM and IDU were carried out in three states selected in 2007 (Lagos, Cross River and Kano) and three additional states, Kaduna, FCT, and Oyo (DFID/ENR-funded).

2.1.2 Target populations

2.1.2.1 Female sex workers (FSW)

For the purpose of this survey, a FSW, both brothel and non-brothel-based was defined as any female 15 years and above who receives money or other valuable gifts/incentives in exchange for sex in areas such as brothels, bars, restaurants, night clubs, hotels, or on the street. FSW are considered to be at a higher risk of contracting and transmitting HIV because sex work involves a gender power imbalance in negotiating safe sex.

2.1.2.2 Men who have sex with men (MSM)

For the purpose of this survey, an MSM is defined as any male 18 years and above who has engaged in sexual activities with other men in the 12 months preceding the survey. This target group is considered to be at a higher risk of contracting and transmitting HIV because of the elevated biological risk of HIV transmission through unprotected anal sex, multiple partnerships, and the potential for riskier sexual behaviour due to the stigma and discrimination attached to male-to-male sex. More is now known about MSM in Nigeria since the 2007 IBBSS, so six states were chosen for inclusion of MSM in the 2010 survey, namely: Lagos, Kano, Cross River, FCT, Kaduna and Oyo.

2.1.2.3 Injecting drug users (IDU)

For the purpose of this survey, an IDU is defined as any person 18 years and above who has injected drugs recreationally at least once in the past 12 month. This group is considered at higher risk of contracting and spreading HIV primarily through the sharing of needles and syringes, as well as practicing unsafe sex. The number of states where IDU were interviewed was increased from three to six states in the 2010 survey, namely: Lagos, Kano, Cross River, FCT, Kaduna and Oyo.

2.1.2.4 Armed Forces (Army, Navy & Air force), the Police and Transport Workers (TW)

These groups are considered to be at higher risk of contracting and transmitting HIV because of their job-related mobility which in many countries leads to increased patronage of commercial and casual sex partners. Police and the Armed Forces were eligible for inclusion in the study if they were based at barracks/stations in and around each state's urban centre, regardless of rank. With respect to TW, four categories of workers were identified: (i) long distance drivers/assistants of heavy duty vehicles (e.g. trailers) that spend more than one day on the road before reaching their final destinations; (ii) inter-state commercial bus and taxi drivers who travel relatively long and medium distances, the majority of whom sleep in the destination towns and not along the routes; (iii) intra-state commercial bus and taxi drivers who operate within a city or between relatively short distances and return to their usual place of residence at the end of each day; and (iv) commercial motorcyclists who transport persons from one place to another within a city for a fee. In the 2010 survey, group iii was dropped from the survey, as they were found to have similar risk of HIV infection with the general population.

2.2. Sample Size

The sample size for each target population was calculated to detect differences of 15% in key behaviours such as consistency of condom use and commercial sex, and to provide reliable estimates for each variable at state-level. The table below shows the final sample sizes achieved in this study for each group and state.

Table 2: Sample size achieved by study groups and states

State	BBSW	NBBSW	MSM	IDU	ARMED FORCES	POLICE	TW	
Anambra	249	250	*	*	300	220	312	
Benue	251	247	*	*	300	207	309	
Crossriver	237	250	313	273	300	219	312	
Edo	255	181	*	*	304	220	313	
FCT	249	249	199	271	300	219	312	
Kaduna	250	253	286	262	301	220	312	
Kano	249	267	299	269	297	218	306	
Lagos	276	250	215	197	278	219	312	
Nassarawa	249	247	*	*	301	215	312	
Oyo	Ω	Ω	233	273	Ω	Ω	Ω	
Total	2, 265	2, 194	1, 545	1,545	2,681	2,800	1,957	
Grand Total								14,987

* IDU and MSM were sampled only in 6 states

Ω MSM and IDU only were sampled in Oyo State

2.3 Sampling Procedures

In order to reach a representative sample of all groups involved in the 2010 IBBSS, a number of different sampling techniques were used depending on the group in question, including simple random sampling (SRS), cluster sampling (probability proportionate to size (PPS) for fixed populations), time-location sampling (TLS)⁶ and respondent-driven sampling (RDS)⁷. For MSM and IDU, the RDS method was used, while a TLS technique was used to select NBBSW and TW. The BBSW, Armed Forces, and Police were selected using a two-stage cluster sampling technique. The take all (TA) sampling method was used when the desired sample size was not attainable based on the results of target population mapping.

Table 3: Sampling procedures by study groups and states

	BBSW	NBBSW	MSM	IDU	ARMED FORCES	POLICE	TW
Anambra	PPS	TA	-	-	SRS	SRS	TLS
Benue	PPS	TLS	-	-	SRS	SRS	TLS
Cross River	TA	TA	RDS	RDS	SRS	SRS	TLS
Edo	PPS	TA	RDS	RDS	SRS	SRS	TLS
FCT	PPS	TLS	RDS	RDS	SRS	SRS	TLS
Kaduna	PPS	TLS	RDS	RDS	SRS	SRS	TLS
Kano	PPS	TLS	RDS	RDS	SRS	SRS	TLS
Lagos	PPS	TLS	RDS	RDS	SRS	SRS	TLS
Nassarawa	PPS	TLS	-	-	SRS	SRS	TLS
Oyo	-	-	RDS	RDS	-	-	TLS

⁶TLS is a form of cluster sampling that contains both time and location dimensions. TLS provides the opportunity to reach members of a target population who access certain locations at any point in time.

⁷RDS is a method that combines “snowball sampling” with a mathematical model that weights the sample to compensate for the fact that the sample was collected in a non-random way. The RDS process starts with the recruitment of the initial seeds each of whom recruits a maximum of two to three members from their population group.

The real challenges of the study pertained to locating and convincing eligible participants to participate given the often clandestine and socially unacceptable behaviours of some of the target groups (FSW, MSM, IDU), as well as the HIV test. These challenges were addressed by:

- Involving the target populations in the design and recruitment of study participants. A formative research was done among the MSM and IDU target groups before the data collection;
- Working with community leaders, authorities and NGOs to ensure that everyone was informed about the study and that data release is handled in such a manner as to minimize risk and stigma;
- Ensuring strict confidentiality of survey participants;
- Adequate training of field team in all of the survey process; and
- Thorough mapping of the various places where the target groups can be found before the survey. A list of sites where the population groups at higher risk of HIV infection were located and how and when they can be reached for information and services, and the essential distinguishing characteristics of these sites was prepared.

2.3.1 Armed Forces and Police

The Armed Forces respondents were selected using a two-stage cluster sampling procedure from the Armed Forces units in urban centres. Clusters were selected using PPS with a fixed number of Armed Forces participants recruited from each cluster. Where lists of personnel at each site could be obtained, simple random sampling was used. The Police respondents were stratified into males and females and 25% of the sample was female. For the Armed Forces, only males were sampled.

2.3.2 FSW (Brothel-based)

The brothel-based FSW were selected using a two-stage cluster sampling procedure (PPS). A team of mapping officers from the National Population Council (NPC) updated the list of brothels where FSW work based on the 2007 IBBSS. For each brothel listed, information was collected on the approximate number of FSW present to permit an estimate of cumulative measure of size. The information on measure of size was used to allocate the sample by PPS. Clusters were selected using PPS with a fixed number of FSW recruited from each cluster. The cluster size of the brothel-based FSW was five and 50 clusters were selected in each state where available. Individual participants were selected from the total number of FSW in the site. When the estimated number of brothel-based FSW in the state was less than the sample size of 250, a “take-all” approach was used in which all of the consenting FSW in the state’s urban centre were recruited for the survey.

2.3.3 FSW (Non-brothel-based)

The non-brothel-based FSW were recruited using the TLS approach. The TLS is a form of cluster sampling that contains both time and location dimensions. Working through relevant NGOs and States AIDS Program Coordinators (SAPC) in different cities/towns, the list of streets, bars, night clubs and hotels where non-brothel-based FSW usually congregate was updated (including information on the time of the day when they congregate there and the estimated number at each four-hour time segment). TLS clusters were selected using PPS with a fixed number of FSW recruited from each cluster. The cluster size of the non-brothel-based FSW was five and 50 clusters were selected in each state in order to reach the sample size of 250. When the estimated number of non-brothel-based FSW in the state was less than the sample

size of 250, a “take-all” approach was used where all of the consenting FSW in the state’s urban centre were recruited for the survey.

2.3.4 MSM and IDU

The respondent-driven sampling (RDS) method was adopted for the selection of MSM and IDU, because it offers several advantages for hard to reach populations, about whom little is known until the last round of the survey. RDS not only serves to achieve the desired sample size, it permits the identification of networks and characteristics within those networks. The RDS methodology starts with the recruitment of ‘seeds’ from the members of the target group, who then recruit other members of their personal networks who are also either MSM or IDU.

The seeds were identified by non-governmental organizations during the formative research. The number of seeds recruited varied from state to state across the two groups. An initial four to five seeds were recruited and the number was increased when it was discovered that some of the initial seeds were not recruiting efficiently. These seeds were the first MSM and IDU to be contacted and the objectives of the survey and expectations were explained to them. Once a seed completed all parts of the study (behavioural and biological), he was given three vouchers to recruit his peers into the study. Vouchers were numbered to include the identification number (serial number) of the original recruiter. The number of vouchers given to each recruiter was limited to three. This ensured a broad array of subjects had opportunity to recruit, to prevent the emergence of semi-professional recruiters, and to preclude turf battles over recruitment rights. A total of 1545 MSM and 1545 IDU were recruited for this study.

2.3.5 Transport Workers (TW)

The TLS procedure was also adopted among the male TW. TLS clusters were chosen using PPS, so the proportion of each different transport worker sub-type in the survey reflected the actual proportion in the TW population. In collaboration with the TW union and NGOs that have worked with TW, a list of major parks for each category of TW was compiled. For the long distance truckers, truck parking spots were identified along major routes. For other categories of TW, parks were identified in the major cities/towns of destination/operation. The list contained information on the high-and low-peak day and time-periods, and the estimated number of TW onsite during each period. TLS clusters were defined as the location where TW congregate, the day(s) of the week that constitute peak times, and the number of TW present at each four hour interval. TLS clusters were selected using PPS with a fixed number of transport workers recruited from each cluster. The cluster size of the transport workers was five and a total of 44 clusters were selected in each state in order to reach the sample size. Individual participants were selected from the total number of workers on the site on the day and specified time period through a simple randomization exercise. A total of 1957 TW were recruited for the study.

2.4 Refusal for HIV test

There were 14,987 individuals selected for this study out of which 10.7% refused to participate in biological components of the study. Non-brothel-based FSW had the highest refusal rate of 16.6%, followed by MSM at 16.4%, IDU at 14.8% and brothel-based FSW at 13.6%. The Police, Armed Forces and TW had 7.1%, 5.9% and 3.6% of HIV test refusal respectively.

2.5 Key Indicators in the IBBSS

The following are a selection of key analysis variables selected as part of the survey data analysis plan to facilitate comparison with 2007 data:

- HIV prevalence
- Knowledge about HIV/STI (individual components and UNGASS knowledge indicator for most-at-risk populations)
- Self-reported STI symptoms
- Sex with non-marital partners by type
- Duration of sex work and injecting drug use
- Condom use at last sex in commercial sex
- Condom use at last sex with non-commercial partners by type
- Consistent condom use with commercial and non-commercial partners
- Sharing of injecting equipment among IDU
- Receiving HIV testing and results
- Condom use in anal sex among MSM by type of partner (commercial and non-commercial)
- Attitudes towards PLWHA
- Exposure to interventions

2.6 Pilot Study

A one-week pilot test was held in Ogun State, a non-IBBSS state prior to the main survey. This involved testing various parts of the survey process, including the study protocol, the methodology, training and data collection. Members of the TC, including FHI/GHAIN and the ENR team participated in the pilot study. A TC meeting was held to discuss improvements to the survey process, methodology and instrument based on the outcome of the pilot.

2.7 Training of Personnel

Two levels of training were implemented: a central training of trainers/supervisors (two sessions, North and South), followed by state-level trainings in each state where the survey was conducted. The valuable experience gained from the one-week pilot exercise was used to feed into the central-level training of supervisors. At this training, state teams were formed and all supervisors were taken through in-depth sessions on the survey objectives and methodology, enhancing their understanding of their roles in the survey, the survey process, and the need for good quality data. The supervisors used were experienced supervisors, many of whom had been involved in the past round of IBBSS. They spent one week in the central-level training in Lokoja, where members of the TC were able to observe and correct common mistakes and areas of weakness prior to teams' departure for their respective state-level training. At both central-and state-level trainings, each question in the questionnaire was reviewed and acted out in role-play, and possible challenges were identified and addressed. The four-day state-level training was conducted for the interviewers and counsellor/testers in each of the states prior to commencement of data collection. Three additional interviewers per state were invited to participate in the training as back-up and a screening process overseen by

members of the TC ensured that only the most capable interviewers were selected for the main study. Some of the additional interviewers trained were also used as replacements as the need arose.

2.8 Data Collection

Data collection flow was consistent across target populations, and included the following steps:

- Interviewer introduced and explained the study to the participant;
- Interviewer obtained consent for behavioural component from the participant;
- Interviewer conducted the behavioural interview;
- Interviewer obtained consent for the biological component from the participant and accompanied participant to counsellor-tester;
- Counsellor-tester conducted pre-test counseling;
- Counsellor-tester obtained finger prick blood sample from the participant on a dried blot spot (DBS) paper, and labelled the sample with the participant's study ID;
- Counsellor-tester conducted a rapid test, and provided client with the results of their HIV tests (if desired);
- DBS samples with corresponding code numbers were then appropriately stored and later sent to the state lab scientist who collated and sent them to FHI office in Abuja;
- Counsellors provided the participants with post-test counseling when the results were provided.

The survey was administered for all target groups through one-on-one, face-to-face interviews in private settings that guaranteed the confidentiality of information provided by the respondent. The survey team for each group in each state consisted of three or four interviewers, one supervisor and two counsellor-testers. Witnessed consent was obtained by a counsellor or supervisor who acknowledged that all necessary information was provided and understood. Interviewers ensured that respondents were not interviewed twice by asking respondents if they were interviewed earlier on in the survey, and using a single team member for screening RDS participants.

Interviews and testing with brothel-based FSW were carried out at the selected brothels. Adequate preparations were made to ensure that each brothel was visited at the time determined during the pre-surveillance mapping exercise to be most suitable to conduct the interviews and testing. Shortly before data collection commenced, members of the survey team updated the data on the selected brothels, established rapport with the gatekeepers and confirmed the best time to conduct interviews. Similar advocacy was paid to gatekeepers of non-brothel-based FSW. Survey teams conducting interviews in street and bar locations and received security support from plain clothes Police as required.

Interviews and testing with the Armed Forces personnel were conducted in the selected units/barracks. The survey team was guided by members of the Armed Forces Program on AIDS Control (AFPAC) serving on the TC, and following due consultation with the unit commanders. Interviewing and testing with Police was guided by members of the Police Action Committee on AIDS (PACA) serving on the TC, following due consultation with the officers in charge of each police station. The interviews and testing for TW were conducted in the selected time-location sites (parks). The TW were first screened to prevent interview of one respondent more than once. This is because they are very mobile; the chances of appearing in two or more

study locations during the period of the study are high.

The MSM and IDU respondents were interviewed and tested at a designated location agreed with key informants during the pre-assessment study. The seed participants recruited and referred additional participants to the study location. Each recruit was also asked to recruit and refer up to three other members of the group they know to the study location until the desired sample size was attained. Marked coupons were used by these respondents to recruit their peers.

2.9 HIV Testing Procedures

Rapid HIV testing was done on the field using recommended national parallel algorithm. Determine and Unigold were used first while Stat Pak was used as a tie breaker when there were discordant results from the two tests. The parallel algorithm was used because of the expected higher HIV prevalence (than general population) expected among the high-risk groups. The parallel tests ensured respondents were not pricked twice and assured higher degree of certainty of results given. Pre and post test counseling was conducted on the field and respondents who tested positive were referred for care and treatment while negative respondents were told to repeat test in the nearby VCT centre after 3 months. Dried Blood Spot (DBS) samples were taken simultaneously and stored at room temperature in Ziploc bags containing desiccants and paper indicator. DBS samples collected within a state were sent to the state laboratory scientist who ensures that the samples get to the central collecting site in Abuja. All samples were stored appropriately. The DBS samples will be tested with Elisa and the results reported in a separate document.

Universal precautions were observed by all during handling of blood and blood products. Personal protective equipment (PPE) (laboratory coats, gloves and eye protectors) were provided for all laboratorians and counsellors handling specimens.

2.10 Data Management and Analysis

2.10.1 Field Supervision

Every field team had one supervisor. The supervisors reviewed each completed questionnaire immediately after the interview session ended and identified mistakes which were corrected before the respondent left the site. The completed questionnaires were also further reviewed by the State AIDS Program Coordinator and the TC members supervising the teams in each state. The TC provided guidance and oversight to supervisors where necessary. They also supervised the sampling techniques to ensure that the teams adhered to the sampling methods described for the different groups.

2.10.2 Data Entry

Data was entered using CS Pro version 3.2. A template for the questionnaire was designed with pre-programmed consistency checks for cross-checking answers, including skips and eligibility criteria. At least 25% of the questionnaires entered daily by each data entry clerk had the behavioural data re-entered, while 100% double-data entry was done for the biological data for quality control purposes. The data entry clerks were supervised by four supervisors who reviewed and validated all questionnaires entered.

Coupons used for the MSM and IDU groups were retrieved, the paper-based coupon managers were entered into excel spreadsheet.

2.10.3 Data Cleaning

After data entry, the data was cleaned using STATA 10. Frequency counts were carried out to check consistency and assess cleanness of the data. The data cleaning also included the following:

- Searching for ages outside the age range criteria;
- Cross-checking all corresponding skips to the questionnaire;
- Reviewing the cluster allocations;
- Cross-checking the questionnaire completion responses from the interviewers in the database with the records in the supervisors log to ensure they matched;
- Consistency checks involving cross-checking answers to related questions.
- The coupon numbers and respondents ID were also crossed-checked from the coupons where the numbers did not correspond.

2.10.4 Data Management and Coding

Variables were recoded using standard recodes according to the indicators to be measured. Denominators were standardized and composite indicators created. A clean data set was used to generate the necessary tables in accordance with the pre-approved analysis plan.

2.10.5 Data Analysis

2.10.5.1 STATA

Data was analyzed using STATA 10. The data analysis focused on highlighting HIV risk factor prevalence at state-and national-levels. HIV prevalence were calculated as the percentages of the samples that were positive and 95% confidence intervals were determined.

2.10.5.2 RDSAT

RDS relies on peer recruitment; however, peer recruitment can lead to significant selection bias. Selection bias is a threat to the validity of the results obtained for various indicators, including HIV prevalence. For example, if HIV risk is much higher in those who have larger networks (e.g. MSM sex workers or gay-identified MSM) than those with smaller networks, then the un-weighted HIV prevalence is likely to be an overestimate. This is because those with larger networks have a greater probability of getting into the sample. Hence those with larger networks were likely oversampled. If the oversampled group (i.e., the group with larger networks) has a higher HIV prevalence, then the sample (un-weighted) HIV prevalence will be over-estimated. Additionally, with any peer recruitment, it is also likely that people tend to recruit others like themselves, and that some are more efficient at recruiting peers. This may happen with MSM sex workers, for example. This kind of recruitment behaviour may lead to over-sampling of certain sub-groups, leading to a biased sample.

Analysis in the RDSAT software was used for HIV prevalence of MSM and IDU where data was collected using the RDS. It adjusts for selection bias, recruitment patterns, and the differences in network size by reducing the over-representation of those with larger network sizes, in the sample. This ensures proper analytical adjustment of a non-probability sampling methodology.

2.11 Ethical Issues

Participation of all respondents in the survey was strictly voluntary. Measures were taken to ensure the respect, dignity and freedom of each individual participating in the study. In order to guarantee the anonymity of each participant, the names of respondents, their addresses

or other identifying information were not included in the questionnaires or on any biomarker tracking forms. Stickers with numbered codes were used: on the questionnaire, on the DBS samples, on the test forms, and on the HCT referral forms. Informed consent was obtained from each participant. After witnessing verbal informed consent, the form was signed by the supervisor or counsellor. All respondents who tested for HIV were given pre and post-test counseling and results. Those testing positive were referred to a site offering HIV treatment services at no cost to the respondents. Those testing negative were advised as in national guideline to re-test every 3 months. The protocol, consent forms and draft questionnaires were approved by the Nigerian Institute for Medical Research's (NIMR) Institutional Review Board (IRB) in Nigeria and by Family Health International's (FHI) Protection of Human Subjects Committee.

2.12 Study limitations

The following are limitations of the study:

Reporting Bias: Similar to most behavioural surveys, the issue of under-reporting risk behaviours among participants of this study must be considered. Due to social stigma, some behaviour such as condom use, male to male sex, anal sex, drug injection, or needle sharing may be under-reported by respondents. For example, the percentage of condom use at last sex among FSW was over 90% in most states, higher than what was reported by male groups surveyed and this needs to be viewed with some caution, especially as condom use was much lower with regular partners. Many efforts were taken to limit this reporting bias in the 2011 IBBSS, including the anonymity of the surveys, conduct of interviews in private places, the capture of information using a special code rather than identifying information and respondents were encouraged to provide accurate responses before and during the interview.

Incomplete sampling frames: cluster samples were chosen at random based on sampling frames developed through the mapping process conducted by the National Population Commission. This process was to identify places where potential subjects could be reached and sampled. Field work for the mapping exercise was performed over three weeks by staff from the NPC with previous experience in conducting mapping from the 2005 BSS and 2007 IBBSS. It is thus possible that some hidden populations may not be adequately represented in the sampling frames.

Incomplete information needed to calculate national estimates for MSM and IDU: A population size estimate is needed to adequately determine national estimates of HIV prevalence of MSM and IDU recruited through the RDS methodology. It is hoped that the next survey will take this into consideration and apply suitable method for estimating the population estimates of IDU and MSM in each of the selected states.

3 RESULTS

This section presents the findings from the 2010 IBBSS by study groups. A total of 14,987 respondents consisting of brothel-based female sex workers (BBFSW), non-brothel-based female sex workers (NBBFSW), transport workers (TW), Men who have Sex with Men (MSM), Injecting Drug Users (IDU), Police and members of the Armed Forces were studied. Weighted data are presented at the national level for all groups except the MSM and IDU, while un-weighted data is presented at the state level.

Results are presented in the following subsections: 3.1) characteristics of respondents; 3.2) HIV prevalence; 3.3) HIV awareness, knowledge and risk perception; 3.4) HIV/STI risk behaviours; 3.5) attitude towards PLWHA; 3.6) exposure to HIV prevention intervention.

In addition to the results presented below, detailed state level group characteristics and behavioural data can be found in the appendix.

3.1 Characteristics of Respondents

Table 4: Percentage distribution of all study groups by socio-demographic characteristics, IBBSS Nigeria 2010

CHARACTERISTICS	BBFSW	NBBFSW	MSM	ARMED FORCES	POLICE	TW	IDU
Total	2,265	2,194	1,545	2,681	2,800	1,957	1,545
Age (years)							
15-19	5.0	11.4	13.8	0.3	0.2	1.9	2.4
20-24	27.9	36.4	39.6	9.9	7.5	9.7	18.9
25-49	67.1	52.1	46.6	89.8	92.4	88.5	78.7
Sex							
Male	0.0	0.0	100.0	100.0	75.4	100.0	94.6
Female	100.0	100.0	0.0	0	24.6	0.0	5.4
Marital status							
Currently married	3.3	2.9	8.9	70.2	69.2	67.1	24.0
Never married	54.9	69.0	87.6	27.2	27.3	28.9	62.9
Others (separated/divorced/widowed)	40.5	28.1	2.6	2.3	3.2	3.7	12.9
Level of education							
No formal education	5.7	3.0	0.7	0.1	0.0	1.8	1.0
Primary*	23.8	11.5	9.6	3.3	5.6	34.2	18.0
Secondary	65.6	69.5	63.8	59.3	70.4	55.1	57.9
Tertiary	4.9	16.0	26.0	37.3	24.0	8.9	23.1

*Includes those with Quranic education

Age: MSM had the highest percentage of respondents in the younger age groups compared to other groups, with 39.6% of them in the age group 20-24 years and 13.8% below the age of 20 years. Almost half of the NBBFSW (47.8%) were less than 25 years, while a third of the BBFSW were under 25 years. Among the NBBFSW 11.4% were below the age of 20 years compared to 5% in the BBFSW. Among the Armed Forces, 89.8% were over the age of 25. This distribution is similar for the Police and TW among whom only 7.7% and 11.6% respectively were less than 25 years old. The IDU had a slightly younger age profile with 21.3% of them being less than 25 years of age.

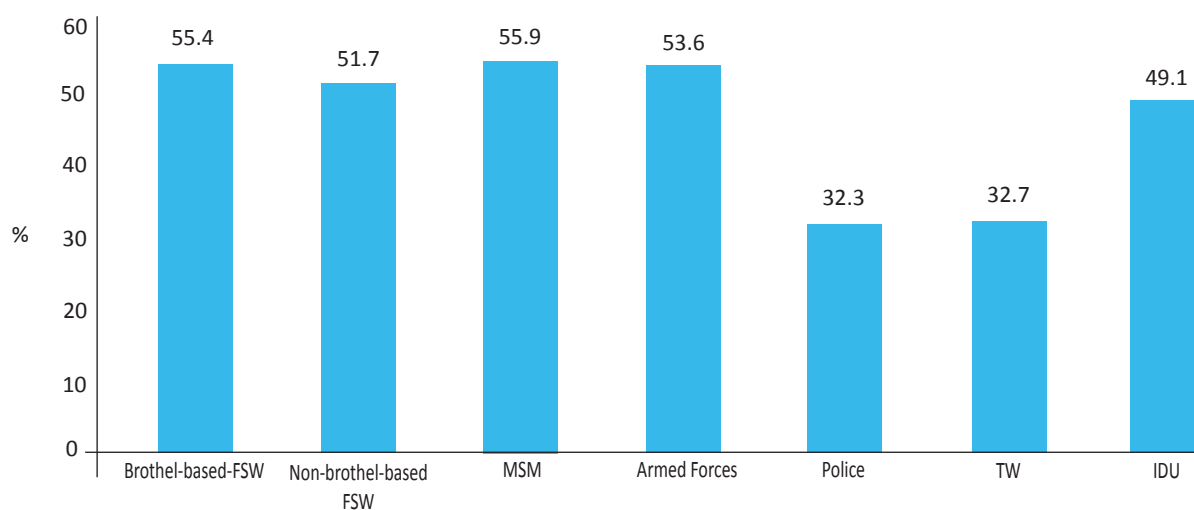
Sex: Only two groups, Police and IDU, had representatives from both sexes. About a quar-

ter (24.6%) of the Police were females and only 5.4% of IDU were females.

Marital status: Few of the FSW were currently married, with almost similar proportions in both BBFSW and NBBFSW groups at 3.3% and 2.9% respectively. Only 8.9% of MSM were currently married while 87.6% were neither married nor living with a sex partner. Among the male dominated occupational groups, 70.2% of the Armed Forces, 69.2% of the Police and 67.1% of TW were currently married. About a quarter (24.0%) of the IDU were currently married.

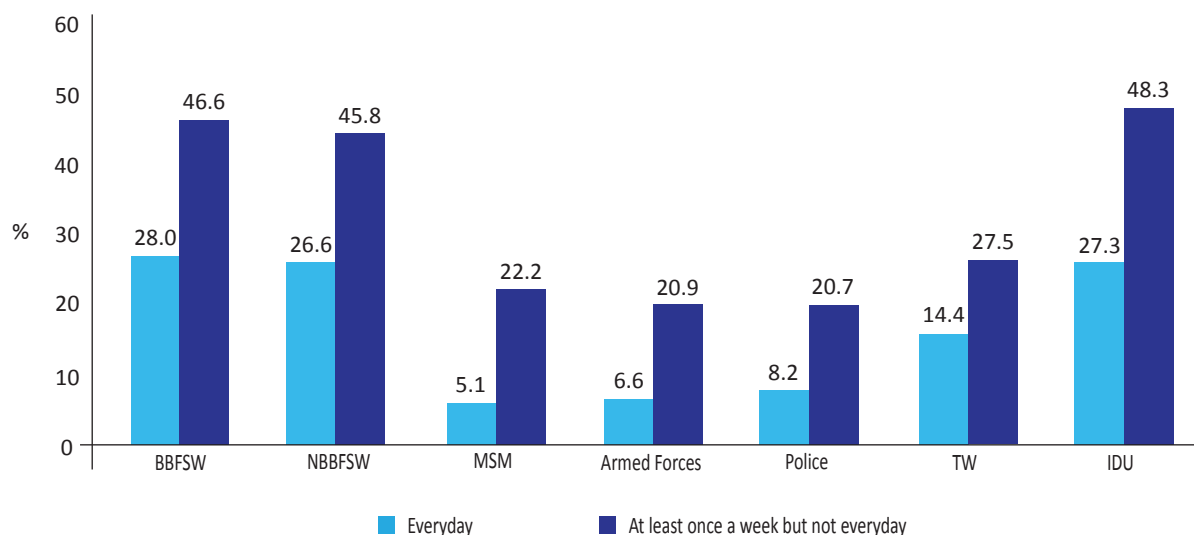
Education: The Armed Forces had the highest proportion with tertiary education (37.3%) followed by the MSM (26.0%) and the Police (24.0%). Only 4.9% of BBFSW had tertiary education.

Figure 3: Proportion of respondents away from home for at least 1 continuous month in the past 12 months preceding the survey, IBBSS Nigeria 2010



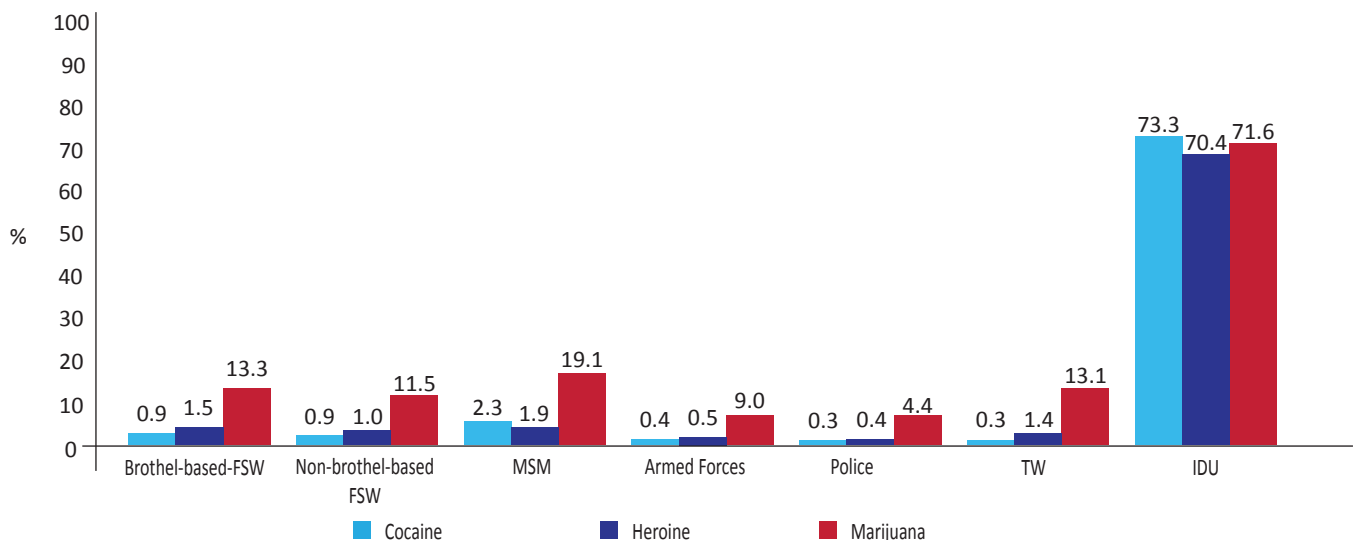
Mobility: The mobility status of respondents was assessed by asking whether they had been away from their home continuously for one month or more in the 12 months preceding the survey date. Increased mobility has been associated with risky sexual behaviour. Figure 3 above shows that all groups were highly mobile. Based on this measure of mobility, the least mobile groups were the Police and TW (32.3% and 32.7% respectively). Out of those surveyed, FSW, MSM and Armed Forces were the most likely to have spent a month or more away from home. There were state level differences (see appendix).

Figure 4: Frequency of alcohol consumption among study groups, IBBSS Nigeria, 2010



Use of Alcohol: Respondents were asked whether they consume alcohol and how frequently. The FSW and the IDU were more likely to consume alcohol everyday compared to the other study groups (Figure 4).

Figure 5: Drug use in the last four weeks among study groups, IBBSS Nigeria 2010



Drug and substance use: Respondents were asked what types of recreational drugs and other substances they had tried in the last four weeks prior to the survey. Figure 5 shows the percentage of respondents who reported use of cocaine, heroin or marijuana during this time period.

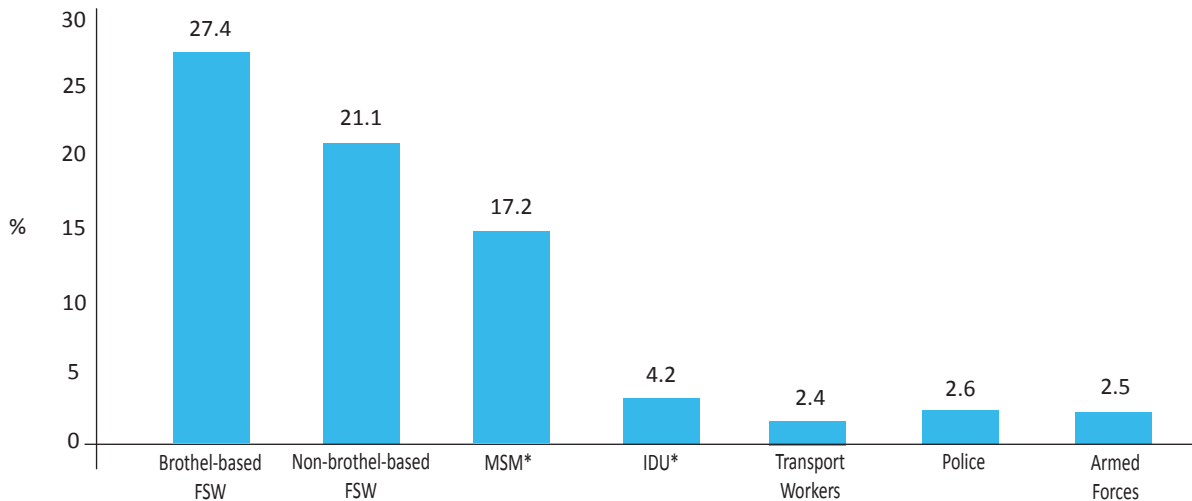
Drug use was very high among IDU. Majority of IDU reported using cocaine (73.3%), as well as heroin (70.4%) and marijuana (71.6%) during the four weeks leading up to the survey. After IDU, MSM were the group with the next highest reported use of a variety of drugs, with 19.1%, 2.3% and 1.9% consuming marijuana, cocaine and heroin respectively in the four weeks prior to the survey. A fair proportion of FSW, both brothel and non-brothel-based, reported using marijuana in the four weeks prior to the survey (13.3% and 11.5% respectively), and 1.0% had used heroin. Marijuana was also the main drug reportedly used by the predominantly male occupational groups in the four weeks prior to the survey - 13.1% of TW, 9.0% Armed Forces personnel and 4.4% of Police. Apart from marijuana, 1.4% of TW reported use of heroin.

3.2 HIV Prevalence among study groups

3.2.1 Overall HIV prevalence

This section describes the pattern of HIV among the study groups. The understanding of the distribution of the HIV infection within the perceived high risk population and analysis of the social and behavioural factors associated with HIV infection can offer insights into sub-populations at higher risk among these high-risk groups.

Figure 6: HIV prevalence among all study groups, IBSS Nigeria 2010



*Population size estimates of MSM and IDU in the sampled states, which are not available, are needed to calculate the weighted national estimates for these groups.

Figure 6 shows the weighted HIV prevalence for all the groups except the MSM and IDU where crude rates are reported. BBFSW and NBBFSW showed the highest HIV prevalence 27.4% and 21.1% respectively. The least prevalence was found among the TW (2.4%).

