*Original Research Article*

# ASSESSMENT OF SAFE SEXUAL PRACTICE AND KNOWLEDGE OF HIV/AIDS AMONG FEMALE SEX WORKERS IN PORT HARCOURT


## ABSTRACT

**Introduction:** Monitoring of the practices and behavior of populations more vulnerable to HIV infection is essential for effective interventions is of importance to curtail the spread of HIV and to help generate significant changes in the transmission pattern of HIV/AIDS in the general population. The aim of this study was to assess safe sexual practice and knowledge of HIV/AIDS among female sex workers in Port Harcourt, Rivers State, Nigeria. **Method:** Two hundred female sex workers participated in this cross-sectional study. Data was collected using an adapted IBBSS 2014 semi-structured questionnaire and interview method. Knowledge of HIV among Female Sex Workers (FSWs) was also assessed with questions on Test for HIV, modes of transmission, prevention, behavioral attributes of HIV and safe sexual practice assessed for with the options of answers of these dimension: YES and NO. Data for this study was collected by trained peer educators who are familiar with the environment via interview method with FSWs. Data Obtained were analyzed and presented using descriptive statistics of frequency tables, simple percentage and bar charts using Microsoft Excel 2016. **Results**: Result obtained showed that the mean age of FSWs is 25.7±3.7years, majority of the respondent (59.5%) had secondary education, majority (81.0%) of FSWs are Single and about 2.5% are married. Also more than a quarter (44.5%) started sex work at 20-24 years with a mean age of 22.0±3.0 years. Also, majority of them do not have other source of income (70%). On Assessment of risky behaviours such as multiple sex partners, no condom use during sexual intercourse, there was a high prevalence of use of condoms with most especially paying partners (70.5%) and casual partners (52.5%). On assessment of female Sex Workers' knowledge on HIV, majority of FSWs have good knowledge of HIV transmission, prevention and the need to get tested. **Conclusion**: though FSWs a minimal safe sexual practice by the use of condoms with higher percentage of different identified partners as well as having acceptable knowledge of HIV, the few FSWs who lack this knowledge and do not practice safe sex needs to be re-sensitized of the need for their benefit and the benefit of the general population. Conclusively, safe sexual practices and acceptable knowledge about prevention, transmission and the need to be tested for HIV were observed.



**Key Words:** Female Sex Workers, Knowledge of HIV, Port Harcourt, Safe Sexual Practice




## INTRODUCTION

Human Immunodeficiency Virus (HIV) is a universal menace that affects cells and the immune system, thus destroying their functions. HIV is a challenge to human dignity and a threat to

human existence (Awoleye and Thron, 2015). Global statistics has it that 36.9 million people were living with HIV as at the end of 2014 with 15.8 million people accessing antiretroviral therapy (United Nation Programme on AIDS, UNAIDS, 2014). Health promotion activities geared towards the prevention of HIV infection has led to a global decrease of HIV prevalence, although all efforts in the sub-Saharan Africa have proved abortive. In the sub-Saharan Africa, 25.8 million were living with HIV as at the end of 2014 and 10.7 million people accessed antiretroviral treatment (UNAIDS, 2014).

Nigeria is one of the most populous countries in sub-Saharan Africa with an estimated population of 177,071,561 million, a growth rate of 2.54% and a Total Fertility Rate of 5.5 (National Population Commission, (NPC), 2014). It is second to South Africa after India in the number of people living with HIV/AIDS worldwide, representing 9 percent of the global burden of the disease (UNAIDS, 2011). The first case of AIDS in Nigeria was reported in 1986, consequently and in line with the World Health Organization's (WHO) guidelines, the government adopted Antenatal Clinic (ANC) sentinel surveillance as the system for assessing the epidemics (WHO, 2003). The first sentinel survey was in 1991. However the National HIV/AIDS and Reproductive Health Survey (NARHS) were adopted in 2003 to provide information on key HIV/AIDS and reproductive health knowledge and behaviour related issues. In 2012, National HIV and AIDS and Reproductive Health Survey (NARHS Plus II), a nationally representative survey was carried out to provide information on key HIV & AIDS and reproductive health knowledge and behaviour related issues. This survey provided estimates for important indicators at state level, zones, national and for global reporting, and also parameter values for different partners to support national response to HIV and reproductive health issues. The findings of the study provided useful information on drivers of HIV epidemic useful for

developing effective prevention programs for HIV infection. The findings indicated a reduction in national HIV prevalence by 0.2% between 2007 and 2012, NARHS suggesting a great need to intensify the use of appropriate, targeted, evidence-based and proven HIV prevention interventions (Federal Ministry of Health, 2013).

