

Evaluation of Condom Use among University Undergraduates in Port Harcourt, Nigeria

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Abstract

Background: Barrier contraception has the beauty of dual protection—against pregnancy and sexually transmitted infections. Following the persisting burden of unsafe abortion and human immunodeficiency virus (HIV), much sensitization/campaign has been ongoing in the past few decades by government and non-governmental organisations (NGOs) in Nigeria against unprotected sexual intercourse. The youth are generally assumed to have high risk sexual behaviour, hence this study on Port Harcourt university undergraduates. **Objectives:** To determine the awareness and use of condom among University undergraduates in Port Harcourt. **Methods:** The study was a prospective descriptive cross-sectional study of 636 undergraduate students of the University of Port Harcourt and Rivers state University, South-south Nigeria. The multistage sampling technique was used to randomly select participants and data collected using a pretested structured self administered questionnaire. Data was analyzed using version 23.0 SPSS and reported in means, frequencies and percentages. Probability value was set at 5% ($p < 0.05$) at a confidence interval of 95%. **Result:** Majority of the undergraduates (58.4%) had their first sexual intercourse at ≤ 19 years. A total of 580 (97.8%) and 467 (78.9%) were aware of male and female condoms respectively. However, a statistically significant number of sexually active undergraduates had unprotected sexual intercourse ($p < 0.001$; $\chi^2 = 200.602$). Only 5.5% of the respondents in this study were willing to know their HIV status. **Conclusion:** There is a high level of condom awareness among Port Harcourt University undergraduates. Surprisingly, their practice of unprotected sexual intercourse is still high.

Keywords

Condom Use, Unprotected Intercourse, Port Harcourt

1. Introduction

Nigeria has the second highest burden of Human Immunodeficiency Virus (HIV) worldwide with about 3.6 million people living with the virus [1]. Young people contribute 35% of new infections each year [2] [3]. This higher prevalence of HIV infection among Nigerian undergraduates has been attributed to their high level unprotected sexual intercourse with multiple sexual partners [4] [5] [6]. This sexual behaviour is also responsible for the rising incidence of sexually transmitted diseases, unwanted pregnancy, induced miscarriages, and post abortal complications seen among Nigerian undergraduates [7] [8].

Majority of Nigerian undergraduates have the knowledge that the use of condom during sexual intercourse can be effective in preventing sexually transmitted disease and unwanted pregnancy [7]. However, a significant percentage does not consistently use condom during sexual intercourse [9]. Barriers to male condom use identified among Nigerian undergraduates are reduced pleasure during sex, partners' decision, not protective for pregnancy, difficult to use, not affordable, allergy to latex, not readily available, and religion [10] [11]. There is also a very poor knowledge and use of female condom among the Nigerian Undergraduates [12], which primarily has been attributed to unavailability and difficulty in using it [13] [14] [15].

Studies have shown that 68% of undergraduates in South-eastern Nigeria are sexually active, 17.9% of these undergraduates have more than two sexual partners per year and 13.7% have more than five sexual partners per year [15]. Similar reports of high level of unprotected sexual intercourse with multiple sexual partners among University undergraduates have been reported in Southern Nigeria [11], North central Nigerian [10], Ethiopia [16] and China [17]. The factors responsible for this multiple sexual partners are satisfying sexual urge, peer pressure, ignorance, promiscuity, and sexual addiction [18]. About 73.7% of undergraduates in south eastern Nigeria have sex for pleasure [5] and 15.2% of undergraduates have been reported to have sexual addiction [19].

Majority of Nigerian undergraduates have the knowledge that the use of condom during sexual intercourse can be effective in preventing sexually transmitted disease and unwanted pregnancy [7]. However, a significant percentage does not consistently use condom during sexual intercourse [9]. In south eastern Nigeria, 96.4% of undergraduate know how to use the male condom and only 68.8% undergraduates have ever used it before [20]. Another study reported that only 47.3% of undergraduates in southern Nigeria use male condom consistently [21]. A study among students in south-south Nigeria reported a low practice of condom use and is barely boarded about sexually transmitted diseases and unwanted pregnancies [9]. Studies have also reported that only 33.2% of students in Ethiopia [22] and 30% of students in China [17] use condom consistently. In Akwa Ibom state south-south Nigeria, barriers to condom use identified among undergraduates were stigma attached to condom use because of its association with HIV, familiarity with sex partners and perception that condom use reduces

sexual satisfaction and hinders sexual interest [11] Another study among undergraduates in south eastern Nigeria showed that religious belief (33.3%) was the commonest reason why most undergraduates don't use condom [20].