3.2.2 HIV prevalence by states

Figures 7-13 show the state level HIV prevalence which includes RDSAT (weighted) analysis for MSM and IDU at state level. Benue, Nasarawa, Kano, FCT and Kaduna had higher burden of the HIV infection among the FSW compare to other states surveyed. MSM in FCT, Kaduna and Lagos also recorded high HIV prevalence. IDU in FCT, Kano, Kaduna and Oyo had higher prevalence than their counterparts in Lagos and Cross River. Transport workers and Armed Forces in Benue and Nasarawa States had high HIV prevalence compared to other states. However, the Police in Nasarawa, FCT and Kano recorded HIV prevalence higher than other states.

Figure 7: HIV prevalence among brothel-based FSW by state, IBSS Nigeria 2010

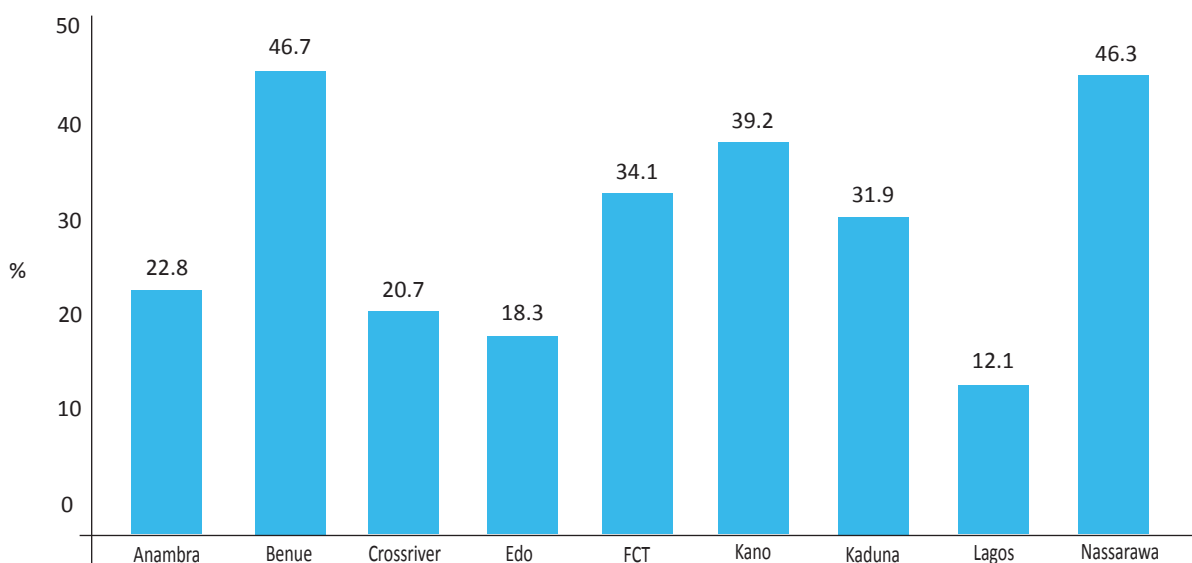
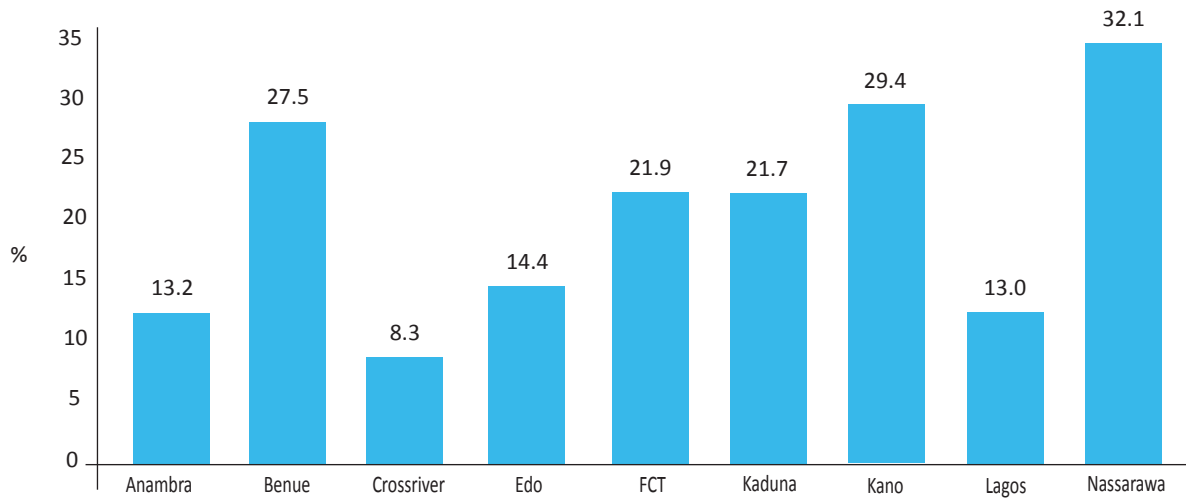
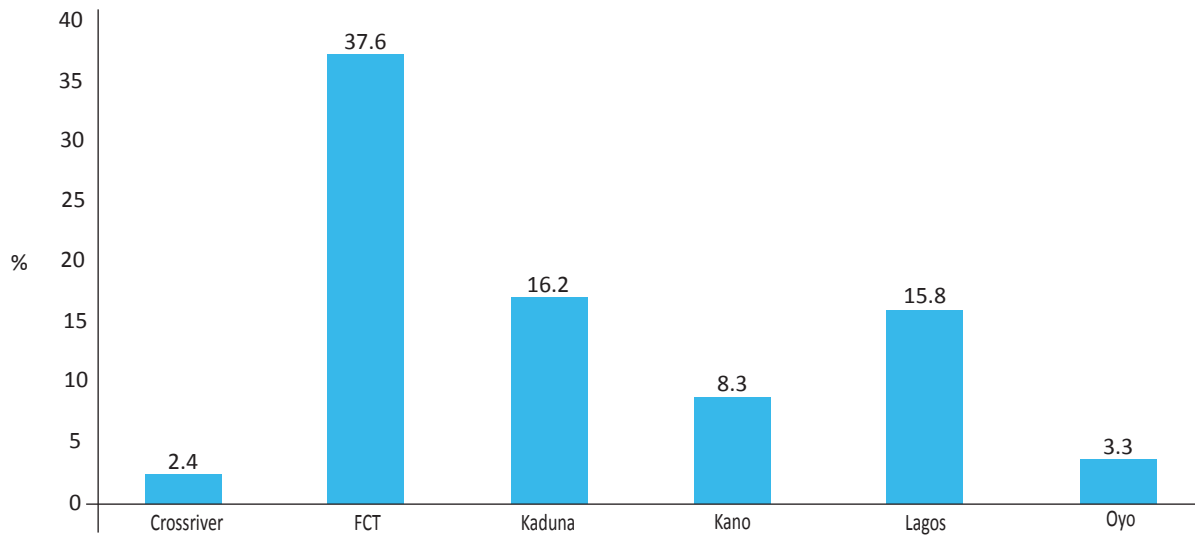


Figure 8: HIV prevalence among non-brothel-based FSW by state, IBBSS Nigeria 2010



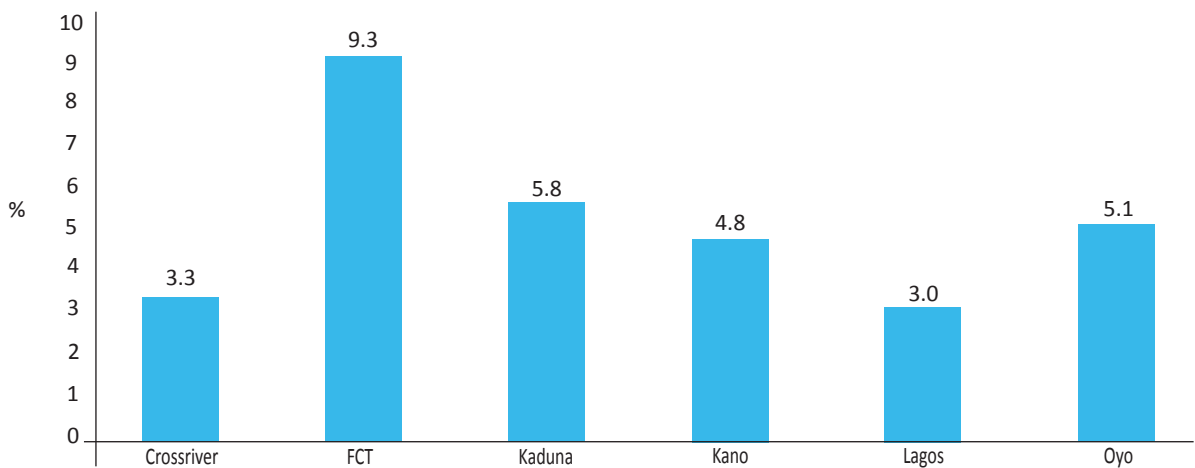
The highest prevalence of HIV among NBBFSW was in Nasarawa (32.1%) and Kano (29.4%).

Figure 9: HIV prevalence among MSM by state, IBBSS Nigeria 2010



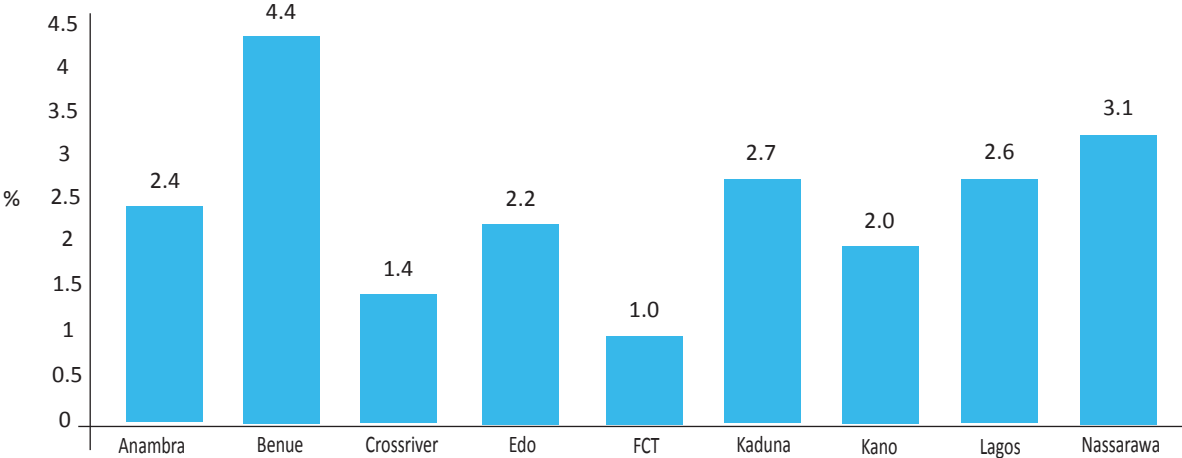
MSM in FCT had the highest HIV prevalence (37.6%) followed by those in Kaduna (16.2%).

Figure 10: HIV prevalence among IDU, IBBSS Nigeria 2010



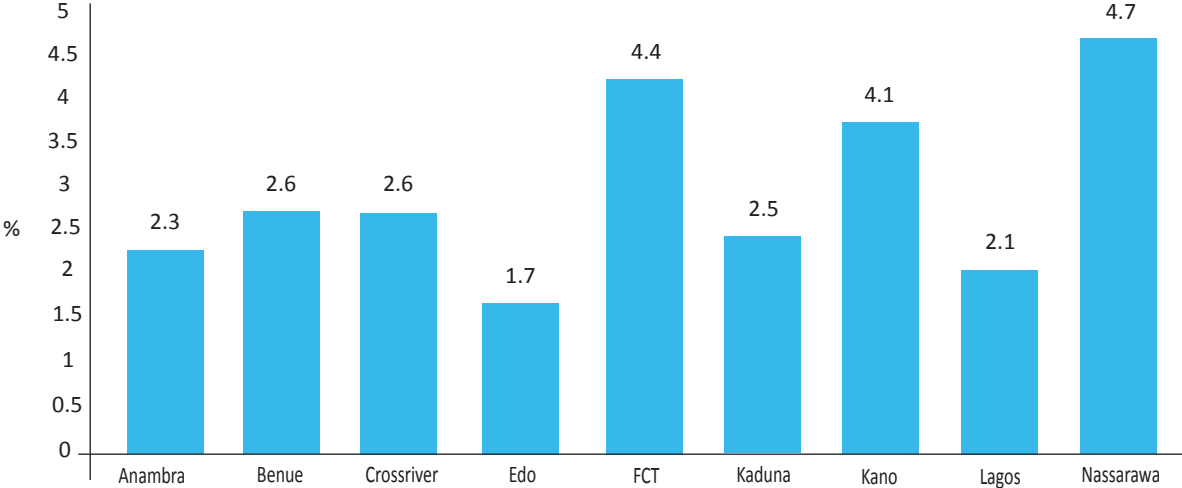
The highest HIV prevalence among IDU was found in FCT (9.3%) and Kaduna (5.8%) closely followed by Oyo (5.1%).

Figure 11: HIV prevalence among Armed Forces, IBBSS Nigeria 2010



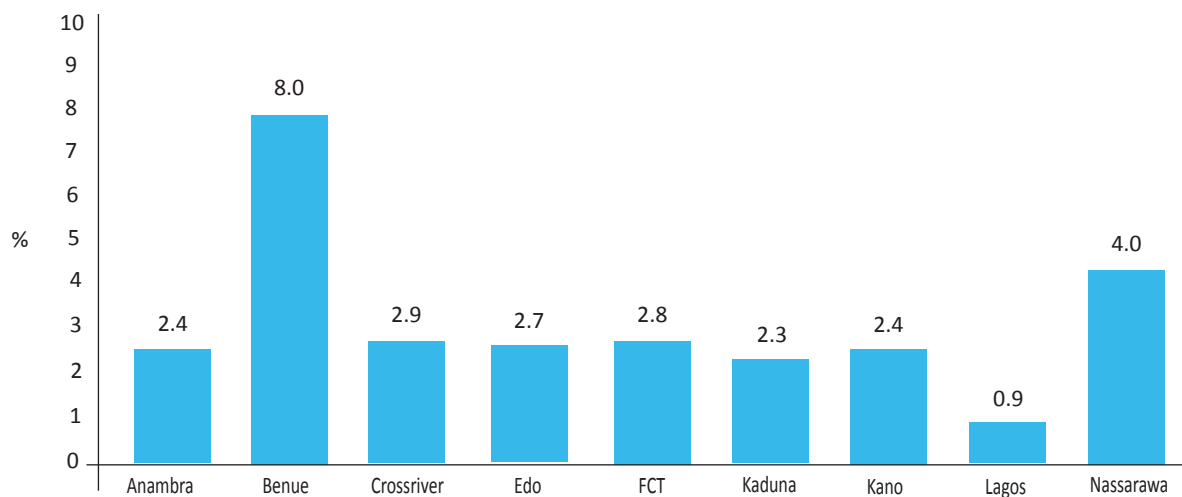
Armed Forces in Benue and Nasarawa (4.4% and 3.1% respectively) had the highest HIV prevalence among those surveyed.

Figure 12: HIV prevalence among Police, IBBSS Nigeria 2010



Highest HIV prevalence among the Police was found in Nasarawa, FCT and Kano States, 4.7%, 4.4% and 4.1% respectively.

Figure 13: HIV prevalence among transport workers, IBBSS Nigeria 2010



TW in Benue had higher HIV prevalence (8.0%) compared to other states.

3.2.3 HIV prevalence by selected characteristics

3.2.3.1 HIV prevalence by socio-demographic factors

Table 5: HIV prevalence by selected socio-demographic characteristics among BBFSW and NBBFSW

Characteristics	Prevalence	n	95% confidence interval
BBFSW			
Age group (years)			
15-19	24.3	101	15.1 – 33.6
20-24	20.3	552	16.7 – 24.0
25-49	30.8	1295	28.1 – 33.5
Years in sex work			
Less than a year	29.6	458	25.2 – 34.1
1- 2	26.4	821	23.2 – 29.6
3 -4	23.7	369	19.1 – 28.4
5+	36.8	206	29.6 – 44.0
Education			
No formal education	48.9	104	38.4 - 59.4
Primary	35.2	460	30.4 - 40.0
Secondary	22.8	1291	20.3 – 25.2
Tertiary	29.1	93	19.1 – 39.1
Marital status			
Currently married	36.3	64	23.3 – 49.3
Never married	20.4	1067	17.8 – 23.1
Others	36.6	796	33.0 – 40.1
NBBFSW			
Age group (years)			
15-19	15.2	220	10.1 – 20.2
20-24	18.0	662	15.0 - 21.1
25-49	24.8	937	21.8 – 27.7
Years in sex work			
Less than a year	18.8	333	14.4 – 23.2
1- 2	19.0	797	16.1 – 21.9
3 -4	22.6	300	17.4 – 27.7
5+	28.3	233	22.0 – 34.5

Education			
No formal education	29.5	56	16.5 – 42.4
Primary	34.2	209	27.4 – 41.0
Secondary	19.8	1287	17.5 – 22.1
Tertiary	15.1	267	10.5 – 19.8
Marital status			
Currently married	14.1	52	4.0 – 24.2
Never married	18.4	1265	16.1 – 20.6
Others	28.7	481	24.4 – 33.0

HIV prevalence was highest among respondents aged 25-49 among both BBFSW (30.8%) and NBBFSW (24.8%) groups. HIV prevalence increased with years of sex work among the NBBFSW whereas there was no definite pattern among the BBFSW. HIV prevalence was also highest among those with primary and no formal education compared to those with secondary and tertiary education. Those who were divorced or separated had highest HIV prevalence compared to those either never married or currently married.

Table 6: HIV prevalence by selected socio-demographic characteristics among MSM and IDU

Characteristics	Prevalence	n	95% confidence interval
MSM			
Age group (years)			
18-19	12.0	200	7.5 – 16.5
20-24	16.2	537	13.1 – 19.3
25-49	20.0	554	16.7 – 23.3
Education			
No formal education	*	7	
Primary	15.1	126	8.8 – 21.4
Secondary	16.0	871	13.6 – 18.4
Tertiary	20.9	287	16.2 – 25.6
Marital status			
Currently married	15.0	100	8.0 – 22.0
Never married	17.5	1146	15.3 – 19.7
Others	14.7	34	2.8 – 26.6
IDU			
Age group (years)			
18-19	0	25	0
20-24	4.0	248	1.6 – 6.4
25-49	4.3	1044	3.1 – 5.5
Gender			
Male	3.1	1236	2.1 – 4.1
Female	21.0	81	12.1 – 29.9
Education			
No formal education	*	16	
Primary	5.4	258	2.6 – 8.2
Secondary	3.9	761	2.5 – 5.3
Tertiary	3.5	282	1.4 – 5.6
Marital status			
Currently married	3.3	329	1.4 – 5.2
Never married	3.9	811	2.6 – 5.2
Others	6.9	174	3.1 – 10.7

* Suppressed due to denominator less than 30

HIV prevalence increased with increasing age among both MSM and IDU. The prevalence increased with increasing educational status among the MSM while the reverse is the case among the IDU. Female IDU had about 7 times higher HIV prevalence than in their male counterparts. MSM who had never married had the highest HIV prevalence (17.5%) while IDU (6.9%) who were either divorced or separated had the highest HIV prevalence.

Table 7: HIV prevalence by selected socio-demographic characteristics among Armed Forces, Police and transport workers

Characteristics	Prevalence	n	95% confidence interval
ARMED FORCES			
Age group (years)			
18-19	*	9	
20-24	0.3	252	0.9 – 4.7
25-49	2.6	2262	1.7 – 3.5
Rank			
Junior	2.5	2357	1.7 – 3.4
Senior	2.1	164	0.0 – 2.8
Education			
No formal education	*	2	
Primary	4.3	82	1.6 – 11.1
Secondary	2.7	1495	1.5 – 3.9
Tertiary	2.1	944	1.0 – 3.2
Marital status			
Currently married	2.7	1761	1.6 – 3.7
Never married	2.2	701	0.6 – 3.8
Others	1.8	55	0.3 – 9.6
POLICE			
Age group (years)			
18-19	*	4	0
20-24	0.9	198	0.2 – 3.4
25-49	2.7	2400	1.7 – 3.6
Gender			
Male	2.0	1968	1.1 – 3.0
Female	4.5	634	2.5 – 6.5
Rank			
Junior	2.7	2488	1.7 – 3.6
Senior	1.1	102	0.2 – 5.5
Education			
No formal education	*	0	
Primary	2.0	146	0.7 – 5.8
Secondary	2.9	1825	1.7 – 4.0
Tertiary	1.8	631	0.4 – 3.2
Marital status			
Currently married	2.4	1802	1.3 – 3.5
Never married	2.3	712	1.4 – 3.3
Others	10.0	80	5.2 – 18.5
TRANSPORT WORKERS			
Age group (years)			
18-19	0	34	0
20-24	0	180	0
25-49	2.6	1673	1.9 – 3.4
Categories of TW			
Long distance	2.8	668	1.6 – 4.0
Short distance	2.2	1196	1.2 – 3.1

Education			
No formal education	1.1	34	0.1 – 12.0
Primary	1.9	637	0.9 – 2.9
Secondary	2.9	1048	1.8 – 4.1
Tertiary	1.4	168	0.1 – 2.7
Marital status			
Currently married	2.1	1271	1.3 – 3.0
Never married	2.2	540	0.9 – 3.3
Others	8.4	71	0.2 – 16.5

HIV prevalence in male predominant groups was highest among respondents between ages 25-49; 2.6%, 2.7% and 2.6% in the Armed Forces, Police and TW respectively. Along educational line, the Police (2.9%), TW (2.9%) with secondary education and Armed Forces (4.3%) with primary education had the highest HIV prevalence. Meanwhile, the widowed, separated or divorced had the highest prevalence in the Police (10.0%) and TW (8.4%) whilst those currently married in the Armed Forces had the highest prevalence. However, the prevalence was higher among females (4.5%) compared with the males (2.0%) within the police.

3.2.3.2 HIV prevalence by selected risk factors

This section presents results of HIV prevalence by selected risk factors and study groups. Selected risk factors include use of alcohol, knowledge of HIV prevention and sexual behaviour.

Table 8: HIV prevalence by selected risk factors for HIV among brothel and non brothel based FSW

	Yes		No	
	% (95% CI)	n	% (95% CI)	n
BBFSW				
Daily alcohol consumption	24.0 (20.2 – 27.8)	541	28.7(26.2–31.3)	1407
Correctly identified ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission	21.6 (18.1 – 25.1)	604	30.1 (27.5 - 32.8)	1344
Perceives self at high risk of HIV infection	27.0 (23.8 – 30.2)	811	27.6 (24.8 – 30.5)	1137
Had 5 or more clients last day of sex work	27.6 (24.1 – 31.1)	763	27.3 (24.6–29.9)	1185
Use condom consistently with clients	27.4 (25.2 –29.7)	1777	26.7 (19.7 – 33.7)	171
FSW who reported STI symptoms in past 12 months	32.5 (26.7- 38.3)	309	26.4 (24.1 – 28.7)	1639
NBBFSW				
Daily alcohol consumption	20.9 (17.1 – 24.7)	500	21.2 (18.9 – 23.6)	1319
Correctly identified ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission	19.2 (16.1 – 22.3)	715	22.4 (19.8 – 25.0)	1104
Perceives self at high risk of HIV infection	21.5 (18.2–24.8)	670	20.9 (18.4 –23.4)	1149
Had 5 or more clients last day of sex work	23.7 (14.4 – 33.0)	90	21.0 (18.9 –23.0)	1729
Use condom consistently with clients	21.5 (19.2 – 23.8)	1377	19.9 (16.0 –23.9)	442
FSW who reported STI symptoms in past 12 months	24.0 (19.8 – 28.1)	442	20.2 (17.9 –22.5)	1377

Table 8 describes the pattern of HIV prevalence in relation to selected risk factors. Among the BBFSW, the prevalence among the respondents who could not correctly identify ways of preventing sexual transmission of HIV (30.1%) was higher than those who could (21.6%). Similarly the prevalence among BBFSW who reported STI symptoms in past 12 months (32.5%) was higher than those who did not report symptoms during the same period (26.4%).

Table 9: HIV prevalence by selected risk factors for HIV among MSM and IDU

	Yes		No	
MSM	% (95% CI)	n	% (95% CI)	n
Daily alcohol consumption	21.5(11.3 – 31.8)	65	17.0(14.9 – 19.1)	1226
Condom use last non marital sex	17.0(13.0 – 21.2)	317	17.0(14.9 – 19.6)	974
Correctly identified ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission	19.5(15.7 – 23.3)	415	16.1(13.7 – 18.5)	876
Perceives self at high risk of HIV infection	24.1(18.8 – 29.4)	249	15.5(13.3– 17.8)	1042
Has more than one non marital partner	16.5(12.7 – 20.3)	369	17.5(15.0 – 19.9)	992
Had sex with FSW last 12 months	15.6(9.7 – 21.5)	147	17.4(15.2 – 19.6)	1144
Was insertive male partners last 6 months	14.7(12.4 – 17.0)	924	23.4(19.1 – 27.8)	367
Was receptive male partners last 6 months	19.0(16.3 – 21.7)	785	14.4(11.4 – 17.5)	506
Sold sex to male partners last 6 months	18.7(15.2 – 22.2)	477	16.3(13.8 – 18.9)	814
Paid for anal sex with male partner last 6 months	16.0(11.8 – 20.3)	287	17.5(15.2 – 19.9)	1004
Used condom last anal sex	17.3(14.2 – 20.3)	602	17.1(14.3 – 19.9)	689
Reported STI symptoms in past 12 months	21.3(15.6 – 27.0)	202	16.4(14.2 – 18.6)	1089
IDU				
Daily alcohol consumption	4.0(1.9- 6.0)	353	4.3(3.0- 5.5)	964
Condom use last non marital sex	5.6(3.7 – 7.6)	549	3.1(1.9 – 4.4)	768
Correctly identified ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission	4.2(2.2 – 6.2)	403	4.2(2.9 – 5.5)	914
Perceives self at high risk of HIV infection	6.8(3.9 – 9.7)	295	3.4(2.3 – 4.5)	1022
Has more than one non marital partner	4.5(3.0 – 6.0)	695	3.9(2.3 – 5.4)	622
Had sex with FSW last 12 months	4.5(2.5 – 6.5)	397	4.0(2.7 – 5.3)	920
Started injecting age less than 20 years	3.4(1.2 – 5.6)	263	4.4(3.1 – 5.6)	1054
Has been injecting for 3 or more years	3.9(2.6- 5.2)	848	4.7(2.8 – 6.6)	469
Injected more than once in the past month	4.0(2.5 – 5.5)	671	4.3(2.8 - 5.9)	646
Injected with needle used by someone else in past month	1.5(0.4 – 5.3)	135	4.5(3.3 – 5.7)	1182
Reported STI symptoms in past 12 months	6.4(3.2 – 9.6)	234	3.7(2.6 – 4.8)	1083

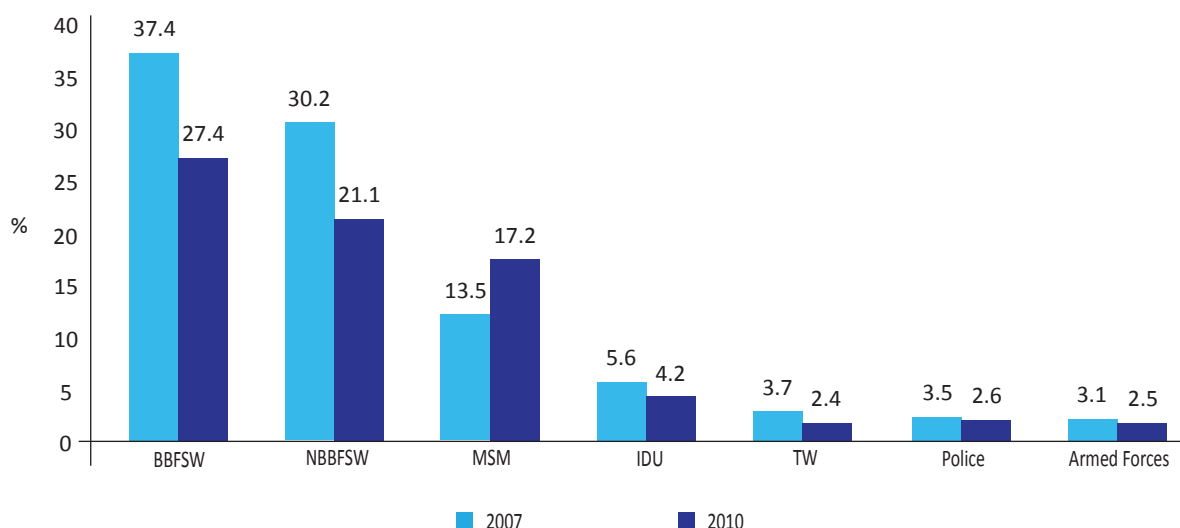
Among the IDU, there was no apparent difference in HIV prevalence between the two groups of respondent for all selected risk factors. MSM (24.1%) and IDU (6.8%) who perceived themselves at risk of HIV had higher prevalence compared to those who did not, 15.5% and 3.4% respectively.

Table 10: HIV prevalence by selected risk factors for HIV among Armed Forces, Police and transport workers

	Yes		No	
ARMED FORCES	% (95% CI)	n	% (95% CI)	n
Daily alcohol consumption	1.5(0.5 – 4.7)	169	2.6(1.7 – 3.5)	2354
Condom use last non marital sex	2.6(0.9 – 4.4)	838	2.5(1.5 – 3.4)	1685
Correctly identified ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission	2.4 (1.3 – 3.4)	1459	2.7(1.7 – 4.2)	1064
Perceives self at high risk of HIV infection	4.4(1.8 – 7.1)	548	2.0(1.2 – 2.8)	1975
Has more than one non marital partner	2.6(0.8 – 4.4)	612	2.5(1.5 – 3.4)	1911
Had sex with commercial partner last 12 months	5.2(2.6 – 10.2)	142	2.4(1.5 – 3.2)	2381
Had STI symptoms in the last 12 months	7.1 (3.6 – 13.4)	113	2.3(1.5 – 3.2)	2410
POLICE				
Daily alcohol consumption	1.4(0.3 – 2.6)	216	2.7(1.7 – 3.7)	2386
Condom use last non marital sex	1.7(0.8 – 2.6)	638	2.8(1.7 – 3.9)	1964
Correctly identified ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission	2.6(1.2- 4.1)	1083	2.5(1.4 – 3.7)	1519
Perceives self at high risk of HIV infection	2.8(1.0 – 4.6)	557	2.5(1.5 – 3.5)	2045
Has more than one non marital partner	2.4(1.2 – 3.6)	501	2.6(1.6 – 3.6)	2101
Had sex with commercial partner last 12 months	0.8(0.1 – 5.2)	98	2.7(1.7 – 3.6)	2504
Had STI symptoms in the last 12 months	3.8(1.8 – 5.8)	217	2.4(1.5 – 3.4)	2385
TRANSPORT WORKERS				
Daily alcohol consumption	3.3(1.4 – 5.2)	273	2.2(1.5 – 3.0)	1614
Condom use last non marital sex	2.5(1.0 – 4.0)	416	2.4(1.5 – 3.2)	1471
Correctly identified ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission	2.3(1.1 – 3.6)	560	2.4(1.6 – 3.3)	1327
Perceives self at high risk of HIV infection	2.3(0.9 – 3.7)	378	2.4(1.6 – 3.2)	1509
Has more than one non marital partner	2.7(1.2 – 4.2)	426	2.3(1.5 – 3.1)	1461
Had sex with commercial partner last 12 months	5.3(1.6 – 9.0)	162	2.2(1.4 – 2.9)	1725
Had STI symptoms in the last 12 months	5.0(7.6 – 9.2)	161	2.1(1.5 – 2.7)	1726

Among the police, there was no apparent difference in HIV prevalence among the two groups of respondents for all the selected risk factors. However among the Armed Force and TW, HIV prevalence was found to be higher only among those who had STI symptoms in the last 12 months, 7.1% and 5.0% respectively; and among those who had sex with commercial sex partner in the last 12 months, 5.2% and 5.3% respectively.

Figure 14: HIV Prevalence among study groups, IBBSS Nigeria 2007 and 2010



3.2.4 Discussion

The brothel-based FSW, non-brothel based FSW and the MSM continued to bear the burden of HIV infection in that order (Figure 4). The HIV prevalence among the male dominated occupational groups such as the Police, Armed Forces and Transport workers is lower than the 4.1% prevalence reported among women attending ANC (FMOH ANC 2010). The national prevalence of HIV among IDU was 4.2%, which is similar to the HIV prevalence among women attending antenatal clinics.

HIV prevalence among BBFSW, NBBFSW and TW were higher in states such as Nasarawa and Benue with almost half of BBFSW HIV positive. The high HIV prevalence recorded among study groups in these states may be a reflection of the high prevalence in those states, 7.5% and 12.2% respectively (FMOH, ANC 2010). HIV prevalence among MSM in the FCT, Kaduna and Lagos was also high at 37.6%, 16.2% and 15.8% respectively.

Prevalence among BBFSW was highest among those aged 25-49, but among young sex workers (15-19), prevalence was still as high as 24.3% suggesting that it is likely sex workers get infected early in sex work. The prevalence among sex workers who reported having been in sex work for less than a year was also high (29.6%). Similar findings are seen among NBBFSW. In contrast, older MSM and IDU are more likely to be infected. Female IDU were also more likely to be HIV infected.

Among the male dominated occupational groups, the pattern shows no particular socio-demographic direction, except in the case of transport workers where long distance transport drivers were more likely to be infected.

The pattern of infection reported in this survey is similar to the 2007 IBBSS findings.

3.3 Awareness, Knowledge and Risk Perception of HIV and AIDS

This section reports awareness of HIV and AIDS, knowledge of HIV transmission and misconceptions about transmission. It also seeks to know respondents’ personal assessment of their risk of contracting HIV.

3.3.1 HIV awareness and knowledge of HIV prevention methods

Figure 15: Knowledge of selected HIV prevention methods by group, IBBSS Nigeria 2010

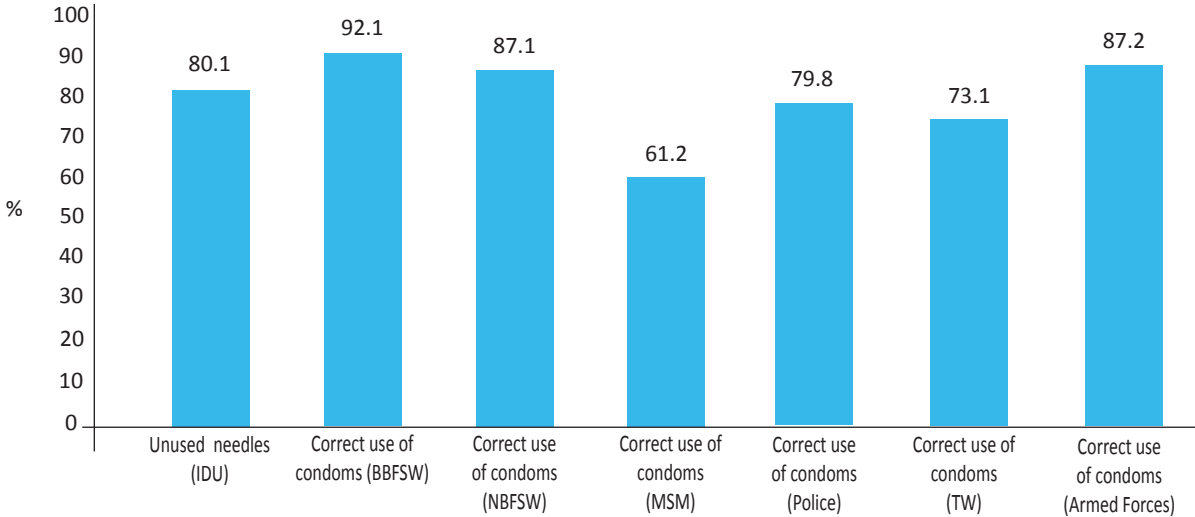


Figure 15 illustrates that knowledge of correct and consistent use of condoms as a means of preventing HIV was fairly high among all groups at risk of sexual transmission, with the exception of MSM. About 80.1% of IDU knew the importance of not using needles used by someone else for preventing HIV.

