

**PREDICTORS OF SEXUAL RISK BEHAVIOUR AMONG UNDERGRADUATE STUDENTS OF FEDERAL COLLEGE OF EDUCATION TECHNICAL GOMBE, NORTHEAST, NIGERIA**Ibrahim R.<sup>1\*</sup>, Akorga M. E.<sup>1</sup>, Abubakar J. D.<sup>1</sup>, Abubakar Z.A.<sup>2</sup> and Danladi M. U.<sup>2</sup><sup>1</sup>Department of Community Medicine, Gombe State University, Gombe, Nigeria.<sup>2</sup>Department of Biological Science, Gombe State University, Gombe Nigeria.**\*Corresponding Author: Ibrahim R.**

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**ABSTRACT**

Sexual risk behaviors and their complications still remain a major health problem among young. This study aimed to assess the level of knowledge and Practice of sexual risk behaviour and to determine factors that predict sexual risk behaviour among students of Federal college of education Technical Gombe, A cross-sectional study was conducted in which information was obtained from 317 students who fulfilled the inclusion criteria. Mean age of respondents was 25±5.39years. Those who are aged 20 - 30years constitute about three-fourth (74.9%) of the study population. Of the total studied participates, 171(57.2%) were male and 246(82.3%) were not married. About two-third of the students were residing in the school. Close to two-third (64.2%) of the students had poor knowledge of sexual risk behaviour and more than half (56.5%) of the students had bad practice of sexual risk behaviour. More than third-fourth (77.3%) of the students had engaged in one of form of sexual intercourse or the other with average age at first sexual intercourse of 18±3.5years. Age, sex, faculty, department and level of study were found to have statistical significant association with knowledge of sexual risk behaviours (P< 0.05). Younger age group, male sex and those living in the hostel tend to engage more in sexual risk behaviours with a significant difference (P<0.05). Age, sex and place residence were significant predictors of practice sexual risk behaviours in this study. The study concluded that there is need for targeted behaviour change and communication guideline to address the sexual risky behaviours.

**KEYWORDS:** Sexual, behaviour, knowledge, Practice, Students,**INTRODUCTION**

Sexual risk behaviors are sexual activities that may expose an individual to the risk of sexually transmitted infections (STIs) such as HIV, gonorrhoea, syphilis, chlamydia, genital herpes and warts, unwanted pregnancies and mental health disorders such as depression, suicidal ideation and suicide attempts.<sup>[1]</sup>

The United Nations (UN) has identified some indicators of risky sexual behavior, which are low levels of education, early sexual debut, unprotected sexual intercourse, teenage pregnancy, multiple partners, sexual intercourse for reward and forced sexual intercourse.<sup>[2]</sup> These risky sexual behaviors and their complications, which can be early and late complications still remain the major health problems of young adults worldwide.<sup>[2]</sup> Sexual risk behaviors specifically among college student populations are a growing public health concern.<sup>[3]</sup> College students represent a population of interest to college/university administrators, policy makers and public health professionals seeking to improve young people's sexual health.<sup>[3]</sup>

According to the World Health Organization, 340 million new sexually transmitted infections (STIs) occur every year; one-third in young people under the age of 25.<sup>[3]</sup> This has given rise to complications such as 'pelvic inflammatory disease, infertility, ectopic pregnancy, miscarriages, foetal deaths and congenital infections'.<sup>[4]</sup>

There is the need to understand the sexual risk behavior among this high risk group in order to contribute to the development and implementation of reproductive health strategies to promote appropriate sexual practice amongst the undergraduates. Though many studies have been carried out to determine the sexual risk behavior of students in Nigeria, most of these studies are conducted in the southwest, northwest and north central regions of the country and few documented studies have looked at the factors that influence risky sexual behavior and prevalence among university students in those region in Nigeria.

This study aimed to assess the level of knowledge and Practice of sexual risk behaviour and to determine factors that predict sexual risk behaviour among students

of Federal college of education Technical Gombe, Gombe State.

