

Risky sexual behaviour and associated factors among female students of a Tertiary institution in North-Central Nigeria

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Abstract

Background: Human sexual behaviour is the way in which humans experience and express their sexuality. It could be risky and non-risky. Risky sexual behaviours including early sexual debut, unprotected sexual intercourse, multiple sexual partners and having sex under the influence of alcohol or drugs.

Objective: This study assessed the sexual practices and factors associated with risky-sexual behaviour of the female students.

Methodology: This was a cross-sectional study involving 400 female students of the Plateau State Polytechnic. The subjects were selected from all the departments using a two-stage sampling technique. A pretested semi-structured self-administered questionnaire was used to obtain relevant information from the subject. Analysis was done using IBM-SPSS 22.0. Statistical significance was set at $p < 0.05$.

Results: Sixty-four percent of the respondents had sexual debut at age 19-23 years. Fifty-two percent had sex with only one partner within the last six months while respondent's sexual partners were mostly male. About 92% practiced vaginal

sex, 6.2% oral sex and 2.3% anal sex. Less than one-quarter and 19.2% of the study participants used condom always and did negotiate for safer sex respectively. There was a significant association between substance use and risky-sexual behaviour.

Conclusion: There is a high prevalence of risky-sexual behaviours among the study cohort. These were seen from the high percentage of the female students who had sexual debut before the age of 18 years, unprotected sexual intercourse as well as multiple sexual partners. Substance use, desire for pleasure, expression of love, and quest for money were the factors associated with sexual behaviour of the cohort.

Key words: Risky-sexual behaviour, Female students, Substance use, Tertiary Institution

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Introduction

Sexual behaviour is the way in which humans experience and express their sexuality. People engage in a variety of sexual acts, ranging from activities done alone to acts with another person (sexual intercourse, non-penetrative sex, oral sex, anal sex, etc.) in varying pattern of frequency, for a variety of reasons.¹

High rate of sexual activities have been reported among undergraduates in Nigeria.^{2,3,4} In spite of the high rate of sexual activity among young girls, most lack the skills to negotiate safe sex thereby engaging in unsafe and risky sexual behaviour. The Centre for disease control (CDC) defines risky sexual behaviour as that which increases one's risk of contracting sexually transmitted infections and experiencing unwanted pregnancies.^{5,6}

These include having sex at an early age, multiple sexual partners, having sex under the influence of alcohol or drugs and unprotected sexual behaviors.⁷

Inconsistent and incorrect condom use is a common practice among young people in Nigeria resulting in STI and HIV, unintended pregnancy that ends in unsafe abortion and its complications.

It has been documented that the prevalence of HIV is 17% among young people and some studies have recorded an abortion rate of 14% in the northern part of the country and as high as 32% in the southern part of the country.⁸ Nigeria reports a yearly abortion rate of 25 abortions/1000 women mainly from unsafe abortion among young girls resulting from unintended pregnancy.⁸ This study assessed sexual practices and factors associated with risky sexual behaviour of the female students of Plateau State Polytechnic.

Methodology

Study Area

This study was conducted at Plateau State Polytechnic, Jos Campus located at the Jos-South Local Government area. The school was established in 1978 and it has eight departments. Marketing department offers only HND, General Studies department offers Psychology at OND, office technology management, banking and finance, business administration and management, public administration and accounting offers both OND and HND while mass communication department offers only OND. It is a catchment area to the neighbouring states of Nasarawa, Benue, Bauchi, Kaduna, Niger and Kogi. The population of female students was 1700.

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Study Population

The study population comprised of female students of the Plateau State Polytechnic, Jos campus

Study Design

This was a cross sectional study conducted between July and November 2018 to assess sexual practices and associated factors among female students of Plateau State Polytechnic using a quantitative method of data collection.