3.3.2 Accurate knowledge of prevention of sexual transmission of HIV transmission and rejection of major misconceptions (UNGASS indicator)

Each group was assessed in relation to the UNGASS indicator 14 for most-at-risk populations which requires a respondent had to answer “Yes” to the following questions:

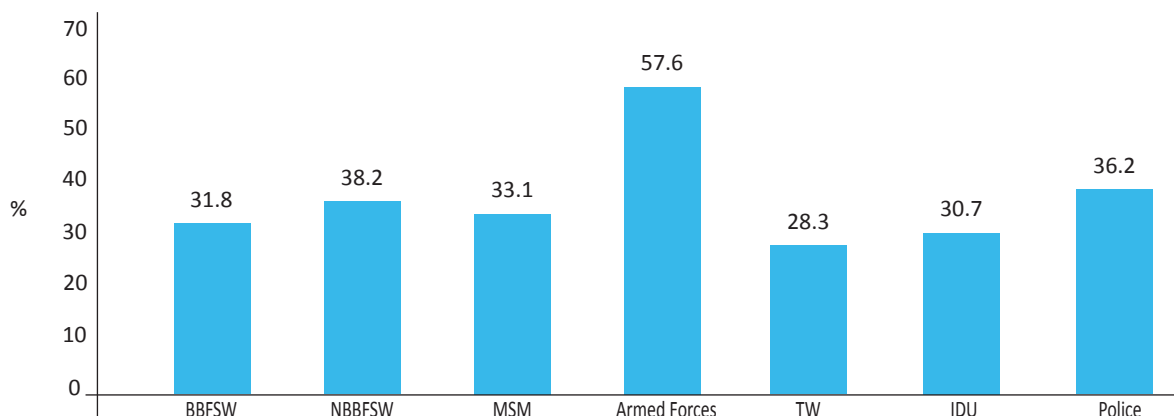
- Can having sex with only one faithful, uninfected partner reduce the risk of HIV transmission?
- Can using condoms reduce the risk of HIV transmission?
- Can a healthy-looking person have HIV?

And answer “No” to the following misconceptions:

- Can a person get HIV from mosquito bites?
- Can a person get HIV by sharing a meal with someone who is infected?

The results are presented in Figure 16 below. State level analysis of each group are presented in the appendix.

Figure 16: Percentage of study groups who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission, IBBSS Nigeria 2010



Correct knowledge of prevention of sexual transmission of HIV and rejection of major misconceptions are generally low among all the study groups. The Armed Forces had the highest (57.6%) knowledge while the TW had the least (28.3%)(Figure 16).

Further exploration of misconceptions are shown in Figures 17 and 18. However, it was noted that the misconception on possibility of transmission of HIV through sharing of toilet with PLWHA is high (Figure 19).

Figure 17: Proportion of study groups who believe HIV can be transmitted through mosquito bite, IBBSS Nigeria 2010

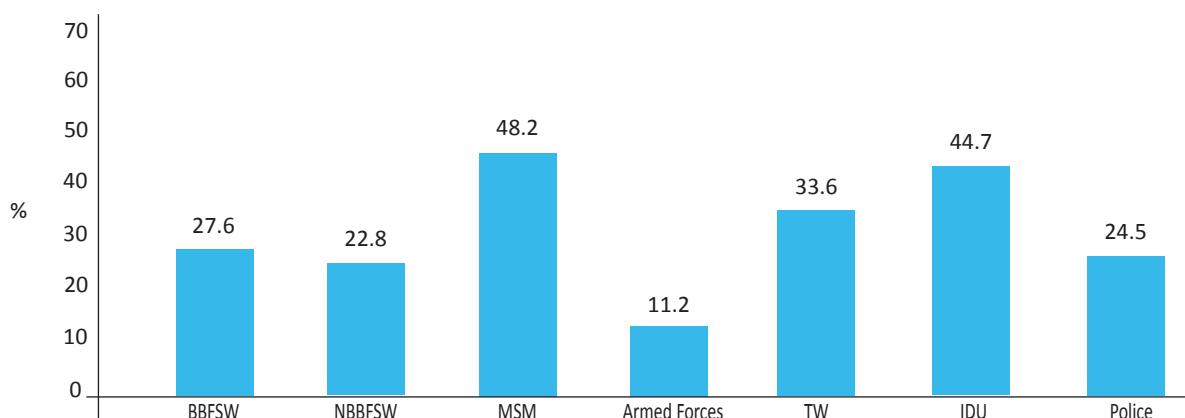
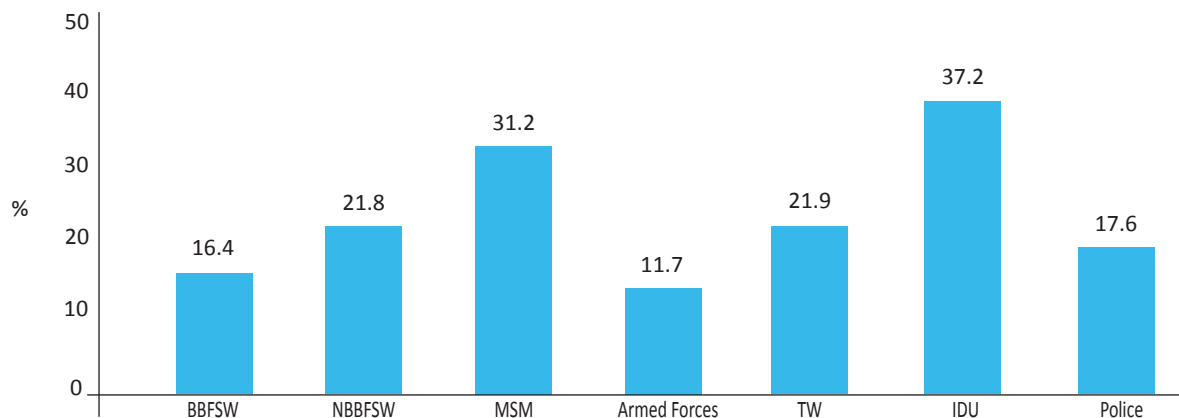


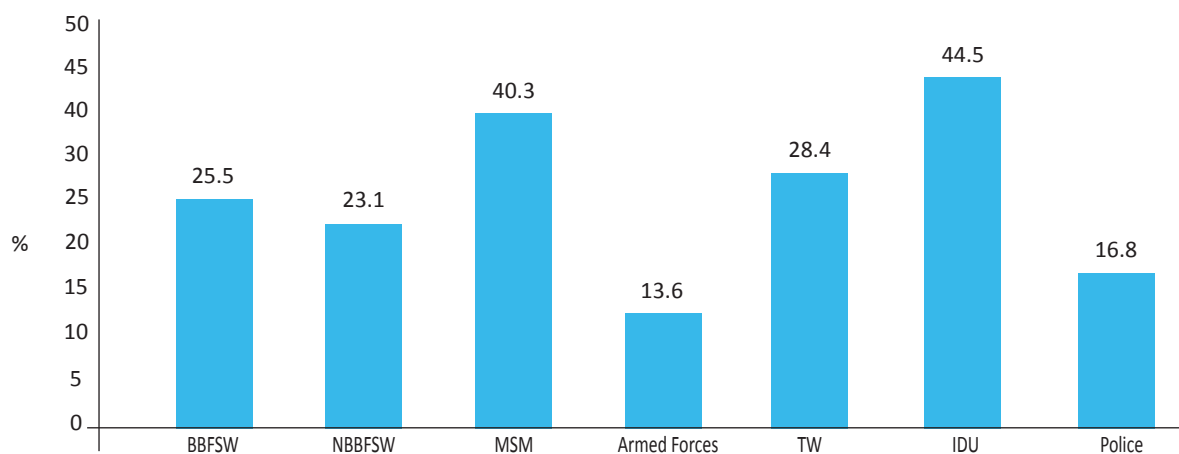
Figure 17 showed MSM as having the highest (48.2%) proportion of those who believed mosquitoes can transmit HIV, followed by IDU (44.7%). The least (11.2%) was recorded among the Armed Forces.

Figure 18: Proportion of study groups who believe HIV can be transmitted by sharing meal with an infected person, IBBSS Nigeria 2010



The level of this misconception is generally low among all study groups. IDU had the highest (37.2%) proportion of members who believed HIV can be transmitted by sharing meal (using the same plate/utensils) with someone who is infected.

Figure 19: Percentage of respondents in the study groups who believe that sharing of toilets with a person who has HIV is a means of contracting HIV, IBBSS Nigeria 2010

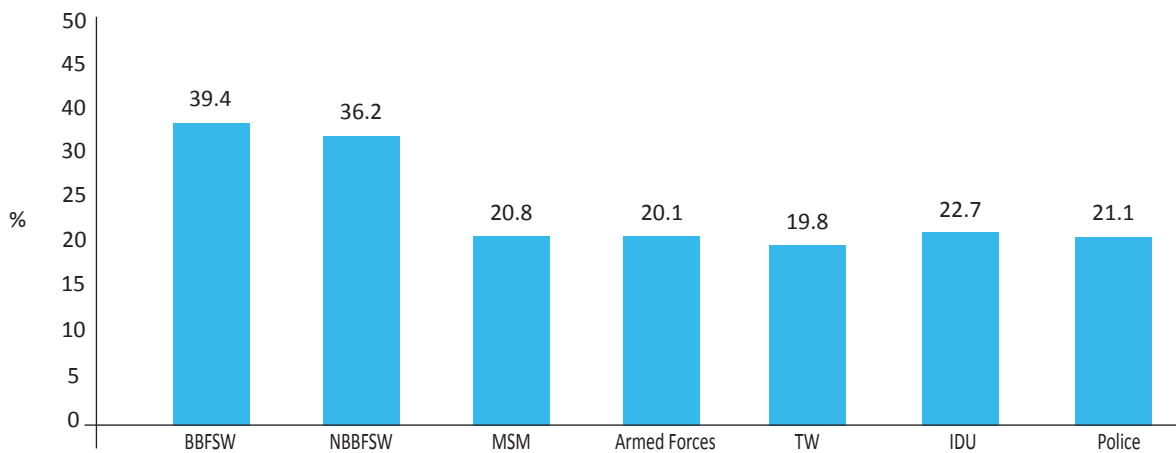


The misconception of transmission of HIV through sharing of toilets with PLWHA was highest among IDU (44.5%) and is lowest among the Armed Forces (13.6%).

3.3.3 HIV Risk Perception

All respondents were asked whether they perceived themselves to be at risk of HIV infection. Those who answered affirmatively were further prompted for the reasons why they felt they were at risk.

Figure 20: Proportion of study groups who perceived themselves at risk of HIV, IBBSS Nigeria 2010



Risk perception was generally low among all the study groups. The highest was over a third of both categories of FSW (BBFSW 39.4%, NBBFSW 36.2%). The lowest proportion was recorded among the TW where about a fifth (19.8%), considered themselves at risk of contracting HIV.

Reasons why respondents across all groups considered themselves at risk of HIV are shown in Table 11.

Table 11: Reasons for HIV risk perception among study groups who perceived themselves at risk by study group, IBBSS Nigeria 2010

Reasons for perceiving themselves at risk of HIV	BBFSW	NBBFSW	MSM	Armed Forces	TW	IDU	Police
Often change sex partners	73.2	68.9	27.0	26.9	24.4	33.3	19.5
Don't always use condoms	33.0	22.2	23.9	27.7	13.0	29.1	23.0
Use injected narcotics	1.9	5.3	7.5	5.4	3.0	19.4	13.0
Total (N)	929	793	322	572	394	351	594

Frequent change in sex partners account for the commonest reason why respondents considered themselves at risk of HIV followed by inconsistent use of condom.

3.3.4 Discussion

Majority of respondents were aware of HIV and condom use but knowledge of different means of prevention of HIV transmission was found to be lower and varied considerably among the study groups at state-level (see appendix). Knowledge of correct and consistent use of condoms as a means of preventing HIV was fair among all study groups. Despite the general awareness of HIV and AIDS, the UNGASS indicator for correct knowledge of prevention of sexual transmission of HIV and rejection of misconceptions was generally low among all the study groups except respondents in the Armed Forces where more than half had correct knowledge.

Failure to reject common misconceptions especially that mosquitoes can transmit HIV was quite high among all study groups. In addition, the level of belief in the fact that sharing toilets with an HIV infected person can be a means of contracting HIV was also high. While members of the study groups did perceive themselves at risk of contracting HIV, less than 40% of all the study groups perceived themselves at risk of contracting HIV. Risk perception was highest

among BBFSW and NBBFSW.

3.4 HIV/STI Risk Behaviours and self reported STI symptoms

The risk behaviours were assessed by sexual partnerships, condom use and self reported STI symptoms. Sexual intercourse has been identified as the main mode of transmission of HIV and other sexually transmitted diseases. The risk behaviours section seeks to identify behaviours that predispose respondents at risk and provides information that can be used for specific interventions. This section reports findings among the different groups. Detailed state level analysis is reported in the appendix.

3.4.1 Female sex workers

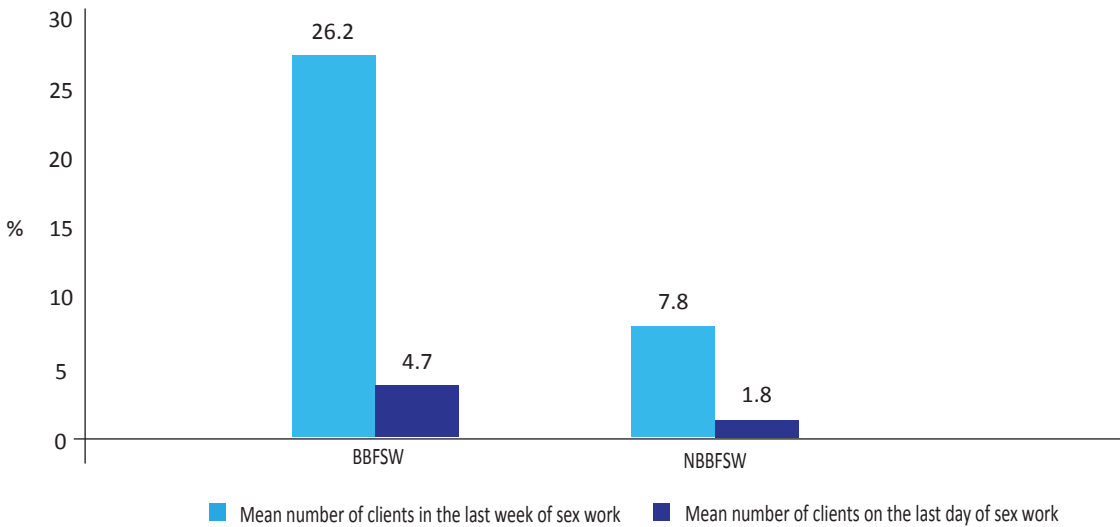
3.4.1.1 Sexual Partnerships

Types and number of sexual partners and exchange of sex for gifts or favours are considered under this subsection.

The survey attempted to define the various types of sexual partners among study groups. The four types of partners sought for were regular partners, commercial partners, boy/girlfriends and casual sex partners.

The following are the definitions of the different types of sex partners assessed in this study: A regular sex partner is defined as a spouse, or a live-in partner. A commercial sex partner is defined as a sexual partner where sex is exchanged for money, gift or favour. A boyfriend is defined as a non-cohabiting sexual partner. A casual sex partner is any sex partner that is not a regular sex partner, girl/boyfriend and is not a commercial sex partner.

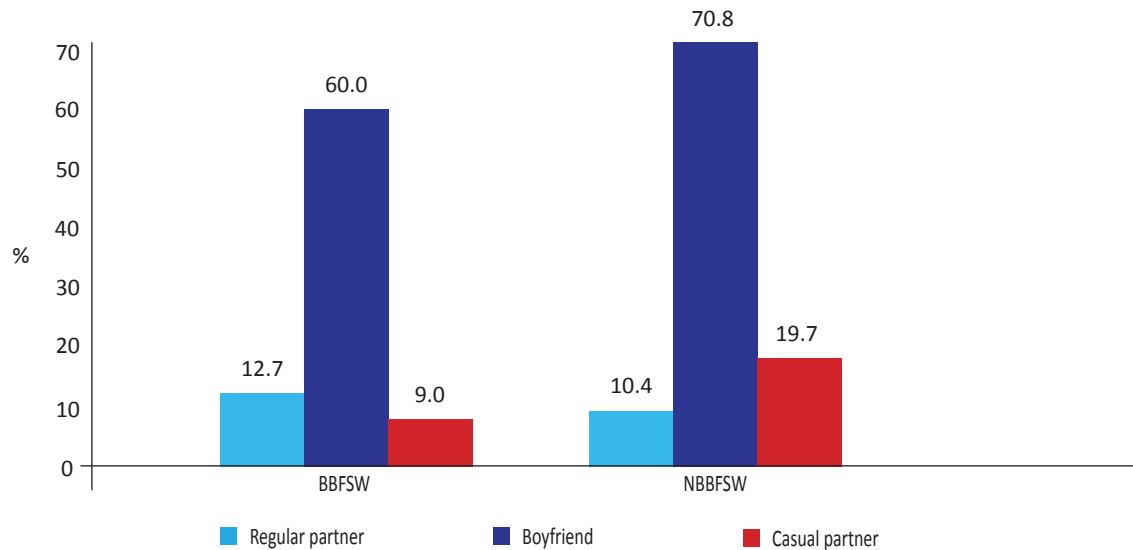
Figure 21: Mean number of clients last day/week of sex work, IBBSS Nigeria 2010



Brothel-based FSW had an average of 26 clients in the last week and about 5 clients in last day of work preceding the survey. Non-brothel based FSW tend to have lower clients with an average of 8 and 2 clients in the last week and last day of work preceding the survey respectively (Figure 21).

A non-commercial sex partner is defined as casual, boyfriend and regular sexual partnership. A breakdown of their non-commercial partners over the last 12 months by type is shown in Figure 22.

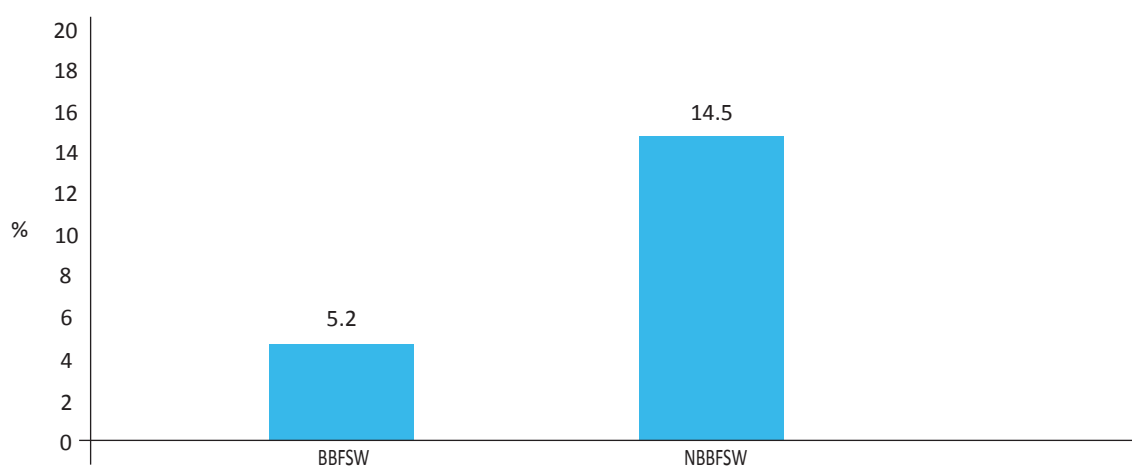
Figure 22: Types of non-commercial sexual partners among FSW in last 12 months preceding the survey, IBBSS Nigeria 2010



Both BBFSW (60%) and NBBFSW (71%) were shown to have had sex with boyfriends in the last 12 months preceding the survey than with other types of non-commercial partners.

Sex with casual partners in the past 12 months was reported by 9.0% and 20.0% of BBFSW and NBBFSW respectively. Overall, NBBFSW were shown to have more casual sexual partners than BBFSW.

Figure 23: Percentage of FSW having sex with more than one boyfriend in the last 12 months preceding the survey, IBBSS Nigeria 2010

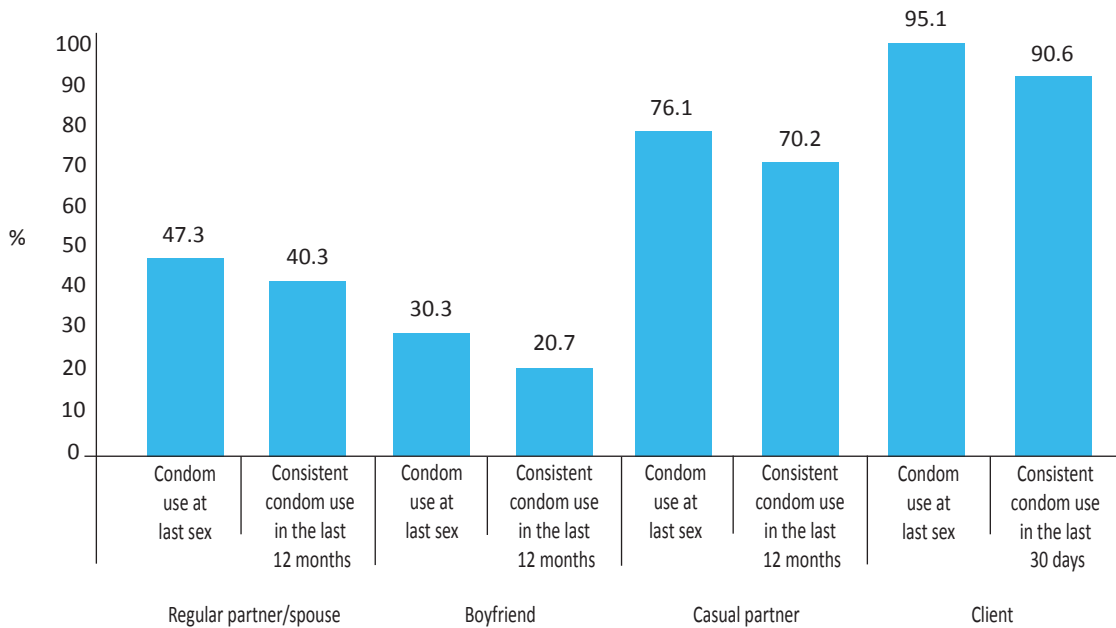


Both categories of FSW were shown to have had sex with more than one boyfriend, however, the proportion was higher among NBBFSW (14.5%).

3.4.1.2 Condom use

FSW were asked about condom use with different types of partners, both consistently with client over the last 30 days and with other sexual partners over the last 12 months preceding the survey, as well as at last sex.

Figure 24: Distribution of brothel-based FSW according to condom use with commercial and other sexual partners, IBSS Nigeria 2010



Condom use at last sex was over 90% in all commercial sex transactions reported by BBFSW and NBBFSW. Consistent condom use in commercial sex in the last 30 days was lower.

Only those FSW that admitted having other non-client sexual partners, were asked about condom use with those partners. Condom use as at last sex with a casual partner was high, around 76% among both BBFSW and NBBFSW. Condom use at last sex with regular partners and boyfriends is low. Same pattern observed among BBFSW and NBBFSW. Consistent condom use is generally poor (Figure 24 and 25).

Figure 25: Distribution of non-brothel-based FSW according to condom use with commercial and other sexual partners, IBSS Nigeria 2010

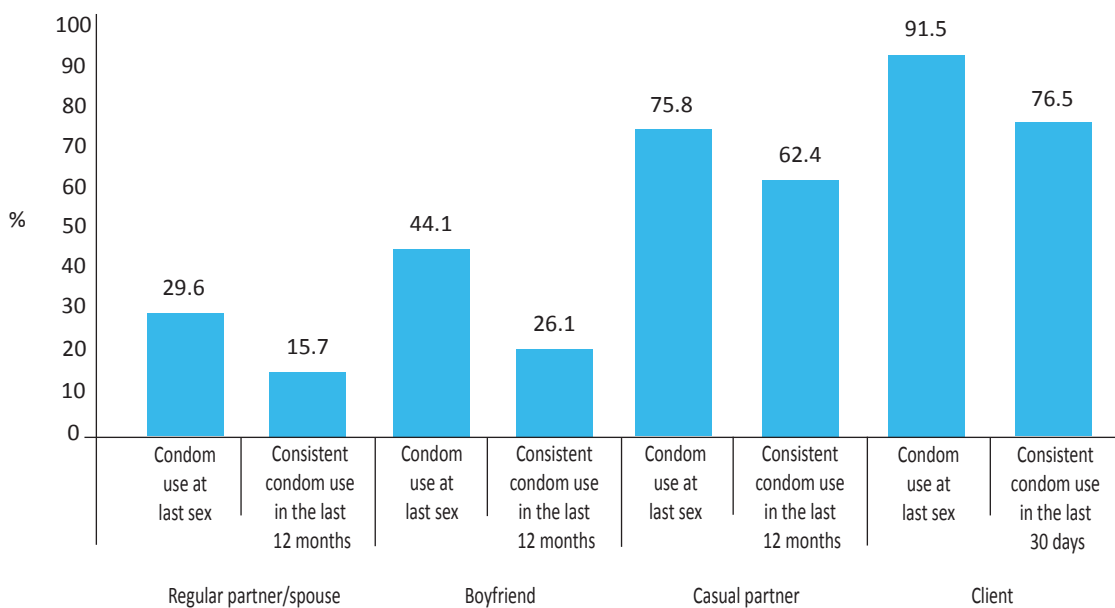
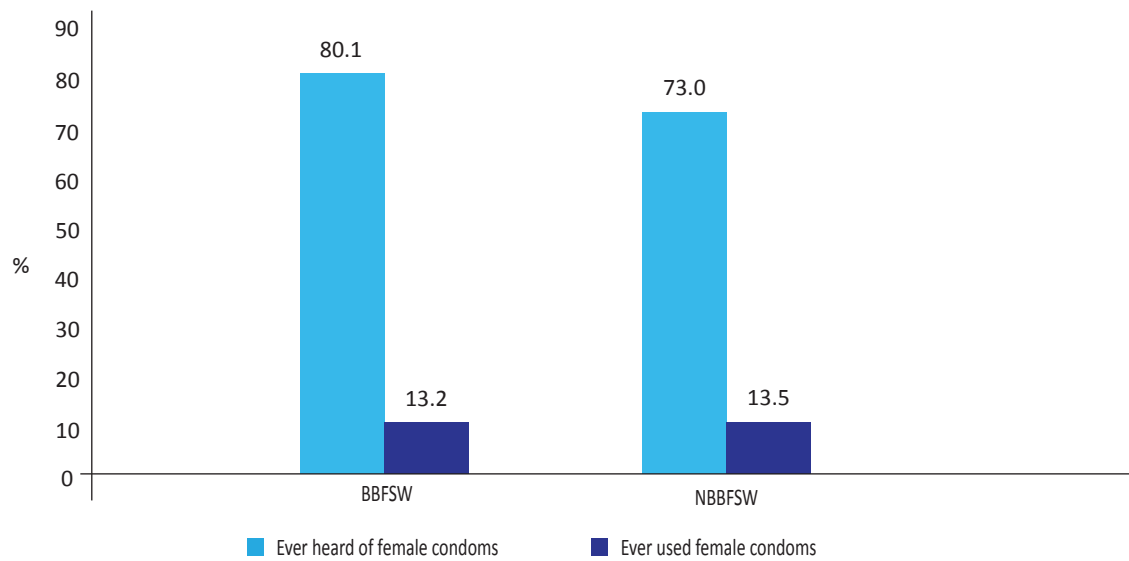


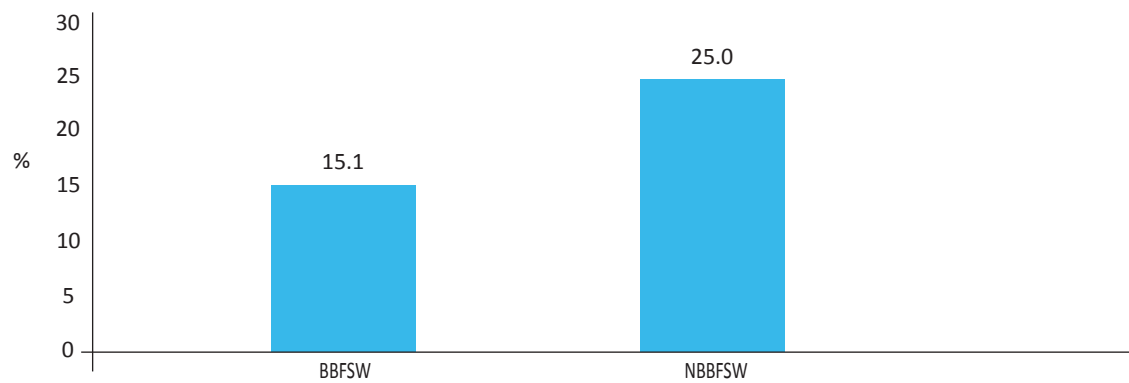
Figure 26: Awareness and usage of female condom by FSW, IBBSS Nigeria 2010



3.4.1.3 Self-reported STI symptoms

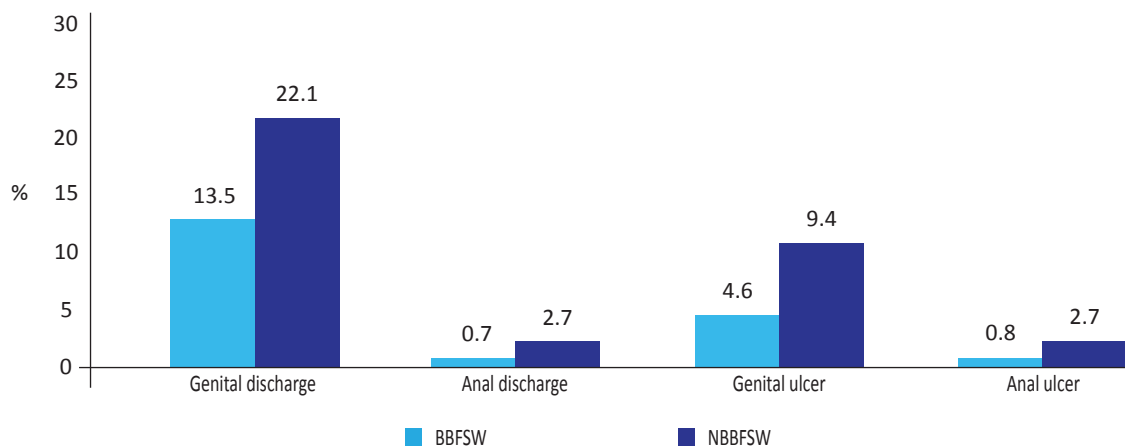
The presence of ulcerative STI is known to increase the potential for HIV transmission substantially. Self-reported STI symptoms included in the results presented below are not as valid or reliable as biological indicators of STI prevalence, and are subject to bias based on symptoms not resulting from STI as well as the ability of sub-populations to recognize STI symptoms.

Figure 27: Self reported STI symptoms in the last 12 months preceding the survey by FSW, IBBSS Nigeria 2010



The NBBFSW were shown to have reported an STI symptom in the last 12 months preceding the survey (25%).

Figure 28: Self reported STI symptoms by type, by FSW in the last 12 month preceding the survey, IBBSS Nigeria 2010



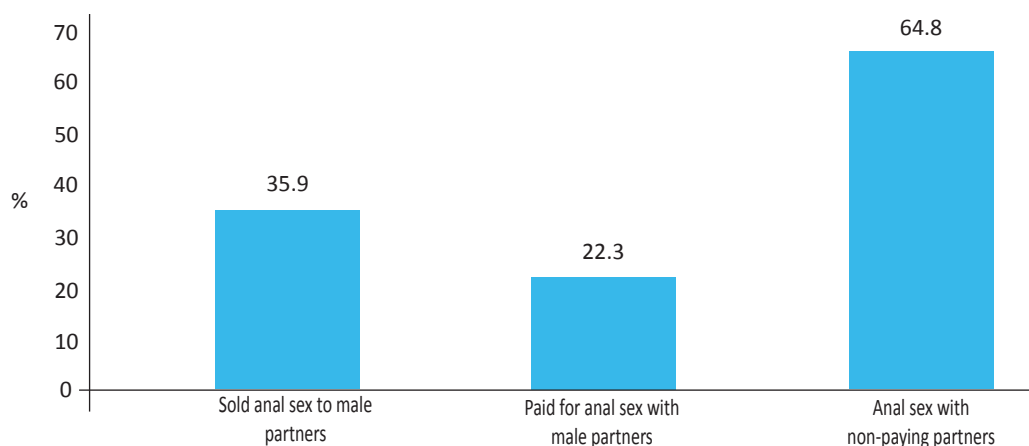
FSW were shown to report unusual genital discharge and genital ulcers/sores than other STI symptoms (Figure 28).

3.4.2 Men who have sex with men (MSM)*

3.4.2.1 Sexual partnership

The sexual risk of HIV transmission was assessed for MSM by examining types of sexual partnerships in the past six months and the rates of condom use in these partnerships (Figures 29 to 32).

Figure 29: Distribution of MSM according to different male partner types last 6 months preceding the survey, IBBSS Nigeria 2010

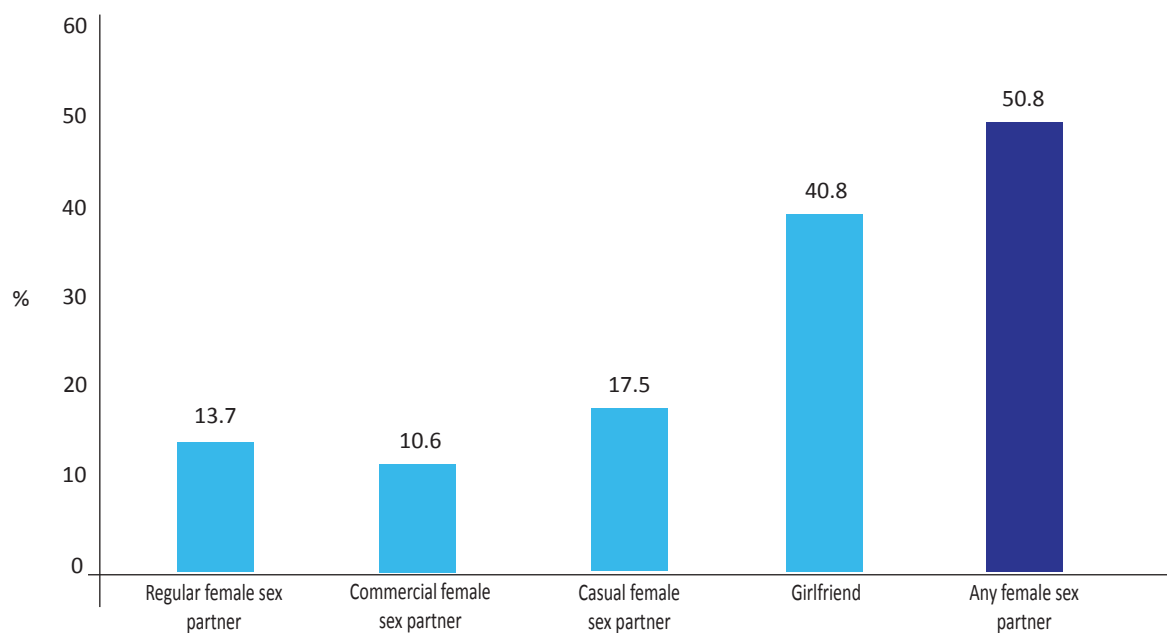


A high percentage (64.8%) of MSM reported engaging in anal sex with non-paying male partners in the six months preceding the survey, while 35.9% had sold anal sex to male partners and 22.3% had paid for anal sex within the same period.

MSM were also asked about their sexual relationships with females including FSW (Figure 30).

