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Research Article

Unsafe Sexual Practices and Associated Factors Among Female Sex Workers in Sagamu Local Government, Ogun State, Nigeria

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ABSTRACT

One of the public health challenges that have gripped the universe is the rapid spread of the Human Immunodeficiency Virus. Unprotected heterosexual intercourse remains central to HIV transmission in Nigeria, as in most of sub-Saharan Africa and female sex workers play a crucial role in the spread of the virus through unsafe sex practices. Globally, sex workers make up 9% of the total number of new HIV infections and while HIV prevalence among the population in Nigeria has been declining from its peak of 5.8% in 2001 to 1.4% in 2018, prevalence among sex workers remains high at 14.4%%. A descriptive cross-sectional study of 81 Female Sex Workers out of the estimated total population of 360 FSWs based in brothels only, in Sagamu local government was selected. The majority 63(77.8%) of the respondents engaged in unsafe sex practices. The majority 65(80.3%) had a low to moderate risk perception of STI/HIV/AIDs. Almost half participants 36(44.4%) had the erroneous belief that they could not contract HIV. Statistically significant association was found between unsafe sexual practices and previous history of STIs among FSWs ($p = 0.021$), reported current HIV status ($p = 0.019$), alcohol use ($p = 0.004$), and binge alcohol ($p = 0.037$). Unsafe sex practice is highly prevalent among female sex workers in Sagamu with low to moderate risk perception for HIV/AIDs / STI.

Keywords: *Female sex workers, HIV/AIDS, Perception, Unsafe sexual practices, sexually transmitted infections*

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INTRODUCTION

One of the public health challenges that have gripped the universe is the rapid spread of the Human Immunodeficiency Virus (HIV), the main cause of AIDS. In many countries, the HIV epidemic is concentrated in subgroups of the population like homosexuals, sex workers, etc. whose behavior exposes them to the high risk of acquiring HIV infection.

According to UNAIDS (2018) report, Sex workers accounted for about one in 10 infections in eastern Europe and central Asia and the Middle East, and North Africa. Population size estimates suggest there are nearly one million sex workers in need of preventive services. Available data on prevention program coverage for this key population ranged from 38% in South Sudan to 74% in Kenya (UNAIDS, 2018). Unsafe sex practices are responsible for the rapid spread of HIV among female sex workers, therefore, understanding unsafe sexual practices is one of the most important strategies in preventing the spread of HIV/AIDS and STIs among sex workers. Certain barriers and unsafe sexual practices increase the vulnerability of female sex workers to the risk of HIV infection.

Existing studies estimate the prevalence of HIV to be 14.4% among sex workers in Nigeria (UNAIDS, 2017), compared with a prevalence of (1.3%) in the adult population (NACA,2017). Notwithstanding increased funding for HIV prevention activities among sex workers in Nigeria since the 1990s, HIV prevalence among sex workers has remained high over the past two decades. HIV prevalence among sex workers in 2007 was still over 30%, and in some cities like Kano and Abuja, 16.8% of all brothel-based sex workers are HIV-infected (NARHS,2012). Similarly, brothel-based sex workers face greater HIV risk in Nigeria, with a prevalence of 27.4%. (FMOH, 2013; NARHS, 2012) Thus, while HIV prevalence among the general population in Nigeria has been declining from its peak of 5.8% in 2001 to 4.1% in 2011, (Federal Ministry of Health, 2010), HIV prevalence among sex workers is still eight times higher than the general population (NACA,2015). Although the population of brothel-based sex workers is very small in size compared with the general Nigeria population, recent modeling of apportionment of new infections estimated that in some states (such as Ogun in south-west Nigeria and Benue in north-central Nigeria), sex workers and their clients account for about 18% of all new infections. (Oladembe, Adeniji, Omilaju, Adebayo, Somda, Fajemisin, 2010; Baba-Manu, Nwankwo & Wende, 2010). This study was therefore designed to determine the prevalence of unsafe sexual

practices, identify their perceived risk of contracting HIV/AIDs/ STI, and to access the beliefs of brothel-based sex workers about sex work in Sagamu Local Government of Ogun State.

MATERIALS AND METHODS

Study design: This was a cross-sectional study designed to investigate the prevalence of unsafe sexual practices, identify their perceived risk of contracting HIV/AIDS/STI, and access the beliefs of brothel-based female sex workers about sex work in Sagamu Local Government of Ogun State.