Sample Size Determination

Sample size was calculated using Cochran formula $[n = z^2 pq / d^2]$ ⁹

Where n = appropriate sample size

z = normal standard deviation at alpha level of 0.05 = 1.96

p = the proportion of students having sex without condom in a similar study (57.0%)¹⁰

q = estimate of variance (0.43)

d = acceptable margin of error set at 0.05. $n = z^2 pq / d^2$

$n = [(1.96)^2 \times 0.57 \times 0.43] / (0.05)^2$

n = 377

An estimated 5% (19) was added to make up for incomplete responses or non-response. Total study participants were 400

Sampling Technique

The study participants were selected from all the departments using a two-stage sampling technique. All 8 departments were included since all of them have female students. **Stage one:** Selection of classes; each department has students in different levels of academic pursuit: HND (first and second year) and OND (also first and second year). Using Simple random sampling by balloting, one of the classes was selected in each of the academic levels (HND/OND). **Stage two:** Selection of female students; a list of all the female students in all the classes selected was generated, (516). Proportion to size technique was used to determine the number of female students to be selected from each of the classes by dividing the number of eligible female students (A) in each class by the cumulative total of all the students in all the selected classes (B = 516) multiplied by the sample size (n) for the study, {i.e. number per class (c) = (A/B) x n}. 'A' for the various departments is as follows; Public administrations department-89, Accounting department -66, Legal and general studies department-69, Marketing department-73, Office technology department-63, Banking and finance department-54, Mass communication department-41, Business administration and management department-61.

Following which the serialized list of the eligible students in each of the classes selected (3 OND-1, 4 OND-2, 3 HND-1 and 3 HND-2 classes) was taken as the

sampling frame from which random sampling technique using table of random numbers was used to select the participants for the study.

Data Collection

A pretested semi-structured self-administered questionnaire was used to obtain information from the study subjects. This questionnaire was developed by the researcher based on the objectives of the study after extensive literature search (Cronbach's alpha reliability, $\alpha = 0.839$) and was pretested on students of University Jos among 10% of the estimated sample size. The research team comprised of the researcher and research assistants. Two data collectors were recruited and trained by a Public health consultant on how to administer the questionnaires and address any concerns from the respondents. The questionnaires were shared in a hall to the selected students spaced apart and supervised to fill the information independently while maintaining confidentiality. All shared questionnaires were retrieved immediately by the trained data collectors.

Information that was obtained include; socio-demographic characteristics, sexual conduct and practices, influences to sexual behaviour. Information was also sought on risky sexual behaviours, of the study subjects, contraceptive use, use of alcohol and other substances.

Data Analysis

Analysis was done using IBM-SPSS version 22.0. The level of statistical significance was set at $p < 0.05$. A total of 3 questions focusing on number of sexual partners, condom use and safe sex negotiation were used to assess sexual behaviour while negative or unfavourable response to any such as multiple sexual partners, incorrect or non-consistent use of condoms and non-negotiation of sex at all times was adjudged as risky sexual behaviour. Safe sex negotiation refers to a partner's ability to not only communicate the intention to either use condom or abstain to a partner, but also the other partner's reaction to such a proposal^{11,12} Over all behaviour: for each questionnaire, anyone who had risky behaviour for any of the 3 components/categories (number of sexual partners, condom use and safer sex negotiation) was categorised as risky behaviour. Only if all three components were non-risky was it categorised as non-risky. All bivariate analysis was analysed with the overall behaviour (risky/non-risky) as the outcome variable. The other 3 components used to get the outcome variable were presented as proportions. Simple descriptive statistic was used to present the various sexual behaviour of the respondents in frequencies and percentages.

Results

Socio-demographic distribution of respondents is as shown in Table 1. Approximately 17% of the respondents were in Public Administration Department. More than half (52.6%) of the respondents were in the OND programme.