*The analyses conducted under this section for the MSM are proportions calculated with STATA

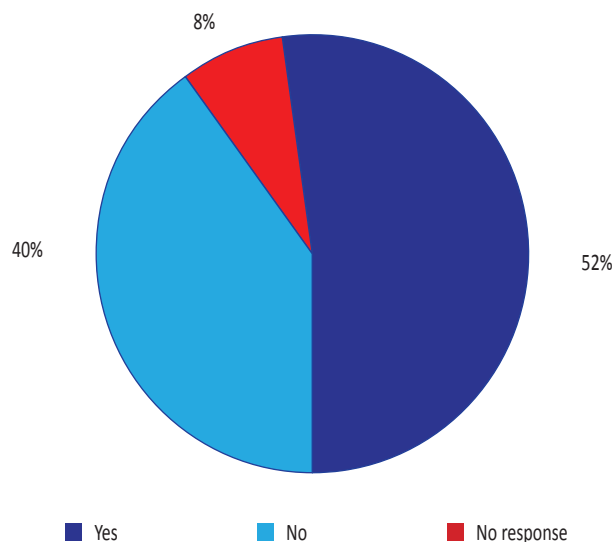
Figure 30: Distribution of MSM by female sexual partners in the last 12 months preceding the survey, IBBSS Nigeria 2010



More than 50% of MSM reported sex with any female partner in the last 12 months preceding the survey. Most (40.8%) had sex with girlfriends.

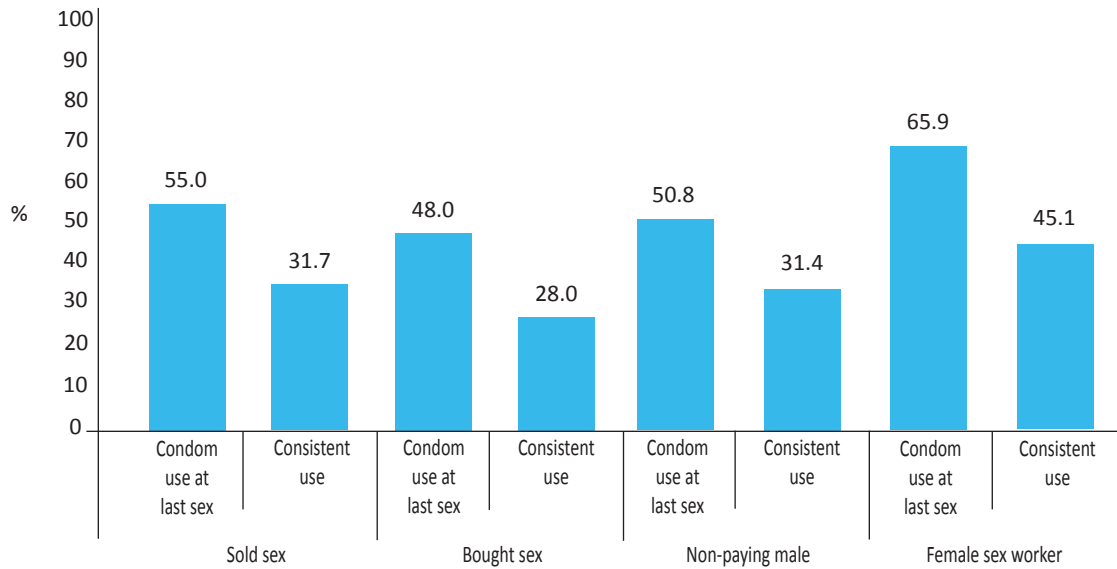
3.4.2.2 Condom use

Figure 31: Condom use as at last anal sex among MSM, IBBSS Nigeria 2010



This UNGASS indicator 19 showed that 52% of MSM surveyed reported use of condom at last anal sex.

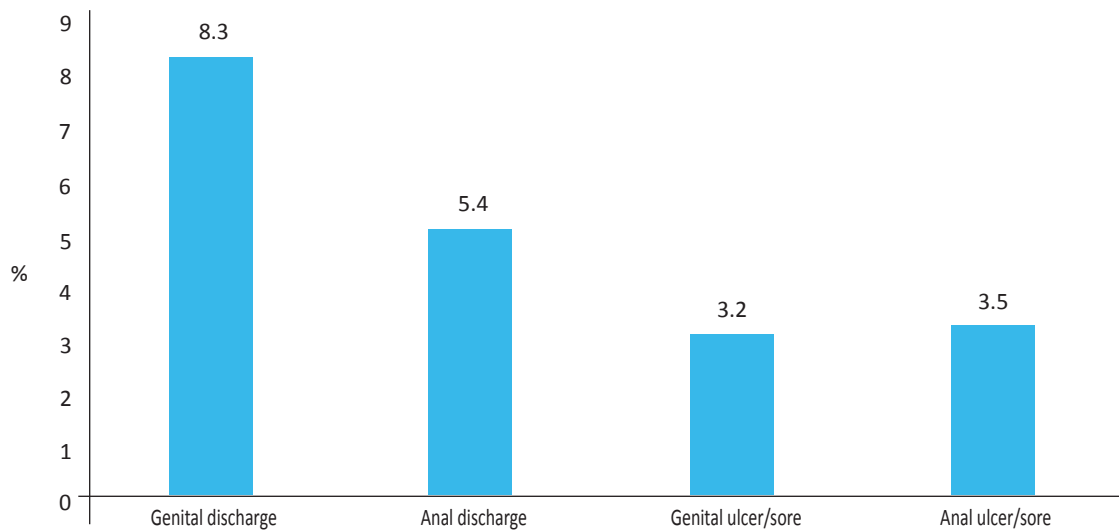
Figure 32: Condom use at last sex and consistent condom use among MSM by type of partner, IBBSS Nigeria 2010



Condom use by MSM during the last sex ranged from 48.0% with bought sex from male partners to 65.9% with FSW. Consistent condom use by MSM in the past 6 months with male sexual partners and in the past 12 month with FSW was below 50%. State level variations are detailed in the appendix.

3.4.2.3 Self-reported STI symptoms

Figure 33: Self reported STI symptoms among MSM, IBBSS Nigeria 2010

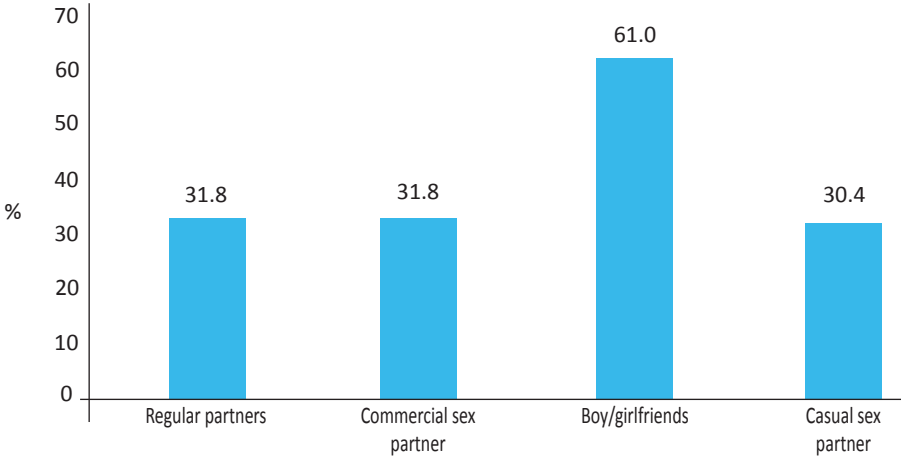


Unusual genital discharge was the most common STI symptom reported by MSM (8.3%) in the last 12 months preceding the survey, with genital ulcer/sore being the least reported (3.2%)

3.4.3 Injecting Drug Users*

3.4.3.1 Sexual partnerships

Figure 34: Types of sexual partners among all sexually active IDU in the last 12 months preceding the survey, IBBSS Nigeria 2010

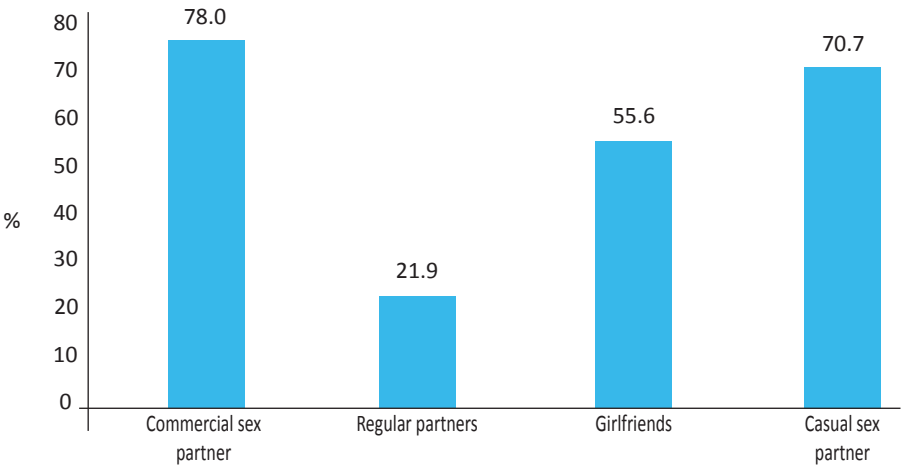


The IDU reported sex with boy/girlfriends (61.0%) more than other sexual partners.

3.4.3.2 Condom use

Figure 35 shows condom use at last sex reported by IDU for different partner types.

Figure 35: Distribution of male IDU by condom use at last sex by type of sexual partner, IBBSS Nigeria 2010

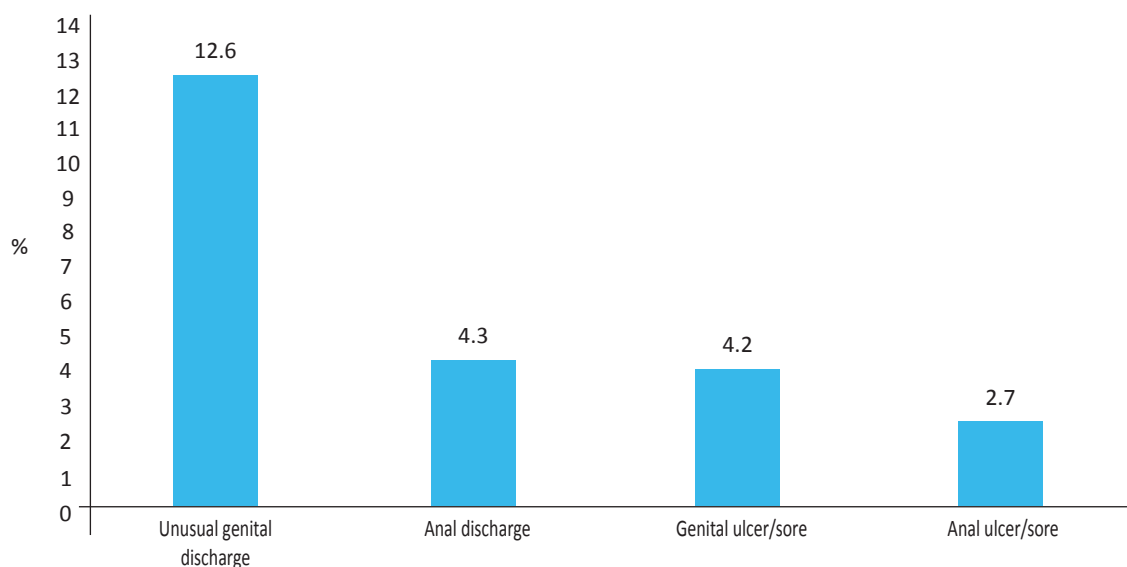


Condom use at last sex with commercial sex workers among male IDU was highest (78.0%), few female IDU admitted selling sex, however, condom use was not probed. This was closely followed by condom use at last sex with casual partners (70.7%) compared to condom use at last sex with other types of sexual partners (Figure 35).

*The analyses conducted under this section for the IDU are proportions calculated with STATA

3.4.3.3 Self-reported STI symptoms

Figure 36: Self reported STI symptoms among IDU, IBBSS Nigeria 2010



The commonest STI symptom reported by IDU was unusual genital discharge (12.6%).

3.4.3.4 Female IDU

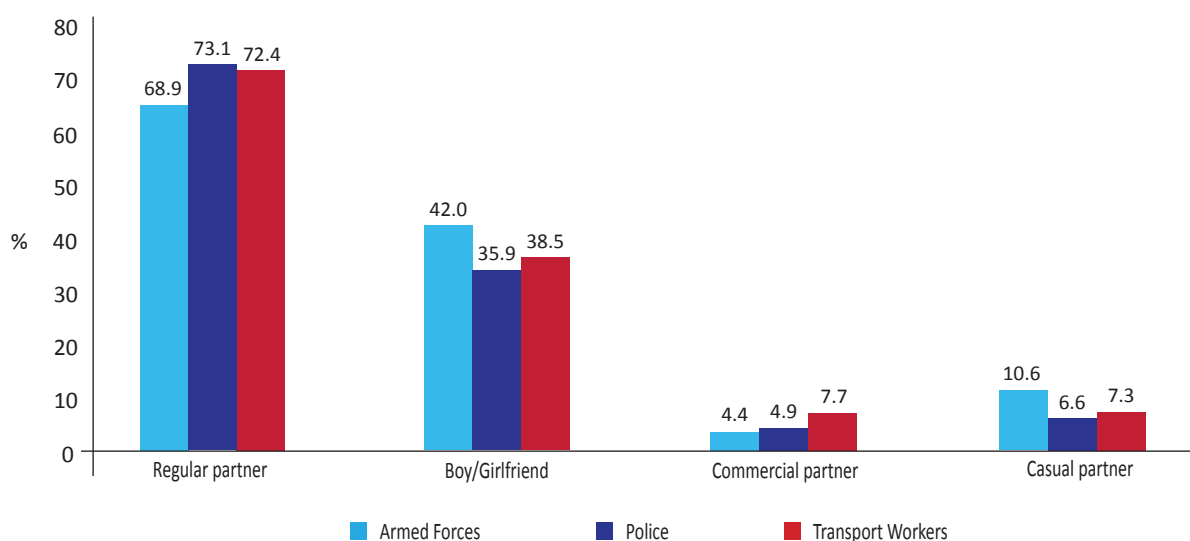
A gender analysis of commercial sex behaviour, among IDU indicates that only five percent of the IDU sampled were women. Among them, 38.1% sold sex in the past 12 months.

3.4.4 Predominantly male occupational groups

3.4.4.1 Sexual partnerships

All three predominantly male occupational groups namely the Armed Forces, Police (males only), and TW, were asked about their different types of sexual partners in the last 12 months preceding the survey. The results are outlined in Figure 37.

Figure 37: Types of sexual partners among predominantly male occupational groups, IBBSS Nigeria 2010



Sexual relationship with boy/girlfriend was the most commonly reported non-marital sex among all the predominantly male occupational groups in the last 12 months preceding the survey.

Figure 38: Male occupational group reporting sex with more than one non-regular partner in the last 12 months preceding the survey, IBBSS Nigeria 2010

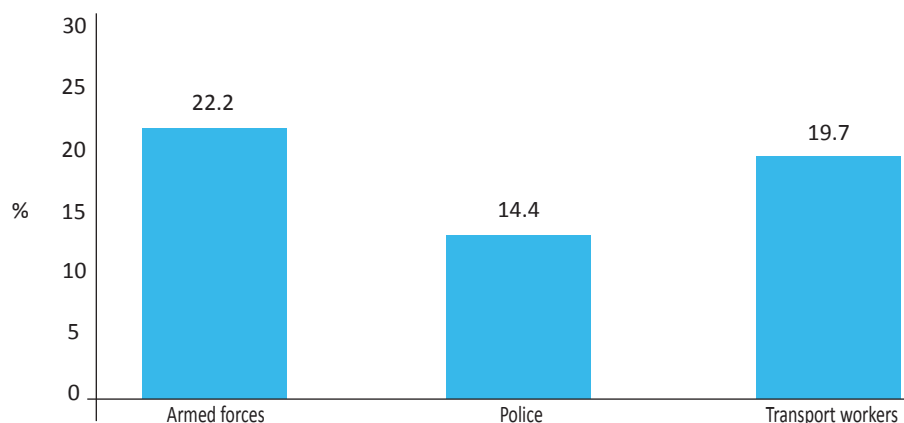
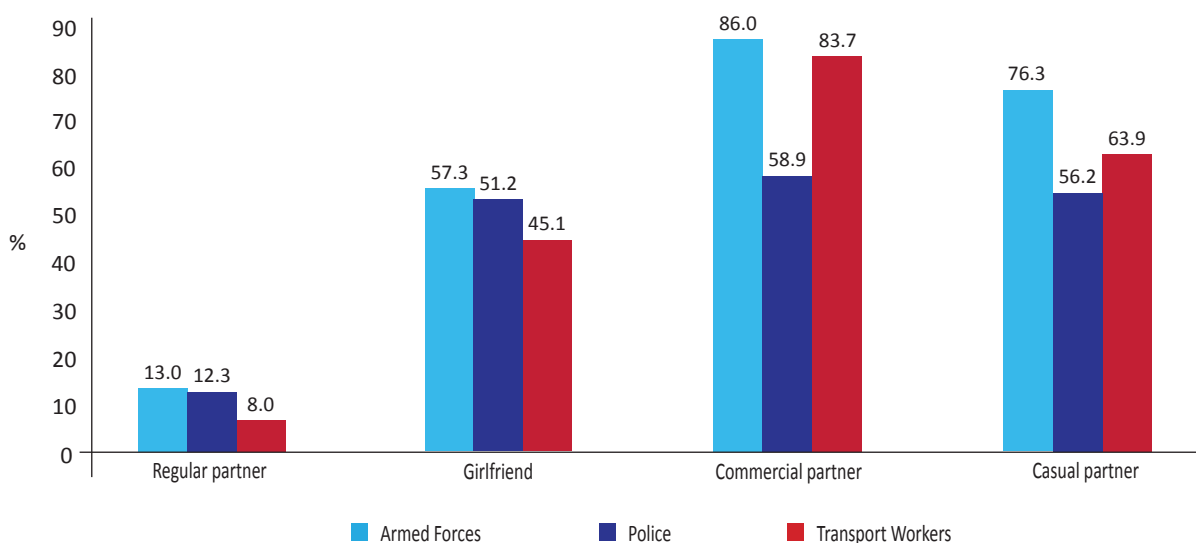


Figure 38 shows the percentage of each predominantly male occupational group reporting sex with more than one non-regular partner in the 12 months preceding the survey. Overall, 22.2% of Armed Forces, 14.4% of Police (male and female) and 19.7% of TW reported sex with more than one non-regular partner (casual, commercial and girl/boyfriend) in the 12 months preceding the survey.

3.4.4.2 Condom Use

To better understand the potential for HIV transmission among these groups, it is necessary to examine condom use with different types of partners (Figure 39 below).

Figure 39: Condom use at last sex by type of sexual partner, male occupational groups IBBSS Nigeria 2010



Condom use at last commercial sex was high among the Armed Forces (86%) and TW (83.7%) compared to the Police (58.9%). The Armed Forces group reported the highest percentage (76.3%) of condom use at last sex with casual partners compared to the Police (56.2%) and TW (63.9%). Though sexual relation with girlfriends was fairly common among all the predominantly male groups, condom use at the last sexual encounters was low. The lowest was recorded among the TW (45.1%).

3.4.4.3 Self-reported STI symptoms

Like other groups surveyed, the Armed Forces, Police and TW were asked whether they had experienced any unusual genital discharge or genital ulcer/sore in the last 12 months preceding the survey. The results are presented in Figures 40 and 41 below.

Figure 40: Self reported STI symptom among the predominantly male occupational groups, IBBSS Nigeria 2010

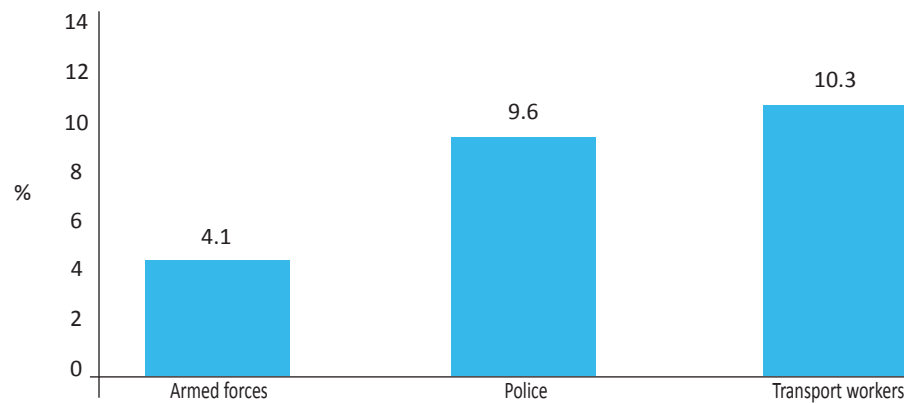
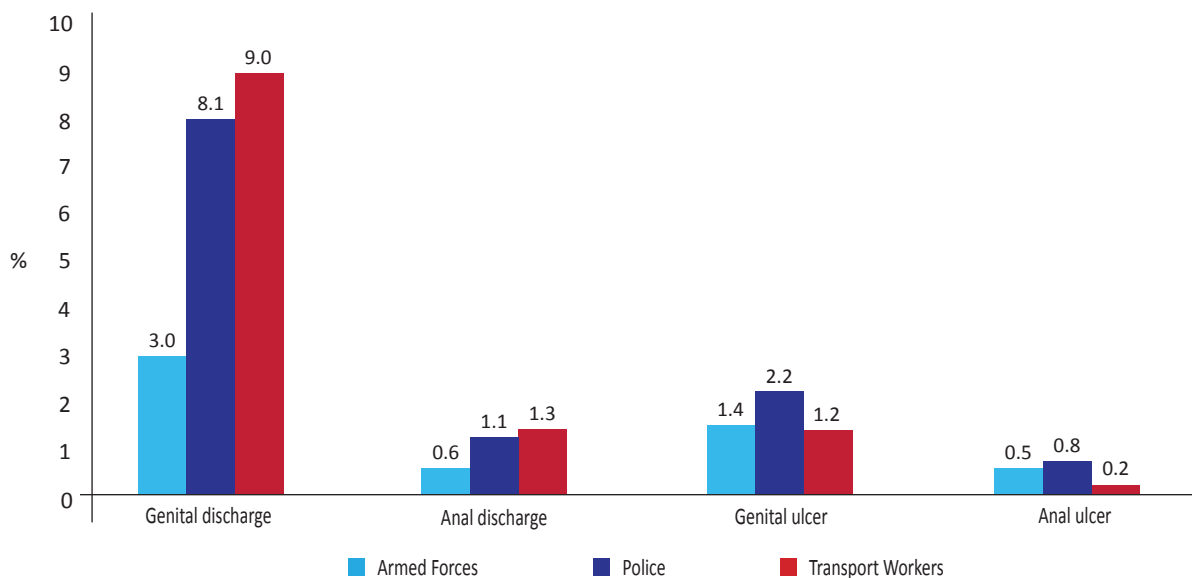


Figure 41: Self reported STI symptoms by type among predominantly male occupational groups, IBBSS Nigeria 2010



The proportions of the three groups reporting STI symptoms varied (Figure 40). Unusual genital discharge was the most commonly reported symptom (Figure 41) with the TW (9.0%) and the Police (8.1%) superseding the Armed Forces (3.0%) on genital discharge symptom.

3.4.5 Discussion

Brothel-based FSW had high client load compared to NBBFSW surveyed. Majority of both categories of FSW had non-paying partners in the last 12 months with boyfriend being the most commonly reported. Reported condom use was high among both BBFSW and NBBFSW with over 90% and 75% respectively, using condoms consistently with paying clients. Consistent condom use with boyfriends and regular partners was much lower. NBBFSW had lower levels of condom use with clients but higher levels with boyfriends. Very few FSW had ever used female condoms. NBBFSW were more likely to have self reported STI symptoms in the past 12 months.

Among MSM, sexual risk behavior was high, with almost two third reporting anal sex in the last 6 months, a third selling anal sex, a quarter reported paying for anal sex and about a tenth reporting sex with a FSW. Half of all MSM sampled had had sex with a female partner in the last 6 months. Condom use during last anal sex with a male partner was low at only 52% compared to 66% at last sex with a FSW. Minimal differences existed between condom use at last paying and non-paying anal sex. Despite evidence of risk behavior, self reported STI symptoms was low. In general, reports of unusual genital discharge and genital ulcers/sores among MSM were at levels comparable to the predominantly male occupational groups. MSM were most likely of all groups to report an anal discharge in the last 12 months.

Almost a third of female IDU sold sex in the last 12 months, a feature not commonly reported among male IDU. The noted higher HIV prevalence among female IDU suggests increased risk factors for sexual transmission among them and the potential for wider spread. However, the size of the female IDU population is unknown.

Among the predominantly male occupational groups, majority had regular partners, less than a tenth of each group reported having a commercial female partner. Multiple partnering was generally high over 20% of all groups had more than one partner in the last 12 months. Condom use at last sex was generally high among all the groups in commercial and casual sex, but lower among more regular partnerships. Transport workers had the highest levels of genital discharge among the occupational groups.

3.5 Attitudes Towards People Living with HIV and AIDS

All groups were asked a number of hypothetical questions to assess levels of stigma and discrimination against people living with HIV and AIDS. Table 12 below shows the percentage of responses to each question by group.

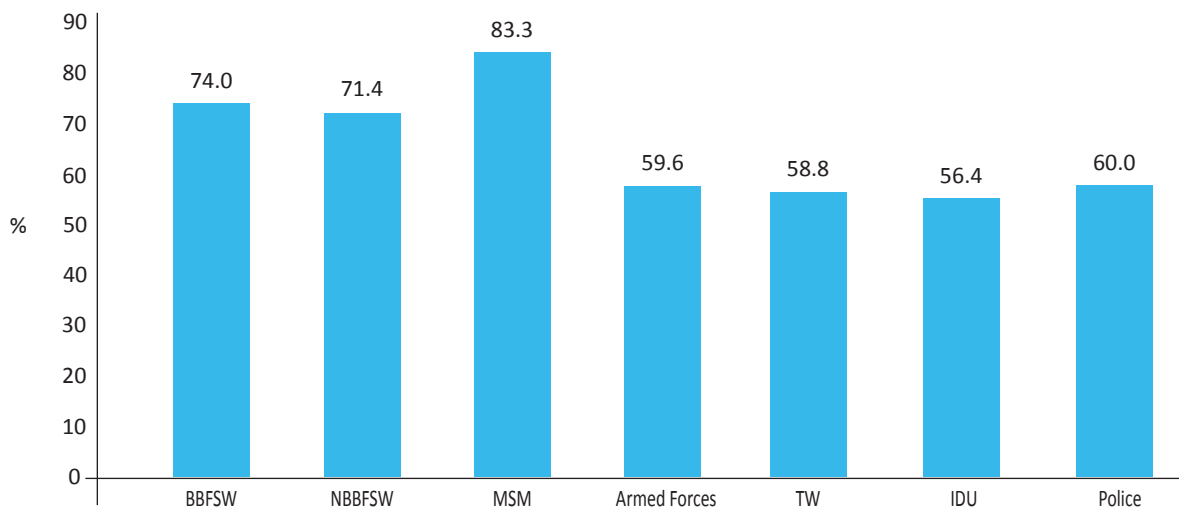
Table 12. Distribution of study groups by attitudes towards PLWHA, IBBSS Nigeria 2010

	Willing to care for a relative with HIV	HIV+ student allowed to attend school	PLWHA should be allowed to teach	Would buy food from PLWHA	Would eat with PLWHA	Would work with PLWHA
Groups						
Brothel-based FSW	82.1	72.8	72.6	41.3	57.5	68.0
Non-brothel-based FSW	87.3	80.2	78.8	51.7	61.1	80.8
MSM	89.6	57.9	84.7	60.9	73.8	74.1
IDU	77.8	55.1	72.9	48.2	59.7	66.3
Armed Forces	90.1	86.4	86.0	55.4	73.8	90.3
Police	88.4	84.0	86.4	52.5	70.5	89.5
Transport Workers	83.4	86.1	74.4	44.3	55.4	72.9

The level of understanding and acceptance of PLWHA varied among the groups. Most of the respondents in all the groups were more willing to care for and work with PLWHA than buy food from or eat with such an individual. There was also a general acceptance of PLWHA student or teacher allowed to attend school or teach. The BBFSW was the least (41.3%) willing to buy food from a PLWHA followed by TW (44.3%).

The issue of disclosure about HIV infection was asked during the survey. Respondents were asked if they will want it to remain a secret if a member of their family tested positive to HIV.

Figure 42: Distribution of study groups by desire to keep HIV status secret, IBBSS Nigeria 2010



The responses to these questions indicate that while compassion towards PLWHA is generally high, there was high level of fear of disclosure of HIV infection (Table 12, Figure 42).

3.5.1 Discussion

In general, tolerance of persons living with HIV and AIDS was generally over 50% except among BBFSW, IDU and TW. Many groups showed higher levels of tolerance for the societal presence of HIV positive individuals, compared to actual personal contact with a person living with HIV and AIDS such as buying food from an HIV positive person. Compassion towards family and relatives with HIV was generally high among all the groups but very high numbers would prefer to keep the knowledge of an HIV infection in the household secret.

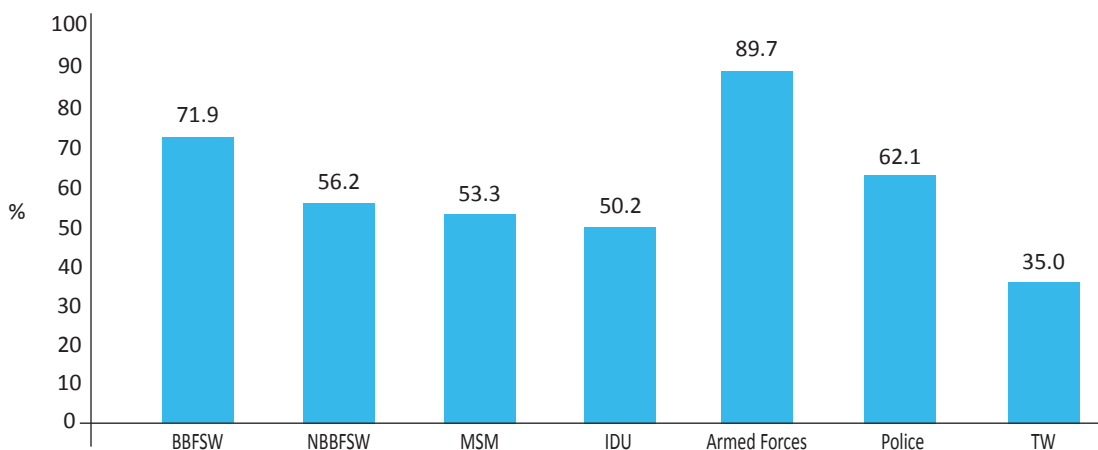
3.6 Exposure to HIV Prevention Interventions

The study groups were asked about their exposure to previous HIV test and knowledge of their HIV status (UNGASS indicator 8) and to different types of HIV prevention-related information and services in the last 12 months preceding the survey (UNGASS indicator 9). Denominators used were all members of the study groups.

3.6.1 HIV test

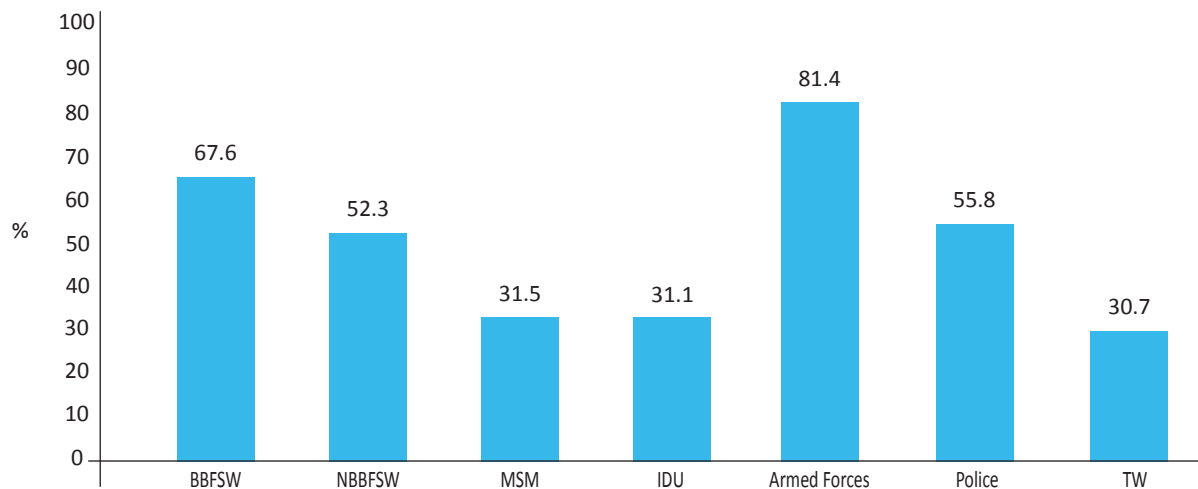
In order to protect themselves and to prevent infecting others, it is important for everyone to know their HIV status. Respondents were asked whether they have ever been tested, whether they received results and how recent their HIV test was. State level analysis is presented in the appendix.

Figure 43: Distribution of study groups according to those ever tested for HIV, IBBSS Nigeria 2010



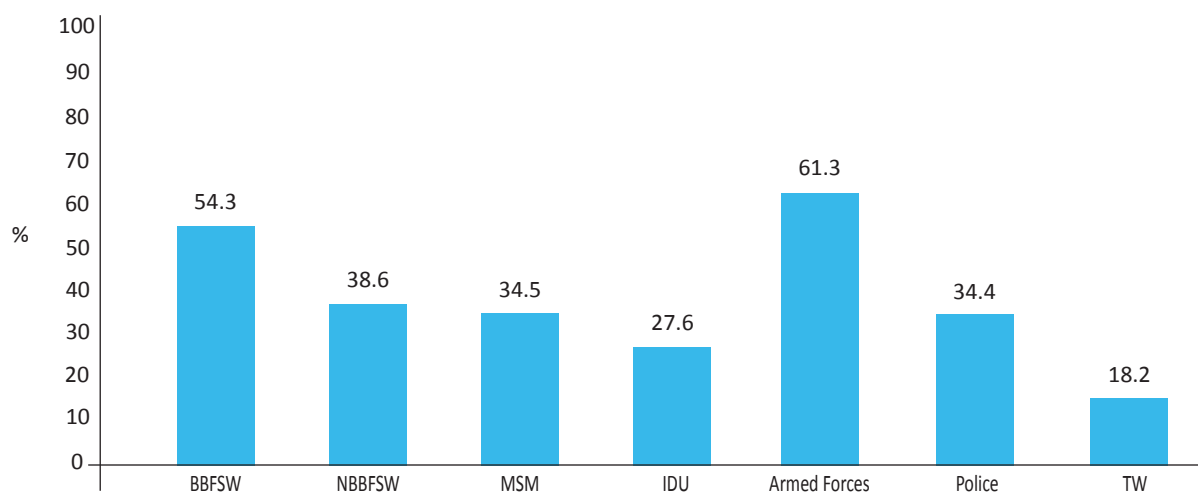
Members of the Armed Forces were the most likely to have ever been tested (89.7%), closely followed by BBFSW (71.9%). TW were the least ever tested for HIV, 35.0% (Figure 43).

Figure 44: Distribution of study groups according to those who tested for HIV and received results, IBBSS Nigeria 2010



Armed Forces group were more likely to know their HIV status compared to all the other groups studied. The TW, IDU and MSM were the least likely.

