



*Full Length Research Paper*

# Knowledge and practice of safe sex among students of College of Medical Sciences, University of Maiduguri, Borno State, Nigeria

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## Abstract

This cross-sectional descriptive study investigated into the knowledge and practice of safe sex among students of College of Medical Sciences, University of Maiduguri, Borno State. Two hundred and eighty students from the University's College of Medical Sciences selected from five departments were surveyed. Data was collected through the use of self constructed questionnaire which was administered by the researchers and trained assistants. Data collected were presented in frequency and percentage. Mean scores were used to analyze the data. 2.50 were chosen as the bench mark ( $\geq 2.5$  as criteria of acceptance). Inferential statistics (chi-square) [ $X^2$ ] was used to test the hypothesis at 0.05 level of significance. The finding revealed that majority of the student of college of medical sciences have knowledge on safe sex but do not always practice it and of those who practice it avoidance of STIs and pregnancy were the leading factors. The study also revealed that majority of the respondents got their information on safe sex through friends as against parents. The researchers recommend that: parents/guardian should put serious effort in adequately educating their children about the importance of safe sex practice. Government should make education on practice of safe sex a must in our primary, secondary and tertiary institutions. Health personnel should from time to time organize workshops or programmes aimed at educating the youths on the importance of safe sex practice.

**Keywords:** Knowledge, Practice, Safe sex, Students, Medical sciences.

## INTRODUCTION

The term 'safe sex' refers to the adoption of sexual practices which does not predispose self and partner to sexually transmitted infections (STIs) and/or pregnancy. The high number of people living with HIV/AIDS especially among youths and its growing prevalence in the student population in Nigeria and its devastating consequences on the future of the country has made mandate the campaign of safer sex among undergraduates. Different studies have reported high prevalence of various sexual activities such as kissing, breast/ genital fondling, oral/anal sex and unprotected sexual intercourse among undergraduate youths in

different Nigerian institutions of higher learning (Digban, Aigbogun, and Agofure, 2014). Students of the health care professions are essentially trained to be care providers and educators. They are often viewed as role models to students of other professions in terms of practice of health related issues due to the assumption that they are more knowledgeable in the concept of transmission and prevention of diseases including STIs. Unfortunately, studies conducted among undergraduates revealed a discrepancy between students' knowledge of AIDS and the minimization of susceptibility among undergraduates (Abdulsalam and Babatunde, 2015).

Several studies have revealed the sexual behaviour of youths. The researcher has observed increase in promiscuity among students and increase in sexual activities among the youths, such activities are kissing, breast/genital fondling, embracing, handholding and sexual intercourse. A number of studies show high engagement in unsafe sexual behaviour such as high average number of partners, sex with unknown persons as well as less than positive views about condom use (Ezomoh, 2012). This study therefore aims at determining the knowledge attitude and practice of safe sex among students of college of medical sciences, University of Maiduguri, Borno State, Nigeria.

### Objectives of the study

1. To determine the knowledge of students of College of Medical Sciences on safe sex
2. To examine their practice of safe sex
3. To identify their source of information on safe sex.
4. To identify factors influencing their choice of safe sex.

### Study hypotheses

1. Students of college of medical sciences do not have any knowledge on safe sex
2. Students of college of medical sciences do not practice safe sex
3. There is no relationship between source of information on safe and practice of safe sex among the students
4. There are no factors influencing choice of safe sex among the students.

## METHODOLOGY

### Research design

The researcher used cross-sectional descriptive survey to determine the knowledge, attitude and practice of safe sex among students of College of Medical Sciences, University of Maiduguri.

### Setting for the study

The study was conducted at the college of medical sciences, University of Maiduguri. The compositions of the college include five departments. These departments are; Medical/Dental Surgery, Nursing Science, Physiotherapy, Radiography and Medical Laboratory Science. College of medical sciences is divided into two sections; pre-clinical and clinical. The pre-clinical is situated on the main campus of the University along Baga Road, while the clinical section is situated in the

academic section of the University of Maiduguri Teaching Hospital (UMTH).

### Target population

The target population consisted of clinical students in the Department of Medical/Dental Surgery, Nursing science, Radiography, Physiotherapy and Medical Laboratory science of the University of Maiduguri, Borno state. The number of clinical students in each department was as follows:

Nursing	-	-	-	167 students
Physiotherapy	-	-	-	185 students
Radiography	-	-	--	201 students
Medical Laboratory Science	-			216 students
Medical/ Dental Surgery	-			356 students.

The total number of estimated students from the various departments was 1125 students.

### Sample and sampling technique

Convenience sampling technique was used to select the respondents after stratified random sampling technique was used. Use of stratified random sampling technique was to ensure that the students were grouped according to their levels (class). It also ensured that all levels of clinical students from Medical/Dental Surgery, Nursing Science, Physiotherapy, Radiology and Medical Laboratory Science were represented.

### Determination of sample size

The total number of estimated students from the various departments was 1125 students.