Almost after three decades of the first case of HIV/AIDS, the epidemic has not gotten to zero infections as the country is still recording new infections despite concerted efforts of the various researchers, government, national, international, bilateral and multi-national agencies in curbing the spread of the virus and understanding the epidemiology of the disease. As available data reveals that in 2013 approximately 220,394 new cases of HIV infections occurred and 3,229,757 people were estimated to be living with HIV/AIDS out of which 210,031 persons died from AIDS related cases (Federal Ministry of Health, 2014). AIDS has been expunging health, economic, and social progress as it has been implicated in the reduction of life expectancy, deepened poverty, exacerbated gender inequalities, lessened labour productivity, eroded the capacity of governments to provide essential services and increased number of dependents and orphans and vulnerable children. The prevalence of the infection seems to be high despite the fact that a decline in the trend had been documented and there exist regional variations, as some states have prevalence higher than the national prevalence (Peter-Kio, 2022).

HIV epidemicity in Nigeria is multifaceted and differs widely by region. In some states, the epidemic is more intense and driven by high-risk behaviors, while in other states the epidemic is more generalized and sustained primarily by multiple sexual partnerships in the general population. Youth within the age range of 15-24 years in Nigeria are particularly vulnerable to HIV, with young women at higher risk than young men (UNAIDS, 2011). Risk factors such as unprotected sexual intercourse, early sexual exposure, multiple sex partners, trans-generational

sexual intercourse, transactional sex, poor perception of risk factors etc. contribute to the spread of HIV in Nigeria (WHO, 2010). Having multiple sex partners continues to be recognized as a persistent problem driving the epidemic in the country, especially among youths. In many parts of the country, traditional values promoting female submissiveness make the young girls more vulnerable because it is difficult for them to refuse sexual relationships. In addition, early marriage for girls remains a common practice in some communities, particularly in the Northern part of Nigeria where girls between the ages of 10 and 12 years are given out in marriage (Federal Ministry of Health, 2010).

Since the beginning of the AIDS epidemic, sex workers in developing and under developing countries have been termed one of the most at risk population (most vulnerable) to HIV infection due to enormous and rapid change of sexual partners. Increase in other sexually transmitted infections and sexual practices such as non-use of condoms, dry sexual intercourse or sexual intercourse during menses give rise to the transmission of HIV in sex workers. Furthermore, the prevalence of HIV among sex workers and their clients is normally ten to twenty times higher than the general population. Along with rapid client change and the contingency of onward transmission of the virus from an infected sex worker to a client may be higher than from other people living with HIV. More than half to two thirds of sex workers have a curable STI and higher 10% have active genital ulcer and over 30% reactive syphilis serology and many have multiple infections (WHO, 2011).

Sex workers are also often in no position to negotiate safe sex because of social, economic, cultural and legal factors. According to Nega and Zelaem (2014), they revealed that the distribution of the burden of HIV/AIDS is uneven across region and different social groups and sub-Saharan countries are inappropriately affected from the virus than anywhere else. An

important public health principle relevant to many diseases including HIV is that different social groups have disproportionate risk of acquiring disease which demands specific services for those who are at higher risk (WHO, 2011). HIV epidemics seems decreasing in few sub-Saharan Africa countries in the general population, the key relative importance of key social groups such as sex workers remains important (WHO, 2011). Therefore, female sex workers play a very important role and are termed most-at- risk population in the spread and prevention of HIV. This study was designed as an intervention programme to help reduce the risk of HIV infection among Female Sex Workers and recommend preventive measures that can be taken by them to prevent new infection.

**Aim of Study**

The aim of this study was to assess safe sexual practice and knowledge of HIV/AIDS among female sex workers in Port Harcourt

**Objectives of the Study**

The objectives of the study were to:

1. Obtain socio-demographic data from female who Sell Sex (FWSS) via interview and administration of structured questionnaire.
2. Determine the rate of risky behaviours (inconsistent condom use, alcohol consumption and drug use) among Female Who Sell Sex (FWSS).
3. Assess the knowledge of female sex workers about HIV and its influence on sexual practices.