A study among undergraduates in south eastern Nigeria reported that 62% of the students were aware of female condom however only 5.1% of students have ever used a female condom [20]. Another study among undergraduates however reported that 64.3% of undergraduates had knowledge of female condom, however only 32.9% of respondents agreed that female condom can protect against STDs, HIV [23]. In a study to investigate the perceived confidence to use the female condoms amongst undergraduate female students from selected tertiary institutions in south western Nigeria, only 10.8% of respondent had confidence to use a female condom [13]. However, in southern Nigeria, a study among undergraduates reported that 89.3% were aware of female condom, only 8.9% had ever used one due to unavailability, high cost, and difficulty with its insertion [14]. In a Camerounian study, 67.3% of respondents were aware of female condom, however only 8.0% have ever used it before [12]. In view of the high rates of risky sexual practices and higher HIV prevalence rate among undergraduates, and the effectiveness of condom in the prevention of sexually transmitted diseases and unwanted pregnancies, it has become important to review the current knowledge and actual practice of condom usage among University undergraduates in Port Harcourt, south-south Nigeria.

2. Methodology

Study location: The study was carried out at the University of Port Harcourt and Rivers State University, Port Harcourt.

Study population: Male and female undergraduate students of the University of Port Harcourt and Rivers state University who are between the ages of 18 and 40 years.

Inclusion criteria:

- Students who have a form of identification;
- Students who are within the stated age limit and gave consent;

Exclusion criteria:

- Students that were not in class during the study.

Study design: The study was a prospective descriptive cross-sectional study of 636 undergraduate students of Port Harcourt University.

Sample size estimation: Sample size was estimated using the formula:

$$n = Z^2 p (1 - p) / d^2$$

where:

- Z is the test statistic at 95% confidence interval given as 1.96;
- p = Prevalence of condom use among undergraduates in southern Nigeria, given as 47.3% [21];
- d = Tolerable error set at 0.05.

Using the above formula, a minimum sample size of 385 was estimated. Ten percent attrition was considered to accommodate for non-response, giving a value of 424. The sample size was further multiplied by 1.5 to cater for design effect since multistage sampling technique was used which brought the sample size to 636.

Sampling method: A multistage sampling method was used. The sampling method consisted of four stages.

Stage One (Selection of Faculties): Six faculties were randomly selected from the twelve faculties of the University.

Stage Two (Department selection): Two departments were selected from each of the selected faculty.

Stage Three (year of study selection): Students at two different years of study were selected from each of the selected department.

Stage Four (Students Selection): A minimum of 12 students were randomly selected from each year of study to achieve the sample size. This is for each of the Universities.

Study procedure: The instrument for data collection was a structured self-administered questionnaire developed from modification of previous questionnaires used in similar studies. Verbal consent was obtained after explanation of the study in the class and only students who gave consent received the questionnaires.

Data analysis: Data was entered into the Micro Soft Excel (2016) spread sheet, and later exported to version 23.0 of the Statistical Package for Social Science (SPSS) statistical software for analysis. Descriptive statistics were conducted and reported as means and standard deviation for continuous variables, and as frequencies and percentages for categorical variables. Inferential statistics was done using the Chi-Square test, to test for statistically significant variables. The level of significance was set at a probability level of 5% ($p < 0.05$) at 95% confidence interval.

Ethical considerations: Ethical clearance for the study was obtained from the University of Port Harcourt Ethical Committee.

3. Results

A total of 636 questionnaires were distributed to undergraduate students of the two universities. Five hundred and ninety-three (593) of the questionnaires were retrieved and analysed, giving a response rate of 93.2%.

Two hundred and sixty three (44.4%) respondents were males and 330 (55.6%) were females. Most (41.8%) were between 20 and 25 years. A greater number of them (91.2%) were single (**Table 1**).