Using Yamen's formula

$$n = \frac{N}{1 + Ne^2}$$

Where n = sample size sought

N = population size

e = level of significance chosen

l = constant

(Source: Jonathan (2003) A practical guide to Research writing)

Level of significance chosen is 5% (0.05).

Therefore,

$$n = \frac{1125}{1 + 1125 (0.05)^2}$$

$$n = \frac{1125}{3.8125}$$

$$n = 295.08$$

Therefore, sample size = 295 students was chosen and used as sampled population.

**Table 1:** Socio-Demographic Variables (n=280)

S/N	Items	Variables	Response	Percentage (%)
1	Gender	Male	160	57
		Female	120	43
2	Age group	16-20	28	10
		21-25	180	64
		26-30	52	19
		30- above	20	7
3	Religion	Islam	178	64
		Christianity	102	36
4	Place of residence	Campus	138	49
		Off campus	102	37
		With parent/guardian	40	14

### Instrument for data collection

A self-designed, structured questionnaire was used for the data collection to achieve the objectives of this study. The questionnaire has introductory part to provide detailed information about researcher, expected outcomes in the participation and instruction on how to answer the research instrument. Section A of the questionnaire has to do with the socio demographic data of the respondents while section B, C,D,E were designed to answer the research questions. The questionnaire comprised about 26 items that comprised of both open and close ended questions. Some part of the questionnaire consisted of 4-point Likert scale (Strongly Agree (SA) =4, Agree (A) =3, Disagree (D) =2, and Strongly Disagree (SD) =1).

### Method of data collection

295 questionnaires were distributed by the researchers and trained research assistants to clinical students of College of Medical Sciences. The questionnaires were distributed to available students from each department after stratification. The students were stratified according to their class levels to avoid using only one or two classes. Following the stratification, the researcher went round the classes or levels of all the students and distributed the questionnaire to the available students.

### Method of data analysis

The demographic data obtained from the distributed questionnaires were analyzed and presented using frequency distribution table while mean scores were used to analyze the remaining data and interpreted as from which  $>2.50$  as positive and  $<2.50$  as negative. Chi-square ( $X^2$ ) was used to test the hypotheses at 0.05 level of significance.

### Data presentation

The questionnaire distributed was 295 while 280 were returned completely filled given a response rate of 95%. From the above table 1, 57% of the respondents are male constituting the majority. It also showed that 64% of the respondents are within the ages of 21-25, as against few 7% who were within the ages of 30 and above. The table also showed that 64% of the respondents are Muslims constituting the majority among others. Response on place of residence large number (49%) of them stayed on campus compared to 37% and 14% who stayed off-campus.

From table 2 below, all the items in the table have mean scores above 2.50. The cluster mean of 3.19 shows that students of college of medical sciences have adequate knowledge on safe sex.

From table 3 below, most of the items in the table have mean scores below 2.50. The cluster mean of 2.64 showed that even though some of the student of college of medical sciences practices safe sex, majority do not practice it.

From table 4 below, some of the items in the table have mean scores above 2.50. The mean scores of 3.08 and 3.04 on items number 3 and 6 showed that most of the students got information about safe sex in school and through friends respectively.

From table 5 below, most of the items in the table have mean scores below 2.50. The mean scores of 3.18 on item number 1 showed that main reason for practice of safe sex among the students was to prevent pregnancy.

### Testing of hypotheses

**Hypothesis 1:** Student of college of medical sciences does not have any knowledge on safe sex.

**Hypothesis 2:** Students of college of medical sciences do not practice safe sex.

**Table 2:** Level of Knowledge About Safe Sex

S/N	ITEMS	SA	A	D	SD	MEAN	REMARK
1.	You have heard about sexual transmitted infections (STI)	98	118	51	13	3.19	
2.	Sexual transmitted infections are infections gotten from sexual intercourse	103	137	31	9	3.31	
3.	You have heard about use of protective measures like condom during sex	101	152	21	6	3.37	
4.	The protective measures is to prevent sexual transmitted infections and unwanted pregnancies	113	151	13	2	3.46	
5.	The use of protective measures can prevent the risk of sexual transmitted infections and unwanted pregnancies	56	91	84	49	2.64	
<b>CLUSTER MEAN</b>						<b>3.19</b>	

Note :< 2.50 means negative, >2.50 means positive

**Table 3:** Practice of Safe Sex Among the Students

S/N	ITEMS	SA	A	D	SD	MEAN	REMARK
1.	You have sexual intercourse	87	92	49	52	2.76	
2.	You use protective measures during sexual intercourse	53	73	98	56	2.44	
3.	You do not have the real test of sexual intercourse when you use protective measures	103	136	28	13	3.29	
4.	Protective measures are too costly	42	61	93	84	2.30	
5.	Protective measures interferes with activities of sexual intercourse	87	103	69	21	2.43	
<b>CLUSTER MEAN</b>						<b>2.64</b>	

Note :< 2.50 means negative, >2.50 means positive

**Table 4:** Sources of Information on Safe Sex

S/N	ITEMS	SA	A	D	SD	MEAN	REMARK
1.	You have heard about safe sex	69	104	58	49	2.79	
2.	Safe sex is the use of protective measures like condom to prevent STI and unwanted pregnancies	71	105	82	22	2.19	
3.	You heard about safe sex in school	87	125	41	27	3.08	
4.	Your parents discussed important of safe sex with you	29	33	107	111	2.00	
5.	You cannot advice parents/guardians to discuss safe sex with their children	31	42	88	119	2.02	
6.	You heard about safe sex from your friends	83	113	65	19	3.04	
<b>CLUSTER MEAN</b>						<b>2.64</b>	

Note :< 2.50 means negative, >2.50 means positive

**Hypothesis 3:** There is no relationship between source of information on safe sex and practice of safe sex

among the students.