Study setting: The study was carried out in the Sagamu local government of Ogun State, southwest Nigeria. Sagamu is a well-known commercial center in Ogun State. It is a densely populated area, dominated by different tribes in Nigeria specifically, Yoruba, Hausas, Igbos, and other minor tribes (Isekiri, Irobo, and Fulanis). According to the National Population Commission project population report, Sagamu had an estimated population number of 355, 900 and comprises males and females (NPC, 2016 and NBS, 2018).

Data collection and sampling procedure: The study employed an interview schedule to interview 81 female sex workers derived from the Cochran formula for estimating proportion in a cross-sectional study at a 95% confidence level. (Cochran, 1985). The participants were selected using the cluster sampling technique. First, we used a simple random sampling by balloting to select three out of the six brothel locations in Sagamu. Each Brothel had between 50 and 55 sex workers living in them. Then, we recruited all eligible consenting sex workers within the selected Brothels to participate in the study. Consenting female sex worker, resident and duly registered in the selected study brothel who had been in the business for at least three months were eligible to participate in the study.

The respondents were approached for an interview during their break period in the daytime when they had no or less few clients. A well-structured questionnaire was used to investigate the social demographics of the respondents, the prevalence of unsafe sexual practices, their perceived risk of contracting STIs and HIV/AIDS, and their beliefs about sex work. The questionnaire was pretested in a brothel in Ijebu ode, a town with similar characteristics and identity to the main study setting. The validity of the study instrument was ascertained by experts in the field. The face and content validity of the instrument was established. The reliability of the instrument was good with a Cronbach alpha value of 0.872.

Ethical consideration: Ethical approval was sought and obtained from Ogun State Human Research Ethics Committee with ref no: HPRS/381/324. Written consent was used to obtain consent for participation in the study. Approvals were obtained from the management of the selected brothels before the commencement of the study. The researcher read the consent form to the respondents and they were given time to ask questions. The respondents agreed to participate by signing the consent form. Confidentiality was also assured by removing all identifiers of respondents from the questionnaire.

Data analysis: The data was sorted, arranged, and input into the spreadsheet and analyzed using the Statistical Product for Social Sciences version 20.0 (SPSS Inc. USA). Descriptive and inferential statistics were used to analyze the data. Proportions and mean (with standard deviation) were used to summarize the data. Chi-square test, student's t-test, and logistic regression analysis were carried out. Findings were presented with charts and tables.

RESULTS

Respondents' background characteristics: The female sex workers who participated in the study had a mean age of 31.16 years with a standard deviation of 7.71 years.

Table 1:
Socio-demographic characteristics of respondents (N = 81)

Characteristics		Frequency	Percent
Age in years		31.16 (7.71)*	
Age group in years	16-25	22	27.2
	26-35	40	49.4
	36-45	18	22.2
	46-55	1	1.2
Ethnicity	Yoruba	13	16.0
	Hausa	13	16.0
	Igbo	24	29.6
	Others	31	38.3
Highest level of education completed	Non- formal	8	9.9
	Primary	14	17.3
	Secondary	53	65.4
	Tertiary	6	7.4
Religion	Christianity	61	75.3
	Islam	19	23.5
	Traditional	1	1.2
Marital status	Never married	28	34.6
	Co-habiting	3	3.7
	Married	16	19.8
	Divorced	23	28.4
	Separated	9	11.1
	Widowed	2	2.5
Other occupation	None	29	35.8
	Self-employed	10	12.3
	Restaurant/bar	35	43.2
	Others	7	8.7
Duration of sex work in years*		3.40	2.41
The average number of steady male partners*		1.54	1.50
Customer pick up point	Brothel alone	77	95.1
	Brothel and street	4	4.9
Customer service point	Brothel alone	70	86.4
	Brothel and other private spaces	6	7.5
	Brothel and other public places	1	1.2
	Brothel, public, and private spaces	4	4.9

The most predominant age group was 26 to 35yrs (49.4%), followed by 16 to 25yrs (27.2%). Concerning ethnicity,

29.6% (24) were Igbos, while 16% (13) each were Hausa and Yoruba while 38.3 % (31) of the respondents came from the other ethnic groups. Fifty-three (65.4%) of the FSWs had a secondary education, 61 (75.3%) 58, were Christians, and 28 (34.6%) were never married. Twenty-three (28.4%) of the respondents were divorced while 16 (19.8%) were married. Concerning other occupations engaged in by the respondents, 35 FSWs (43.2%) work in the restaurant/bar, while 29 (35.8%) of them had no other occupation. The mean years of duration of sex work are 3.40 years with a standard deviation of 2.41 years. Also, the average number of steady partners per participant is 1.54 with a standard deviation of 1.50. Seventy-seven (95.1%) of the respondents picked up their customers in the brothels alone and 57 (83.8%) serviced their customers in the brothels only.

