

Knowledge about HIV/AIDS, sexual practices, reproductive health, and risk assessment among workers in the formal sector of Ondo State, Nigeria

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Abstract

Background: HIV/AIDS is a rapidly growing epidemic in sub-Saharan Africa, in particular, Nigeria. The report of the 2012 National Reproductive Health Survey Plus (NARHS-Plus) indicated that the prevalence of HIV/AIDS in Nigeria, that is, Nigerians currently living with HIV/AIDS, is about 3.4%, while Ondo state shows a prevalence of 4.3%. Lack or inadequate knowledge, traditional beliefs, poverty, and cultural factors have all been fingered as factors contributing to the prevalence in the country.

Objectives: To determine the knowledge about HIV/AIDS, sexual practices and reproductive health, and the practice of prevention and transmission of HIV/AIDS among workers in the formal sectors of Ondo State, Nigeria.

Materials and Methods: An open-ended structured questionnaire was administered consecutively to 721 consenting formal sector workers by interviewer at the various government/public and private sector workplaces. The cross-sectional survey questionnaire comprised sections on sociodemographic data, knowledge about HIV/AIDS, and knowledge about sexual practices and reproductive health.

Results: The mean age (SD) was 39.6 (9.9) years; 295 respondents (40.9%) are men while 426 respondents (59.1%) are women. Majority of the respondents [719 (99.7%)] have heard about HIV/AIDS, 302 (41.9%) defined HIV correctly as human immunodeficiency virus, and 259 (35.9%) defined the acronyms AIDS correctly. Only 79 (11.0%) got the prevalence rate in the state correctly.

Conclusion: The average percentage knowledge score on the knowledge about HIV/AIDS, sexual practices, and reproductive health among this category of workers indicates that there are still some knowledge gaps in certain aspects of these fields, influencing their sexual practices to be such that promoting the transmission of the virus.

KEY WORDS: HIV/AIDS, worker, reproductive health, sexual practice

INTRODUCTION

HIV/AIDS is a rapidly growing epidemic in sub-Saharan Africa, in particular, Nigeria. Nigeria carries the second highest burden of HIV in Africa and has an increasing population of people living with HIV (PLHIV).^[1] The report of the 2012 National Reproductive Health Survey Plus (NARHS-Plus) indicated that Nigerians currently living with HIV/AIDS is about 3.4%, while Ondo state shows a prevalence of 4.3%. Lack or inadequate knowledge, traditional beliefs, poverty, and cultural factors have all been fingered as factors contributing to

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the prevalence in the country.^[2] It has been reported in various studies that there are misconceptions about HIV/AIDS, sexual, and reproductive health. The authors of a 2013 study on the sexual characteristics and knowledge of adolescent hawkers about HIV/AIDS in Ilorin, Nigeria, reported that all the respondents have heard about HIV/AIDS and those who ever had sexual intercourse were 31.9%, of which 24.5% ever used condom.^[3] In addition, the authors of a Caribbean study on the knowledge, attitude, and practices of adults of the reproductive years stated that 4% showed positive HIV test results.^[4] A 2011 Ethiopian study on the assessment of knowledge, attitude, and risk behaviors toward HIV/AIDS in Gondar town reported that all the students had heard about AIDS before the interview.^[5] In Ecuador, there was a report from the cross-sectional study to assess the knowledge about HIV/AIDS transmission and prevention measures in company workers that incorrect knowledge about HIV/AIDS transmission were found in 49.1% of subjects, with the incorrect knowledge higher among male subjects, older subjects, subjects with lower education, manual labor workers, and subjects without previous exposure to HIV intervention programs.^[6] Moreover, some Indian researchers who carried out a study on vulnerability of automobile repair workers to HIV/AIDS, reported that 63.2% showed poor knowledge score and one of the three participants who experienced commercial sex in the last 12 months did not use condom.^[7] This study is, therefore, designed to determine the knowledge about HIV/AIDS, sexual practices and reproductive health, and the practice of prevention and transmission of HIV/AIDS among workers in the formal sectors of Ondo state, Nigeria.

MATERIALS AND METHODS

Study site/subject selection/study design

This cross-sectional survey study was conducted in various parts of Ondo state, Nigeria. An open-ended structured questionnaire was administered consecutively on 721 formal sector workers of Ondo state, Nigeria, by the interviewers. The questionnaire comprised three sections: sociodemographic data, knowledge about HIV/AIDS, and knowledge about sexual practices and reproductive health. Simple random sampling was used to randomly select the required number of participants till the required number of willing participants was recruited. Only consenting workers in the formal sector of Ondo state, Nigeria, were included in the study. Participation was voluntary and informed consent was obtained by participants' signing the consent form attached to the questionnaire. Names of the participants were not included in the information requested, and confidentiality was ensured. Ethical consideration was obtained from the State Ministry of Health. The data collected through the questionnaire were statistically analyzed using Statistically Package for the Social Sciences (SPSS) for windows, version 20.0, software. Frequency counts were generated for all variables, and statistical tests of significance was performed with χ^2 -test. Significance was fixed at $P < 0.05$ and highly significant if $P < 0.01$.