**METHODOLOGY**

**Research Design:** A descriptive cross sectional survey design was used to assess socio-demographic characteristics and risky behaviours of female sex workers in Port-Harcourt. Port Harcourt City LGA has 51 hot spots with a total of 799 sex workers (Society for Family Health, 2015). 10 hot spots were selected for the study. Cluster sampling technique was used for brothel based sex workers and all available sex workers in each of the cluster were interviewed. For non-brothel based sex workers time location sampling approach was used.

**Sample size:** For this study, a total of 200 Female Sex Workers were assessable, interviewed and administered questionnaire.

**Reliability and Validity of Instrument:** Time Location Sampling (TLS) also known as Time-Space Sampling or Venue Based Sampling involves reaching individuals in places and at times when they gather. Time-location clusters was defined as the location where non-brothel-based sex workers congregate, the day(s) of the week that is the peak time, and the time of the day when the highest number of sex workers are present at the site. It is mainly used in population at high infectious risk for example female sexual workers in and on street and all those within the period and time of data collection who agreed to participate were selected for the study.

**Method of Data Collection:** Data was collected using an adapted IBBSS 2014 semi-structured questionnaire (Federal Ministry of Health, 2014). The instrument adapted was designed to elicit socio-demographic information of respondents such as; Age at last birthday, Educational qualification, Marital status, Age at first sex work, having non-paying boyfriend, having non-paying causal partner, use of condom with non-paying boyfriend causal friends and paying partners and pattern of alcohol consumption. Knowledge of HIV among Female Sex Workers

(FSWs) was also assessed with questions on Test for HIV, modes of transmission, prevention, behavioral attributes of HIV and safe sexual practice assessed for with the options of answers of these dimension: YES and NO. Data for this study was collected by trained peer educators who are familiar with the environment via interview method with FSWs. The application of the instrument had duration of 30 minutes.

**Method of Data Analysis:** Data were analyzed and presented using descriptive statistics of frequency tables, simple percentage and bar charts using Microsoft Excel 2016.



## RESULTS

### A. Socio-Demographic Characteristics of Sex Workers

**Table 1: Socio-demographic characteristics of sex workers (N = 200)**

| Demographic variables | Frequency | Percentage |
|---|---|---|
| **Age (in years)** | | |
| ≤14 | 1 | 0.5 |
| 15-19 | 8 | 4.0 |
| 20-24 | 77 | 38.5 |
| 25-29 | 83 | 41.5 |
| 30-34 | 22 | 11.0 |
| 35-39 | 5 | 2.5 |
| ≥40 | 4 | 2.0 |
| Mean 25.7±3.7 years | | |
| **Educational attainment** | | |
| No education | 7 | 3.5 |
| Vocational education | 5 | 2.5 |
| Quranic only | 1 | 0.5 |
| Primary education | 32 | 16.0 |
| Secondary | 119 | 59.5 |
| Higher education | 36 | 18.0 |
| **Marital status** | | |
| Married | 5 | 2.5 |
| Co-habiting | 12 | 6.0 |
| Single | 162 | 81.0 |
| Divorced | 7 | 3.5 |
| Separated | 9 | 4.5 |

| | | |
|---|---|---|
| Widowed | 5 | 2.5 |
| **Age at first sex work (in years)** | | |
| 10-14 | 3 | 1.5 |
| 15-19 | 52 | 26.0 |
| 20-24 | 89 | 44.5 |
| 25-29 | 41 | 20.5 |
| 30-34 | 12 | 6.0 |
| 35-39 | 1 | 0.5 |
| >40 | 2 | 1.0 |
| Mean 22.0±3.0 years | | |
| **Other Source of Income** | | |
| I have other source of income | 42 | 21 |
| I do not have other source of income | 158 | 79 |

Table 1 shows that more than a quarter (41.5%) were aged 25-29 years, 38.5% aged 20-24, 11% aged 30-34, 4.0% aged 15-19 years, 0.5% aged ≤14years with a mean age of 25.7±3.7 years. More than half of the respondent (59.5%) had secondary education, 18% Higher education, 3.5% No form of education, 2.5% vocational education. Majority (81.0%) are Single, 6.0% cohabiting, 4.5% separated, 3.5% divorced, 2.5% married. Also more than a quarter (44.5%) stated sex work at 20-24 years, 26.0% at 15-19 years, 20.5% at 25-29 years and 1.5% at 10-14 years with a mean age of 22.0±3.0 years. Also, majority of them do not have other source of income (70%) while about 21% have other source of income.