As shown in Table 2, 63 (77.8%) of the respondents engaged in unsafe sex practices. Fifty-four (66.7%) of them reported that they had concurrent sexual relationships, 37 (45.7%) reported the practice of anal sex, while 36 (44.4%) of them reported alcohol use before sex. Few of the respondents reported drug use before sex (14.8%) and injection of drugs before sex (8.6%).

Table 2:
Prevalence of unsafe sexual practices

Unsafe sexual practices	Yes (%)	No (%)
Non-use of condom during sex, regularly	3 (3.7)	78 (96.3)
Non-use of condom during the last sexual act	1 (1.2)	80 (98.8)
The practice of anal sex	37 (45.7)	44 (54.3)
Concurrent sexual relationship	54 (66.7)	27 (33.3)
Drug use before sex	12 (14.8)	69 (85.2)
Injection of drugs before sex	7 (8.6)	74 (91.4)
Alcohol use before sex	36 (44.4)	45 (55.6)
Practice of unsafe sex (overall)	63 (77.8)	18 (22.2)

Table 3 shows what the respondents thought were the risk and protective factors for STI/HIV. The majority (87.7%) of the respondents agreed that unsafe sex practices constitute a risk for HIV/STI transmission. Sixty-five (80.3%) of them are aware of their chances of contracting HIV/AIDs and STIs. Sixty-eight (84.0%) of the FSW perceived that sexual intercourse with multiple partners increased the risk of contracting HIV/AIDs. Concerning risk perception for HIV, only 44 (54.3%) of the respondents perceived themselves to be at risk of contracting HIV/AIDs.

Table 4 shows the result of bivariate analysis between participant characteristics and unsafe sexual practices. There was statistically significant association between unsafe sexual practices and previous history of STIs ($\chi2 = 5.313$, $p = 0.021$), reported current HIV status ($\chi2 = 7.972$, $p = 0.019$), alcohol use ($\chi2 = 11.058$, $p = 0.004$), and binge alcohol ($\chi2 = 4.349$, $p = 0.037$). Participants who had a previous history of STIs, currently HIV positive, take alcohol, practice binge alcoholism were more likely to engage in unsafe sexual practices. The other participant characteristics did not show a significant relationship with unsafe sexual practices.

DISCUSSION

The result of the study indicated that the majority (77.8%) of the study participants had engaged in unsafe sex practices such as anal sex (45.7%) concurrent sexual relationship (66.7%), alcohol use before sex (44.4%) and drug use before sex (14.8%). This is similar to a study by Mahapatra, Mohanty, Gurav and Ramesh, et al. (2013) on the prevalence of inconsistent condom use, concurrent sexual relationships, anal sex, and alcohol consumption before sex which reported that about half of the sex workers (51%) had engaged in risky sexual practices; 71% of FSWs reported inconsistent condom use with any client, 32% reported concurrent sexual relationships, 12% had engaged in anal sex and 54% reported consuming alcohol before sex. In this study, consistent condom use during sexual intercourse was self-reported by almost all the FSWs.

Majority (91.7%) of the FSWs perceived themselves to be at low/moderate risk of contracting STIs/HIV/AIDs despite their high risk of sexual activity which could, in turn, be a risk factor of contracting the infection. The perceived risk of HIV was found to be an important trigger among FSWs negotiating condom use with clients. Furthermore, risky sexual behavior despite preventive knowledge is less surprising if FSWs are unaware of the level of risk of contracting HIV when having unprotected sex or practicing unsafe sex, i.e., knowing how to reduce risk may not change behavior if the level of risk is perceived as low.

Most (87.7%) of the FSWs are also aware of the risk behaviour linked to HIV/STI transmission, 80.3% of the participant are aware of their chances of contracting STI/HIV/AIDs, (54.3%) of the respondents perceive themselves as being at risk of contracting HIV/AIDs. A study by Bruce, Bauai, Sapuri, Kaldor, Fairley, and Keogh, (2011), reported that although most FSWs were aware of HIV risk through sexual contacts, most perceived themselves as more at risk of infection through sex work than through their private sexual relationships.