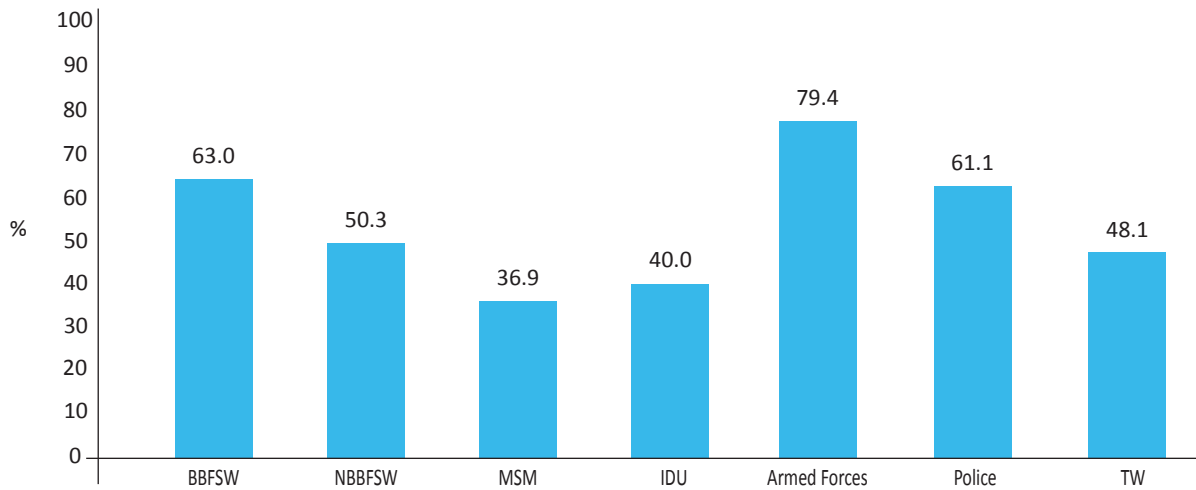
Figure 45: Distribution of study groups according to those tested for HIV in the last 12 months preceding the survey, IBBSS Nigeria 2010



Similar pattern as observed in Figure 44 was seen among those who recently accessed HIV test among the study groups. TW were least likely to have been tested in the last 12 months preceding the survey (18.2%).

Analysis of those who were HIV positive and who claimed to have been tested and received result was done. The result is shown in figure 46.

Figure 46: Percent of HIV positive respondents who know their status, IBBSS Nigeria 2010



Majority (79.4%) of members of the Armed Forces who were tested positive during the survey had prior knowledge of their HIV status compared with members of the other groups. HIV positive MSM were the least likely to know their status prior to the survey. Almost half (48.1%) of the TW group that were positive during the survey already know their status. There were state level variations and these are shown in the appendix.

3.6.2 HIV prevention information and services

Interventions assessed were;

- a) Information /education about HIV
- b) Free condoms
- c) Education on safe sex
- d) Referral for STI services
- e) Referral for VCT services

Figure 47: Distribution of FSW according to HIV prevention services received in the last 12 months preceding the survey, IBBSS Nigeria 2010

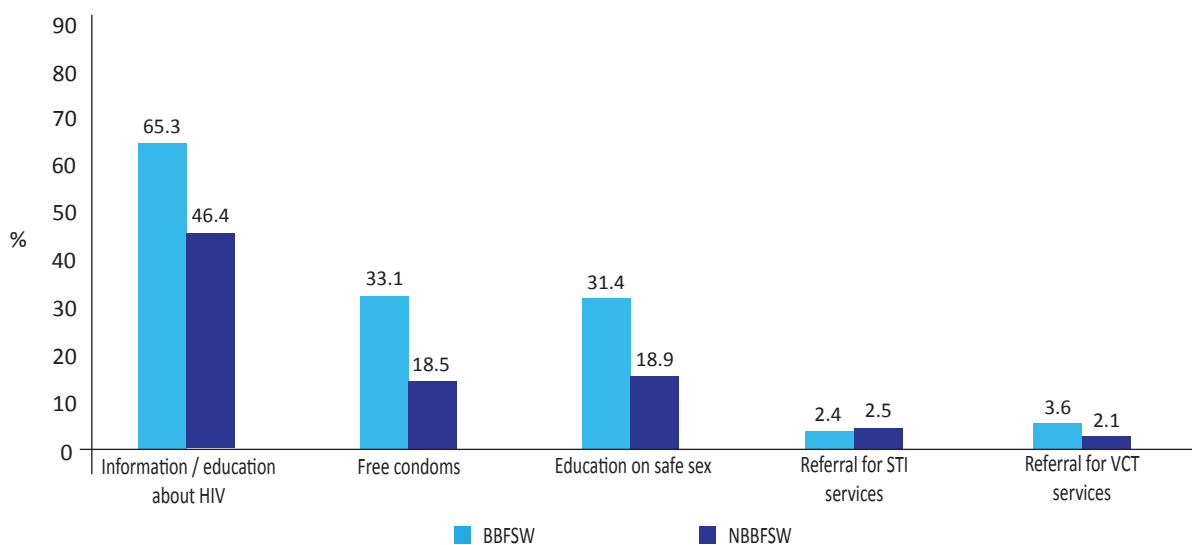


Figure 48: Distribution of MSM according to HIV prevention services received in the last 12 months preceding the survey, IBBSS Nigeria 2010

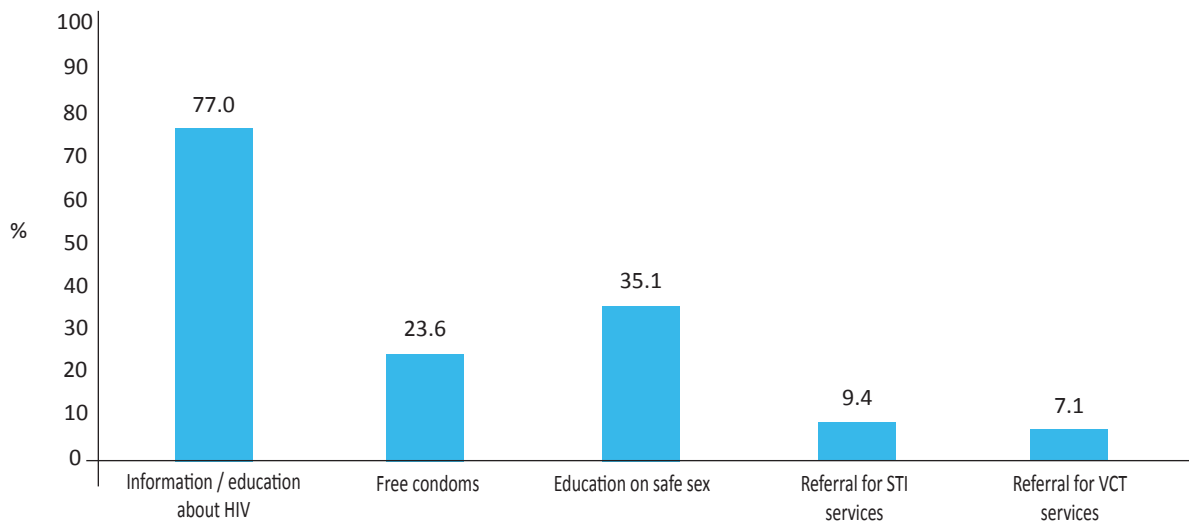


Figure 49: Distribution of IDU according to HIV prevention services received in the last 12 months preceding the survey, IBBSS Nigeria 2010

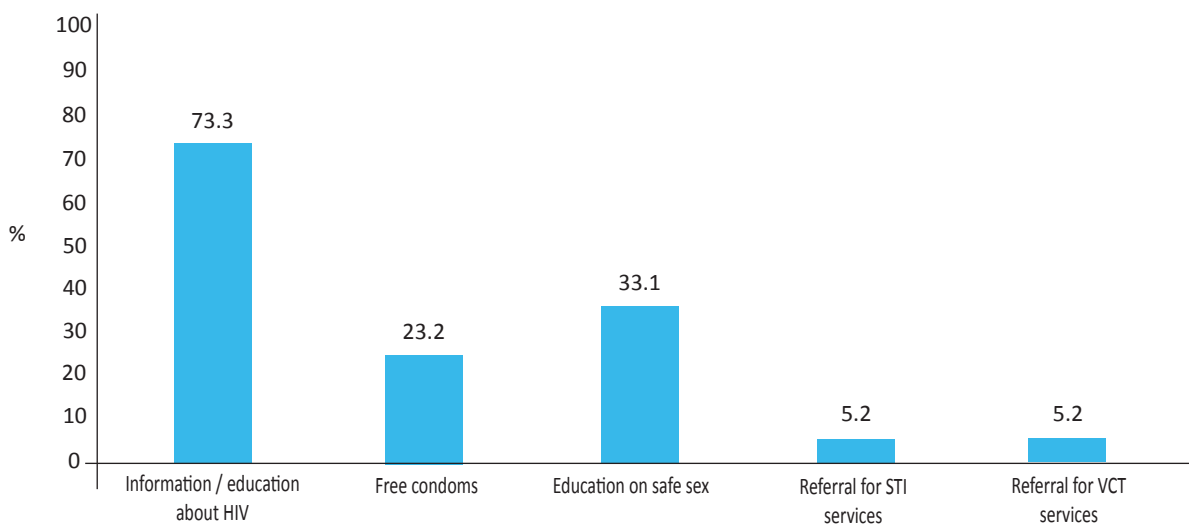
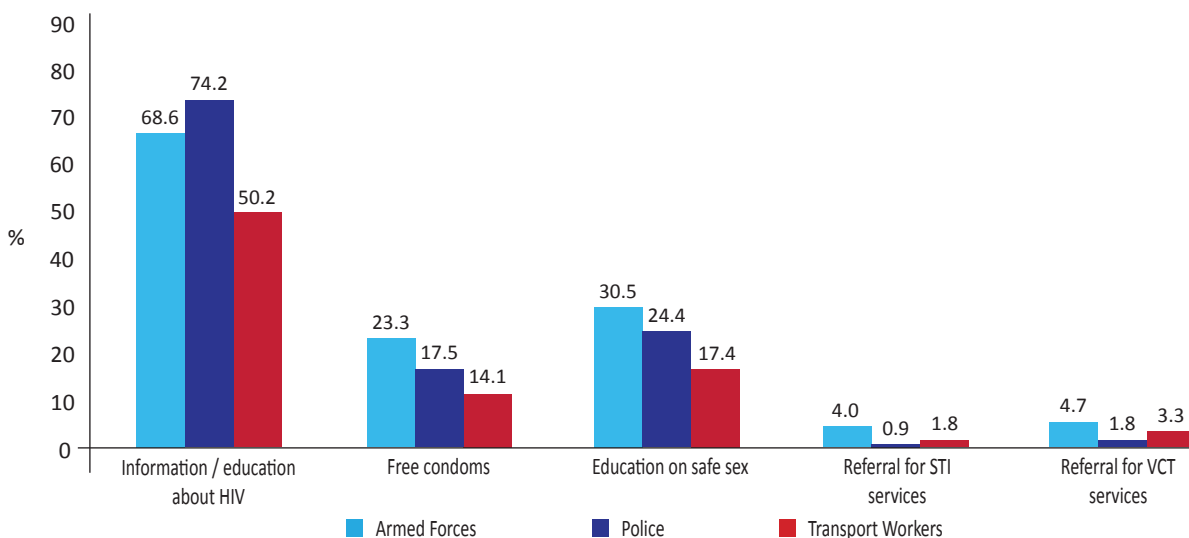


Figure 50: Distribution of predominantly male occupational groups according to HIV prevention services received in the last 12 months preceding the survey, IBBSS Nigeria 2010



All the groups surveyed were shown to have received HIV information/education than free condoms, safe sex or referral services for STI and VCT. MSM surveyed were more likely than the other groups to report receipt of referral services.

3.6.3 Discussion

Evaluation of exposure to different types of HIV/AIDS related services, information and education is critical to further planning and implementation of HIV programs. State level analysis presented in the appendix gives a geographical representation of the services available to the different study groups. The Armed Forces showed good access and utilisation of HIV testing services and this is reflected in the proportion of those who know their HIV status.

A good proportion of all the members of the study groups reported receiving any HIV/AIDS information or education in the last 12 months preceding the survey. However, TW and NBBFSW seemed to be less reached with these services. Referral to STI and HCT services in the past 12 months prior to the survey was very low among all groups. Provision of free condoms and education on safer sex were also low.

4

TREND OF SELECTED BEHAVIOURAL INDICATORS

Data from the 2005 BSS and the 2007 IBBSS were analysed for trend with the 2010 IBBSS on certain indicators in selected states that participated in the three surveys. MSM and IDU were only sampled in 2007 and 2010 and these two points in participating states were compared. All indicators were rounded up to the nearest whole number.

4.1 Ever had HIV Test

The proportions of respondents ever tested for HIV were compared.

Figure 51: Proportion of Armed Forces who have ever tested for HIV by state (2005-2010), IBBSS Nigeria 2010

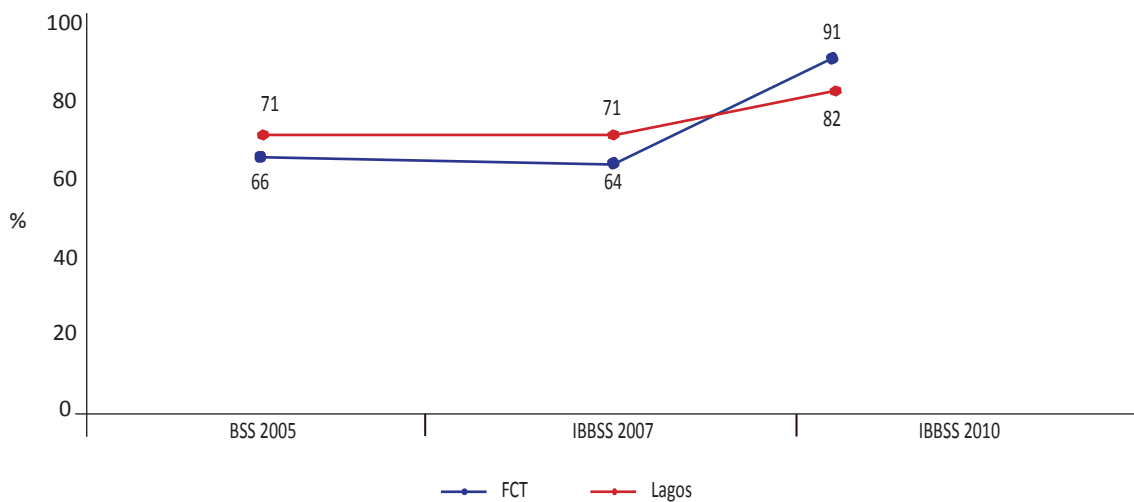
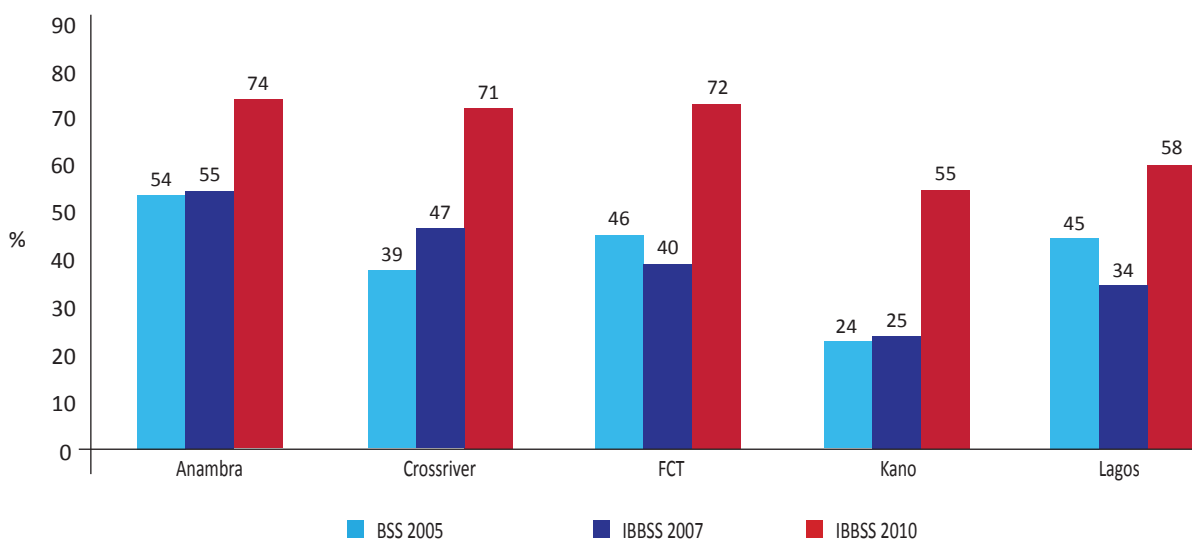


Figure 51 shows the trend in HIV testing among Armed Forces personnel for two states – FCT and Lagos. Overall there appeared to be an increase in the proportions reporting they ever tested, especially more among Armed Forces personnel in the FCT.

Figure 52: Proportion of Police who have ever tested for HIV by state (2005-2010), IBBSS Nigeria 2010



The proportion of Police who have ever tested for HIV was found to increase in all the five states surveyed between 2005 and 2010

Figure 53: Proportion of transport workers who have ever tested for HIV by state (2005-2010), IBBSS Nigeria 2010

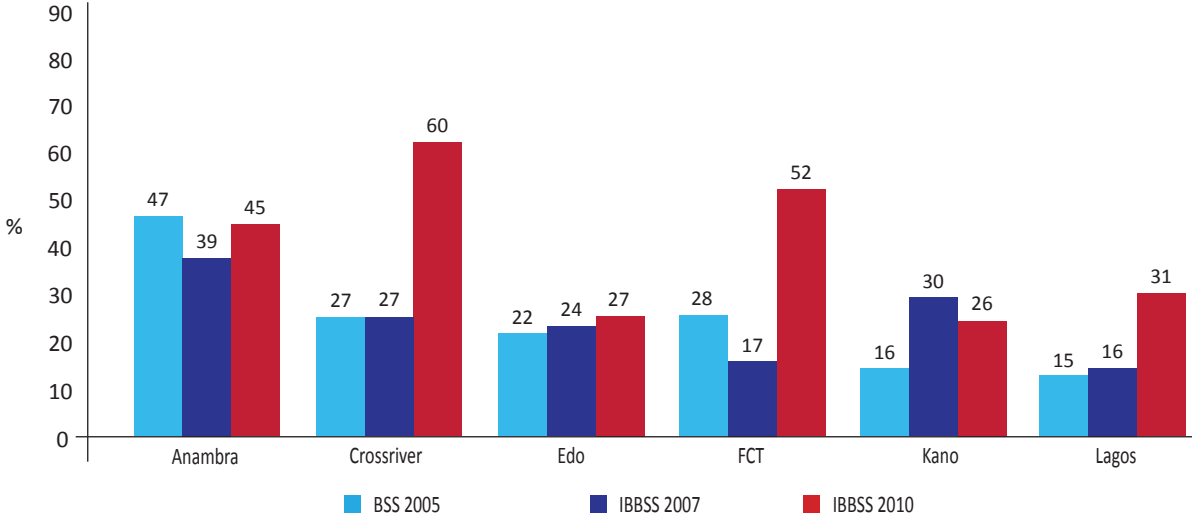
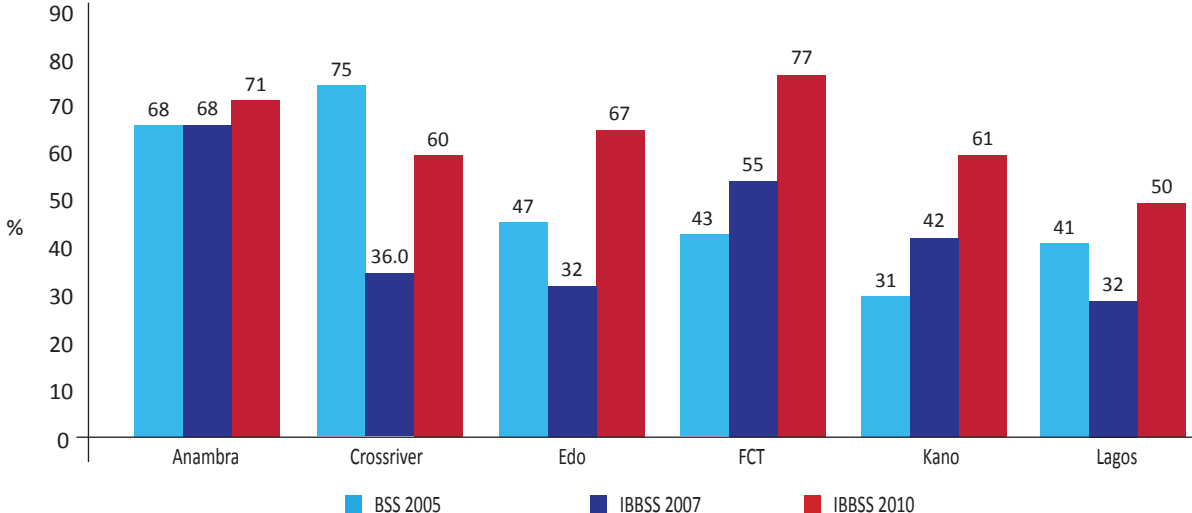


Figure 54: Proportion of FSW who have ever tested for HIV by state (2005-2010), IBBSS Nigeria 2010



FSW in FCT and Kano had progressive improvements in the proportions reporting they ever had an HIV test across the three time points. The proportion that ever tested almost doubled between the 2005 BSS and the 2010 IBBSS. No appreciable change in HIV test among FSW in Anambra (Figure 54).

Figure 55: Proportion of IDU who have ever tested for HIV by state (2007-2010), IBBSS Nigeria 2010

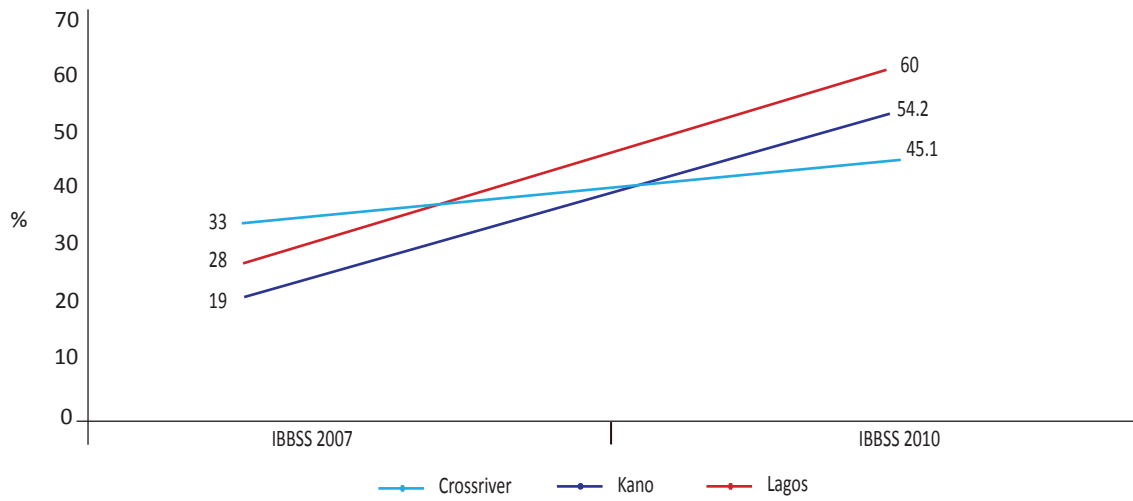
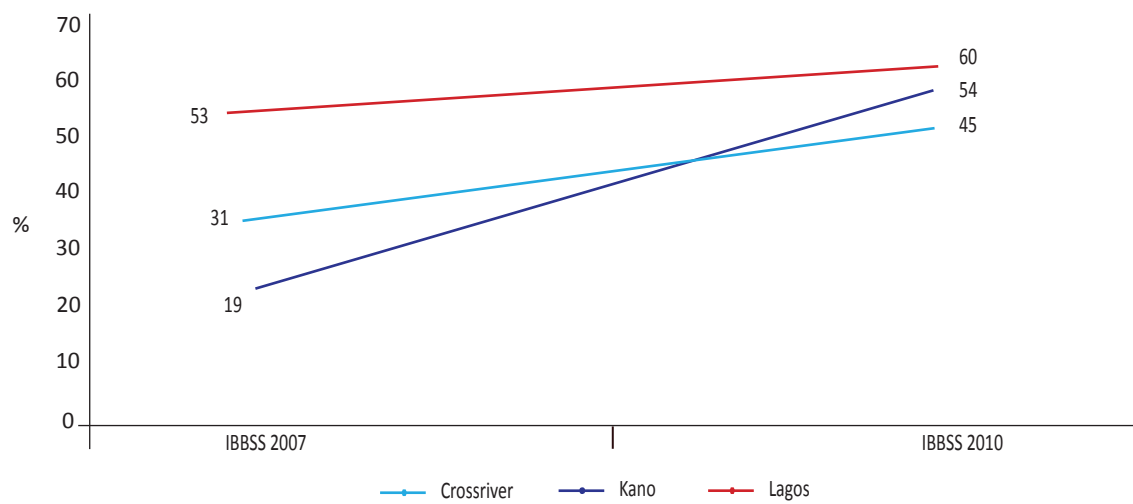


Figure 56: Proportion of MSM who have ever tested for HIV by state (2007-2010), IBBSS Nigeria 2010



4.2 Sex with female sex worker by study group

Figure 57: Proportion of Armed Forces who have had sex with a FSW in the past 12 months by state (2005-2010), IBBSS Nigeria 2010

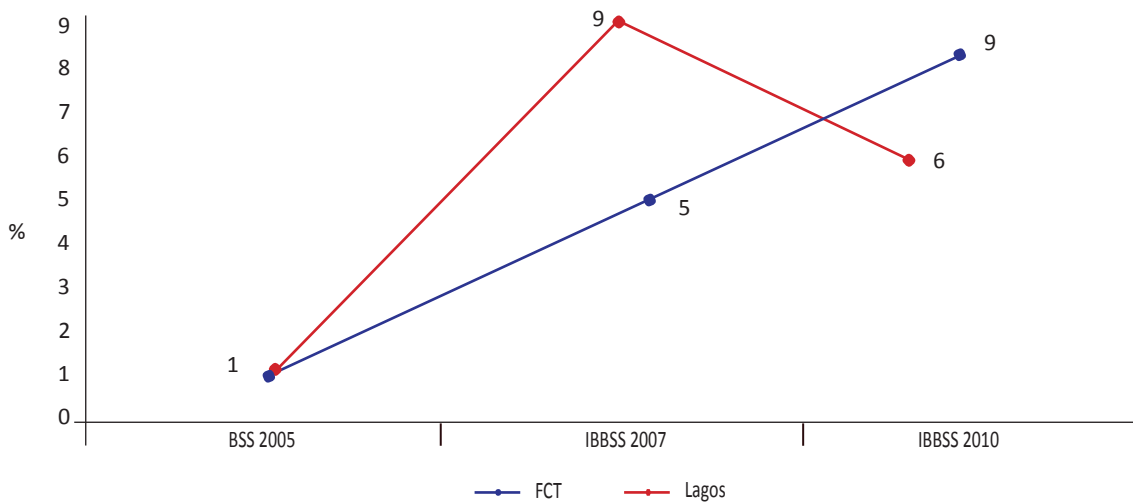


Figure 58: Proportion of the Police who have had sex with a FSW in the past 12 months by state (2005-2010), IBBSS Nigeria 2010

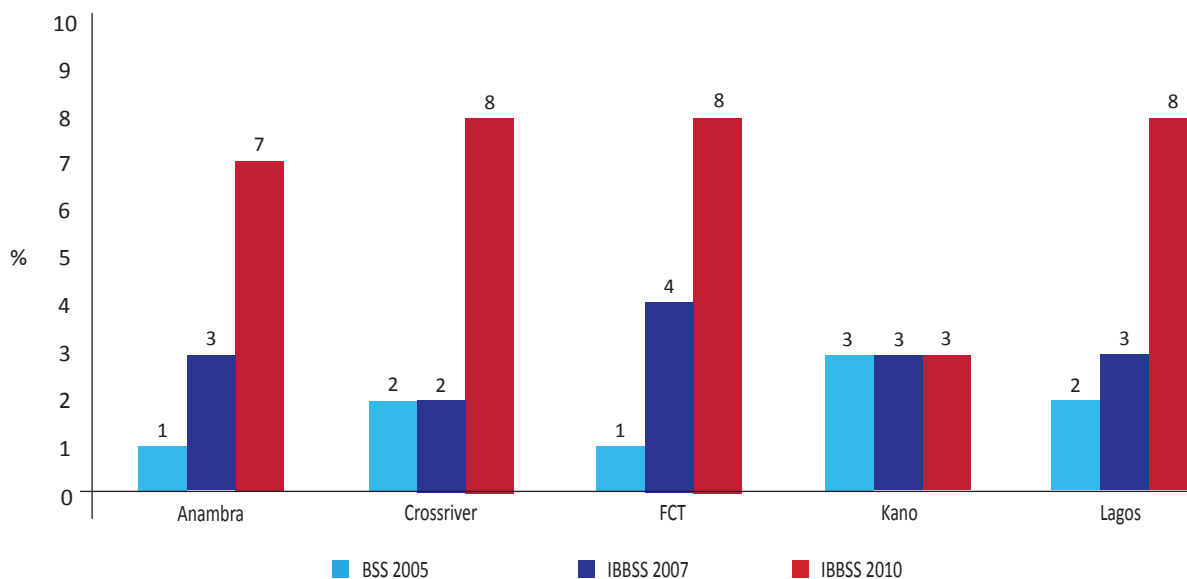
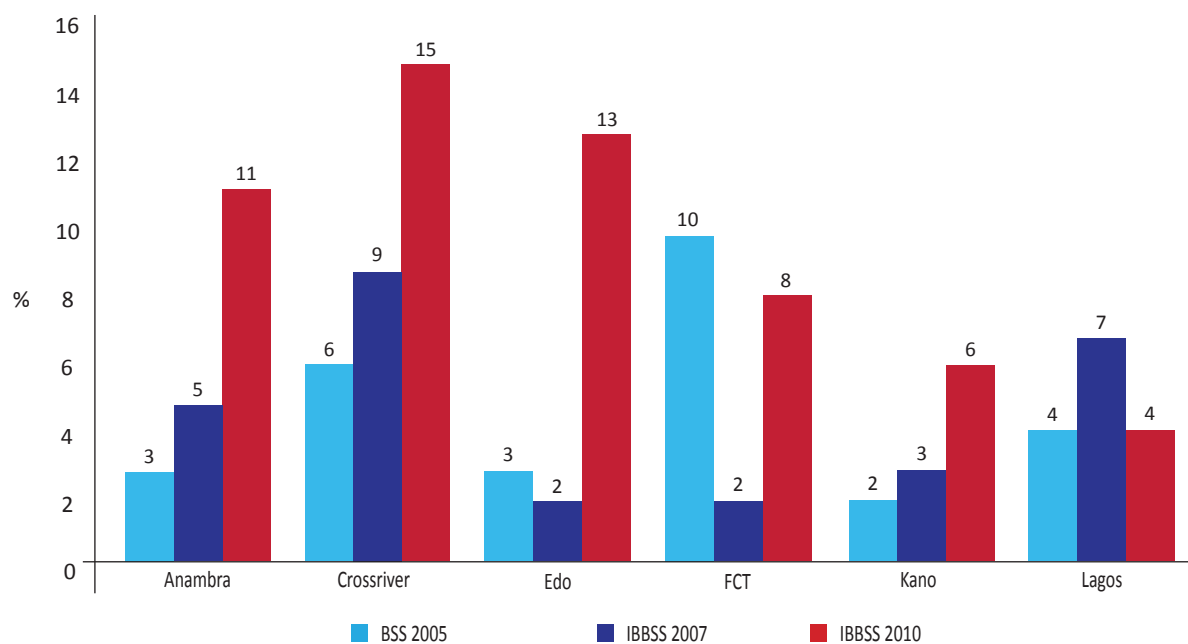


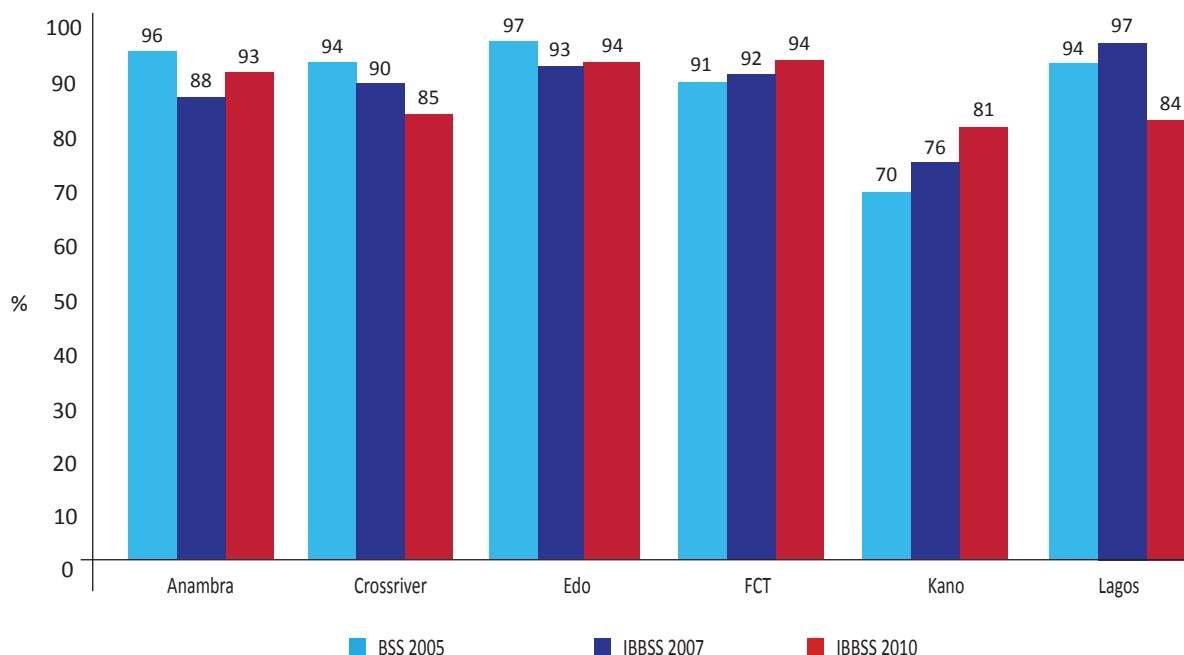
Figure 59: Proportion of TW who have had sex with a female sex worker in the past 12 months by state (2005-2010), IBBSS Nigeria 2010



The trends in the proportions reporting they had sex with a FSW 12 months preceding the survey are shown for Armed Forces, Police and TW (Fig. 57 to 59). There were significant increases in the proportion reporting this behaviour for Police in all the states except Kano. TW also showed increase in this behaviour in all states except Lagos. Armed Forces personnel in Lagos showed increase in this indicator between the 2005 BSS and 2007 IBSS but a decline in 2010, while there was a progressive increase among those in the FCT. None of the target groups had a consistent decline in the level of this indicator.

4.3 Consistent condom use

Figure 60: Consistent condom use with clients among FSW in the last 1 month by state (2005-2010), IBBSS Nigeria 2010



The trend in consistent condom use with client among FSW is shown in Figure 60. There were only modest changes in the figures in the six states studied over the 2005 BSS, the 2007 IBBSS and the 2010 IBBSS, suggesting that consistent condom use with clients has remained over 80% except in Kano.