**Table 2: Sexually Transmitted Infection and condom use (N = 200)**

| **Risky behaviours** | **Frequency** | **Percentages** |
|---|---|---|
| **Used condom** | | |
| Non-paying boyfriend | 31 | 15.5 |
| Non-paying casual friend | 105 | 52.5 |
| Paying partners | 141 | 70.5 |
| **STI's** | | |

| | | |
|---|---|---|
| Lower abdominal pain | 139 | 69.5 |
| Genital pain on urination | 17 | 8.5 |
| Anal pain on defecation | 24 | 12 |
| Anal itching | 70 | 35 |
| Rash around the anus/genitalia | 62 | 31 |
| Smelly discharge | 121 | 60.5 |
| **Treatment** | | |
| Public hospital/clinic | 171 | 85.5 |
| Private hospital/clinic | 167 | 83.5 |
| NGO | 145 | 72.5 |
| Pharmacy/chemist | 183 | 91.5 |
| Traditional healer | 150 | 75.0 |
| Self medication | 142 | 71.0 |

Table 2 reveals that FSWs indulged in risky behaviours such as multiple sex partners, no condom use during sexual intercourse. 70.5% of them use condom with a paying partner, 52.5% use condom with casual partner and 15.5% use condom with boyfriend. There was a high level of STIs of which includes 69.6% for abdominal pain, 60.5% had smelly discharge, 35% had anal itching and 31% had rash around the anus/ genitalia.