Table 1: Sociodemographics of Study Participants

SOCIODEMOGRAPHICS	TOTAL NUMBER n = 390	PERCENTAGE (%)
DEPARTMENT		
Public Administration	67	17.2
Mass Communication	50	12.8
Accounting	52	13.3
Legal & General Studies	55	14.1
Marketing	48	12.3
Office Technology Mgt.	41	10.5
Banking & Finance	31	7.9
Business Administration & Mgt.	46	11.8
TYPE OF PROGRAMME		
OND*	205	52.6
HND*	185	47.4
AGE (YEARS)		
≤20	135	34.6
21 - 29	169	43.3
30 - 39	71	18.2
40 - 49	15	3.8
ETHNICITY		
Plateau Indigenous Tribes	148	37.9
Non-indigenous Tribes	242	62.1
RELIGION		
Christianity	356	91.3
Islam	34	8.7

*OND = Ordinary National Diploma *HND = Higher National Diploma
Mgt. = Management

Additionally, slightly less than half of the study participants were within the 21-29 age group (43.3%). A higher proportion of participants were non-indigenous tribes on the plateau (62.1%) while Christianity was the most practiced religion (91.3%).

Sexual behaviour of the respondents is as shown in Table 2. Most (64.1%) of the respondents had their sexual debut at the 19-23 age group. Slightly above half (52.3%) had sex with only one partner within the last six months while respondent's sexual partners were mostly male (98.8%). About 92% of respondents practiced

vaginal sex, 6.2% practiced oral sex and 2.3% anal sex. Only 23.1% used condom always. About 38.7% of study participants do not negotiate for safer sex while 42.1% sometimes do.

Table 2: Sexual Behaviour of Respondents

SEXUAL BEHAVIOUR	TOTAL NUMBER n = 390	PERCENTAGE (%)
AGE AT FIRST INTERCOURSE		
≤18	83	21.3
19 - 23	250	64.1
24 - 28	57	14.6
NUMBER OF SEXUAL PARTNERS IN PAST SIX MONTHS		
1	204	52.3
2	90	23.1
3	54	13.8
4	42	10.8
SEX OF SEXUAL PARTNERS		
Male	366	93.8
Female	22	5.6
Both	2	0.5
TYPE OF SEXUAL INTERCOURSE PRACTICED		
Vaginal sex	349	89.5
Oral sex	22	5.6
Anal sex	8	2.1
Vaginal and oral	8	2.1
Vaginal and anal	2	0.5
Vaginal, Oral, Anal	1	0.3
CONDOM USE DURING INTERCOURSE		
Do not use	137	35.1
Use occasionally	163	41.8
Use always	90	23.1
SAFER SEX NEGOTIATION WITH PARTNER(S)		
At all times	75	19.2
Some times	164	42.1
At no time	151	38.7

Table 3 shows that 47.7% for number of sexual partners, 76.9% condom use and 80.8% safe sex negotiation practice were risky. The combined analysis of sexual behaviour showed that 99% of respondent's sexual behaviour was risky.

In Table 4 only the Department of the study participants showed statistically significant association with sexual behaviour with the highest proportion of

risky sexual behaviour practiced by those in Public Administration department and the lowest within the department of Banking and Finance. The largest proportion of risky sexual behaviour were within the 21-29 age group but this was not statistically significant.

Table 3: Sexual Behaviour Categorised

SEXUAL BEHAVIOUR COMPONENT	FREQUENCY (n)	PERCENTAGE (%)
	TOTAL = 390	
NUMBER OF SEXUAL PARTNERS		
Non-Risky behaviour	204	52.3
Risky behaviour	186	47.7
CONDOM USE		
Non-Risky behaviour	90	23.1
Risky behaviour	300	76.9
SAFER SEX NEGOTIATION		
Non-Risky behaviour	75	19.2
Risky behaviour	315	80.8
OVERALL SEXUAL BEHAVIOUR		
Non-Risky behaviour	4	1.0
Risky behaviour	386	99.0