## MATERIAL AND METHODS

### Study design

A descriptive cross sectional study was carried among randomly selected undergraduate students of Federal College Education Technical Gombe in the month of January 2021 and the information was collected through the use of structured questionnaire to assess respondents on the study objectives.

### Study Area

The college is located in Gombe LGA, situated along Ashaka Road Gombe on a land covering about 325.92 hectares. There are 9,667 total number of student in the college in both NCE and degree programmes with a student population of 8, 692 for NCE programme and 975 for its degree programme, and a total of six schools which include; school of education, school of primary education studies, school of technical education, school of vocational studies, school of business studies and school of science. The Mandate of the college is producing technical, vocational and science teachers for primary and secondary school.

### Study Population

Study populations were all registered National Certificate of Education (NCE) students of the college. It excluded all those on part time study and students on industrial training.

### Sample size determination

The calculated sample size was 288 using the Cochran's formula and with a non-response of 10%, minimum sample size was 317.

### Sampling method

A multi stage sampling technique was used to select two schools in the first stage from the list schools using simple random sampling technique by balloting. In the second stage, two facilities were selected. Systematic random sampling was used to select the study population.

### Data collection

The questionnaire was pretested in at State College Education Billiri with 60 participants. The questionnaire which was self-administered was adapted<sup>4</sup> from a study and was administered after obtaining verbal consent with the aid of 5 research assistants who were trained for 5 days. It consists of sections on socio-demographic characteristics, Knowledge and practice of sexual risk behaviour. Knowledge of sexual risk behavior of the respondents was graded by allocating a score of one for every relevant answer and zero for wrong or unanswered questions. Practice of sexual risk behaviour of the respondents was also graded by allocating a score of one to every right answer and zero to every wrong answer.

On overall score of 14, a total score of less than 7 is a poor knowledge of sexual risk behaviour while a total score of 7 and above is good knowledge. For the practices of sexual risk behaviour, out of overall score 8, a total score of less 4 is good practice while a total score of 4 and above is bad practice.

### Data analysis

The data were coded, checked, and processed with version 23 Statistical Package for the Social Sciences. Descriptive statistics, such as means, standard deviations (SD), frequencies, and proportions, were used to summarize variables. Chi-square tests were used to identify associations between categorical variables using a P-value of 0.05 at 95% confidence interval as the significance level. Logistics regression was used to determine the predictors of sexual risk behaviour among the students.

### Ethical consideration

Institutional approval for the conduct of the study was obtained from Gombe state ministry of health. The study was conducted according to the Principles of the Helsinki Declaration. Before the questionnaire was applied to the respondents, permission was obtained from the college authority and verbal consent was obtained from all the respondents who participated in the study. The respondents were specifically informed regarding their entitlement to information regarding the study, voluntary participation, privacy issues, their right to refuse to divulge information, and to terminate their participation at any time.

## RESULTS

Table 1: Socio-demographic characteristics.

Variable	Frequency (%) n=299
Age group (years)	
<20	9(3)
20-30	271(90.8)
31-40	6(1.9)
>40	13(4.3)
Mean age	25±5.3
Sex	
Male	171(57.2)
Female	128(42.8)
Tribe	
Hausa	70(23.4)
Fulani	30(11.7)
Tangale	65(21.7)
Tera	29(9.7)
Tula	36(12)
Others	64(21.4)
Religion	
Christianity	147(49.2)
Islam	152(50.8)
Marital Status	
Single	246(82.3)
Married	53(17.7)
Faculty	
Business education	217(72.6)
Vocational education	82(27.4)
Department	
Office management Technology	217(72.6)
Agricultural science education	82(27.4)
Level	
NCE 1	82(27.4)
NCE 2	217(72.6)
Place of living	
School Hostel	197(65.9)
Family house	62(20.7)
Rented house	40(13.4)

Table 2: Knowledge of sexual risk behaviour.