**B. Risky behaviours among Female Sex Workers**

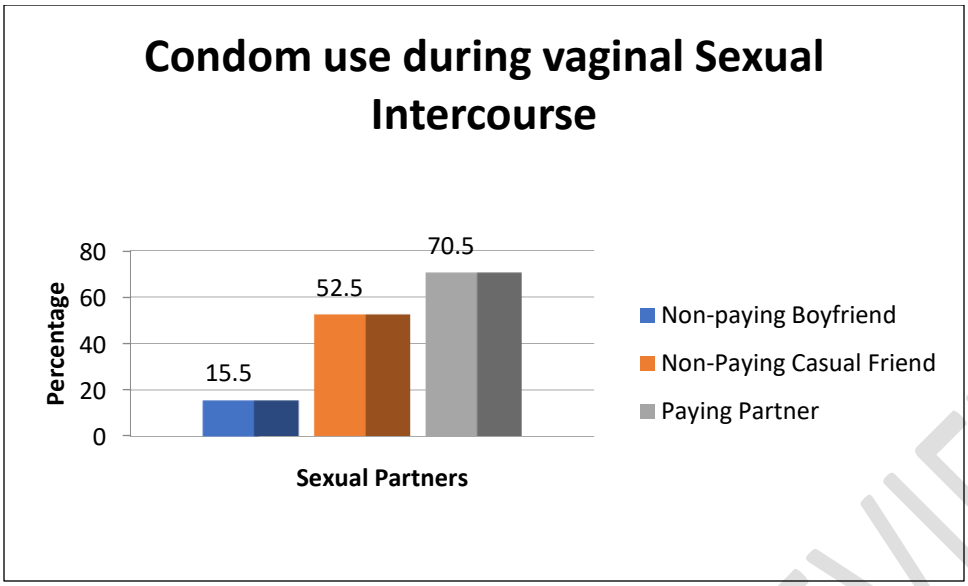


**Figure 1: Condom use during vaginal sexual intercourse**

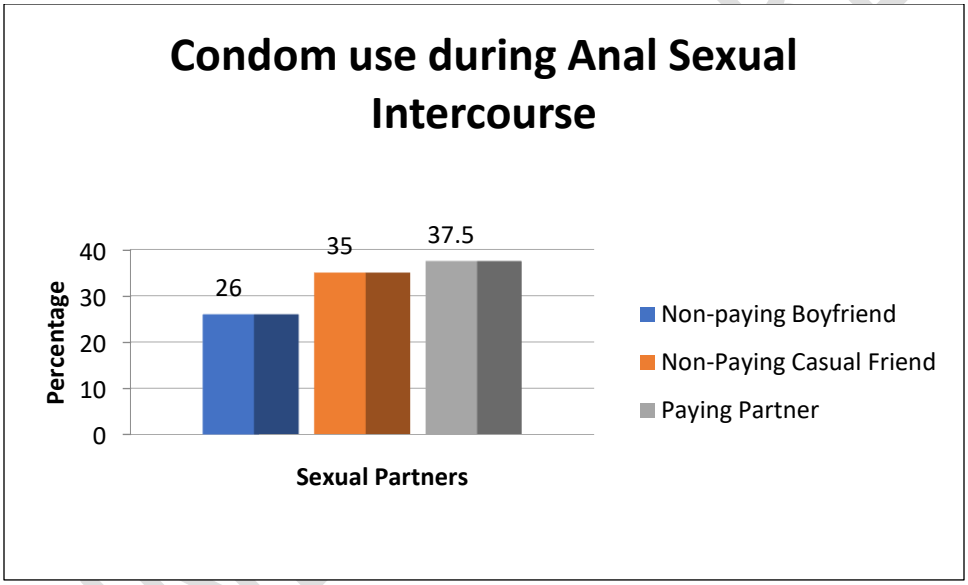


**Figure 2: Condom use during anal sexual intercourse**

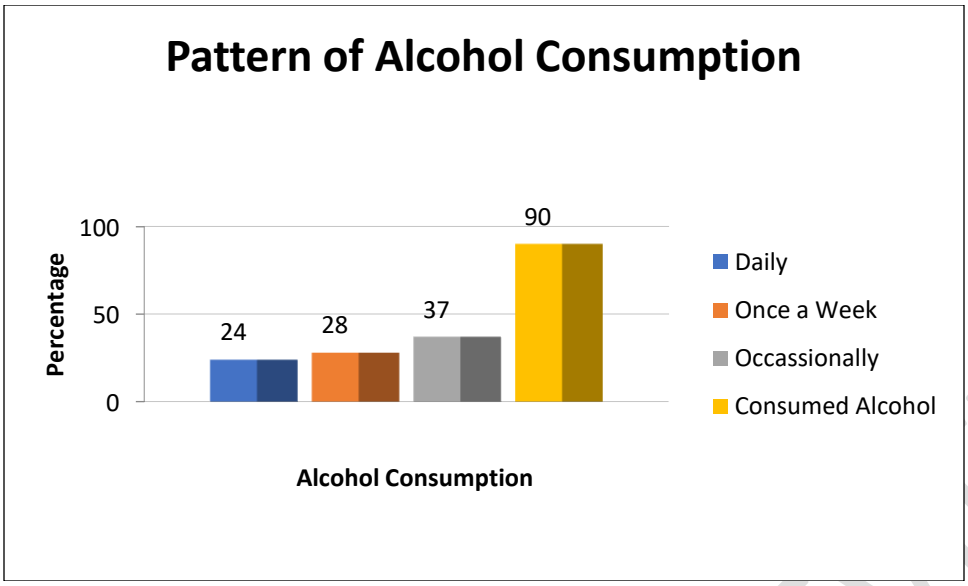


**Figure 3: Pattern of alcohol consumption**

Figure 1 shows that majority (70.5%) of female sex workers used condom with their paying sexual partners during virginal sexual intercourse, 52.5% who had non-paying casual sex partners used condom while 15.5% who had non-paying boyfriends used condom. Majority (37.5%) of female sex workers used condom with their paying sexual partners during anal sexual intercourse, 35% who had non-paying casual sex partners used condom using anal sexual intercourse while 26% who had non-paying boyfriends used condom using anal sexual intercourse (Figure 2). On pattern of alcohol consumption, majority (90%) of female sex workers consumed alcohol. Of those who consumed alcohol, 37% consumed alcohol occasionally, 28% consumed alcohol once in a week and 24% consumed alcohol daily.

**Table 3: Assessment of Female Sex Workers' Knowledge on HIV (N = 200)**

| S/N | Question | Response | Frequency | Percentage | Remark |
|---|---|---|---|---|---|
| **1** | Do you know of a place where you can go to get an HIV test? | Yes | 186 | 93 | Majority of FSWS know where to get tested for HIV |
| | | No | 14 | 7 | |
| **2** | Have you ever been tested for HIV? | Yes | 128 | 64 | Majority of FSWS have been tested for HIV |
| | | No | 72 | 36 | |
| **3** | If YES, did you receive the results of the HIV test? | Yes | 124 | 62 | Majority of FSWS received the result of the HIV test. |
| | | No | 76 | 38 | |
| **4** | Can a person get HIV through mosquito bite? | Yes | 28 | 14 | HIV cannot be transmitted through mosquito bite. |
| | | No | 172 | 86 | |
| **5** | Can HIV be transmitted through sharing of toilet with an HIV infected person? | Yes | 34 | 17 | HIV cannot be transmitted through sharing of toilet with an infected person. |
| | | No | 166 | 83 | |
| **6** | Can one avoid getting HIV by staying faithful to an uninfected partner? | Yes | 162 | 81 | One can avoid getting HIV by staying faithful to an uninfected partner |
| | | No | 38 | 19 | |
| **7** | Can one avoid getting HIV by using condom every time? | Yes | 174 | 87 | Condon can be used as a preventive measure against HIV |
| | | No | 26 | 13 | |
| **8** | Can a healthy looking person be HIV positive? | Yes | 188 | 94 | A healthy looking person can be HIV positive. |
| | | No | 12 | 6 | |