Table 3:
Perceived risk and protective factor for STI/HIV

Risk of unsafe sex practices (no of respondents)	Agree (%)	Undecided (%)	Disagree (%)
Risk behaviour linked to STI/HIV transmission	71 (87.7)	9 (11.1)	1 (1.2)
Awareness of chances of contracting STI/HIV	65 (80.3)	10 (12.3)	6 (7.4)
Sexual intercourse with multiple partners can increase the risk of contracting STI/HIV	68 (84.0)	9 (11.1)	4 (4.9)
My sexual practices put me at risk of contracting STI/HIV	44 (54.3)	20 (24.7)	17 (21.0)

Table 4:
Relationship between participants' characteristics and unsafe sex practices

Characteristics (no of respondents)		unsafe sex practices		χ2 or t-test (*)	p-value
		Yes (%)	No (%)		
Age in years*		30.82 (7.60)	32.44 (8.38)	0.779*	0.438
Age group in years	16-25	18 (81.8)	4 (18.2)	0.672	0.879
	26-35	30 (75.0)	10 (25.0)		
	36-45	14 (77.8)	4 (22.2)		
	46-55	1 (100.0)	0 (0.0)		
Ethnicity	Yoruba	12 (92.3)	1 (7.7)	4.230	0.237
	Hausa	8 (61.5)	5 (38.5)		
	Igbo	20 (83.3)	4 (16.7)		
	Others	23 (74.2)	8 (25.8)		
Highest level of education completed	Non- formal	8 (100.0)	0 (0.0)	5.316	0.150
	Primary	8 (57.1)	6 (42.9)		
	Secondary	40 (75.5)	13 (24.5)		
	Tertiary	5 (83.3)	1 (16.7)		
Religion	Christianity	46 (75.4)	15 (24.6)	0.411	0.814
	Islam	15 (78.9)	4 (21.1)		
	Traditional	1 (100.0)	0 (0.0)		
Marital status	Single	22 (78.6)	6 (21.4)	0.370	0.946
	Co-habiting	2 (66.7)	1 (33.3)		
	Married	13 (81.2)	3 (18.8)		
	Divorced, Separated, Widowed	26 (76.5)	8 (23.5)		
Other occupation	None	24 (82.8)	5 (17.2)	6.792	0.079
	Self-employed	5 (50.0)	5 (50.0)		
	Restaurant/bar	26 (74.3)	9 (25.7)		
	Others	7 (100.0)	0 (0.0)		
Duration of sex work in years*		3.35 (2.18)	3.64 (3.18)	0.438*	0.663
Number of steady male partners*		1.52 (1.62)	1.61 (1.11)	0.207*	0.837
History of STI	No	14 (59.1)	9 (40.9)	5.313	0.021
	Yes	49 (85.5)	9 (14.5)		
Knowledge of HIV Status	No	18 (81.8)	4 (18.2)	0.468	0.494
	Yes	44 (74.5)	15 (25.5)		
HIV status	Negative	21 (61.8)	13 (38.2)	7.972	0.019
	Positive	17 (94.4)	1 (5.6)		
	Did not disclose	24 (82.8)	5 (17.2)		
Alcohol use (76)	Never	5 (41.7)	7 (58.3)	11.058	0.004
	Previous use	6 (75.0)	2 (25.0)		
	Current use	52 (85.2)	9 (14.8)		
Binge alcohol consumption (70)	No (Non-Binge)	23 (71.9)	9 (28.1)	4.349	0.037
	Yes (Binge)	44 (89.8)	5 (10.2)		
Customer pick up point	Brothel alone	59 (76.4)	18 (23.6)	1.202	0.272
	Brothel and street	4 (100.0)	0 (0.0)		
	Customer service point				
	Brothel alone	50 (71.4)	20 (28.6)	2.050	0.562
	Brothel and other private spaces	4 (66.7)	2 (33.3)		
	Brothel and other public places	1 (100.0)	0 (0.0)		
	Brothel, public, and private spaces	4 (100.0)	0 (0.0)		

*t-test

This data also revealed that most FSWs had recently engaged in unsafe sex with clients despite adequate knowledge. According to Lammers, Wijnbergen and Willebrands, (2013), most FSWs also perceived themselves as more at risk of infection through sex work. In contrast, in a recent survey among the most at-risk populations in six states in Nigeria, over half of the sex workers did not consider themselves at risk of HIV infection. In Lagos state, with the highest concentration of sex workers in Nigeria, only 16% of brothel-based sex workers felt they were at risk, even though each has on average 34 clients per week. Despite their high-risk sexual activity, many sex workers perceive their risk of HIV infection as low. (Messersmith, Kane, Odebiyi & Adewuyi, 2000). The respondents seemed not to connect knowledge and risk perception with their behaviour. This also confirms the results of similar studies in Nigeria by Messersmith et al. (2000), Federal Ministry of Health (2007), and Ankomah et al. (2011).