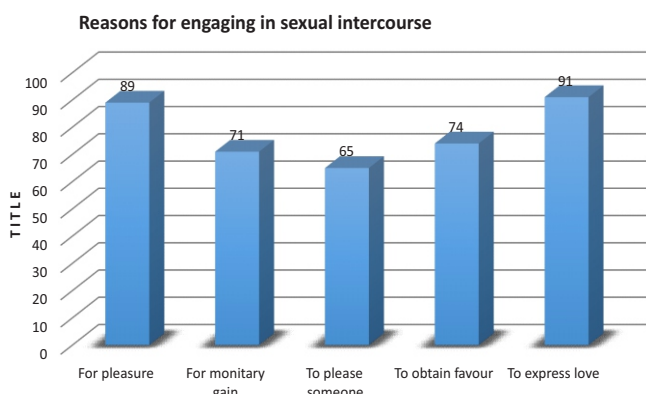


Figure 1: Reasons for Engaging in Sexual Intercourse by Respondents

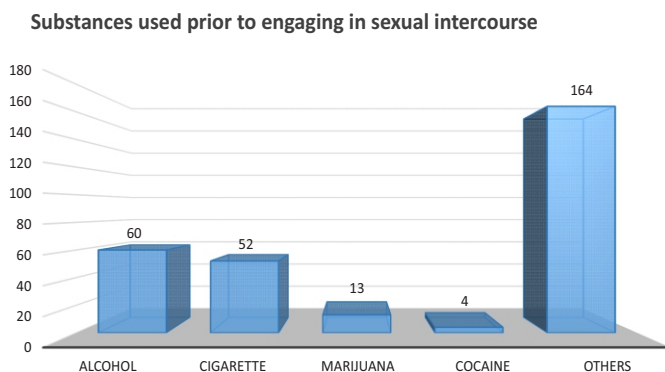


Figure 2: Substances used Prior to Engaging in Sexual Intercourses

Figure 1 shows the various reasons for engaging in sexual intercourse in the last six months before the study with sex for expression of love, for pleasure, to obtain favour, for monetary gain and to please someone accounting for 91 (23.3%), 89 (22.8%), 74 (19.0%), 71 (18.2%) and 65 (16.7%) respectively. These reasons were expressed in various combinations as some respondents had more than one reason for engaging in sexual intercourse.

Figure 2 shows substances used prior to having sex, 293 (75.1%) of respondents used various agents such as alcohol 60 (20.5%), cigarette 52 (17.7%), marijuana 13 (4.4%), cocaine 4 (1.4%) and others 164 (56%). These also were used in various combinations.

Table 4: Sociodemographic Factors Associated with Sexual Behaviours

FACTORS	BEHAVIOUR		P-VALUE
	Total (n = 390) (%)		
	NON-RISKY n (%)	RISKY n (%)	
ETHNICITY			
Hausa	0(0.0)	23(6.0)	0.131*
Yoruba	2(0.5)	70(17.9)	
Igbo	2(0.5)	89(22.8)	
Plateau Indigenous Tribes	0(0.0)	148(37.9)	
Others	0(0.0)	56(14.4)	
DEPARTMENT			
Public administration	0(0.0)	67(17.2)	0.009*
Mass communication	0(0.0)	50(12.8)	
Accounting	1(0.3)	52(13.3)	
Legal and general studies	0(0.0)	55(14.1)	
Marketing	0(0.0)	48(12.3)	
Office technology			
Management	3(0.8)	41(10.5)	
Banking and finance	0(0.0)	31(7.9)	
Business administration and management	4(1.0)	46(11.8)	
STUDY PROGRAMME			
OND ⁺	1(0.3)	204(52.3)	0.349**
HND ⁺	3(0.8)	182(46.6)	
AGE-GROUP (YEARS)			
≤ 20	1(0.3)	134(34.3)	0.447*
21-29	3(0.8)	166(42.6)	
30-39	0(0.0)	71(18.2)	
40-49	0(0.0)	15(3.8)	
RELIGION			
Christianity	4(1.0)	352(90.3)	1.000**
Islam	0(0.0)	34(8.7)	

* = Likelihood ratio chi-square ** = Fishers exact test
 OND⁺ = Ordinary National Diploma HND⁺ = Higher National Diploma

Discussion

Respondents engaged in a variety of sexual acts to satisfy their sexual drives ranging from vaginal intercourse, oral to anal and combinations of different acts. This is in line with the finding of a similar study.¹ This study has also exposed some trend that most local studies did not address, that is the practice of anal sex and the oral sex. These forms of sexual practices are not without future health risks such as possibility of human papilloma virus associated nasopharyngeal carcinoma and anal cancers.^{13,14}

The findings that a high proportion of the study participants were sexually active, with majority having early onset of sexual activities corroborate the reports of studies from other higher institutions across Nigeria and Ethiopia.^{2,3,15} Early onset of sexual activity reported in this study is lower than that reported in a study from South-South Nigeria.¹⁵ This difference may be due to the fact that the South-South is more liberal and an oil producing area where students may have early exposure to all forms of social life, alcohol, drugs and the influence of money without a commensurate mental maturity compared to a conservative North-central Nigeria which is a predominantly civil service and agrarian region where such exposure may be delayed.