Figure 61: Proportion of MSM who consistently used condom with a non- paying male partner in the last 6 months (2007-2010), IBBSS Nigeria 2010

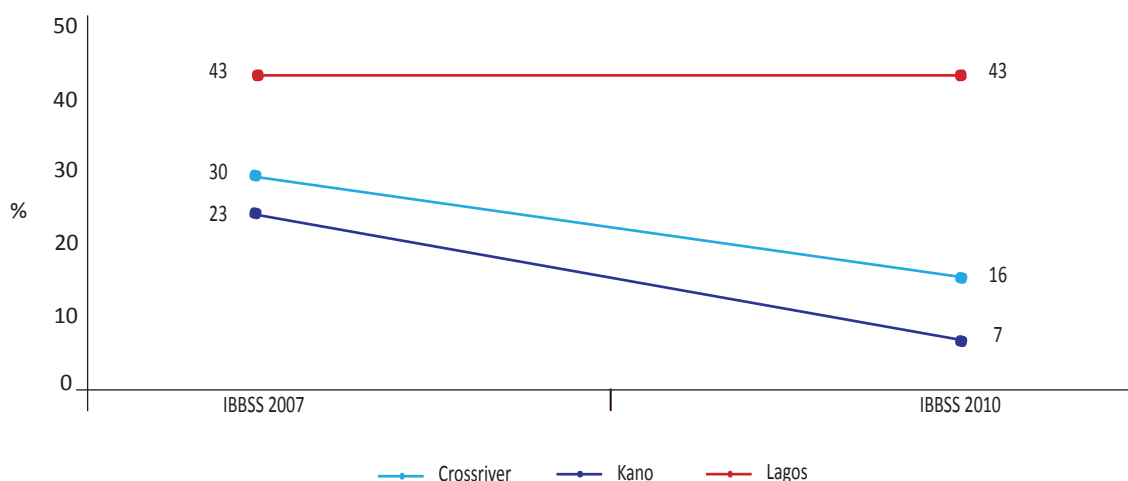
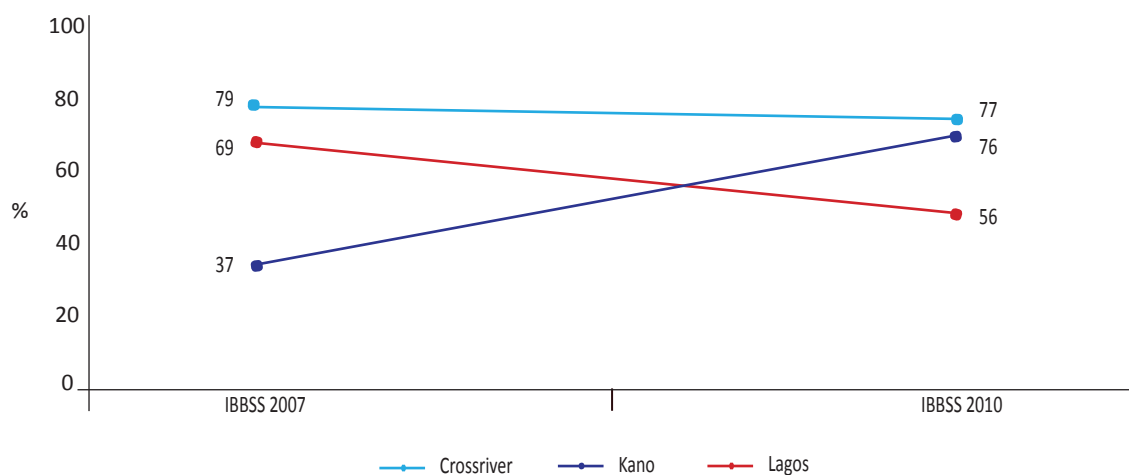


Figure 61 shows the change in the level of consistent condom use with non-paying male partners among MSM between the 2007 and 2010 rounds of the IBBSS. There were lower figures for this indicator in Cross River and Kano States in 2010 compared to 2007, suggesting a drop in consistent condom use with non-paying male partners. Figures in Lagos remained constant.

4.4 Use of sterile injecting equipment

Figure 62: Proportion of IDU who reported always use of sterile injecting equipment in the last 1 month prior to the survey by state (2007-2010), IBBSS Nigeria 2010



The consistent use of sterile injecting equipments in the past month by IDU for the 2007 and 2010 IBBSS is shown in Figure 62. The proportion reporting such behaviour was higher among IDU in Kano state in the 2010 IBBSS while Cross River and Lagos reported lower figures in 2010 compared to 2007.

In general, values for majority of the indicators show improvement in certain indicators, or maintenance of trends.

The 2010 IBBSS provides several new insights into the current state and potential future direction of the HIV epidemic in Nigeria among the study groups. Most important contribution is the continuing insights into HIV prevalence in the study groups investigated.

HIV prevalence and STI symptoms

There is now concrete evidence of the unequal distribution of the burden of HIV in Nigeria, including among groups about whom little was known (MSM and IDU). FSW still bear the brunt of the HIV epidemic in Nigeria, with HIV prevalence levels among BBFSW as high as 46% in Benue and Nasarawa States, states which incidentally also have high HIV prevalence among the ANC attendees (12.7% and 7.5% respectively) used as proxy for the general population (FMOH ANC 2010). MSM in the FCT were also severely affected, with almost one out of every three respondents testing positive for HIV in the IBBSS 2010, which is particularly worrisome as most of those sampled in this group were under the age of 25.

At the other end of the spectrum, all three predominantly male occupational groups returned HIV prevalence levels considerably lower than the 2010 ANC attendees' estimates, 4.1% (FMOH ANC 2010). The Armed Forces HIV prevalence continues to remain low, at 2.5% (compared to 3.1% in 2007 IBBSS). The highest HIV prevalence among the Armed Forces was seen in Benue state, but this was still lower than among other groups within the state. Female Police had higher prevalence (4.5%) compared to male Police (2.0%). Transport workers had the lowest prevalence among all the study groups. Despite this, in Benue State the prevalence among transport workers was very high at 8.0% which probably mirrors the prevalence among the general population. These results may signify the need to re-classify 'high-risk' groups for HIV in Nigeria.

Prevalence was low among IDU suggesting a limited risk of transmission among them. The exception here is in the case of female IDU who had HIV prevalence of 30%.

Another important observation from the 2010 IBBSS was the low level of self reported STI symptoms including genital ulcers/sores and unusual genital discharge in most groups, except in the case of sex workers (both BBFSW and NBBFSW).

FSW

Data on risk behaviours and trends presented in relation to previous BSS rounds suggest that condom use in commercial sex transactions is generally high. Condom use was far less likely in boyfriend relationships, and the data indicate that these relationships are quite common for both BBFSW and NBBFSW. Higher risk taking through non condom use with boyfriends may be associated with emotional trust and confidence built in the course of a steady relationship. Multiple partnerships of this nature and casual partners coupled with low condom use can act as facilitators for HIV transmission, and could form a bridge to the general population. Despite the high level of condom use with clients among FSW, HIV prevalence remains high among these groups.

An additional important finding was that young sex workers (15 to 19 years of age) and sex workers who have worked for less than one year also have high HIV prevalence. While it cannot be ruled out that this group contracted HIV before sex work, there is a high possibility that many get infected soon after entrance into sex work, likely as a result of poor condom negotiation skills and the larger number of clients and other sexual partners young girls have.

Education may also play a role in reducing HIV prevalence in this target group. HIV prevalence was highest among FSW with either primary or no formal education. This may explain their poor negotiating skills as their dependence on sex work may be greater, based on their low level of education.

MSM

MSM reported highly risky sexual behaviour, as condom use in anal sex was low; relatively the same for both paying and non-paying partners, and over one third of the respondents had sold sex in the past six months. Half of MSM surveyed had sexual relationship with at least one female partner in 12 months preceding the survey, suggesting significant bridging with female populations including girlfriends and casual partners and another tenth that patronised FSW. Consistent condom use was generally low. Of those MSM that sold sex, only about a third used condom consistently in the last 12 months preceding the survey.

IDU

A third of female IDU reported selling sex. Female IDU sell sex to obtain money to purchase drugs. Careful attention need to be paid to sexual transmission among both male and female groups, as many have links with the wider population. In particular, female IDU should be targeted with innovative HIV prevention messaging. IDU had low level of knowledge of HIV prevention transmission due to high level of misconceptions about HIV transmission, however high proportion of them (82.6%) used sterile injecting equipments. Condom use at last commercial sex was high compared to last sex with girlfriend though only a fifth of them considered themselves at risk of HIV.

Police

Despite the low HIV prevalence recorded among the Police, low HIV risk perception, low level of knowledge of HIV prevention transmission and low condom use at last commercial sex are potential risk factors for HIV transmission among the Police.

Armed Forces

HIV infection levels follow similar trends in the Police in each state. Multiple sexual partnerships were reported by almost a quarter of male members of the Armed Forces in the 12 months leading up to the survey, mainly girlfriends. Condom use was less likely in boyfriend/girlfriend relationships. This would suggest the possibility of spread of HIV infection despite the current low levels of HIV infection among this group across most states, so interventions will need to be maintained among this group to prevent increased transmission rates.

The higher use of condoms by Armed Forces compared with the Police and TW has apparently resulted in a lower report of STI symptoms by the Armed Forces, and this may have impact on HIV transmission among this group.

Transport Workers

Similar levels of multiple partnering exist among TW as with other predominantly male occupational groups but lower levels of condom use and higher levels of STI symptoms were reported. Promoting STI treatment, free condom distribution and mobile HIV counseling and testing could reduce risks of HIV transmission significantly among these groups, especially in states with higher HIV prevalence. Since the 2007 IBSS survey report, a considerable number of interventions have commenced among the study groups, MSM in particular.

General Recommendations

Since the 2007 IBBSS survey report, a considerable number of interventions have commenced among the study groups, MSM in particular. The demographic and behavioural differences between study groups in various states and the results coming from a single state can significantly differ from national group averages. This gives programme managers, donors and policy makers the opportunity to target prevention and care resources to different groups and geographic areas more effectively in the principle of 'Know your epidemic, Know your response' at the state and national level. These differences are expected to make significant impact on programming at various levels and among various study groups at the state levels.

Group Interactions

There were limited signs of behavioural interactions between IDU, MSM and FSW, linkages which are believed to be responsible for accelerating HIV epidemics in certain concentrated epidemic settings. There are however significant linkages between each of these groups with the perceived 'general' population such as MSM with girlfriends and FSW with boyfriends. Targeted interventions should address these.

Population Size Estimates

To better understand the potential for the wider spread of HIV, reliable population size estimates of FSW, MSM and IDU are needed urgently in certain states. These estimates need to be viewed together with results of this report to help target limited prevention and care resources. Future rounds of surveillance should consider estimating the population size of IDU, MSM and FSW and expand their surveillance outside of the states surveyed in 2010.

Accurate HIV Prevention Messaging

The low accurate knowledge of prevention of sexual transmission of HIV, high level of misconceptions and low self-risk perception for HIV among all the groups need to be addressed. HIV education campaigns must provide appropriate information on HIV prevention and mode of transmission and dispel myths. This may increase self-risk perception for HIV and promote safer sex practices.

Condom Use and Gender-Based Programming

The discrepancies between responses of FSW and the male groups surveyed regarding condom use in commercial sex will merit further research. The continuing risk of transmission among FSW and high reported use of condom with clients suggest possible over-reporting of condom use. Economic empowerment of females and gender-sensitive HIV programming to decrease dependence on sex work and increase condom negotiating skills are highly recommended.

HIV Test

Increased access to HIV counselling and testing is recommended as part of intervention for all the study groups. Mobile HCT might be useful among NBBFSW, MSM and IDU.

Linking Testing to Care, Support, and Treatment Services

Many FSW, IDU, MSM and TW report having ever been tested for HIV and having recently been tested. While it is important for high risk groups to be aware of their HIV status, it is critical that those who are diagnosed as positive are linked to services in care, support, and treatment. Future surveys can also explore the awareness and utilization of care, support, and treatment services among those who know their status.

Further use of survey data and recommendation for next survey

Considerable knowledge, behavioural and intervention exposure related data are reported to provide insights into current and future HIV transmission routes. Only a selection of this data was included in the report, highlighting the need for further and ongoing analyses.

1. Federal Ministry of Health Nigeria (2003). National HIV and AIDS and Reproductive Health Survey, 2003, Federal Ministry of Health, Abuja.
2. Federal Ministry of Health Nigeria (2005). National HIV and AIDS and Reproductive Health Survey, 2005, Federal Ministry of Health, Abuja.
3. Federal Ministry of Health (2007) 2008 National HIV sero-prevalence sentinel survey. Federal ministry of Health National AIDS/STI Control Programme.
4. Federal Ministry of Health (2008) 2007 National HIV and AIDS and Reproductive Health Survey Plus. Federal ministry of Health National AIDS/STI Control Programme.

7 APPENDIX

7.1 Appendix I: Summary indicators for each of the target groups

Table 13: Summary Indicators for FSW, IBBSS Nigeria 2010

Indicator	BBFSW (%)	NBBFSW (%)
Percentage of all respondents who had a comprehensive and correct knowledge of HIV prevention methods	31.8	38.2
Percentage of FSW who reported daily alcohol use	28.0	26.6
Percentage of FSW who reported marijuana use	13.3	11.5
Percentage of FSW who reported cocaine and/or heroin use	2.4	1.9
Average number of clients per week	26.2	7.8
Percentage of FSW having sex with more than 1 boyfriend in the last 12 months	5.2	14.5
Percentage of FSW with any STI symptom in the last 12 months	15.1	25.0
Condom use at last sex with client	95.1	91.5
Consistent condom use with clients in the last 1 month	90.6	76.5
Condom use at last sex with boyfriend	30.3	44.1
Consistent condom use with boyfriend in the last 1 month	20.7	26.1
Percentage of FSW who reported being forced to have sex	3.7	14.0
FSW ever tested for HIV	71.9	56.2
FSW tested and received results	67.6	52.3
HIV prevalence	27.4	21.1

Table 14: Summary indicators for MSM, IBBSS Nigeria 2010

Indicator	%
Percentage of all respondents who had a comprehensive and correct knowledge of HIV prevention methods	33.1
Percentage of MSM who reported alcohol use	5.0
Percentage of MSM who reported marijuana use	19.1
Percentage of MSM who reported cocaine and/or heroin use	4.2
Percentage of MSM who had any female sex partner in the last 12 months	50.8
Percentage of MSM who reported sex with a FSW	10.6
Percentage of MSM who reported selling anal sex to a male partner	35.9
Percentage of MSM who reported buying anal sex from a male partner	22.3
Condom use at last anal sex	52.0
Condom use at last anal sex with a non-paying partner	50.8
Condom use at last anal sex with paying partner	55.0
Condom use at last anal sex with paid partner	48.0
Condom use at last sex with FSW	65.9
Percentage of MSM with any STI symptom in the last 12 months	15.0
MSM ever tested for HIV	53.3
MSM tested and received results	31.5
HIV prevalence	17.2

Table 15: Summary indicators for IDU, IBBSS Nigeria 2010

Indicator	%
Percentage of all respondents who had a comprehensive and correct knowledge of HIV prevention methods	30.7
Percentage of MSM who reported alcohol use	27.2
Percentage of MSM who reported marijuana use	71.6
Percentage of MSM who reported cocaine and/or heroin use	73.3
Percentage of IDU who reported heroin use	70.4
Percentage of IDU who reported use of unused needles as a means of HIV prevention	80.1
Percentage of IDU who used sterile injecting equipment anytime they injected in the last 12 months	
Percentage of IDU who reported sex with commercial partners	31.8
Percentage of female IDU who sold sex in the last 12 months	38.1
Percentage of IDU who reported condom use at last commercial sex	78.0
Percentage of IDU who reported condom use at last sex with boy/girlfriend	55.6
Percentage of IDU who reported condom use at last sex with regular partner	21.9
Percentage of IDU with any STI symptom in the last 12 months	17.8
IDU ever tested for HIV	50.2
IDU tested and received results	31.1
HIV prevalence	4.2

Table 16: Summary indicators for Armed Forces and Police, IBBSS Nigeria 2010

Indicator	Army (%)	Police (%)	TW (%)
Percentage of all respondents who had a comprehensive and correct knowledge of HIV prevention methods	57.6	36.2	28.3
Percentage of all respondents who reported daily use of alcohol	6.6	8.2	14.4
Percentage of all respondents who reported use of marijuana	9.0	4.4	13.1
Percentage of all respondents who reported use of cocaine and/or heroin	0.9	0.7	1.7
Percentage of respondents who had more than one non-regular partner in past 12 months	22.2	14.4	19.7
Percentage of respondents who reported commercial sex in past 12 months	4.4	4.9	7.7
Percentage of male respondents who reported condom use at last commercial sex	86.0	58.9	83.7
Percentage of respondents who reported sex with boy/girlfriend in the last 12 months	42.0	35.9	38.5
Percentage of respondents who reported condom use at last sex with girlfriend	57.3	51.2	45.1
Percentage of respondents with any STI symptom in the last 12 months	4.1	9.6	10.3
Percentage of all respondents who ever had an HIV test	89.7	62.1	35.0
Percentage of all respondents who had an HIV test and received result	81.4	55.8	30.7
HIV prevalence	2.5	2.6	2.4

7.2 Appendix II: Descriptive state level analysis of behavioural data

7.2.1 Brothel-based female sex workers

Table 17: Characteristics of brothel-based FSW, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Age group (n)	249	251	237	255	249	250	249	276	249	2,265
15-19	10.4	7.6	5.5	2.4	1.6	2.8	4.0	5.1	5.6	5.0
20-24	29.7	26.3	32.9	23.9	26.5	22.4	29.3	35.9	24.1	27.9
25-49	59.8	66.1	61.6	73.7	71.9	74.8	66.7	59.1	70.3	67.1
Duration of selling sex(n)	243	215	222	241	238	241	243	251	244	2,138
Mean (months)	28.6	32.0	35.6	21.8	24.2	33.5	33.6	26.5	35.7	30.1
Marital status	249	251	237	255	249	250	249	276	249	2,265
Currently married, living with spouse	0.0	8.0	1.7	0.0	1.6	0.4	0.4	0.0	0.4	1.4
Currently married, living with other sex partner	0.4	0.8	0.0	0.4	0.4	0.0	0.4	0.0	1.2	0.4
Currently married, not living with spouse or other sex partner	1.2	0.8	0.4	0.4	5.2	2.0	2.4	0.4	1.2	1.6
Not married, live with other sex partner	4.0	11.2	0.8	2.0	1.6	2.0	6.0	4.7	6.4	4.3
Not married, don't live with other sex partner	61.8	25.1	84.4	79.6	45.4	46.8	68.7	63.8	47.0	58.0
No response	32.5	54.2	12.7	17.6	45.8	48.8	22.1	31.2	43.8	34.3
Highest level of education(n)	249	251	237	255	249	250	249	276	249	2,265
Never attended school	2.4	15.5	0.4	2.7	5.2	6.4	9.2	2.5	7.2	5.7
Quranic education only	0.0	0.0	0.0	0.4	0.4	0.4	2.0	0.0	2.0	0.6
Some primary	7.6	11.6	4.2	2.7	4.4	11.6	7.6	5.4	10.4	7.3
Completed primary	16.1	16.7	10.1	12.5	20.9	15.6	14.5	19.6	16.9	15.9
Some secondary	40.6	38.6	45.6	32.9	26.1	31.2	29.3	36.2	33.3	34.8
Completed secondary	32.5	15.1	36.3	41.2	31.3	29.2	30.9	34.1	26.1	30.8
Tertiary education	0.8	2.4	3.4	7.5	11.6	5.6	6.4	2.2	4.0	4.9

Table 18: Number of sexual partners of brothel-based FSW, by state IBBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Number of clients in the last week of sex work	241	129	212	241	154	206	213	188	191	490
Mean	28.5	13.8	32.3	36.1	15.4	25.6	28.8	13.7	31.5	26.2
Number of clients on the last day of sex work	244	204	222	243	222	233	230	245	244	178
Mean	5.5	3.6	8.8	4.9	3.7	4.3	4.8	2.9	3.9	4.7
Number of non-commercial sex partners in the last week of sex work	243	184	222	243	230	234	234	193	222	260
Mean	0.3	3.0	0.1	0.1	0.2	0.5	0.7	0.8	0.2	0.6

Table 19: Sexual history and number of sexual partners among brothel-based FSW, by state IBBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Age at first sex(n)	249	251	237	255	249	250	249	276	249	2,265
<15	22.5	17.9	18.1	3.9	17.3	14.0	22.5	11.6	20.1	16.3
15-19	65.1	49.8	60.3	64.3	65.5	61.6	57.8	51.5	66.3	60.1
20-24	9.2	10.0	20.3	27.1	10.0	10.8	12.1	16.7	7.6	13.8
25-49	0.4	1.6	1.3	3.5	1.2	0.8	0.4	0.4	0.4	1.1
FSW who reported having sex with regular partner in the last 12 months	249	251	237	255	249	250	249	276	249	2,265
Percent	7.2	28.3	4.2	3.9	8.4	8.8	13.7	16.7	18.1	12.2
Number of regular partners in the past 12 months (n)	249	251	237	255	249	250	249	276	249	2,265
1	7.2	25.9	4.2	3.9	7.6	7.6	12.9	2.2	17.7	9.9
2+	0.0	2.4	0.0	0.0	0.8	1.2	0.8	14.5	0.4	2.5
Number of commercial partners in the past week (n)	249	251	237	255	249	250	249	276	249	2,265
1-3	0.4	4.8	0.8	0.4	0.8	1.2	0.8	8.0	1.2	2.1
4+	96.4	42.6	88.6	93.7	59.0	80.8	84.7	59.1	73.9	75.2
FSW who reported having sex with boyfriend in the past 12 months	249	251	237	255	249	250	249	276	249	2,265
Percent	55.0	45.8	74.7	59.2	56.6	67.6	61.9	61.6	59.4	60.1
Number of boyfriend partners in the past 12 months	249	251	237	255	249	250	249	276	249	2,265
1	52.6	42.2	65.0	56.1	49.0	60.4	59.0	57.3	47.0	54.3
2+	2.4	3.6	9.7	3.2	7.6	7.2	2.8	4.4	12.4	5.9
FSW who reported having sex with casual partners in the past 12 months(n)	249	251	237	255	249	250	249	276	249	2,265
Percent	2.0	5.2	14.8	1.2	8.8	6.8	25.7	4.4	21.3	9.9
Number of casual partners in the past 12 months(n)	249	251	237	255	249	250	249	276	249	2,265
1	0.8	2.8	4.6	1.2	3.6	5.2	4.0	1.1	7.6	3.4
2+	1.2	2.8	10.2	0.0	5.3	1.7	22.8	3.5	13.7	6.5

Table 20: Condom use among brothel-based FSW, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Condom use with client during last sex (n)	249	251	237	255	249	250	249	276	249	2,265
Percent	97.2	86.1	93.3	94.9	94.8	98.0	96.8	94.6	96.0	94.6
Consistent condom use with client in the past 1 month (n)	249	251	237	255	249	250	249	276	249	2,265
Percent	90.0	84.9	92.4	94.5	92.8	93.6	85.5	91.7	89.2	90.5
Condom use with regular partner during last sex (n)	18	71	10	10	21	22	34	46	45	277
Percent	33.3	25.4	20.0	0.0	23.8	13.6	11.8	93.5	35.6	35.0
Condom use with non commercial sex partner during last sex(n)	152	162	187	160	161	184	187	177	175	1,545
Percent	20.4	41.4	32.1	15.6	44.1	36.4	48.7	50.8	53.1	38.5
Condom use with boyfriend during last sex(n)	137	115	177	151	141	169	154	170	148	1,362
Percent	16.8	42.6	25.4	15.2	38.3	34.3	22.7	35.3	39.2	29.7
Consistent condom use with boyfriend in the last 12 months(n)	137	115	177	151	141	169	154	170	148	1,362
Percent	5.8	39.1	9.0	8.6	29.1	20.1	17.5	26.5	22.3	19.2
Condom use with casual partner during last sex(n)	5	13	35	3	22	17	64	12	53	224
Percent	60.0	46.2	68.6	100.0	63.6	58.8	95.3	50.0	79.3	75.5
Consistent condom use with casual partner during last sex	5	13	35	3	22	47.1	64	12	53	224
Percent	20.0	46.2	57.1	100.0	45.5	24.2	92.2	58.3	71.7	67.9

Table 21: Self-reported STI symptoms among brothel-based FSW, by state IBBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
FSWs correctly identifying ways of preventing HIV infection and rejecting misconception of HIV transmission(n)	249	251	237	255	249	250	249	276	249	2,265
Percent	43.8	10.4	51.9	21.6	31.7	28.0	44.6	33.3	14.5	30.9
FSW who perceived their risk of HIV transmission	249	251	237	255	249	250	249	276	249	2,265
Percent	78.7	39.4	18.1	74.9	40.6	26.4	20.1	27.5	43.0	41.0
FSW ever had HIV test	249	251	237	255	249	250	249	276	249	2,265
Percent	76.3	73.7	65.0	74.5	79.5	77.2	72.7	63.4	73.9	72.9
FSW had HIV test in last year	249	251	237	255	249	250	249	276	249	2,265
Percent	54.6	57.4	43.5	61.6	62.2	57.6	54.6	46.4	57.4	55.0
FSW ever had HIV test and received results (n)	249	251	237	255	249	250	249	276	249	2,265
Percent	70.3	66.1	63.7	72.9	76.3	75.6	66.7	59.1	67.5	68.6
FSW ever had voluntary HIV test with counselling	249	251	237	255	249	250	249	276	249	2,265
Percent	42.2	42.6	42.6	60.8	46.2	36.8	47.8	38.8	53.0	45.6

Table 22: HIV knowledge, risk perception and HIV testing among brothel-based FSW, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
FSWs who can mention correctly STI symptoms in women	249	251	237	255	249	250	249	276	249	2,265
Percent	93.2	57.4	92.4	87.8	69.1	74.4	54.2	84.4	67.1	75.6
Abdominal pain	47.0	33.9	53.6	36.9	39.0	51.2	33.3	40.2	47.8	42.4
Genital discharge	61.4	19.9	62.0	62.0	37.3	41.2	16.5	35.9	24.1	39.9
Foul smelling discharge	32.9	11.2	36.7	6.3	13.3	23.2	9.6	18.5	12.9	18.1
Burning pain on urination	27.7	19.5	46.0	20.4	28.1	42.0	22.1	19.6	33.7	28.6
Genital ulcers/sores	26.5	7.6	26.2	6.3	14.1	19.2	19.7	11.2	9.6	15.5
Swellings inn the groin area	20.5	6.0	23.6	4.3	10.0	6.8	4.4	12.7	7.6	10.6
Itching of the genitals	56.2	32.3	49.8	62.7	42.2	51.2	22.5	46.0	41.8	45.0
FSW who can mention correctly STI symptoms in men (n)	249	251	237	255	249	250	249	276	249	2,265
Percent	89.6	45.8	89.9	56.1	40.6	74.0	46.2	74.3	58.6	63.8
Genital discharge	39.8	18.3	36.3	11.8	18.5	40.4	17.3	22.1	27.7	25.7
Burning pain on urination	58.2	20.7	69.6	36.9	27.7	70.0	34.9	37.0	42.2	43.9
Genital ulcers/sore/rash	20.5	6.0	29.5	6.7	10.0	28.8	24.1	10.5	9.6	16.0
Swellings in the groin area	12.4	6.4	24.5	2.7	10.4	10.4	2.4	23.9	8.4	11.3
Itching of the genitals	45.8	18.7	48.1	26.7	16.1	36.8	20.9	29.3	34.1	30.6
FSW who reported an STI symptoms in the past 12 months(n)	249	251	237	255	249	250	249	276	249	2,265
Percent	5.6	21.1	11.8	9.8	25.3	15.2	10.8	14.1	27.7	15.7
FSW who reported unusual genital discharge in the past 12 months(n)	249	251	237	255	249	250	249	276	249	2,265
Percent	4.0	15.9	9.3	9.0	22.1	13.2	10.8	14.1	22.5	13.5
FSW who reported unusual anal discharge in the past 12 months(n)	249	251	237	255	249	250	249	276	249	2,265
Percent	0.4	1.6	0.0	0.0	0.4	0.0	1.2	0.4	4.0	0.9
FSW who reported a genital ulcer/sore in the past 12 months(n)	249	251	237	255	249	250	249	276	249	2,265
Percent	1.6	10.4	4.6	4.3	11.6	3.2	5.2	0.4	10.4	5.7
FSW who reported anal ulcer/sore in the past 12 months(n)	249	251	237	255	249	250	249	276	249	2,265
Percent	0.0	1.6	0.8	0.0	1.2	1.2	2.0	0.0	2.0	1.0

Table 23: STI treatment seeking behavior among brothel-based FSW, by state IBBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Sought treatment when had STI (n)	13	51	26	25	62	37	27	39	66	346
Percent	0.0	7.8	0.0	0.0	3.2	0.0	3.7	0.0	10.6	4.1

Table 24: Exposure to HIV/AIDS interventions among brothel-based FSW, by state IBBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
FSW who obtained cheap/free condoms in the last 12 months among sexually active FSW (n)	249	251	237	255	249	250	249	276	249	2,265
Percent	33.7	25.9	72.6	72.9	42.6	12.8	7.2	33.3	32.9	37.0
FSW who received education on safe injection in the past 12 months (n)	249	251	237	255	249	250	249	276	249	2,265
Percent	12.1	1.2	3.4	35.7	19.7	10.0	3.2	8.0	17.3	12.3
FSW who received safe sex education in the past 12 months (n)	249	251	237	255	249	250	249	276	249	2,265
Percent	38.2	18.7	39.7	71.8	41.0	14.8	6.8	31.9	30.9	32.7
FSW who received referral for STI services in the past 12 months (n)	249	251	237	255	249	250	249	276	249	2,265
Percent	3.2	0.4	0.0	0.8	2.8	2.8	0.8	2.9	5.6	2.2
FSW who received HIV/AIDS, STI or condom education from television in the past 12 months (n)	249	251	237	255	249	250	249	276	249	2,265
Percent	38.6	2.4	44.3	83.1	37.0	50.4	47.4	52.5	49.0	45.1
FSW who received HIV/AIDS, STI or condom education from radio in the past 12 months	249	251	237	255	249	250	249	276	249	2,265
Percent	51.4	4.4	50.6	70.2	32.1	46.0	51.0	51.1	56.6	46.0

Table 25: Alcohol use among brothel-based FSW, by state IBBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
FSW who drank alcohol in the past four weeks (n)	249	251	237	255	249	250	249	276	249	2,265
Every day	31.3	15.1	21.9	47.5	34.9	24.8	37.8	21.7	16.9	28.0
At least once a week	16.5	11.6	16.0	7.5	28.1	21.6	25.7	17.0	24.1	18.6

8.2.2 Non-brothel-based female sex workers

Table 26: Characteristics of non-brothel-based FSW, by state IBBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Oyo	Overall
Age group (n)	250	247	250	181	249	253	267	250	247	2,194
15-19	14.8	18.2	11.6	5.5	8.8	13.8	10.5	6.4	11.7	11.4
20-24	51.2	39.3	31.6	29.8	38.2	29.2	29.6	32.4	45.3	36.4
25-49	34.0	42.5	56.8	64.6	53.0	56.9	59.9	61.2	42.9	52.1
Duration of selling sex(n)	246	188	249	173	240	245	245	181	230	1997
Mean (<i>months</i>)	30.13	26.96	37.01	16.69	22.76	34.84	51.56	25.45	64.60	35.39
Marital status (n)	250	247	250	181	249	253	267	250	247	2,194
Currently married, living with spouse	1.2	2.4	0.0	1.1	0.4	2.0	0.0	3.6	2.4	1.5
Currently married, living with other sex partner	0.0	3.6	0.4	0.6	0.4	0.4	1.9	0.0	0.4	0.9
Currently married, not living with spouse or other sex partner	1.2	0.4	0.4	0.6	0.8	0.8	0.0	0.4	0.4	0.6
Not married, live with other sex partner	3.2	17.8	6.4	3.3	4.8	8.3	3.4	6.0	10.5	7.2
Not married, don't live with other sex partner	85.6	58.3	70.4	73.5	79.9	60.9	60.3	52.4	64.4	67.1
No response	8.8	17.4	22.4	21.0	13.7	27.7	34.5	37.6	21.9	22.9
Highest level of education (n)	250	247	250	181	249	253	267	250	247	2,194
Never attended school	0.4	5.3	4.0	2.8	1.2	2.0	3.4	3.6	4.0	3.0
Quranic education only	0.0	0.0	0.0	0.0	0.0	1.6	4.1	0.0	1.2	0.8
Some primary	2.4	3.6	2.0	5.0	2.0	2.0	5.2	4.4	3.6	3.3
Completed primary	5.2	10.1	4.0	12.2	4.0	7.9	11.6	3.6	8.5	7.3
Some secondary	27.6	31.2	24.8	42.0	18.9	24.5	24.0	21.6	23.5	25.9
Completed secondary	42.8	33.2	50.4	28.7	48.2	48.2	41.9	63.2	31.2	43.6
Tertiary education	21.6	16.6	14.8	9.4	25.7	13.8	9.7	3.6	27.9	16.0

Table 27: Number of sexual partners of non-brothel-based FSW, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Number of clients in the last week of sex work (n)	240	125	246	173	199	249	247	226	217	1922
Mean	6.5	6.7	7.0	6.5	10.4	7.4	6.1	9.6	9.9	7.8
Number of clients on the last day of sex work (n)	249	187	249	172	236	250	254	231	235	2063
Mean	1.4	1.6	1.5	1.9	2.2	1.6	1.7	2.6	1.8	1.8
Number of non-commercial sex partners in the last week of sex work (n)	241	155	206	167	243	244	219	145	226	1846
Mean	0.2	2.3	0.8	0.4	0.5	0.4	0.8	0.4	0.5	0.7

Table 28: Sexual history and number of sexual partners among non-brothel-based FSW, by state IBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Age at first sex(n)	250	247	250	181	249	253	267	250	247	2,194
<15	10.8	18.2	18.4	11.6	10.4	15.8	24.0	12.8	17.0	15.6
15-19	72.8	65.6	60.0	69.1	65.5	64.8	50.9	60.0	50.6	61.9
20-24	11.6	11.3	17.2	17.1	18.1	14.6	17.2	14.8	16.6	15.4
25-49	0.0	0.4	1.6	0.6	0.4	1.6	1.1	1.6	1.6	1.0
FSW who reported having sex with regular partner in the last 12 months (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	4.4	23.1	7.6	7.2	4.4	15.4	0.4	9.2	23.1	10.5
Number of regular partners in the past 12 months (n)	250	247	250	181	249	253	267	250	247	2,194
1	4.4	16.6	6.4	6.1	4.4	14.6	0.4	8.4	19.0	8.9
2+	0.0	2.4	0.8	1.2	0.0	0.8	0.0	0.8	2.8	1.5
Number of commercial partners in the past week (n)	250	247	250	181	249	253	267	250	247	2,194
1-3	8.8	11.0	12.4	29.9	3.2	25.7	29.9	10.4	11.3	15.5
4+	87.2	30.0	84.4	64.6	70.7	70.4	56.6	79.6	75.7	68.9
FSW who reported having sex with boyfriend in the past 12 months (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	74.8	76.5	57.2	72.9	69.1	84.6	71.2	44.4	85.8	70.7
Number of boyfriend partners in the past 12 months	250	247	250	181	249	253	267	250	247	2,194
1	64.8	61.1	48.8	61.9	59.4	61.3	61.4	35.2	55.5	56.5
2+	10.0	15.3	8.4	11.1	9.6	23.4	9.8	9.2	30.3	14.2
FSW who reported having sex with casual partners in the past 12 months (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	26.4	12.2	24.4	20.4	12.5	28.1	27.3	6.0	27.5	20.6
Number of casual partners in the past 12 months(n)	250	247	250	181	249	253	267	250	247	2,194
1	18.4	6.5	14.0	14.4	6.4	15.8	16.9	1.6	12.6	11.8
2+	8.0	5.6	10.4	6.1	6.0	12.3	10.5	4.4	15.0	8.8

Table 29: Condom use among non-brothel-based FSW, by state IBBS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Condom use with client during last sex (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	97.6	79.8	89.2	94.5	98.0	93.7	89.9	91.2	86.6	91.1
Consistent condom use with client in the past 1 month (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	93.2	68.8	74.0	84.0	94.0	65.2	73.4	73.2	63.2	76.3
Condom use with regular partner(n)	11	57	19	13	11	39	1	23	57	231
Percent	36.4	24.6	31.6	53.9	18.2	33.3	100.0	47.8	17.5	29.4
Condom use with non commercial sex partner during last sex(n)	193	211	178	145	185	223	203	125	226	1,689
Percent	65.8	50.2	69.7	38.6	40.5	65.5	48.3	52.8	52.2	54.2
Condom use with boyfriend during last sex(n)	187	189	143	132	172	214	190	111	212	1,550
Percent	60.4	47.1	67.1	27.3	32.6	53.7	31.1	50.5	39.2	45.4
Consistent condom use with boyfriend inn the last 12 months(n)	187	189	143	132	172	214	190	111	212	1,550
Percent	42.3	32.3	30.8	30.3	18.6	25.2	20.5	31.5	15.1	26.8
Condom use with casual partner during last sex(n)	66	30	61	37	31	71	73	15	68	452
Percent	95.5	53.3	67.2	73.0	77.4	81.7	74.0	80.0	61.8	74.6
Consistent condom use with casual partner during last sex	66	30	61	37	31	71	73	15	68	452
Percent	86.4	43.3	50.8	64.9	58.1	73.2	65.8	60.0	35.3	61.1