Sample size

Sample size calculation was determined using 95% response rate and 0.05 precision and prevalence rate. The report of the 2012 National Reproductive Health Survey Plus (NARHS-Plus) indicated that the percentage of residents of Ondo state with complete knowledge of HIV/AIDS transmission was 9.6%, with 10.2% reported to have used modern family planning in the last 12 months, while the percentage having more than one sexual partner was 22.9%.^[2] It is on this premise that our sample size will be calculated, using the highest percentage. The formula for sample size when population is more than 1,000 is: $n = Z^2 PQ/d^2$.^[8]

RESULTS

Sociodemographic data

A total of 721 consenting formal sector workers participated in the study. Of them, 248 (34.4%) workers were aged between 35 and 44 years, while 210 (29.1%) workers between 25 and 34 years and 162 (22.5%) workers between 45 and 54 years; 295 (40.9%) workers were men and 426 (59.1%) women. Of the men who were already married, 118 (16.4%) workers reported having two wives, while 385 (53.4%) have just one wife. Regarding marital status, those married were 580 (80.4%) and 102 (14.1%) being single, while the remaining are separated, divorced, or widowed. Majority [575 (79.8%)] workers were Christians, while 136 (18.9%) workers were Muslims, with others belonging to traditional religion.

Educational status and occupation

The levels of education of the workers were as follows: Ordinary National Diploma/National Certificate in Education (OND/NCE) for 314 (43.6%) respondents, Higher National Diploma (HND)/Bachelor's Degree (B.Sc/BA/B.Tech) for 195 (27.0%) respondents, secondary education for 97 (13.5%) respondents, master degree for 43 (6.0%) respondents, PhD for 11 respondents (1.5%). Regarding occupation, 307 (42.6%) were government workers, mainly working in the government offices (both in the state and federal secretariats) belonging to various professions; 234 (32.5%) were school teachers and lecturers of various subjects and courses; and 113 (15.7%) were working in the private sector.

Knowledge about HIV/AIDS

A total of 719 (99.7%) have heard about HIV/AIDS; 302 respondents (41.9%) defined HIV correctly as human immunodeficiency virus, and 176 (24.4%) defined it as human immune deficiency virus. As for the full meaning of AIDS, 259 (35.9%) defined the acronym AIDS correctly as acquired immune deficiency syndrome, and 237 (32.9%) defined it as acquired immunodeficiency syndrome. A majority of the respondents knew the signs and symptoms of HIV/AIDS including fever, rash, headache, sore throat, fatigue, aches and pains around muscles or joints, weight loss, unexplained tiredness, sores, and so on, with most respondents mentioning at least one [Table 1].

Table 1: Transmission of HIV/AIDS

	Yes		No		Do not know	
	N	%	N	%	N	%
HIV can be transmitted by transfusion of HIV-infected blood	691	95.8	0	0	30	4.2
HIV can be transmitted through sexual intercourse with HIV-infected person	710	98.5	9	1.2	2	0.3
HIV can be transmitted by sharing plate, cup, spoon, toilet, and bathroom with an infected person	48	6.7	649	90.0	24	3.3
HIV can be transmitted by sharing sharp objects	711	98.6	8	1.1	2	0.3
HIV can be transmitted by mosquito bite	32	4.4	630	87.4	59	8.2
HIV can be transmitted by sharing clothes with HIV-infected person	29	4.0	661	91.7	27	3.7
HIV can be transmitted from HIV-infected mother to her child through breastfeeding	482	66.9	128	17.8	111	15.4

Table 2: HIV testing

	N	%
Ever tested for HIV		
Yes	550	75.3
No	171	23.7
Received test result		
Yes	465	64.5
No	53	7.4
Tested for HIV in the last 6 or 12 months		
6 months	63	8.7
12 months	249	34.5

Only 154 (21.4%), 299 (41.5%), and 76 (10.5%) respondents knew the top three countries with highest HIV prevalence, being South Africa, Nigeria, and India, respectively. Seventy-nine respondents (11.0%) got the prevalence rate in the state correctly. Only a few proportion of the respondents (less than 5%) knew about newer biomedical options such as preexposure prophylaxis (PrEP) and postexposure prophylaxis (PEP). Those who never tested for HIV were mainly because of fear of possible test outcome, probably owing to risky behaviors. Of those who tested and received the results of the last test, 446 (61.9%) respondents reported negative result and 34 (4.7%) positive result, and 36 (5.0%)

Table 3: Sexual practices and reproductive health

	Yes		No	
	N	%	N	%
Have had sexual intercourse	615	85.3	100	13.9
Ever used condom	562	77.9	159	22.1
Have had unprotected sex with regular partner	536	74.3	183	25.4
Have had unprotected sex with regular partner in the last 3 months	378	52.4	343	47.6
Have had unprotected sex with casual partner	146	20.2	489	67.8
Have had unprotected sex with casual partner in the last 3 months	87	12.1	530	73.5
Premarital sex is believed to be prohibited by religion	546	75.7	145	20.1
Have had blood transfusion	41	5.7	639	88.6

Table 4: Relationship between occupation and prevalence of HIV in the state

Prevalence of HIV in the state	0-1	≥1-3	≥3-5	≥5-7	>7	Total
Occupation						
School teacher	29	51	17	120	17	234
Private sector worker	3	37	12	37	24	113
Government worker	7	132	41	111	16	307
Self-employed	12	10	9	30	6	67
Total	51	230	79	298	63	721

$\chi^2 = 79.79$; $P = 0.001$.

did not disclose their result. The three most important source of information about HIV/AIDS listed by the respondents were radio, health workers, and television with 221 (30.7%), 199 (27.6%), and 147 (20.4%), respectively [Tables 2 and 3].