Five hundred and thirty nine (90.9%) of the respondents have had sexual intercourse and 38.6% had multiple sexual partners in the past 12 months (**Table 2**). The reasons for sexual intercourse were pleasure (68.8%), money (15.2%), forced (6.5%), and 51 (9.5%) gave no response to this question.

In **Table 3**, 580 (97.8%) of the respondents had knowledge of male condom and most of them heard it from their friends (74.0%). More than one third (77.6%)

of the respondents have used condom (male condom) during sexual intercourse but only 347 (58.5%) used it consistently.

Table 4 showed that 60.9% of the respondents feel that the use of condom can prevent pregnancy and sexually transmitted diseases. While in **Table 5**, the major complaints of those who did not use condom regularly were reduced pleasure (57.1%), not reliable to prevent pregnancy (44.2%) or partner dislike (43.2%).

Four hundred and sixty-seven (78.8%) of the respondents had heard about the female condom, but only 116 (19.6%) had used it (**Table 6**).

Two hundred and thirty eight respondents (40.1%) do not know their HIV status and only 13 respondents (5.5%) were willing to get tested for HIV (**Table 7**).

Table 1. Socio-demographic data.

	Frequency (n = 593)	Percentage
Gender		
Male	263	44.4
Female	330	55.6
Age		
≤19 years	127	21.4
20 - 25 years	248	41.8
>25 years	218	36.8
Marital status		
Single	541	91.2
Married	52	8.8

Table 2. Sexual history.

	Frequency (n = 593)	Percentage
Ever had sexual intercourse		
Yes	539	90.9
No	54	9.1
Age at first sexual intercourse 593 – 54 (n = 539)		
≤19 years	315	58.4
20 - 25 years	199	37.0
>25 years	25	4.6
Number of sexual partners in the past 12 months 593 – 54 (n = 539)		
None	134	24.9
One	197	36.5
Two or more	208	38.6

Table 3. Knowledge and use of male condom.

	Frequency (n = 593)	Percentage
Knowledge of condom		
Yes	580	97.8
No	13	2.2
Source of information(n = 580)		
Friends	429	74.0
Social media	113	19.5
Clinical personnel	31	5.3
Others	7	1.2
Ever used condom during sexual intercourse		
Yes	460	77.6
No	133	22.4
Consistent use of condom during sexual intercourse (n = 593)		
Yes	347	58.5
No	246	41.5

Table 4. Factors influencing use of male condom.

	Frequency (n = 593)	Percentage
Reasons for regular use of condom		
For prevention of pregnancy and infection	361	60.9
For protection of infection	126	21.2
For prevention of pregnancy	106	17.9

Table 5. Limitations to use of male condom.

	Frequency (multifactorial)	Percentage
Reasons for not using condom regularly		
Reduces pleasure	168	57.1
Not reliable in preventing pregnancy/infection	130	44.2
Partner's dislike	127	43.2
Difficult to use	82	27.9
Not affordable	77	26.2
Reacts to condom	58	19.7
Not available	58	19.7
Religious reason	46	15.6

Table 8 shows that condom use was significantly higher among respondents older than 25 years (91.2%), and least among those who were 19 years or less (59.2%) ($p < 0.001$; $\chi^2 = 48.582$). It was also found that condom use was significantly higher among married men (96.1%) than among single men (77.7%) ($p = 0.002$; $\chi^2 = 9.581$). Among the respondents who reported that they had had sex before, about 72 (13.5%) of them had sex without condom as compared to those who had sex with condom (86.5%), and this difference was statistically significant ($p < 0.001$; $\chi^2 = 200.602$).

Table 6. Knowledge and use of female condom (n = 593).

	Yes (%)	No (%)
Ever heard of female condom	467 (78.8)	126 (21.2)
Ever seen female condom	284 (47.9)	309 (52.1)
Ever used female condom	116 (19.6)	477 (80.4)

Table 7. Attitude towards HIV screening (n = 593).

	Yes (%)	No (%)
Do you know your HIV status	355 (59.9)	238 (40.1)
Are you willing to know your HIV status	13 (5.5)	225 (94.5)

Table 8. Association of condom use with socio-demographic characteristics.