Variable	Frequency (%)
Sex before age 14	
Right	130(43.5)
Wrong	169(56.5)
Multiple sexual partners	
Right	212(70.9)
Wrong	87(29.1)
Unprotected sex	
Right	116(38.8)
Wrong	183(61.2)
Substance of abuse/alcohol	
Right	81(27.1)
Wrong	218(72.9)
Sex with CSW	
Right	151(51.5)
Wrong	145(48.5)
Anal/oral sexual practices	
Right	66(22.1)

Wrong	233(77.9)
Sex for reward	
Right	231(77.3)
Wrong	68(22.7)

**Table 3: Practice of sexual risk behaviour.**

Variable	Frequency (%)
Practice of sex	
Yes	231(77.3)
No	68(22.7)
Age at first sexual intercourse (years)	
<20	158(52.8)
20-30	72(24.1)
>30	1(0.3)
Mean	18±3.5
Had multiple sexual partners	
Yes	148(49.5)
No	83(27.8)
Had sex without contraception	
Yes	196((65.6)
No	35(11.7)
Sex with CSW	
Yes	111(37.1)
No	120(40.1)
Had oral/anal sex	
Yes	93(31.1)
No	139(46.2)
Had alcohol/substance before sex	
Yes	168(56.2)
No	63(21.1)
Had sex for reward	
Yes	88(29.4)
No	143(47.8)

**Table 4: Grading of knowledge and practice of sexual risk behaviour.**

Variable	Knowledge	Practice
Mean	7	4
Maximum	14	8
Minimum	0	0
Poor	192(64.2%)	169(56.5%)
Good	107(35.8%)	61(20.2%)

**Table 5: Determinants of knowledge of sexual risk behaviour.**

Variables	Poor knowledge n=192	Good Knowledge n=107	X <sup>2</sup>	df	p- value
Age (years)					
<20	4(44.5%)	5(55.6%)			
20-30	174(64.2%)	97(35.8%)			
31-40	2(33.3%)	4(66.7%)			0.024*
>40	12(92.3%)	1(7.7%)			
Sex					
Male	119(69.6%)	52(30.4%)	5.025	1	0.025
Female	73(57.0%)	55(43.0%)			
Religion					
Christianity	96(65.3%)	51(34.7%)	0.150	1	0.698
Islam	96(63.2%)	56(36.8%)			
Marital status					
Single	161(65.4%)	85(34.6%)	0.918	1	0.338
Married	31(58.5%)	22(41.5%)			

Faculty					
Business education	147(67.7%)	70(32.3%)	4.286	1	0.038
Vocational education	45(54.9%)	37(45.1%)			
Department					
Office mgt technology	147(67.7%)	70(32.3%)	4.286	1	0.038
Agric sc education	45(54.9%)	37(45.1%)			
Level					
NCE 1	45(54.9%)	37(45.1%)	4.286	1	0.038
NCE 3	147(67.7%)	70(32.3%)			
Place of living					
School hostel	133(67.5%)	64(32.5%)	3.355	2	0.187
Family house	34(54.8%)	28(45.2%)			
Rented house	25(62.5%)	15(37.5%)			

**Table 6: Determinants of practice of sexual risk behaviour.**

Variables	Good practice n=61	Poor practice n=169	X <sup>2</sup>	df	p- value
Age (years)					
<20	0(0%)	2(100%)			0.011*
20-30	57(27.1%)	153(72.9%)			
31-40	4(66.7%)	2(33.3%)			
>40	0(0%)	12(100%)			
Sex			14.816	1	0.000
Male	48(36.1%)	85(63.9%)			
Female	13(13.4%)	84(86.6%)			
Religion			0.653	1	0.419
Christianity	34(28.8%)	84(71.2%)			
Islam	27(24.1%)	85(75.9%)			
Marital status			2.927	1	0.087
Single	52(29.2%)	126(70.8)			
Married	9(17.3%)	42(82.7%)			
Faculty			1.315	1	0.252
Business education	42(24.6%)	129(75.4%)			
Vocational education	19(32.2%)	40(67.8%)			
Department			1.315	1	0.252
Office mgt technology	42(24.6%)	129(75.4%)			
Agric sc education	19(32.2%)	40(67.8%)			
Level			1.315	1	0.252
NCE 1	19(32.2%)	40(67.8%)			
NCE 3	42(24.6%)	129(75.4%)			
Place of living			30.603	2	0.000
School hostel	28(19.3%)	117(80.7%)			
Family house	10(20.4%)	39(79.6%)			
Rented house	23(63.9%)	13(26.1%)			