Table 30: HIV knowledge, risk perception and HIV testing among non-brothel-based FSW, by state IBBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
FSWs correctly identifying ways of preventing HIV infection and rejecting misconception of HIV transmission(n)	250	247	250	181	249	253	267	250	247	2,194
Percent	72.8	15.4	49.6	16.6	33.7	58.1	18.0	42.0	33.6	38.3
FSW who perceived their risk of HIV transmission	250	247	250	181	249	253	267	250	247	2,194
Percent	45.2	36.4	30.0	46.4	42.6	32.4	44.9	36.4	23.1	36.1
FSW ever had HIV test	250	247	250	181	249	253	267	250	247	2,194
Percent	65.6	62.8	54.0	55.3	72.7	54.2	52.4	32.4	60.3	56.6
FSW had HIV test in last year	250	247	250	181	249	253	267	250	247	2,194
Percent	40.0	47.0	35.6	38.7	53.4	36	39	19.2	40.9	38.8
FSW ever had HIV test and received results (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	62.4	55.9	52.8	51.4	68.7	53.0	49.1	29.6	52.2	52.8
FSW ever had voluntary HIV test with counseling (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	30.0	28.3	39.6	30.4	46.6	27.7	24.7	13.6	31.6	30.2

Table 31: Self reported STI symptoms among non-brothel-based FSW, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
FSWs who can mention correctly STI symptoms in women (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	98.0	69.2	71.2	54.1	75.5	95.3	73.8	71.6	47.8	73.6
Abdominal pain	58.8	45.3	20.8	15.5	36.9	43.5	20.6	43.6	15.4	33.9
Genital discharge	53.2	15.0	46.0	29.8	43.4	60.5	37.5	42.4	15.8	38.5
Foul smelling discharge	33.2	15.8	20.0	7.7	21.3	47.8	26.6	29.6	10.1	24.2
Burning pain on urination	40.4	25.5	10.0	18.8	28.1	19.8	18.7	33.2	22.7	24.2
Genital ulcers/sores	17.6	9.3	8.0	14.9	13.7	21.7	12.4	25.2	12.8	15.0
Swellings in the groin area	2.8	6.9	5.2	6.1	12.4	3.2	16.9	21.6	2.8	8.8
Itching of the genitals	69.6	31.6	18.8	32.6	43.4	77.1	50.6	43.2	22.3	43.5
FSW who can mention correctly STI symptoms in men (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	93.2	57.1	43.6	40.3	58.6	79.8	61.0	68.4	35.6	60.4
Genital discharge	34.0	17.0	16.8	24.3	26.5	35.2	14.2	36.8	4.5	23.2
Burning pain on urination	58.4	34.4	23.2	28.2	43.8	56.9	21.3	38.8	28.3	37.2
Genital ulcers/sore/rash	25.2	3.6	5.2	8.3	13.7	34.8	13.1	21.2	7.3	14.9
Swellings in the groin area	4.0	6.9	5.6	3.3	16.1	12.3	22.5	26.8	4.0	11.6
Itching of the genitals	66.8	25.9	12.8	9.9	24.9	43.1	42.3	38.4	8.9	31.1
FSW who reported an STI symptoms in the past 12 months(n)	250	247	250	181	249	253	267	250	247	2,194
Percent	16.0	31.2	13.2	28.2	30.5	43.1	23.6	5.6	29.6	24.4
FSW who reported unusual genital discharge in the past 12 months(n)	250	247	250	181	249	253	267	250	247	2,194
Percent	13.2	21.1	12.4	24.9	27.3	41.9	21.7	5.2	26.7	21.5
FSW who reported anal genital discharge in the past 12 months(n)	250	247	250	181	249	253	267	250	247	2,194
Percent	0.4	8.9	3.6	0.6	2.8	3.2	1.1	0.4	4.5	2.9
FSW who reported a genital ulcer/sore in the past 12 months(n)	250	247	250	181	249	253	267	250	247	2,194
Percent	5.2	12.1	2.8	18.8	14.1	14.6	6.7	2.0	9.3	9.2
FSW who reported unusual anal ulcer/sore in the past 12 months(n)	250	247	250	181	249	253	267	250	247	2,194
Percent	2.4	6.9	0.4	1.1	2.0	4.0	2.6	0.8	2.8	2.6

Table 32: STI treatment seeking behaviour among non-brothel-based FSW, by state IBBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Sought treatment when had STI (n)	35	58	33	51	74	108	63	14	70	506
Percent	5.7	5.2	9.1	3.9	4.1	7.4	4.8	7.1	8.6	6.1

Table 33: Exposure to HIV/AIDS interventions among non-brothel-based FSW, by state IBBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
FSW who obtained cheap/free condoms in the last 12 months among sexually active FSW (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	25.6	16.2	8.8	20.4	26.1	37.2	12.4	6.4	7.7	17.8
FSW who received education on safe injection in the past 12 months (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	5.6	3.6	3.2	1.7	16.5	21.7	2.6	2.4	5.3	7.1
FSW who received safe sex education in the past 12 months (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	24.0	16.2	8.0	15.5	25.3	39.5	18.4	5.2	8.1	17.9
FSW who received referral for STI services in the past 12 months (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	1.6	0.8	0.8	0.6	1.2	7.5	2.6	2.4	2.0	2.2
FSW who received HIV/AIDS, STI or condom education from television in the past 12 months (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	46.8	1.2	13.2	53.0	27.3	64.4	24.3	3.6	24.3	28.0
FSW who received HIV/AIDS, STI or condom education from radio in the past 12 months (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	55.6	2.4	15.2	50.3	30.5	56.9	47.6	4.4	30.0	32.2
FSW who received HIV/AIDS, STI or condom education from newspaper in the past 12 months (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	13.6	0.0	2.8	1.7	6.4	12.7	3.8	2.8	8.5	5.9
FSW who received HIV/AIDS, STI or condom education from any source in the past 12 months (n)	250	247	250	181	249	253	267	250	247	2,194
Percent	58.8	25.1	32.8	69.1	50.6	72.7	59.9	9.6	37.3	45.7

Table 34: Alcohol use among non-brothel-based FSW, by state IBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
FSW who drank alcohol in the past four weeks (n)	249	251	237	255	249	250	249	276	249	2,265
Every day	31.3	15.1	21.9	47.5	34.9	24.8	37.8	21.7	16.9	28.0
At least once a week	16.5	11.6	16.0	7.5	28.1	21.6	25.7	17.0	24.1	18.6

7.2.3 Men who have sex with men (MSM)

Table 35: Characteristics of MSM, by state IBBSS Nigeria 2010

Characteristics	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
Age group(n)	313	199	286	299	215	233	1,545
15-24	67.7	51.3	42.7	44.1	61.4	53.6	53.4
25-49	32.3	48.7	57.3	55.9	38.6	48.4	46.6
Highest level of education(n)	313	199	286	299	215	233	1,545
Never attended school	0.0	2.0	1.7	0.3	0.0	0.0	0.6
Quranic education only	0.3	5.5	1.4	2.0	0.0	0.9	1.6
Some primary	0.0	4.5	1.0	2.3	0.9	0.9	1.5
Completed primary	2.2	5.0	9.1	13.4	5.6	2.6	6.5
Some secondary	12.1	17.6	15.7	18.4	10.7	5.2	13.6
Completed secondary	62.0	28.1	39.5	43.8	64.2	62.2	50.3
Tertiary education	23.3	37.2	31.5	19.7	18.6	28.3	26.0
Duration of residence in State (n)	313	199	286	299	215	233	1,545
< 5 years	17.9	56.3	8.7	2.3	14.0	17.2	17.5
5 years or more	81.5	42.2	90.9	97.3	83.7	82.8	81.7
No response	0.6	1.5	0.3	0.3	2.3	0.0	0.8

Table 36: Sexual contacts with male partners among MSM, by state IBSS Nigeria 2010

	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
Number of insertive male partners in the past 6 months (n)	313	199	286	299	215	233	1,545
1	18.2	22.1	16.4	13.7	21.4	30.0	19.7
2	17.6	15.6	17.5	14.1	14.4	23.6	17.1
3	10.9	7.5	7.7	8.7	7.0	9.0	8.6
4+	29.4	11.6	27.6	38.1	14.9	14.2	24.1
Mean	4.7	2.0	4.0	7.3	2.2	2.1	4.0
Number of receptive male partners in the past 6 months (n)	313	199	286	299	215	233	1,545
1	14.7	22.6	24.8	13.0	27.4	18.5	19.6
2	12.8	21.1	14.0	16.4	7.4	9.0	13.5
3	6.1	6.5	8.7	10.0	9.8	4.7	7.7
4+	18.9	15.6	17.1	40.5	16.3	6.4	20.1
Mean	3.0	2.2	2.6	6.0	2.0	1.1	3.0
MSM who sold sex (anal) to male partners in the past 6 months (n)	313	199	286	299	215	233	1,545
Percent	17.9	39.2	31.8	63.9	36.7	25.8	35.9
MSM who paid for anal sex with a male partner in the past 6 months (n)	313	199	286	299	215	233	1,545
Percent	18.2	8.0	33.6	43.5	11.2	9.0	22.3
MSM who had anal sex with a non-paying partner in the past 6 months (n)	313	199	286	299	215	233	1,545
Percent	80.8	58.3	53.2	55.2	60.9	79	64.8
MSM who had sex with a female sex worker in the last 12 months(n)	313	199	286	299	215	233	1,545
Percent	0.6	2.0	17.8	23.4	7.0	9.4	10.6

Table 37: Condom use with male and female partners among MSM, by state IBSS Nigeria 2010

	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
MSM who reported using condom the last time they sold sex to a male partner (n)	56	78	91	191	79	60	555
Percent	71.4	47.4	52.8	45.6	77.2	53.3	55
MSMS who reported using condom during last anal sex when buying sex from male sex worker(n)	57	16	96	130	24	21	344
Percent	45.6	68.8	50.0	40.0	70.8	52.4	48.0
MSM who reported using condom the last time they had anal sex with a non-paying partner (n)	253	116	152	165	131	184	1,001
Percent	46.3	58.6	50.7	32.1	62.6	60.3	50.8
MSM who reported using condom the last time they had sex with a female sex worker (n)	2	4	51	70	15	22	164
Percent	100.0	75.0	57.0	64.3	86.7	72.7	65.9
MSM who reported using condom consistently when they sold sex in the past 6 months (n)	56	78	91	191	79	60	555
Percent	50.0	43.6	35.2	11.0	45.6	41.7	56.5
MSM who reported using condom consistently with a male sex worker in the past 6 months (n)	57	16	96	130	24	21	344
Percent	19.3	68.8	41.7	10.8	41.7	47.6	28.0
MSM who reported using condom consistently when they had sex with a non-paying partner in the last 6 months (n)	253	116	152	165	131	184	1,001
Percent	16.2	49.1	40.1	6.7	42.8	47.8	31.4
MSM who reported using condom consistently with a female sex worker in the last 12 months (n)	2	4	51	70	15	22	164
Percent	100.0	75.0	39.2	35.7	73.3	59.1	45.1

Table 38: MSM use of lubricant and by type of lubricant, by state IBBS Nigeria 2010

	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
MSM reporting ever using lubricant during anal sex with man (n)	313	199	286	299	215	233	1,545
Percent	67.4	77.4	70.6	50.5	71.6	51.9	64.3
Aqua-lube	1.4	24.0	14.9	17.9	16.9	3.3	12.8
Vaseline	75.4	33.1	78.7	68.2	44.2	30.6	58.1
Vaginal gel	2.8	0.7	6.9	11.9	0.7	0.0	4.0
Hand lotion	5.2	1.3	25.7	23.8	5.2	5.8	11.7
Baby oil	30.8	9.7	42.1	9.9	9.7	15.7	21.6
Butter	1.0	0.0	2.5	0.7	0.7	0.0	0.9
Cooking oil	1.0	0.0	0.0	1.3	2.0	4.1	1.2

Table 39: HIV knowledge, risk perception and HIV testing among MSM, by state IBBS Nigeria 2010

Characteristics	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
MSM correctly identifying ways of preventing HIV infection and rejecting misconception of HIV transmission(n)	313	199	286	299	215	233	1,545
Percent	55.6	48.7	18.5	5.4	32.6	43.3	33.1
MSM who perceived their risk of HIV transmission (n)	313	199	286	299	215	233	1,545
Percent	8.6	22.1	23.4	18.7	34.9	22.7	20.8
MSM ever had HIV test (n)	313	199	286	299	215	233	1,545
Percent	45.1	62.8	47.9	54.2	60.0	55.8	53.3
MSM had HIV test in last year	313	199	286	299	215	233	1,545
Percent	35.1	52.8	23.8	19.7	43.3	42.1	34.5
MSM ever had HIV test and received results (n)	313	199	286	299	215	233	1,545
Percent	42.8	59.3	18.9	3.7	29.8	45.1	31.5
MSM ever had voluntary HIV test with counseling (n)	313	199	286	299	215	233	1,545
Percent	30.0	34.7	23.8	28.1	43.7	38.6	32.3

Table 40: Self reported symptoms among MSM, by state IBSS Nigeria 2010

Characteristics	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
MSM who can mention correctly STI symptoms in men (n)	313	199	286	299	215	233	1,545
Percent	64.5	70.4	60.1	55.5	68.4	57.1	62.1
Genital discharge	39.6	51.8	17.1	7.7	22.8	20.2	25.6
Burning pain on urination	45.7	46.7	41.3	42.5	51.6	39.1	44.2
Genital ulcers/sore/rash	7.4	15.1	32.9	38.1	46.1	9.0	24.7
Swellings in the groin area	3.5	9.1	12.2	28.4	21.9	2.2	13.0
Itching of the genitals	47.0	28.1	16.8	21.4	34.9	9.4	26.7
MSM who reported an STI symptom in the past 12 months(n)	313	199	286	299	215	233	1,545
Percent	3.8	19.6	20.6	20.1	17.2	10.7	15.0
MSM who reported unusual genital discharge in the past 12 months(n)	313	199	286	299	215	233	1,545
Percent	2.9	15.6	15	3.3	7.4	8.2	8.3
MSM who reported unusual anal discharge in the past 12 months(n)	313	199	286	299	215	233	1,545
Percent	1.6	2	4.9	12.4	9.3	1.3	5.4
MSM who reported genital ulcer/sore in the past 12 months(n)	313	199	286	299	215	233	1,545
Percent	1.9	2.5	3.8	7.4	1.9	0.4	3.2
MSM who reported anal ulcer/sore in the past 12 months(n)	313	199	286	299	215	233	1,545
Percent	1.3	2.5	2.1	11.0	1.4	1.3	3.5

Table 41: STI treatment seeking behaviour among MSM, by state IBSS Nigeria 2010

Characteristics	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
Sought treatment when had STI (n)	11	34	48	30	19	20	162
Percent	27.3	2.9	4.2	43.3	10.5	0	13.0

Table 42: Exposure to HIV/AIDS interventions among MSM, by state IBBSS Nigeria 2010

Characteristics	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
MSM who obtained cheap/free condoms in the last 12 months among sexually active MSM (n)	313	199	286	299	215	233	1,545
Percent	43.8	42.7	14.3	3.7	21.4	19.3	23.6
MSM who received education on safe injection in the past 12 months (n)	313	199	286	299	215	233	1,545
Percent	41.9	3.0	21.0	22.7	17.2	8.2	20.8
MSM who received safe sex education in the past 12 months (n)	313	199	286	299	215	233	1,545
Percent	58.5	43.7	26.2	21.4	28.8	30.9	35.2
MSM who received referral for STI services in the past 12 months (n)	313	199	286	299	215	233	1,545
Percent	10.9	6.5	5.9	17.7	12.1	1.3	9.5
MSM who received HIV/AIDS, STI or condom education from television in the past 12 months (n)	313	199	286	299	215	233	1,545
Percent	79.9	23.6	59.8	61.5	54.4	38.6	55.6
MSM who received HIV/AIDS, STI or condom education from radio in the past 12 months	313	199	286	299	215	233	1,545
Percent	79.6	34.7	62.9	67.2	60.0	41.2	59.8
MSM who received HIV/AIDS, STI or condom education from newspaper in the past 12 months	313	199	286	299	215	233	1,545
Percent	50.2	13.1	42.3	54.9	50.7	12.0	39.2
MSM who received HIV/AIDS, STI or condom education from any source in the past 12 months	313	199	286	299	215	233	1,545
Percent	81.8	67.8	71.0	67.9	73.0	75.1	73.1

Table 43: Alcohol use among MSM, by state IBBSS Nigeria 2010

	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
MSM who drank alcohol in the past four weeks (n)	313	199	286	299	215	233	1,545
Every day	5.1	5.5	4.9	5.7	4.2	4.7	5.1
At least once a week	23.0	16.1	16.4	10.4	15.4	21.5	17.2

7.2.4 Armed Forces

Table 44: Characteristics of Armed Forces, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Age group (n)	300	300	300	304	300	301	297	278	301	2,681
15-19	0.0	0.3	1.3	0.7	0.0	0.7	0.0	0.0	0.0	0.3
20-24	7.3	12.3	10.3	14.5	7.3	10.0	9.8	14.4	3.3	9.9
25-49	92.7	87.3	88.3	84.9	92.7	89.4	90.2	85.6	96.7	89.8
Marital status (n)	300	300	300	304	300	301	297	278	301	2,681
Currently married, living with spouse	67.7	61.7	52.0	61.2	42.0	56.8	51.9	52.5	73.8	57.8
Currently married, living with other sex partner	0.3	0.3	0.0	0.0	3.0	0.3	3.0	0.4	0.3	0.9
Currently married, not living with spouse or other sex partner	8.0	9.3	13.3	4.3	24.0	13.0	18.9	7.2	5.3	11.5
Not married, live with other sex partner	3.0	1.3	4.0	3.3	4.0	3.3	3.0	3.6	1.3	3.0
Not married, don't live with other sex partner	18.3	25.0	29.0	29.9	24.7	22.6	20.2	33.5	17.6	24.5
No response	2.7	2.0	1.7	1.3	2.3	3.7	3.0	2.9	1.7	2.4
Highest level of education(n)	300	300	300	304	300	301	297	278	301	2,681
Never attended school	0.0	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.1
Quranic education only	0.0	0.3	0.0	0.0	0.0	1.3	1.0	0.4	0.0	0.3
Some primary	0.7	0.7	0.3	0.7	0.0	0.3	0.7	0.0	1.0	0.5
Completed primary	3.3	3.0	1.3	2.3	2.0	4.0	2.4	3.2	1.0	2.5
Some secondary	1.7	0.7	1.3	1.0	0.7	1.3	2.0	0.7	4.3	1.5
Completed secondary	66.3	57.3	59.7	61.8	54.3	56.8	48.2	43.9	70.4	57.8
Tertiary education	28.0	38.0	37.0	33.9	43.0	36.2	45.8	51.8	23.3	37.3
Armed Forces ranks	300	300	300	304	300	301	297	278	301	2,681
Junior officers	97.3	95.7	88.7	96.1	92.0	92.4	93.6	89.2	94.7	93.3
Senior officers	2.7	4.3	11.0	4.0	8.0	7.6	6.1	10.4	5.3	6.7

Table 45: Sexual history and number of sexual partners among Armed Forces, by state IBBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Armed Forces personnel who had sex(n)	300	300	300	304	300	301	297	278	301	2,681
Percent	99.0	95.7	98.7	93.8	97.7	97.0	95.6	96.4	99.3	97.0
Age at first sex(n)	300	300	300	304	300	301	297	278	301	2,681
<15	8.0	4.3	4.7	5.9	6.0	4.0	1.0	10.1	2.7	5.2
15-19	46.7	24.7	46.7	29.6	33.7	36.5	19.2	40.7	42.9	35.6
20-24	35.3	28.7	33.7	33.9	30.0	30.0	28.6	27.7	39.2	31.9
25-49	8.3	12.0	6.7	11.8	14.3	16.0	15.8	13.3	14.6	12.5
Armed Forces Personnel who reported sex with regular partner in the last 12 months(n)	300	300	300	304	300	301	297	278	301	2,681
Percent	76.7	57.7	66.0	67.1	73.0	72.4	67.3	60.8	79.7	69.0
Number of regular partners in the past 12 months (n)	300	300	300	304	300	301	297	278	301	2,681
1	74.7	55.7	64.7	64.1	71.3	68.8	61.6	58.6	75.4	66.2
2+	2.0	2.0	1.3	2.9	1.6	3.7	5.8	2.2	4.3	2.9
Armed Forces personnel who reported having sex with sex workers in the past 12 months(n)	300	300	300	304	300	301	297	278	301	2,681
Percent	10.3	0.7	4.8	8.6	8.7	3.0	1.4	6.1	7.0	5.6
Number of commercial partners in the past 12 months (n)	300	300	300	304	300	301	297	278	301	2,681
1	2.0	0.7	1.7	3.0	4.0	0.3	0.3	2.2	2.3	1.8
2+	8.3	0.0	3.0	5.6	4.7	2.7	1.0	4.0	4.7	3.8
Armed Forces personnel who reported having sex with girlfriend in the past 12 months (n)	300	300	300	304	300	301	297	278	301	2,681
Percent	49.0	15.0	63.3	42.8	47.3	42.5	26.6	47.5	52.2	42.9
Number of girlfriend partners in the past 12 months (n)	300	300	300	304	300	301	297	278	301	2,681
1	30.3	14.3	33.7	26.6	27.0	21.9	16.5	26.3	25.3	24.7
2+	18.7	0.6	29.0	16.2	20.3	26.6	10.1	21.3	26.9	18.2
Armed Forces personnel who reported having sex with casual partners in the past 12 months(n)	300	300	300	304	300	301	297	278	301	2,681
Percent	12.7	2.3	14.0	9.5	8.0	13.0	1.7	13.0	15.0	9.9
Number of casual partners in the past 12 months(n)	300	300	300	304	300	301	297	278	301	2,681
1	6.3	2.3	7.0	5.3	4.7	7.6	0.7	7.6	8.6	5.6
2+	6.3	0.0	7.1	4.3	3.4	5.4	1.0	5.3	6.3	4.5
Armed Forces personnel reporting two or more sexual partners in last year (all types)	300	300	300	304	300	301	297	278	301	2,681
Percent	49.7	9.3	53.7	41.8	47.0	44.5	24.9	43.5	53.2	40.8
Armed Forces personnel reporting four or more sexual partners in last year (all types)	300	300	300	304	300	301	297	278	301	2,681
Percent	15.3	0.3	13.7	9.5	12.0	11.0	4.4	13.0	19.6	11.0

Table 46: Condom use among the Armed Forces, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Condom use with commercial sex partner during last sex (n)	31	2	14	26	26	9	4	17	21	150
Percent	83.9	50	92.9	80.8	73.1	88.9	100	94.1	95.2	85.3
Consistent condom use with commercial partner in the past 12 month (n)	31	2	14	26	26	9	4	17	21	150
Percent	77.4	50.0	85.7	73.1	50.0	88.9	100	94.1	90.5	77.3
Condom use with regular partner during last sex (n)	230	173	198	204	219	218	200	169	240	1,851
Percent	8.3	11.6	11.6	12.8	12.3	12.4	9.5	20.1	17.5	12.8
Consistent condom use with regular partner in last 12 months(n)	230	173	198	204	219	218	200	169	240	1,851
Percent	2.2	6.4	1.0	3.4	2.7	4.1	3.0	3.0	1.7	3.0
Condom use with girlfriend during last sex(n)	147	45	190	130	142	128	79	132	157	1,150
Percent	64.6	55.6	60	66.9	57.0	50	67.1	58.3	86.6	63.7
Consistent condom use with girlfriend in the last 12 months(n)	147	45	190	130	142	128	79	132	157	1,150
Percent	39.5	44.4	46.8	56.2	38.7	37.5	43.0	42.4	70.1	47.2
Condom use with casual partner during last sex(n)	38	7	42	29	24	39	5	36	45	265
Percent	84.2	71.4	76.2	89.7	83.3	71.8	60	77.8	91.1	81.1
Consistent condom use with casual partner during last sex (n)	38	7	42	29	24	39	5	36	45	265
Percent	73.7	57.1	66.7	89.7	79.2	59.0	60.0	69.4	77.8	72.1

Table 47: Knowledge, risk perception and HIV testing among Armed Forces, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Armed Forces correctly identifying ways of preventing HIV infection and rejecting misconception of HIV transmission(n)	300	300	300	304	300	301	297	278	301	2,681
Percent	65.7	52.0	63.7	46.1	66.7	57.8	44.8	54.3	70.1	57.9
Armed Forces who perceived their risk of HIV transmission	300	300	300	304	300	301	297	278	301	2,681
Percent	23.3	15	29.0	18.8	32.0	15.9	14.8	25.2	18.3	21.3
Armed Forces ever had HIV test(n)	300	300	300	304	300	301	297	278	301	2,681
Percent	96.0	89.7	91.3	90.1	91.3	91.4	85.2	82.0	91.4	89.9
Armed Forces had HIV test in last year	300	300	300	304	300	301	297	278	301	2,681
Percent	78.0	48.0	64.0	63.8	62.0	64.1	65.7	52.5	60.8	62.2
Armed Forces ever had HIV test and received results (n)	300	300	300	304	300	301	297	278	301	2,681
Percent	93.6	76.0	87.7	86.5	82.0	81.4	76.8	76.3	87.4	83.1
Armed Forces ever had voluntary HIV test with counselling	300	300	300	304	300	301	297	278	301	2,681
Percent	52.7	14.0	35.3	35.9	27.3	16.3	19.2	23.4	47.8	30.3

Table 48: Self reported symptoms among the Armed Forces, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Armed Forces who can mention correctly STI symptoms in women	300	300	300	304	300	301	297	278	301	2,681
Percent	62.7	31.0	61.3	48.0	31.7	59.1	47.1	52.9	78.1	52.4
Abdominal pain	20.0	8.3	18.0	5.9	7.3	14.3	24.6	15.1	39.2	17.0
Genital discharge	45.3	14.3	35.7	30.6	19.3	31.9	23.2	30.6	20.9	28.0
Foul smelling discharge	24.0	7.3	20.7	10.5	2.3	13.0	8.4	8.3	11.3	11.8
Burning pain on urination	10.3	7.7	26.7	11.5	6.7	16.6	8.8	13.3	10.6	12.5
Genital ulcers/sores	16.3	8.0	29.0	7.2	4.7	10.0	5.4	12.2	8.0	11.2
Swellings in the groin area	4.7	17.0	6.3	5.3	0.7	5.0	4.7	4.0	16.6	7.2
Itching of the genitals	11.0	7.3	30.7	18.8	12.0	21.6	5.1	19.4	30.6	17.4
Armed Forces who can mention correctly STI symptoms in men (n)	300	300	300	304	300	301	297	278	301	2,681
Percent	87.7	40.7	78.7	77.6	63.0	78.1	63.0	75.2	89.0	72.6
Genital discharge	61.3	20.3	44.0	59.2	37.7	52.8	24.9	40.3	54.2	43.9
Burning pain on urination	63.7	27.0	65.0	61.2	41.0	46.8	33.0	51.8	61.5	50.1
Genital ulcers/sore/rash	31.0	15.0	45.3	19.7	14.3	20.9	15.5	20.5	18.9	22.4
Swellings in the groin area	11.7	22.0	14.3	13.8	3.0	9.6	15.5	10.1	14.3	12.7
Itching of the genitals	18.0	7.7	34.0	25.3	12.7	30.6	17.5	15.1	43.2	22.8
Armed Forces who reported an STI symptom in the past 12 months(n)	300	300	300	304	300	301	297	278	301	2,681
Percent	3.3	2.7	3.0	3.6	5.0	4.0	3.0	4.7	11.3	4.5
Armed Forces who reported unusual genital discharge in the past 12 months(n)	300	300	300	304	300	301	297	278	301	2,681
Percent	1.3	2	3	2.6	3.3	3	2.4	2.9	9	3.3
Armed Forces who reported genital ulcer/sore in the past 12 months(n)	300	300	300	304	300	301	297	278	301	2,681
Percent	2.0	1.3	1.7	0.0	1.7	1.3	1.7	0.7	3.7	1.6
Armed Forces who reported unusual anal discharge in the past 12 months(n)	300	300	300	304	300	301	297	278	301	2,681
Percent	0.3	0.7	0.7	0.7	0.0	0.3	0.0	0.7	4.3	0.9
Armed Forces who reported anal ulcer/sore in the past 12 months(n)	300	300	300	304	300	301	297	278	301	2,681
Percent	0.0	0.7	1.0	0.3	0.0	0.3	1.0	0.7	2.0	0.7

Table 49: STI treatment seeking behavior among Armed Forces, by state IBBS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Sought treatment when had STI (n)	9	8	9	8	15	11	9	10	31	110
Percent	0.0	12.5	22.2	0.0	0.0	0.0	22.2	0.0	29.0	12.7

Table 50: Exposure to HIV/AIDS interventions among Armed Forces, by state IBBS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Armed Forces who obtained cheap/free condoms in the last 12 months among sexually active Armed Forces (n)	300	300	300	304	300	301	297	278	301	2,681
Percent	39.7	7.7	49.3	29.0	42.0	18.6	15.5	14.4	33.6	27.9
Armed Forces who received education on safe injection in the past 12 months (n)	300	300	300	304	300	301	297	278	301	2,681
Percent	12.7	3.0	25.0	22.7	6.7	8.3	6.1	18.4	6.6	12.1
Armed Forces who received safe sex education in the past 12 months (n)	300	300	300	304	300	301	297	278	301	2,681
Percent	63.0	10.0	41.0	39.5	30.7	29.9	16.8	30.2	48.2	34.4
Armed Forces who received referral for STI services in the past 12 months (n)	300	300	300	304	300	301	297	278	301	2,681
Percent	1.3	1.3	17.3	2.0	3.0	5.0	1.7	0.4	0.0	3.6
Armed Forces who received HIV/AIDS, STI or condom education from television in the past 12 months (n)	300	300	300	304	300	301	297	278	301	2,681
Percent	65.0	9.3	76.3	62.8	26.0	55.5	32.0	18.7	42.5	43.4
Armed Forces who received HIV/AIDS, STI or condom education from radio in the past 12 months (n)	300	300	300	304	300	301	297	278	301	2,681
Percent	68.0	8.0	70.7	60.5	17.7	41.5	31.3	17.6	54.5	41.3
Armed Forces who received HIV/AIDS, STI or condom education from newspaper in the past 12 months (n)	300	300	300	304	300	301	297	278	301	2,681
Percent	27.0	5.0	48.7	36.5	10.3	26.3	14.8	8.6	32.6	23.5
Armed Forces who received HIV/AIDS, STI or condom education from any source in the past 12 months (n)	300	300	300	304	300	301	297	278	301	2,681
Percent	85.0	18.7	84.0	73.7	69.3	77.1	55.2	65.1	71.8	66.7

Table 51: Alcohol use among Armed Forces, by state IBBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Armed forces who drank alcohol in the past four weeks (n)	300	300	300	304	300	301	297	278	301	2,681
Every day	12.3	6.0	6.3	9.2	6.7	4.7	1.4	7.9	5.3	6.6
At least once a week	20.3	7.7	15.0	15.8	12.0	14.0	10.8	16.2	16.9	14.3

8.2.5 Police

Table 52: Characteristics of Police, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Age group (n)	312	309	312	313	312	312	306	312	312	2,800
15-19	0.0	0.7	0.0	0.7	0.0	0.0	0.0	0.0	0.3	0.2
20-24	7.4	9.1	12.5	12.8	6.1	4.8	3.3	2.2	9.0	7.5
25-49	92.6	90.3	87.5	86.6	93.9	95.2	96.7	97.8	90.7	92.4
Sex (n)	312	309	312	313	312	312	306	312	312	2,800
Male	78.9	75.4	54.5	75.4	66.7	74.7	88.9	83.7	80.8	75.4
Female	21.2	24.6	45.5	24.6	33.3	25.3	11.1	16.4	19.2	24.6
Marital status (n)	312	309	312	313	312	312	306	312	312	2,800
Currently married, living with spouse	54.5	62.1	44.2	59.4	63.8	66.0	75.2	69.9	72.4	63.0
Currently married, living with other sex partner	0.6	0.0	0.6	0.0	0.3	0.6	0.0	1.0	1.3	0.5
Currently married, not living with spouse or other sex partner	9.9	3.2	10.3	1.9	5.1	7.1	2.0	6.4	3.2	5.5
Not married, live with other sex partner	3.9	1.9	12.2	2.9	0.3	1.9	0.7	1.3	4.5	3.3
Not married, don't live with other sex partner	26.0	27.5	29.8	34.2	25.3	20.8	19.6	18.9	14.7	24.1
No response	5.1	5.2	2.9	1.6	4.8	3.2	2.6	1.9	3.5	3.4
Highest level of education(n)	312	309	312	313	312	312	306	312	312	2,800
Never attended school	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Quranic education only	0.0	0.0	2.2	0.3	0.0	0.6	0.3	1.0	0.0	0.5
Some primary	0.3	0.0	0.6	0.3	0.0	0.3	0.3	0.0	0.6	0.3
Completed primary	2.2	12.0	3.9	1.3	2.6	5.1	7.2	2.9	6.4	4.8
Some secondary	3.2	0.7	0.3	2.2	0.6	2.2	0.7	0.3	2.2	1.4
Completed secondary	71.2	64.7	68.9	67.4	72.1	68.0	70.3	67.6	70.5	69.0
Tertiary education	23.1	22.7	24.0	28.4	24.7	23.7	21.2	28.2	20.2	24.0
Police ranks	312	309	312	313	312	312	306	312	312	2,800
Junior officers	96.2	92.9	97.4	96.2	98.1	93.9	97.4	92.3	96.5	95.6
Senior officers	3.5	6.5	2.6	2.9	1.9	6.1	2.6	7.1	2.2	3.9

Table 53: Sexual history and number of sexual partners among Police, by state IBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Police personnel who had sex(n)	312	309	312	313	312	312	306	312	312	2,800
Percent	98.1	98.4	99.7	99.4	99.0	100.0	95.1	99.0	99.4	98.7
Age at first sex(n)	312	309	312	313	312	312	306	312	312	2,800
<15	3.5	7.8	4.5	6.7	8.7	2.6	1.3	3.2	3.5	4.6
15-19	37.2	33.3	53.5	43.8	43.0	28.5	14.1	31.7	34.9	35.6
20-24	31.7	31.7	22.8	34.5	30.5	39.7	36.3	30.8	35.9	32.6
25-49	5.5	6.8	6.4	7.0	9.9	15.4	38.6	7.4	11.2	12.0
Police personnel who reported sex with regular partner in the last 12 months	312	309	312	313	312	312	306	312	312	2,800
Percent	68.0	65.1	67.3	59.7	68.9	75.3	79.4	75.3	79.2	70.9
Number of regular partners in the past 12 months (n)	312	309	312	313	312	312	306	312	312	2,800
1	65.4	62.5	64.4	57.5	67.6	70.5	69.3	73.7	74.7	67.3
2+	2.5	2.6	2.9	2.2	1.3	4.8	10.2	1.6	4.5	3.6
Police personnel who reported having sex with sex workers in the past 12 months(n)	312	309	312	313	312	312	306	312	312	2,800
Percent	7.3	5.2	8.2	1.3	7.7	0.9	2.9	7.7	5.2	5.0
Number of commercial partners in the past 12 months	312	309	312	313	312	312	306	312	312	2,800
1	2.2	1.9	1.0	0.6	2.2	1.0	1.3	4.8	1.9	1.9
2+	3.5	2.1	3.9	0.3	3.6	0.6	1.4	1.2	2.5	2.2
Police personnel who reported having sex with girlfriend in the past 12 months (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	50.3	46.0	46.1	54.0	44.6	41.7	17.7	29.8	37.5	40.9
Number of girlfriend partners in the past 12 months (n)	312	309	312	313	312	312	306	312	312	2,800
1	32.4	28.5	31.7	36.4	29.8	27.2	12.4	19.9	24.7	27.0
2+	18.0	17.5	14.4	17.6	14.7	14.5	5.2	9.6	12.8	13.9
Police personnel who reported having sex with casual partners in the past 12 months(n)	312	309	312	313	312	312	306	312	312	2,800
Percent	14.1	7.1	17.3	6.7	10.9	5.1	3.9	4.2	3.5	8.1
Number of casual partners in the past 12 months(n)	312	309	312	313	312	312	306	312	312	2,800
1	8.0	4.9	10.9	3.5	5.1	4.2	2.0	2.9	2.6	4.9
2+	6.1	2.3	6.4	3.3	5.8	0.9	1.9	1.3	0.9	3.2
Police personnel reporting two or more sexual partners in last year (all types)	312	309	312	313	312	312	306	312	312	2,800
Percent	43.9	37.5	38.1	36.1	37.5	35.9	24.5	27.2	32.4	34.8
Police personnel reporting four or more sexual partners in last year (all types)	312	309	312	313	312	312	306	312	312	2,800
Percent	11.9	6.8	12.2	7.7	9.0	6.4	3.6	9.3	5.8	8.1