On assessment of female Sex Workers' knowledge on HIV, majority 186(93%) of FSWs know where to get tested for HIV, majority 128(64%) of FSWs have been tested for HIV, majority 124(62%) of FSWs received the result of the HIV test. On transmission of HIV by mosquitoes,

majority 172(86%) of FSWs responded with a “NO” and 28(14%) of FSWs responded with a “YES”. On if HIV can be transmitted through sharing of toilet with an HIV infected person, majority 166(83%) of FSWs responded with a “NO” and 34(17%) of FSWs responded with a “YES”. On if one can avoid getting HIV by staying faithful to an uninfected partner, majority 162(81%) of FSWs responded with a “YES” and 38(19%) of FSWs responded with a “NO”. On whether one can avoid getting HIV by using condom every time, majority 174(87%) of FSWS responded with a “YES” and 26(13%) of FSWS responded with a “NO”, while on whether a healthy looking person be HIV positive, majority 188(94%) of FSWs responded with a “YES” and 12(6%) of FSWs responded with a “NO”.

**DISCUSSION**

This study is aimed at assessing safe sexual practice among female sex workers in Port Harcourt Area of Port Harcourt Local Government Area of Rivers State Nigeria, as well as evaluates their knowledge on HIV infection strategies. The study revealed that the mean age of FSWs is 25.7±3.7years, majority of the respondent (59.5%) had secondary education, majority (81.0%) of FSWs are Single and about 2.5% are married. Also more than a quarter (44.5%) started sex work at 20-24 years, 26.0% at 15-19 years, 20.5% at 25-29 years and 1.5% at 10-14 years with a mean age of 22.0±3.0 years. Also, majority of them do not have other source of income (70%) while about 21% have other source of income, hence, the fact that FSWs have unprotected sex is related to financial needs, besides the use of drugs by them or by their clients, which contributes to a greater vulnerability to HIV infection (Jain *et al.,* 2018).

**Risky behaviours among Female Sex Workers**

This study revealed that FSWs indulged in risky behaviours such as multiple sex partners, no condom use during sexual intercourse. 70.6% of them use condom with a paying partner, 52.5% use condom with casual partner and 15.2% use condom with boyfriend. There was a high level of STIs of which includes 69.6% for abdominal pain, 60.5% had smelly discharge, 35.2% had anal itching and 30.8% had rash around the anus/ genitalia. It was also revealed from the study that majority (70.5%) of female sex workers used condom with their paying sexual partners during virginal sexual intercourse, 52.5% who had non-paying casual sex partners used condom while 15.5% who had non-paying boyfriends used condom. Majority (37.5%) of female sex workers used condom with their paying sexual partners during anal sexual intercourse, 35% who had non-paying casual sex partners used condom using anal sexual intercourse while 26% who had non-paying boyfriends used condom using anal sexual intercourse. On pattern of alcohol consumption, majority (90%) of female sex workers consumed alcohol. Of those who consumed alcohol, 37% consumed alcohol occasionally, 28% consumed alcohol once in a week and 24% consumed alcohol daily. Although the use of condom by FSWs was prevalently high and varies among types of partners, the findings from this study agrees with that of Andrews *et al.* (2015) which reveals that the prevalence of condom use among sex workers was high, 85% had consistently use condom with all sexual partners, 97% with non-regular partner and 60% with regular partners, also 73% had used condoms during their last sexual intercourse with a regular partner. Also, Maresha *et al.* (2015) study revealed that the overall consistent and correct condom utilization among FSWs was 47.7%; 84.2% had had sexual intercourse in the past one month, 84.2%, 71.9% and 32.8% utilized condom with their non-regular partners, regular partners, boyfriends/husbands respectively. Fornaso *et al.* (2005) study showed that 85% did not