Variable	Use Condom		χ^2	p-value
	Yes (%) n = 460 (ever used condom)	No (%) n = 120		
Gender				
Male	203 (78.4)	56 (21.6)	0.248	0.619
Female	275 (80.1)	64 (19.9)		
Age (years)				
≤19	71 (59.2)	49 (40.8)	48.582	<0.001*
20 - 25	191 (78.6)	52 (21.4)		
>25	198 (91.2)	19 (8.8)		
Marital Status				
Single	411 (77.7)	118 (22.3)	9.581	0.002*
Married	49 (96.1)	2 (3.9)		
Ever had sex				
Yes	460 (86.5)	72 (13.5)	200.602	<0.001*
No	0 (0.0)	120 (100.0)		

*Statistically significant.

4. Discussion

More than half (58.4%) of the undergraduates in this study had their first sexual intercourse at ≤ 19 years, which means they already have sexual exposure as teenagers probably before getting admission into the University. It had also been reported that majority of these teenager who engage in sex just for pleasure, have poor sex education [5]. This is not surprising as in most African tradition, it is considered inappropriate for a young person to discuss sex related matters before marriage, therefore teenagers have little or no sex education at home. Our educational system is also contributory, as most of our primary and secondary schools and even the Universities do not include sex education as part of its curriculum. The teenager is then left with the social media and friends for sex education leading to misinformation and early sexual adventures [20]. Early sexual exposure is usually associated with unprotected sexual intercourse with multiple sexual partners [11]. This was reflected in this study were 38.6% of undergraduates had multiple sexual partners and almost half (40.8%) of teenage undergraduates had unprotected sexual intercourse. This is higher than findings in South-eastern Nigeria, were 17.9% of undergraduates have more than two sexual partners per year and 13.7% have more than five sexual partners per year [5]. It then means that this deplorable situation is getting worse.

The awareness on condom use among undergraduates was 580 (97.8%) for male condom and 467 (78.9%) for female condom. This is higher than findings at the Nnamdi Azikiwe University, where 96.4% of undergraduates were aware of male condom and 62.3% were aware of female condom [20]. However, this high level of awareness does not reflect in their attitude towards use of condom (female condom use was as low as 19.6% in this study). A statistically significant number of sexually active undergraduates in this study had unprotected sexual intercourse ($p < 0.001$; $\chi^2 = 200.602$). Among the undergraduates that have ever used condom, only 286 (62.2%) used it consistently. This is higher than a previous report in South-west and South-south Nigeria where only 47.3% of undergraduates used condom consistently [21]. The low use of condom is probably due to the source of the information. In this study, majority of the undergraduates got the awareness of condom use from either friends (74.0%) or the social media (19.5%). A study in South-east Nigeria also noted that friends and social media were the commonest sources on information on condom use [20]. These sources may give incomplete or totally false information. Other major limitations to condom use among these undergraduates in this study were reduced pleasure (57.1), not reliable to prevent pregnancy or infection (44.2), and partner's dislike (43.2). These similar limitations were reported by Brian *et al.* [5].

Unprotected sexual intercourse with multiple sexual partners explains the higher prevalence of 3.69% [4] of HIV among undergraduates compared to the national average of 3.6% [1]. A more worrisome issue is that only 5.5% of respondents in this study were willing to know their HIV status despite the fact that HIV counselling and testing is free in most government hospital. This is

scaring. A study in south-south Nigeria had also reported that most undergraduate had little or no regard for sexually transmitted diseases or unwanted pregnancies [9] [24]. If not stopped, this current trend will lead to an increase in HIV, STI, unwanted pregnancy and their associated complications, limiting the possibility of achieving the sustainable developing goals.

5. Conclusion

Though the awareness of condom use is high among undergraduates in this study, consistent use of condom during sexual intercourse was worrisomely poor.

6. Recommendation

There is a dare need to step up ongoing sensitization/counselling efforts on the benefits of the use of condom during sexual intercourse and particularly re-echoing the consequences of unprotected sexual intercourse among our youth and the society at large.

7. Limitation

The limitation to this study included the fact that the data is not large enough. Hence the study remain preliminary, hence further enlarged study is needed.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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