**Table 7: Logistics regression showing factors associated with knowledge of sexual Risk behaviour.**

Variable	Odds ratio	95% confidence interval	P-value
Age			
<20	1		0.132
20-30	9.834	0.835-115.8	0.069
31-40	5.205	0.655-41.33	0.119
>40	19.605	1.354-283.8	0.029
Sex			
Male	1		
Female	0.616	0.376-1.008	0.054
Faculty			
Business education	1		
Vocational education	0.625	0.368-1.062	0.082

**Table 8: Logistic regression showing factors associated with practice of sexual risk behavior.**

Variable	Odds ratio	95% confidence interval	P-value
Sex			
Male	1		
Female	0.309	0.151-0.634	0.001
Place of Living			
School hostel	1		0.000
Family house	7.393	3.337-16.376	0.000
Rented house	6.900	2.610-18.242	0.000

## DISCUSSION

This study determined the level of knowledge and practice of sexual risk behavior among students of Federal College of Education Technical Gombe, Gombe State. The respondent's mean ages ( $25 \pm 5$ ) in this study higher than a similar study in Sri Lanka, Ethiopia, and Malaysia  $23 \pm 0.6$ ,  $18.6 \pm 1.6$  and  $22.1$  years respectively and lower than a similar study done in Egypt  $28 \pm 6$ <sup>[1,5,6,7]</sup> The disparity in mean ages could be because of the type of population or age group studied. The study showed that 57.2% of the respondents were of the male gender which was in keeping with the study done in Western Ethiopia; male (52.6%) and lower in studies done in Rivers state males (48.7%) and South-western Ethiopia (47.4%).<sup>[5,8,9]</sup> This may be due to males attending schools more than the female in the Northern part of the country. The Muslim predominance (50.8%) in the study is not in concordance with the study done in Plateau state, Abuja and South west Ethiopia 9.6%, 27.5% and 16.2% respectively. This may be explained by the fact that the North-eastern part of Nigerian is Muslim dominated.<sup>[4,10,11]</sup> The marital status of the respondents showed that 82% are single, which was in concordance with the study done in Zambia which shows 82.2% are single. This was slightly lower than the studies done in Sri Lanka (98.5%), Southwest Ethiopia (94.8%) and Abuja (94.1%) and this could be due to the type of people; adolescents and young adults who are mostly unmarried.<sup>[1,10,11,12]</sup> The study showed that Hausa (23.4%) is the dominate ethnicity of the respondents which was not in keeping with a study done in Abuja; Hausa (7.6%).<sup>[10]</sup> This could be due to dominance of Hausa speaking communities in North-eastern Nigeria.<sup>[10]</sup> The study also showed that 65.9% of the respondents stay on campus. This is in concordance with the study done in Zambia (65.9%) and higher than the study done in Sri Lanka (26.1%) and Southwest Ethiopia (3.05%) and this may be due to background and cultural difference.<sup>[1,13]</sup>

The study showed that the respondents had good knowledge of sexual risk behaviour of 36% which was slightly below a study done in Metu town, South west Ethiopia (38%) and lower than another study done in Mizan tepi Ethiopia (93%) and Jimma, Southwest Ethiopia (76.86%) though higher than a study done in Egypt (10.2%).<sup>[7,8,11]</sup> They defined sexual risk behaviour as having multiple sexual partners (70.9%) which was higher than the studies done in Southwest Ethiopia

(47.2%) and Metu, Ethiopia (41.2%).<sup>[15,16]</sup> This difference in knowledge may be due to nature of questions asked, different study population and difference in cultural background.