use condom with non-paying partners. However, Atif *et al.* (2015) in their study shows that 58% of FSWs had not used a condom and 42% had used condom during the last sexual intercourse. If, statistically evaluated, there is a tendency that a relationship between risky behaviours and condom use among FSWs exist. Alcohol consumption among FSWs was high (90.0%). This is in line with Atif *et al.* (2015) where 42% of FSWs had had alcohol during their last sexual intercourse. Failing to use condom with non-paying partners indicates an "escape routes" for the spread of STIs considering that sex workers' boyfriends are not monogamists. Furthermore, this study revealed that there was a decline in STI's infection compared to the results from the baseline study carried out.

**Assessment of Female Sex Workers' Knowledge on HIV**

On assessment of female Sex Workers' knowledge on HIV, majority 186(93%) of FSWs know where to get tested for HIV, majority 128(64%) of FSWs have been tested for HIV, majority 124(62%) of FSWs received the result of the HIV test. On transmission of HIV by mosquitoes, majority of FSWs have good knowledge that HIV cannot be transmitted via mosquito bite, cannot be transmitted through sharing of toilet with an HIV infected person and HIV transmission can be prevented by staying faithful to an uninfected partner. Majority of FSWs also have good preventive knowledge of HIV transmission by the use of condom every time and with the understanding that a healthy person can be HIV positive. This revealed that FSWs have good knowledge of HIV, the need to get tested, transmission process, hence the use of condoms during sexual intercourse with mostly paying partners and non-paying casual friend. FSWs fall on the high risk group for HIV. Hence, FSWs who lacked knowledge about HIV prevention are more likely to have a positive HIV test result. It is important that HIV prevention programs are

redrawn in a wide way in order to transmit the knowledge of HIV risk practices (Shakoohi *et al.*, 2016). Furthermore, the HIV prevalence among FSWs has significantly reduced. FSWs are more likely to use condom with their paying partner (clients) and a more than half used condom with their non-paying partner (boyfriend).

## CONCLUSION

The major reason FSWs go into sex work is to get income to carter for themselves and their families as most FSWs do not have other source of income than sex working. Though minimal safe sexual practice is been adhered to by FSWs, there is need to re-sensitize this population to practice strictly HIV prevention measures by the use of condoms and other prevention strategies irrespective of their knowledge of HIV/AIDS. Hence, it is advised that HIV/AIDS education be addressed at FSWs in Port Harcourt, Rivers State, Nigeria, particularly those working in the neighbourhoods. HIV prevention activities, such as encouraging customers and steady partners to use condoms on a regular basis, should be maintained and encouraged among the female sex workers. Other sources of income should also be provided for FSWs, as most FSWs rely on sex work to support themselves and their families.

## RECOMMENDATIONS

Based on the findings from this study, it is recommended that effective intervention programmes for the prevention of HIV and AIDS among the Most at Risk Population (MARP) particularly the FSWs should be intensified. There is need to target intervention towards the regular partners of FSWs as well as their paying client, FSWs and general population and design condom promotion programmes. There is need for research to be carried out on negotiation of condom use and other related factors. There is the need for intensified sensitization and health education

of FSWs on recognition of signs and symptoms of STIs and effective management. Development Partners should intensify funding of HIV intervention more especially among MARPs; accessibility of condoms needs to be increase to encourage more consistent use hence the development of youth friendly centers close to work sites. There is need to strengthen STI testing and treatment among FSWs, thus improving their access to health services and counseling regarding safe sex**.** Provision of income generating activities (IGP), this will bring about independence of FSWs. Finally, a data base on HIV should be created for the state, for imputation of data encompassing from the different Implementing Partners, CBOs, Ministry of Health, LACA's and all involved in HIV/AIDS prevention should be made by RIVSACA,, this will help check duplication of data and determining the actual prevalent rate of the state.

## STUDY LIMITATIONS

The major limitation of this study is the difficulty in finding and addressing female sex workers in their workplaces.

## ETHICAL ASPECTS

The study complied with the ethical principles set out by Rivers State Agency for the Control of AIDS (RIVSACA) and received a favourable opinion from experts in Research Ethics Committee in Universities in Rivers State

## COMPETING INTEREST

Authors wish to state that this article have not been published or submitted for publication in any journal or elsewhere, no competing interest exist and no funding was received for carrying out this research study.

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