It is worrisome to note that about half of the sexually active respondents in our study had multiple sexual partners in the preceeding six months, with about a quarter having sexual intercourse with as many as three or more partners. This is comparable with the report from Lagos.² Respondents with multiple sexual partners reported in this study was however, lower than that reported in the South-Eastern Nigeria.¹⁶ The reason for multiple sexual partners may be related to the fact that adolescents and young person often engage in sexual experimentation and are often ignorant of the associated negative consequences. Evidence of this can be deduced from the fact that 89 (22.8%) and 91 (23.3%) of the studied respondents indulged in sexual activity for "pleasure and to express love respectively", a situation which is even more bothersome. This further validate the claim that young people often abuse freedom from immediate parental supervision and guidance and express this freedom by initiating sexual activity without adequate protection.¹⁷ Indeed, the environment in higher institutions of learning in Nigeria, like in many other parts of the world, is characterised by high level of personal freedom and social interactions. Socially, the typical university environment in Nigeria offers opportunities for high level of sexual networking, and the freedom that characterizes the higher institutions permits permissive lifestyle.¹⁸

In this era of sexually transmitted infection, the prevalence of condom use is still low as reported in this

study in which over 75% of the respondents either use condom occasionally or do not use at all and this is comparable to a study in which majority of the respondent do not use condom or use condom Occasionally.¹⁶ This is also in agreement with the study in South-west Nigeria.² This high-risk behaviour exposes these students to both unintended pregnancy with attendant unsafe abortion and its sequelae as well as sexually transmitted infection and HIV/AIDS. This was however different from the findings from different European studies.^{19,20} This poor condom use may be due to ignorance, unawareness of the dual protective advantage of condoms over other forms of contraceptives and misconception about sexual satisfaction with condom.

Only 19.2% of the respondents are involved in safe sex negotiation at all times. This is extremely low. This is inconsistent with the report from higher institutions in South-south Nigeria in which nearly half of the female respondents were involved in safe sex negotiation at all times.²¹ This difference might be explained by the level of exposure of the respondents and their level of knowledge of the risks involved in having sexual relations indiscriminately. The overall risky sexual behaviour of the respondents is 99% resulting from multiple sexual partners, inconsistent or lack of condom use and low safe sex negotiation. This might partly explain why young people have continued to remain at the centre of the global HIV pandemic in the face of other challenges that make them more vulnerable. Individuals who have sex without using condoms are at high risk of contracting sexually transmitted infections, including HIV and other unplanned pregnancies, with severe implications for their health, education and wellbeing. Sexual behaviour is a sensitive topic worldwide. Information obtained from the respondents were self-reported and may not reflect their exact sexual behaviour in all cases.

Conclusion and Recommendation

The study participants engaged in various sexual practices ranging from vaginal, oral to anal intercourse. There is also a high prevalence of high-risk sexual behaviours among the study participants suggested by the high percentage of female students who had their sexual debut before the age of 18 years, a high level of unprotected sexual intercourse as well as multiple sexual partners and substance use before intercourse. Substance use, desire for pleasure, expression of love and quest for money were the factors that influence sexual behaviour of respondents.

We therefore recommend that; reproductive health should be included in the general study in all high institutions in which safe sexual practices could be taught to the students of these institutions.

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Conflicts of Interest: We declared that, we do not have conflicts of interest.

Ethical Approval: Ethical clearance for this study was obtained from the Research and Ethics Committee of Jos University Teaching Hospital (JUTH). Written informed consent was obtained from all students who met the criteria for inclusion in the study. Written permission was obtained from the school authority before commencement of the study

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