Table 54: Condom use among the Police, by state IBSS Nigeria 2010

Indicator	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Condom use with commercial sex partner during last sex (n)	18	12	14	3	16	2	8	20	13	106
Percent	100.0	83.3	71.4	100	81.3	100	100	45	69.2	77.4
Consistent condom use with commercial partner in the past 12 month (n)	18	12	14	3	16	2	8	20	13	106
Percent	83.3	83.3	50.0	33.3	81.3	50.0	75.0	35.0	46.2	62.3
Condom use with regular partner during last sex (n)	212	201	210	187	215	235	243	235	247	1,985
Percent	7.1	9.5	15.7	5.4	14	8.5	5.4	14.5	11.7	10.2
Consistent condom use with regular partner in last 12 months(n)	212	201	210	187	215	235	243	235	247	1,985
Percent	1.9	4.0	2.9	0.0	4.7	2.1	0.8	3.0	2.8	2.5
Condom use with boy/girlfriend during last sex(n)	157	142	144	169	139	130	54	93	117	1,145
Percent	50.3	60.6	46.5	47.9	55.4	43.9	55.6	51.6	57.3	51.7
Consistent condom use with boy/girlfriend in the last 12 months(n)	157	142	144	169	139	130	54	93	117	1,145
Percent	21.7	41.6	23.6	29.0	44.6	28.5	35.2	36.7	32.5	32.0
Condom use with casual partner during last sex(n)	44	22	54	21	34	16	12	13	11	227
Percent	56.8	68.2	70.4	76.2	76.5	62.5	66.7	30.8	54.6	65.2
Consistent condom use with casual partner during last sex	44	22	54	21	34	16	12	13	11	227
Percent	34.1	59.1	51.9	47.6	64.7	56.3	66.7	23.1	27.3	48.9

Table 55: Knowledge, risk perception and HIV testing among Police, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Police correctly identifying ways of preventing HIV infection and rejecting misconception of HIV transmission(n)	312	309	312	313	312	312	306	312	312	2,800
Percent	29.8	46	40.1	52.1	51.6	49.4	39.2	28.2	41.7	42
Police who perceived their risk of HIV transmission (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	37.8	15.2	25.3	26.8	18.3	20.8	12.1	21.2	13.1	21.2
Police ever had HIV test (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	74.0	76.1	71.5	72.4	72.1	59.0	54.6	57.7	54.2	65.6
Police had HIV test in last year (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	42.6	48.2	46.2	36.1	35.6	35.9	28.8	29.8	33.3	37.4
Police ever had HIV test and received results (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	64.1	72.2	64.1	62.0	68.3	56.7	48.7	50.3	53.2	60.0
Police ever had voluntary HIV test with counselling (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	34.9	41.4	40.7	35.5	33.7	32.4	28.1	19.6	34.3	33.4

Table 56: Self reported STI symptoms among the Police, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Police who can mention correctly STI symptoms in women (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	38.5	40.1	59.6	66.5	36.2	47.1	40.9	33.7	42.0	45.0
Abdominal pain	12.5	14.2	25.3	31.6	9.9	13.5	11.4	14.1	19.2	16.9
Genital discharge	17.0	17.5	29.2	52.4	20.8	36.5	18.3	18.6	26.3	26.3
Foul smelling discharge	7.1	4.5	10.9	28.4	4.2	16.0	2.6	2.9	4.2	9.0
Burning pain on urination	6.4	12.9	22.4	34.2	7.7	14.1	13.4	14.1	14.4	15.5
Genital ulcers/sores	1.3	3.2	2.6	4.8	1.0	8.0	2.6	2.2	1.3	3.0
Swellings inn the groin area	21.2	11.0	28.9	43.8	22.4	27.9	14.4	11.2	14.7	21.8
Itching of the genitals	55	27.4	48.4	65.9	62	59.2	35.2	33.3	35.1	
Police who can mention correctly STI symptoms in men (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	51.9	60.8	68.6	68.4	61.2	64.1	68.0	42.0	72.4	61.9
Genital discharge	22.4	29.5	42.3	46.0	37.5	34.6	40.5	21.8	52.6	36.4
Burning pain on urination	36.2	46.6	57.7	60.7	50.0	54.2	39.9	31.7	60.3	48.6
Genital ulcers/sore/rash	14.7	6.2	24.0	22.7	10.9	15.7	16.7	5.5	9.6	14.0
Swellings in the groin area	6.4	4.5	5.4	14.4	3.5	7.7	11.8	3.9	4.5	6.9
Itching of the genitals	16.0	9.1	19.9	38.7	15.1	22.4	22.2	10.6	19.6	19.3
Police who reported an STI symptoms in the past 12 months(n)	312	309	312	313	312	312	306	312	312	2,800
Percent	9.6	8.7	8.0	5.1	10.9	9.3	5.9	10.9	7.7	8.5
Police who reported unusual genital discharge in the past 12 months(n)	312	309	312	313	312	312	306	312	312	2,800
Percent	6.4	3.6	6.7	4.2	10.6	6.7	5.2	10	5.5	6.5
Police who reported a genital ulcer/sore in the past 12 months(n)	312	309	312	313	312	312	306	312	312	2,800
Percent	2.2	6.5	2.9	1.3	1.3	3.5	1.0	1.6	3.5	2.6
Police who reported unusual anal discharge in the past 12 months(n)	312	309	312	313	312	312	306	312	312	2,800
Percent	1.6	1.6	1.0	0.3	0.3	1.0	0.3	1.3	0.6	0.9
Police who reported a anal ulcer/sore in the past 12 months(n)	312	309	312	313	312	312	306	312	312	2,800
Percent	1.0	1.6	1.6	0.0	0.3	0.3	0.0	1.0	0.3	0.7

Table 57: STI treatment seeking behavior among Police, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Sought treatment when had STI (n)	26	24	25	15	34	27	17	33	23	224
Percent	11.5	8.3	20.0	0.0	5.9	0.0	0.0	3.0	0.0	5.8

Table 58: Exposure to HIV/AIDS interventions among Police, by state IBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Police who obtained cheap/free condoms in the past 12 months among sexually active Police (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	18.6	20.4	48.1	14.7	15.4	4.5	16.0	15.4	11.2	18.3
Police who received education on safe injection in the past 12 months (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	3.9	3.9	25.3	14.7	7.4	7.7	12.1	6.7	8.3	10.0
Police who received safe sex education in the past 12 months (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	27	22.0	52.6	19.2	21.2	19.9	19.3	21.8	21.5	24.9
Police who received referral for STI services in the past 12 months (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	1.0	0.0	4.8	0.3	0.6	0.3	0.7	0.3	2.2	1.1
Police who received HIV/AIDS, STI or condom education from television in the past 12 months (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	54.2	17.2	83.0	72.2	67.3	31.4	46.1	59.6	50.6	53.6
Police who received HIV/AIDS, STI or condom education from radio in the past 12 months (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	52.9	15.2	81.4	69.0	61.9	26.3	65.0	43.0	52.9	52.0
Police who received HIV/AIDS, STI or condom education from newspaper in the past 12 months (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	23.1	4.5	25.0	56.7	25.3	10.3	21.2	23.4	18.0	23.1
Police who received HIV/AIDS, STI or condom education from any source in the past 12 months (n)	312	309	312	313	312	312	306	312	312	2,800
Percent	74.4	45.0	89.1	76.4	84.6	70.2	75.5	73.4	73.7	73.6

Table 59: Alcohol use among Police, by state IBBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Police who drank alcohol in the past four weeks (n)	312	309	312	313	312	312	306	312	312	2,800
Every day	16.0	12.9	7.7	10.5	4.8	4.2	0.7	11.2	5.5	8.2
At least once a week	14.1	18.5	15.4	14.1	13.5	9.0	1.6	17.0	9.0	12.5

7.2.6 Transport workers

Table 60: Characteristics of transport workers, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Age group (n)	220	207	219	220	219	220	218	219	215	1,957
15-19	0.5	6.3	0.9	3.6	1.4	0.5	1.4	0.0	2.8	1.9
20-24	9.6	12.6	9.6	7.7	10.1	12.3	8.3	5.5	11.6	9.7
25-49	90.0	81.2	89.5	88.6	88.6	87.3	90.4	94.5	85.6	88.5
Marital status (n)	220	207	219	220	219	220	218	219	215	1,957
Currently married, living with spouse	66.8	47.8	50.7	65.5	63.0	71.4	70.6	70.8	57.2	62.8
Currently married, living with other sex partner	0.5	0.5	0.0	0.0	0.9	0.9	0.0	0.0	7.9	1.2
Currently married, not living with spouse or other sex partner	0.0	1.0	1.4	1.8	4.6	6.4	0.9	0.9	3.7	2.3
Not married, live with other sex partner	5.9	18.8	9.1	9.1	3.2	0.5	0.5	2.3	4.7	5.9
Not married, don't live with other sex partner	23.6	23.2	36.1	22.7	23.3	16.8	23.4	14.6	21.4	22.8
No response	3.2	7.7	2.7	0.9	4.1	4.1	4.6	5.9	4.7	4.2
Highest level of education(n)	220	207	219	220	219	220	218	219	215	1,957
Never attended school	0.0	1.0	0.0	1.4	2.3	0.0	1.4	1.8	8.4	1.8
Quranic education only	0.0	1.0	0.5	0.5	8.2	17.7	17.4	3.2	11.2	6.6
Some primary	3.6	0.5	4.1	5.9	9.6	6.4	7.8	7.3	8.4	6.0
Completed primary	40.5	9.2	19.2	22.7	12.3	20.0	21.1	27.4	21.4	21.6
Some secondary	23.6	33.8	24.2	30.5	13.7	13.6	13.3	16.4	15.4	20.4
Completed secondary	29.6	42.5	41.6	31.8	42.5	31.4	34.9	30.1	27.9	34.6
Tertiary education	2.7	12.1	10.5	7.3	11.4	10.9	4.1	13.7	7.4	8.9
Types of transport workers surveyed (n)	220	207	219	220	219	220	218	219	215	1,957
Long distance transport workers	30.5	25.1	30.1	55.9	26.0	30.0	38.1	45.7	37.7	35.5
Short distance transport workers	69.6	73.9	69.0	38.6	73.1	70.0	61.9	53.0	61.9	63.4

Table 61: Sexual History and number of sexual partners among transport workers, by state IBBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Transport Workers who had sex(n)	220	207	219	220	219	220	218	219	215	1,957
Percent	99.1	99.0	99.1	98.2	95.0	95.5	84.9	100.0	97.7	96.5
Age at first sex(n)										
<15	8.6	14.0	10.1	5.5	9.6	5.9	2.3	9.1	12.1	8.5
15-19	48.6	53.1	51.6	36.4	28.3	24.6	22.9	23.7	52.1	37.8
20-24	21.4	26.1	25.1	15.9	26.5	29.6	29.8	24.7	20.9	24.4
25-49	6.8	2.4	4.6	4.1	12.3	23.6	29.4	9.6	10.7	11.6
Transport Workers who reported sex with regular partner in the last 12 months										
Percent	220	207	219	220	219	220	218	219	215	1,957
Number of regular partners in the past 12 months (n)	72.7	52.7	60.7	67.7	69.0	80.0	72.0	79.9	69.8	69.5
1	220	207	219	220	219	220	218	219	215	1,957
2+	71.4	48.8	56.6	65.5	59.4	53.6	52.3	66.7	47.0	58.0
Transport Workers who reported having sex with sex workers in the past 12 months(n)										
Percent	1.0	3.9	4.2	2.3	9.6	26.3	19.7	13.2	22.8	11.4
Number of commercial partners in the past 12 months										
1	220	207	219	220	219	220	218	219	215	1,957
2+	10.9	8.7	14.6	11.4	6.9	6.8	5.1	3.7	12.6	8.9
Transport Workers who reported having sex with girlfriend in the past 12 months										
Percent	220	207	219	220	219	220	218	219	215	1,957
Number of girlfriend partners in the past 12 months										
1	3.6	4.8	4.1	5.9	1.8	3.6	2.3	1.4	4.7	3.6
2+	7.4	3.9	10.4	5.5	5.1	3.2	2.8	2.3	7.9	5.4
Transport Workers who reported having sex with casual partners in the past 12 months(n)										
Percent	220	207	219	220	219	220	218	219	215	1,957
Number of casual partners in the past 12 months										
1	48.6	55.6	60.3	41.4	35.2	20.0	6.0	50.2	33.5	38.9
2+	220	207	219	220	219	220	218	219	215	1,957
Transport Workers who reported having sex with casual partners in the past 12 months(n)										
Percent	29.6	37.7	37.4	30.0	21.0	11.4	4.6	29.2	17.7	24.2
Number of casual partners in the past 12 months(n)										
1	19.1	17.9	22.4	11.4	14.1	8.7	1.4	21.0	15.9	14.6
2+	220	207	219	220	219	220	218	219	215	1,957
Transport Workers reporting two or more sexual partners in last year (all types)										
Percent	19.6	9.2	15.5	9.1	8.7	8.6	0.5	1.4	14.9	9.71
Transport Workers reporting four or more sexual partners in last year (all types)										
Percent	220	207	219	220	219	220	218	219	215	1,957
Transport Workers reporting four or more sexual partners in last year (all types)										
Percent	10.9	5.3	7.3	3.6	5.5	5.9	0.0	0.5	7.0	5.1
Transport Workers reporting two or more sexual partners in last year (all types)										
Percent	8.7	3.9	8.2	5.5	3.2	2.7	0.5	0.9	7.9	4.6
Transport Workers reporting two or more sexual partners in last year (all types)										
Percent	220	207	219	220	219	220	218	219	215	1,957
Transport Workers reporting four or more sexual partners in last year (all types)										
Percent	48.6	40.1	51.6	37.7	37.9	42.7	26.2	48.9	56.3	43.3
Transport Workers reporting four or more sexual partners in last year (all types)										
Percent	220	207	219	220	219	220	218	219	215	1,957
Transport Workers reporting four or more sexual partners in last year (all types)										
Percent	14.6	10.1	21.0	11.8	12.8	12.3	3.2	11.4	22.8	13.3

Table 62: Condom use among transport workers, by state IBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Condom use with commercial sex partner during last sex (n)	24	18	32	25	15	15	11	8	27	175
Percent	100.0	55.6	78.1	88.0	93.3	46.7	90.9	87.5	81.5	80.6
Consistent condom use with commercial partner in the past 12 month (n)	24	18	32	25	15	15	11	8	27	175
Percent	79.2	33.3	78.1	80.0	86.7	13.3	81.8	62.5	37.0	62.3
Condom use with regular partner during last sex (n)	160	109	133	149	151	176	157	175	150	1,360
Percent	8.8	15.6	7.5	7.4	12.6	6.3	4.5	8.6	9.3	8.7
Consistent condom use with regular partner in last 12 months(n)	160	109	133	149	151	176	157	175	150	1,360
Percent	0.0	4.6	3.0	2.0	4.0	0.6	1.9	4.6	2.0	2.4
Condom use with boy/girfriend during last sex(n)	107	115	132	91	77	44	13	110	72	761
Percent	38.3	43.5	46.2	33.0	55.8	40.9	84.6	48.2	47.2	44.8
Consistent condom use with boy/girfriend inn the last 12 months(n)	107	115	132	91	77	44	13	110	72	761
Percent	25.2	31.3	24.2	22.0	37.7	25.0	53.9	24.6	33.3	28.0
Condom use with casual partner during last sex(n)	43	19	34	20	19	19	1	3	32	190
Percent	60.5	63.2	61.8	80.0	63.2	42.1	0.0	66.7	68.8	62.6
Consistent condom use with casual partner during last sex	43	19	34	20	19	19	1	3	32	190
Percent	37.2	42.1	47.1	80.0	42.1	15.8	0.0	66.7	34.4	42.1

Table 63: Knowledge, risk perception and HIV testing among transport workers, by state IBBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Transport Workers correctly identifying ways of preventing HIV infection and rejecting misconception of HIV transmission(n)	220	207	219	220	219	220	218	219	215	1,957
Percent	28.2	33.3	38.8	27.3	26.9	31.8	35.8	22.4	22.3	29.6
Transport Workers who perceived their risk of HIV transmission(n)	220	207	219	220	219	220	218	219	215	1,957
Percent	35.9	22.2	11.4	11.8	15.5	15.9	6	23.7	39.1	20.1
Transport Workers ever had HIV test(n)	220	207	219	220	219	220	218	219	215	1,957
Percent	45.0	51.2	60.3	27.3	52.1	22.3	26.2	30.6	32.1	38.5
Transport Workers had HIV test in last year(n)	220	207	219	220	219	220	218	219	215	1,957
Percent	20.5	39.6	39.7	14.1	26.9	9.5	14.2	14.2	17.7	21.7
Transport Workers ever had HIV test and received results (n)	220	207	219	220	219	220	218	219	215	1,957
Percent	44.1	47.3	52.1	25.0	48.4	20.5	23.4	26.0	27.9	34.9
Transport Workers ever had voluntary HIV test with counseling(n)	220	207	219	220	219	220	218	219	215	1,957
Percent	7.7	22.7	48.0	11.4	29.2	10.0	19.3	19.2	19.1	20.7

Table 64: Self reported STI symptoms among transport workers, by state IBBS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nassarawa	Overall
Police who can mention correctly STI symptoms in women (n)	220	207	219	220	219	220	218	219	215	1,957
Percent	47.7	48.3	59.8	13.6	20.6	45.9	53.7	32.4	43.7	40.6
Abdominal pain	10.5	41.1	22.4	5.5	7.8	15.0	17.4	23.7	22.8	18.3
Genital discharge	32.7	17.9	36.5	5.9	7.3	35.0	35.8	10.5	25.1	23.0
Foul smelling discharge	24.6	9.2	18.3	4.1	2.7	7.7	11.9	2.3	5.6	9.6
Burning pain on urination	5.9	26.1	17.8	4.6	11.0	17.7	24.8	1.8	17.7	14.1
Genital ulcers/sores	10.9	3.9	10.1	1.4	3.2	8.6	13.8	3.2	4.2	6.6
Swellings inn the groin area	6.8	3.9	5.9	0.0	0.5	2.7	8.7	1.4	4.2	3.8
Itching of the genitals	25.9	3.4	24.7	5.0	4.6	11.4	18.4	2.2	12.6	12.1
Police who can mention correctly STI symptoms in men (n)	220	207	219	220	219	220	218	219	215	1,957
Percent	85.5	75.9	80.8	47.3	38.8	75.5	76.2	29.2	88.8	66.3
Genital discharge	58.6	42.5	56.2	21.4	16.0	58.6	62.8	21.0	62.3	44.4
Burning pain on urination	68.2	74.9	64.0	37.3	32.9	62.7	47.3	15.1	73.5	52.7
Genital ulcers/sore/rash	28.6	8.2	18.7	8.6	5.0	16.4	30.7	6.9	27.4	16.8
Swellings in the groin area	15.0	23.7	18.7	5.9	2.7	5.0	27.5	1.8	23.7	13.7
Itching of the genitals	43.2	16.9	34.7	10.5	6.9	22.7	33.0	3.7	39.1	23.4
Police who reported an STI symptoms in the past 12 months(n)	220	207	219	220	219	220	218	219	215	1,957
Percent	3.2	7.7	5.5	4.6	10.1	3.6	2.3	20.6	18.6	8.4
Police who reported unusual genital discharge in the past 12 months(n)	220	207	219	220	219	220	218	219	215	1,957
Percent	3.2	7.3	4.1	3.2	8.7	2.7	2.3	18.7	14.4	7.2
Police who reported a genital ulcer/sore in the past 12 months(n)	220	207	219	220	219	220	218	219	215	1,957
Percent	1.8	1.5	1.8	0.9	3.7	2.3	0.5	0.0	4.2	1.8
Police who reported unusual anal discharge in the past 12 months(n)	220	207	219	220	219	220	218	219	215	1,957
Percent	0.0	1.5	0.9	1.8	1.4	0.5	0.5	1.8	3.3	1.3
Police who reported a anal ulcer/sore in the past 12 months(n)	220	207	219	220	219	220	218	219	215	1,957
Percent	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.0	1.4	0.3

Table 65: STI treatment seeking behavior among transport workers, by state IBBSS Nigeria 2010

Characteristics	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Sought treatment when had STI (n)	7	16	11	9	21	8	5	41	37	155
Percent	0.0	0.0	0.0	22.2	4.8	25.0	20.0	0.0	10.8	6.5

Table 66: Exposure to HIV/AIDS interventions among transport workers, by state IBBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Transport Workers who obtained cheap/free condoms in the last 12 months among sexually active Transport Workers (n)	220	207	219	220	219	220	218	219	215	1,957
Percent	7.3	10.1	35.2	9.6	21	10	8.3	14.2	24.2	15.5
Transport Workers who received education on safe injection in the past 12 months (n)	220	207	219	220	219	220	218	219	215	1,957
Percent	2.3	2.4	13.2	3.6	1.8	11.4	5.5	3.2	27	7.8
Transport Workers who received safe sex education in the past 12 months (n)	220	207	219	220	219	220	218	219	215	1,957
Percent	11.4	11.1	52.5	10	24.2	19.6	9.2	12.3	37.7	20.9
Transport Workers who received referral for STI services in the past 12 months (n)	220	207	219	220	219	220	218	219	215	1,957
Percent	1.8	1.5	4.6	0	1.8	1.4	4.1	0.9	0.93	1.9
Transport Workers who received HIV/AIDS, STI or condom education from television in the past 12 months (n)	220	207	219	220	219	220	218	219	215	1,957
Percent	49.6	4.8	54.3	19.1	47.0	18.2	38.1	22.8	58.6	34.9
Transport Workers who received HIV/AIDS, STI or condom education from radio in the past 12 months	220	207	219	220	219	220	218	219	215	1,957
Percent	59.6	8.7	71.2	15.9	68.5	21.4	54.6	25.1	86.5	45.8
Transport Workers who received HIV/AIDS, STI or condom education from newspaper in the past 12 months	220	207	219	220	219	220	218	219	215	1,957
Percent	7.7	2.9	26.5	4.1	16.9	5.5	18.8	11	30.7	13.8
Transport Workers who received HIV/AIDS, STI or condom education from any source in the past 12 months	220	207	219	220	219	220	218	219	215	1,957
Percent	67.3	22.2	88.1	31.4	81.3	38.2	59.6	30.1	89.8	56.6

Table 67: Alcohol use among transport workers, by state IBBSS Nigeria 2010

	Anambra	Benue	Cross River	Edo	FCT	Kaduna	Kano	Lagos	Nasarawa	Overall
Transport workers who drank alcohol in the past four weeks (n)	220	207	219	220	219	220	218	219	215	1,957
Every day	26.2	19.8	30.1	20.0	8.7	0.9	2.3	16.4	2.8	14.4
At least once a week	22.7	6.8	25.1	13.2	15.1	6.8	5.1	18.7	4.2	13.1

8.2.7 Injecting drug users (IDU)

Table 68: Characteristics of IDU, by state IBSS Nigeria 2010

Characteristics	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
Age group(n)	273	271	262	269	197	273	1,545
15-24	31.5	25.1	25.6	23.8	0.5	15.8	21.3
25-49	68.5	74.9	74.4	76.2	99.5	84.2	78.7
Highest level of education(n)	273	271	262	269	197	273	1,545
Never attended school	0.7	0.0	0.0	0.0	0.5	4.8	1.0
Quranic education only	1.5	2.6	0.4	5.6	0.5	1.8	2.1
Some primary	4.8	3.0	0.0	4.8	4.6	5.1	3.7
Completed primary	12.8	5.9	3.8	4.8	11.7	33.3	12.2
Some secondary	16.1	9.6	14.9	13.8	20.8	16.1	15.0
Completed secondary	42.5	54.2	53.4	47.6	32.0	25.3	42.9
Tertiary education	21.6	24.7	27.5	23.4	29.9	13.6	23.1
Duration of drug injection (n)	273	271	262	269	197	273	1,545
1 year or less	11.4	24.7	9.5	14.9	3.6	7.3	12.3
> 1 year	79.1	74.2	71.4	82.9	86.3	85.0	79.5
Don't know	0.7	0.0	0.0	0.0	0.0	0.0	0.1
No Response	8.8	1.1	19.1	2.2	10.2	7.7	8.0

Table 69: Sexual History and number of sexual partners among IDU, by state IBBSS Nigeria 2010

	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
IDU who had sex(n)	273	271	262	269	197	273	1,545
Percent	99.3	99.6	100.0	89.2	99.5	97.8	97.5
Age at first sex(n)	273	271	262	269	197	273	1,545
<15	28.6	17.3	21.4	7.4	14.2	12.1	17.0
15-19	53.1	51.3	59.9	36.8	53.8	49.5	50.6
20-24	14.7	21.0	13.0	33.1	19.3	27.1	21.5
25-49	1.1	2.2	3.8	10.8	10.7	7.7	5.8
IDU who reported sex with regular partner in the last 12 months	273	271	262	269	197	273	1,545
Percent	38.1	28.0	24.8	17.8	26.4	53.8	31.8
Number of regular partners in the past 12 months (n)	273	271	262	269	197	273	1,545
1	34.8	27.3	21.8	16.4	20.3	46.2	28.2
2+	3.3	0.7	2.7	1.5	9.2	7.4	4.1
IDU who reported having sex with sex workers in the past 12 months(n)	273	271	262	269	197	273	1,545
Percent	39.2	39.2	53.9	12.6	20.7	20.4	31.4
Number of commercial partners in the past 12 months	273	271	262	269	197	273	1,545
1	5.5	6.6	10.3	4.1	7.1	9.2	7.1
2+	32.7	32.5	43.9	8.6	16.4	12.5	24.7
IDU who reported having sex with boy/girlfriend in the past 12 months	273	271	262	269	197	273	1,545
Percent	72.2	78.2	84.4	28.3	34.0	62.0	61.0
Number of boy/girlfriend partners in the past 12 months	273	271	262	269	197	273	1,545
1	31.1	34.3	19.9	17.1	10.7	22.7	23.2
2+	41.0	44.0	64.5	11.2	23.4	39.2	37.7
IDU who reported having sex with casual partners in the past 12 months(n)	273	271	262	269	197	273	1,545
Percent	45.1	39.1	48.5	10.4	15.2	20.2	30.4
Number of casual partners in the past 12 months(n)	273	271	262	269	197	273	1,545
1	11.7	16.2	12.2	4.1	5.1	6.2	9.5
2+	33.4	22.9	36.3	6.3	10.2	13.9	20.9

Table 70: Condom use among IDU, by state IBSS Nigeria 2010

Characteristics	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
Condom use with commercial sex partner during last sex (n)	100	105	133	33	38	50	459
Percent	89.0	74.3	72.2	69.7	76.3	86.0	78.0
Consistent condom use with commercial partner in the past 12 month (n)	100	105	133	33	38	50	459
Percent	82.0	62.9	61.7	57.6	60.5	74.0	67.3
Condom use with regular partner during last sex (n)	104	76	65	48	52	147	492
Percent	37.5	17.1	20.0	18.8	17.3	17.0	22.0
Consistent condom use with regular partner in last 12 months(n)	104	76	65	48	52	147	492
Percent	22.1	15.8	6.2	8.3	11.5	5.4	11.6
Condom use with boy/girfriend during last sex(n)	197	212	221	76	67	169	942
Percent	56.4	57.1	50.2	57.9	58.2	58.0	55.6
Consistent condom use with boy/girfriend inn the last 12 months(n)	197	212	221	76	67	169	942
Percent	42.6	39.6	28.5	35.5	47.8	38.5	37.7
Condom use with casual partner during last sex(n)	123	106	127	28	30	55	469
Percent	74.8	76.4	64.7	71.4	70.0	65.5	70.8
Consistent condom use with casual partner during last sex	123	106	127	28	30	55	469
Percent	67.5	55.7	42.5	57.1	56.7	60.0	55.9

Table 71: Knowledge, risk perception and HIV testing among IDU, by state IBBSS Nigeria 2010

Characteristics	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
IDU correctly identifying ways of preventing HIV infection and rejecting misconception of HIV transmission(n)	273	271	262	269	197	273	1,545
Percent	34.8	59	26	10.4	27.9	24.9	30.7
IDU who perceived their risk of HIV transmission	273	271	262	269	197	273	1,545
Percent	25.6	16.6	29.8	26	25.9	13.6	22.7
IDU who did not perceive their risk of HIV infection among:							
1. IDU who reported sharing needle in the last 1 month(n)	12	53	51	37	24	9	186
Percent	41.7	77.4	27.5	16.2	41.7	66.7	44.1
2. IDU who reported inconsistency of condom use with commercial sex workers	16	37	50	14	13	12	142
Percent	56.3	75.7	38	7.1	46.2	58.3	49.3
IDU ever had HIV test (n)	273	271	262	269	197	273	1,545
Percent	52.0	39.9	51.9	64.7	51.8	41.8	50.2
IDU had HIV test in last year (n)	273	271	262	269	197	273	1,545
Percent	38.8	25.1	24.4	31.2	18.3	24.9	27.6
IDU ever had HIV test and received results (n)	273	271	262	269	197	273	1,545
Percent	48.7	36.9	20.2	10.0	33.0	37.4	31.1
IDU ever had voluntary HIV test with counselling	273	271	262	269	197	273	1,545
Percent	32.6	26.9	26.7	35.7	21.8	28.9	29.1

Table 72: Self reported STI symptoms among IDU, by state IBBSS Nigeria 2010

Characteristics	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
IDU who can mention correctly STI symptoms in women (n)	273	271	262	269	197	273	1,545
Percent	48.0	75.3	78.2	84.4	41.6	49.5	63.7
Abdominal pain	8.4	32.5	50.4	74.7	19.8	20.2	34.8
Genital discharge	21.6	43.2	35.5	17.1	17.3	33.0	28.4
Foul smelling discharge	15.0	33.6	26.0	14.5	13.2	10.6	19.0
Burning pain on urination	19.0	29.5	16.8	12.3	8.1	7.0	15.8
Genital ulcers/sores	12.8	21.4	11.5	12.3	7.1	5.1	11.9
Swellings inn the groin area	8.1	27.3	4.6	8.2	2.5	2.2	9.1
itching of the genitals	12.8	31.0	15.7	11.2	7.1	11.4	15.2
IDU who can mention correctly STI symptoms in men (n)	273	271	262	269	197	273	1,545
Percent	77.0	89.7	89.7	61.7	60.0	71.4	75.5
Genital discharge	43.6	65.3	35.9	14.1	27.9	53.5	40.7
Burning pain on urination	59.7	69.4	70.2	33.1	38.6	47.3	53.7
Genital ulcers/sore/rash	14.3	43.9	42.8	32.7	16.2	11.0	27.2
Swellings in the groin area	15.6	42.4	19.9	20.8	8.6	7.7	19.7
itching of the genitals	17.2	50.2	22.9	24.5	8.6	12.5	23.3
IDU who reported an STI symptoms in the past 12 months(n)	273	271	262	269	197	273	1,545
Percent	11.4	20.3	24.4	30.5	8.6	9.5	17.8
IDU who reported unusual genital discharge in the past 12 months(n)	273	271	262	269	197	273	1,545
Percent	9.2	18.5	11.5	21.2	6.1	7.3	12.6
IDU who reported a genital ulcer/sore in the past 12 months(n)	273	271	262	269	197	273	1,545
Percent	5.5	8.5	3.8	2.6	2.0	2.2	4.2
IDU who reported unusual anal discharge in the past 12 months(n)	273	271	262	269	197	273	1,545
Percent	1.5	0.4	11.5	9.3	2.0	1.1	4.3
IDU who reported anal ulcer/sore in the past 12 months(n)	273	271	262	269	197	273	1,545
Percent	1.8	0.7	5.0	4.8	1.0	2.2	2.7

Table 73: STI treatment seeking behavior among IDU, by state IBSSS Nigeria 2010

Sought treatment when had STI (n)	29	35	60	15	23	217			
Percent	3.5	5.7	1.7	20.0	8.7	5.1			

Table 74: Exposure to HIV/AIDS interventions among IDU, by state IBSSS Nigeria 2010

	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
IDU who received syringes in the last 12 months	273	271	262	269	197	273	1,545
Percent	11	17.3	12.6	16	3.1	4.8	11.1
IDU who obtained cheap/free condoms in the last 12 months among sexually active IDU (n)	273	271	262	269	197	273	1,545
Percent	39.6	32.1	17.6	10.4	8.1	26.7	23.2
IDU who received education on safe injection in the past 12 months (n)	273	271	262	269	197	273	1,545
Percent	12.1	33.6	21.4	25.3	5.08	14.7	19.3
IDU who received safe sex education in the past 12 months (n)	273	271	262	269	197	273	1,545
Percent	45.4	36.2	30.2	22.3	15.7	44	33.1
IDU who received referral for STI services in the past 12 months (n)	273	271	262	269	197	273	1,545
Percent	5.5	1.5	10.7	8.2	2.54	2.2	5.2
IDU who received HIV/AIDS, STI or condom education from television in the past 12 months (n)	273	271	262	269	197	273	1,545
Percent	60.8	70.1	51.9	47.6	25.9	33.7	49.4
IDU who received HIV/AIDS, STI or condom education from radio in the past 12 months	273	271	262	269	197	273	1,545
Percent	63.0	70.1	59.2	65.1	21.8	48	56.1
IDU who received HIV/AIDS, STI or condom education from newspaper in the past 12 months	273	271	262	269	197	273	1,545
Percent	24.9	61.6	34.4	23.8	15.7	4.8	28.0
IDU who received HIV/AIDS, STI or condom education from any source in the past 12 months	273	271	262	269	197	273	1,545
Percent	85	76.8	69.9	66.9	47.7	68.9	70.2

Table 75: Alcohol use among IDU, by state IBSS Nigeria 2010

	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
IDU who drank alcohol in the past four weeks (n)	273	271	262	269	197	273	1,545
Every day	33.0	47.6	32.1	11.5	17.8	19.1	27.3
At least once a week	33.7	26.6	27.5	7.8	10.2	17.6	21.0

Table 76: History of drug use among IDU, by state IBSS Nigeria 2010

Characteristics	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
Age at first drug use (n)	273	271	262	269	197	273	1,545
10-14	3.3	1.1	0.4	0.4	2.0	2.2	1.6
15-19	23.8	18.5	24.4	21.9	6.1	9.5	17.9
20-24	38.8	33.2	44.7	36.4	13.7	30.0	33.7
25-49	28.6	41.7	30.2	39.0	61.9	50.2	41.0
Duration of drug injection (n)	273	271	262	269	197	273	1,545
1 year or less	11.4	24.7	9.5	14.9	3.6	7.3	12.3
> 1 year	79.1	74.2	71.4	82.9	86.3	85.0	79.5
Duration of drug use (n)	273	271	262	269	197	273	1,545
1 year or less	4.4	10.7	2.3	2.6	7.6	4.4	5.2
> 1 year	88.3	89.3	79.0	94.8	82.7	87.9	87.3
Frequency of drug injection in the past month (n)	273	271	262	269	197	273	1,545
Only once	26.7	18.5	16.8	12.3	16.2	18.7	18.3
About once a week	23.1	27.3	41.2	16.0	15.7	21.3	24.4
2-6 times a week	12.5	6.6	16.0	33.5	24.4	7.0	16.3
About once a day	2.6	0.4	1.2	11.2	7.6	7.0	4.9
More than once a day	1.8	0.0	1.5	23.8	5.1	3.3	6.0

Table 77: Injecting Behaviours among IDU, by state IBBSS Nigeria 2010

Characteristics	Cross River	FCT	Kaduna	Kano	Lagos	Oyo	Overall
Injecting with needle used by someone else in the past 1 month	184	146	202	260	140	157	1,089
Percent	6.5	36.3	24.3	13.1	17.1	5.7	16.6
Giving, lending, selling or renting needle or syringe after use in the past month	184	146	202	260	140	157	1,089
Percent	7.1	41.1	22.3	11.9	11.4	10.8	16.7
Always using sterile injecting equipment in the past month	184	146	202	260	140	157	1,089
Percent	91.9	62.3	75.7	86.9	81.4	93.6	82.6

8.3 Appendix III: List of contributors

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