Many (44.4%) of the FSWs believed that they cannot contract HIV/AIDs. For many of these sex workers, belief and trust in God were important attributes that offered safety and security from infection Many were of the view that they will

never get infected because of their faith: "I will not catch it in Jesus' name."

There was a statistically significant association between unsafe sexual practices and previous history of STIs. Participants who had a previous history of STIs, currently HIV positive, take alcohol, practice binge alcoholism were more likely to engage in unsafe sexual practices. The other participant characteristics did not show a significant relationship with unsafe sexual practices. Similarly, reports from scientific research indicate a positive association between alcohol consumption and HIV risk. Moreover, FSWs who consume alcohol are more likely to engage in anal sex than those who do not, recent advances in HIV research have also highlighted concurrent sexual relationships as another important factor in increasing the rate of infection in a population. (Hutton, McCaul, Santora & Erbelding, 2008; Verma, Saggurti, Singh & Swain, 2010; Samet, Pace, Cheng, Coleman & Bridden, 2010).

The result shows that there was no evidence of a statistically significant relationship between the female sex workers' perception of their risk of contracting HIV and the practice of unsafe sex. ($\chi 2 = 1.852$, $p = 0.592$). According to Bruce, Bauai, Sapuri, Kaldor, Fairley, & Keogh. (2011), Studies on the influence of HIV knowledge on safer sex practice have reported mixed results. Although some have found conclusive associations, others have found mixed results consistent with our findings. Although some studies found an association between individual perception of HIV risk and safer sex practices, others have found mixed results. This implies that safer sex is complex and determined by several factors in different settings.

In conclusion, the findings highlight that safe sex practice is not determined by the availability of, access to, and promotion of condoms alone, but also by complex contextual, emotional, and other environmental factors. Until effective strategies are implemented to address these factors, no progress on HIV will be sustained. For FSWs, the vital element is empowerment. Overall, it means efforts should be targeted on health education, economic independence, and community development schemes to sustain their livelihoods. Furthermore, safer sex messages have reached most FSWs and they do not need to be convinced about it; however, they need to be enabled to practice it. Current health promotion messages are inadequate in addressing the complexities of sex work in Nigeria. For example, advising sex workers to limit the number of partners or always to use condoms, when the fee for one session of unprotected sex can equal two or three days' income, is an impractical and difficult behaviour to adapt. To succeed, interventions aimed at vulnerable groups need to engage them in developing programs that are relevant to their circumstances (Kaddour, Hafez & Zurayk, 2005; Obermeyer, 1999). Therefore, more efforts should be devoted to engaging and encouraging sex workers to be involved in developing effective sexual health messages that take account of the circumstances surrounding their lives. Without this, economic survival and the contextual circumstances of FSWs lives will continue to make current safe-sex messages obsolete and impractical. (Muñoz, Adedimeji & Alawode. 2010)

These results suggest the need for expanded intensive educational interventions targeting the FSWs and their clients with messages emphasizing the importance of safe sex practices and simultaneously address the barriers to safe sex practice identified by some of the respondents. More efforts should be devoted to engaging and encouraging sex workers to be involved in developing effective sexual health messages that take account of the circumstances surrounding their lives. Without this, economic survival and the contextual circumstances of FSWs lives will continue to make current safe-sex messages obsolete and impractical. There is a need for intervention to address their poor risk perception about contracting STI/HIV/AIDs. Governments and organizations need to create an environment where sex workers can protect themselves against HIV, and easily access HIV prevention, testing, and treatment services. Effective interventions for sex workers must recognize the realities of FSWs' lives regarding the genuine constraints to adopting protective measures. In particular, our findings support the urgent need to move beyond a solely individual-level HIV-prevention approach, such as condom distribution, to structural environmental HIV prevention that facilitates female sex workers' ability to negotiate their risk environment in safer sex-work settings. Finally, we strongly recommend that programs must revisit the areas of misperceptions, avoid promoting messages such as abstinence and being faithful to one uninfected sexual partner that is considered unrealistic in the context of sex work, and intensify prevention efforts on illicit drugs and alcohol use for FSWs.

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