The study revealed that 73% of the study participant had poor practice of sexual risk behaviour which is slightly below the study done in Egypt (84.9%).<sup>[17]</sup> This disparity may be due to awareness of HIV/AIDs and cultural differences. This study showed that 77.2% of the respondents have ever had sexual intercourse before which is in correspondence with a study done in Dublin, Ireland (75%) and Imo state (74%) but higher than studies done in Northern Ethiopia (60.6%), Northwest Ethiopia (22.9%), Rivers state (52%), Plateau state (14.7%) and was lower in a study done in Egypt (94%).<sup>[1,3,4,7,8,11]</sup> This might be partly due to difference in the study time and there is also slight difference in age, religious practices, availability of sex education programmes and attitude towards sex education. The mean ages for sexual debut of the respondents was  $18 \pm 3.5$  years which is in concordance with studies done in Mekelle, Ethiopia ( $18 \pm 2$  years) and Northwest Ethiopia ( $18 \pm 1.8$  years), it was higher than studies done in Mizan-Tepi Ethiopia (17 years), Imo state ( $14 \pm 1.3$  years), Ethiopia ( $17.5 \pm 2.8$ ), Egypt (17 years) and Rivers state ( $17 \pm 4.5$  years).<sup>[7,11]</sup> This might be due to the difference in awareness and cultural value of the respondents towards disadvantage of premarital sex and most sexual practice in Nigeria is hidden or private domain. The study also showed that 49.5% of the respondents have multiple sexual partners which were higher than studies done in Mizan-Tepi, Ethiopia (44.5%), Ethiopia (33.5%), Mekelle, Ethiopia (30.5%), and Western Ethiopia (17%) but It was lower than studies conducted in Metu, Southwest Ethiopia (61.7%), Plateau state (63%), Rivers state (87%), and Imo state (57.4%).<sup>[4,8,10]</sup> It might be due to the age group difference and socio-demographic factors variation and difference in community norm about multiple sexual partners. The study also revealed that 37.1% of the respondents have had sex with commercial sex workers which is in correspondence with a study done in Edo state (35.1%), it is higher than studies done in Western Ethiopia (11.9%), Mekelle Ethiopia (20.5%), Northwest Ethiopia (7.1%), Mizan-Tepi, Southwest Ethiopia (27%) and Northern Ethiopia (6.9%) and lower in a study done in Ethiopia (52.7%).<sup>[2,13]</sup> This discrepancy may be due to the availability and accessibility of commercial sex workers

within the study area. The study also showed that 52.6% of the study participants had alcohol or substance of abuse before sex. This is higher than studies done in Edo state (33%), Mekelle, Ethiopia (27.1%) and Mizan-Tepi, Southwest Ethiopia (35.7%).<sup>2,11</sup> This may be due to the cultural background of the study area and the accessibility of the substance. This study showed that 29.4% of the respondents have had sexual intercourse for a reward which is in correspondence with the study done in Plateau State (25.9%). It is however higher than studies done in Rivers state (13.4%) and Mizan-Tepi Southwest Ethiopia (10%).<sup>[4,11]</sup> The disparity could be due to peer pressure, grades and the rate of poverty in the study area.

The study done showed that gender was a factor associated with sexual practice which was in correspondence with a study done in Owerri, Imo state (P=0.000).<sup>[14]</sup> This study also revealed that gender was a factor associated with sexual risky behaviour which was lower than a study done Mekelle, North Ethiopia (AOR=4.33; 95% CI 1.44-12.99).<sup>[15]</sup>

### CONCLUSION

The level of knowledge and practice of sexual risk behaviour among the students were found to be poor in this study. Young age group, male sex and those living in the hostel engaged more in the practice of sexual risk behaviours has shown in this study.

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### COMPETING INTERESTS

The authors have declared that there is no know competing interest existing.

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