Eight-four (11.7%) respondents possessed two or more sexual partners; 234 (31.1%) have used or were currently then using contraceptives. The types of contraceptive listed as often used were condoms (male), intrauterine devices, pills/oral pills, and so on [Table 4].

The relationship between the level of education and information about HIV/AIDS was statistically significant at $P < 0.05$.

In summary, the average percentage knowledge score based on the total number of correct responses by respondents divided by the total number of available options/questions, in percentage, gave an average score of 64%. The study methodology rating scale of percentage knowledge score classified an average score below or equal to 39% as poor knowledge, 40%–49% as fair knowledge, 50%–59% as average knowledge, 60%–69% as good knowledge, while 70% and above classified as excellent knowledge. On the basis of this rating, this formal sector workers group are thus rated as having good knowledge about HIV/AIDS generally.

DISCUSSION

Our findings that 99.7% of the respondents have heard about HIV/AIDS is similar to a 2013 study that reported that all the respondents have heard HIV/AIDS^[3] and to the report of the 2011 Ethiopian study that stated that all the students had heard about HIV/AIDS before the interview.^[5] The findings on the proportion of the respondents that correctly defined the full meaning of both HIV and AIDS, which shows the respondents have a knowledge gap in this aspect, is slightly contrast to the outcome of the 2013 study in Ecuador, which reported that 49.1% of the subjects showed incorrect knowledge about HIV/AIDS.^[6] Our report that only 21.4%, 41.5%, and 10.5% of the respondents knew that South Africa, Nigeria, and India, are the three top countries with the highest prevalence of HIV/AIDS and the 11.0% respondents stating correctly the state (Ondo state) prevalence rate show that majority of the persons who took part in these study may only be educated to certain extent, as they have some knowledge gap in these areas.

The 4.7% finding of the respondents who tested for HIV and received positive results was very similar to the outcome of the Caribbean study, which stated that 4% showed positive HIV test results.^[4] Our findings of 75.3% and 64.5% of respondents who ever tested for HIV and received results, respectively, are in contrast to the 2012 report that quoted nationwide figures of 26.4% and 15.7%, respectively.^[2] The variations might be because of the difference in methodologies. The three most important sources of information about HIV/AIDS in this research were through radio, health workers, and television. This may be because most of the respondents have access to the means of information/communication much more easily than other means. In addition, the

percentage average score of 64%, which translated to good knowledge about HIV/AIDS, varies from the 2012 Indian research that reported 63.2% having poor knowledge score.^[7]

A finding of 85.3% and 77.9% who have had sexual intercourse and used condom is a direct implication of the marital status of the majority of the respondents. Those who have experienced unprotected sex with casual partners were 20.2%, even despite their marital status, which implies that the majority of respondents were married. This finding supports the outcome of a research on knowledge about HIV/AIDS and sexual practices among automobile repair workers, which concluded that the attitudes of the workers are such that will encourage transmission of HIV. Moreover, 11.7% of them possessed two or more sexual partners and 31.1% of them have used or were using contraceptives. The finding on sexual partner is similar to that reported in 2013 that 11.4% of young women and men aged 15 and 49 years experienced sexual intercourse with more than one partner.^[1] However, the finding on contraceptive is contrary to the 2012 report, which said modern contraceptive prevalence among women nationwide was 8.2%.^[2] The major aspects of HIV/AIDS, sexual practices, and reproductive health that the workers seem to have done poorly include accurate definition of HIV and AIDS, PreP and PEP and prevalence of HIV/AIDS in the state and worldwide. This could be because majority of the workers either have knowledge gap because they have not given more attention to issues relating to HIV/AIDS, sexual practices, and reproductive health despite their educational status.

The strength of this study is that the knowledge about HIV/AIDS, sexual practices and reproductive health, and the practice of prevention and transmission among workers in formal sectors of Ondo state was well assessed. The limitation of this study is that there were some financial constraints that would have allowed the study to be done in other states of the country.

CONCLUSION

The good percentage knowledge score on the knowledge about HIV/AIDS, sexual practices, and reproductive health among this category of workers indicates that there is a reasonable depth of knowledge though some gaps in certain aspects of these fields still exist, influencing their sexual practices to be such that promoting the transmission of the virus. Thus, there is need for more health education intervention or societal reorientation on possible risks of such practices, thereby bridging the knowledge gap.

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