**Hypothesis 4:** There are no factors influencing the

**Table 5:** Factors Influencing Choice of Safe Sex

S/N	ITEMS	SA	A	D	SD	MEAN	REMARK
1.	You use protective measures during sexual intercourse to prevent pregnancy	121	97	54	8	3.18	
2.	The use of protective measures during sex is for protection against STIs	48	91	73	68	2.43	
3.	You take sex advices from your friends	78	95	64	43	2.74	
4.	You go to health personnel for sex advice	17	51	103	109	1.91	
5.	Parents advise you on sex matters	21	53	99	107	1.96	
6.	Friends said open sex is more enjoyable than safe sex	88	97	69	26	2.88	
<b>CLUSTER MEAN</b>						<b>2.52</b>	

Note :< 2.50 means negative, >2.50 means positive

**Table 6:** Chi-Square ( $X^2$ ) Test on Level of Knowledge About Safe Sex

O	E	(E-O)	(E-O) <sup>2</sup>	(E-O) <sup>2</sup> /E = $X^2$
98	94.2	33.8	14.44	0.15
118	129.8	-11.8	139.24	1.07
51	40.0	11.0	121.00	3.03
13	16.0	-3	9.0	0.56
103	94.2	8.8	77.44	0.82
137	129.8	7.2	51.84	0.40
31	40.0	-9.0	81.00	2.03
9	16.0	-7.0	49.00	3.06
101	34.2	6.8	46.24	0.49
152	129.8	22.2	492.84	3.40
21	40.0	-19.0	361.00	9.03
6	16.0	-10.0	100.00	6.25
113	94.2	18.8	353.44	3.75
151	129.8	21.2	449.44	3.46
13	40.0	-27.0	729.00	18.23
3	16.0	-13.0	169.00	10.56
56	94.2	-38.2	1459.24	15.49
91	129.8	-38.8	1505.44	11.60
84	40.0	44	1936.00	48.40
49	16.0	33	1089.00	68.06
<b>Total</b>				<b>209.81</b>

The calculated  $X^2=209.81$

The tabulated  $X^2 = 25.00$

Since the Chi-square ( $X^2$ ) test (calculated) =209.81 is greater than the tabulated value=25.00. There is therefore no statistical evidence to accept the null hypothesis ( $H_0$ ). This means that the students of college of medical sciences have good knowledge on safe sex.

choice of safe sex among the students.

## DISCUSSION OF FINDINGS

### Knowledge of students of College of Medical Science on safer sex

The responses as presented in table 2 showed that most

of the students had adequate knowledge on safe sex. From the 2 above, all the items in the table have mean scores above 2.50. The cluster mean of 3.55 shows that students of college of medical sciences have adequate knowledge on safe sex. The findings of this study is supported by that of Colleen, Margaret, Sally, Daniel and Joyce (2017) whose study on factors associated with use of safer sex practices among college freshmen found that the participants had good knowledge of safer sex but do

**Table 7:** Chi-Square ( $X^2$ ) Test on Level of Practice of Safe Sex

O	E	(E-O)	(E-O) <sup>2</sup>	(E-O) <sup>2</sup> /E = $X^2$
87	74.4	12.6	158.76	2.13
92	93.0	-1	1	0.01
49	67.4	-18.4	338.56	5.02
52	45.2	6.8	46.24	1.02
53	74.4	-21.4	457.96	6.16
73	93.0	-20.0	400.00	4.30
98	67.4	30.6	936.36	13.89
56	45.2	10.8	116.64	2.58
103	74.4	28.6	817.96	10.99
136	93.0	43.0	1849.00	19.88
28	67.4	-93.4	152.36	23.03
13	45.2	-32.2	1036.84	22.94
42	74.4	-32.4	1049.76	14.11
61	93.0	-32.0	1024.00	11.00
93	67.4	25.6	655.36	9.72
84	45.2	38.8	1505.44	33.31
87	74.4	12.6	158.76	2.13
103	93.0	10	100.00	1.08
67	67.4	-0.4	0.16	0.03
21	45.2	-24.2	585.64	12.96
<b>Total</b>				<b>196.30</b>

The calculated  $X^2=196.30$

The tabulated  $X^2 = 20.00$

Since the Chi-square ( $X^2$ ) test (calculated) =196.30 is greater than the tabulated value =20.00. There is therefore no statistical evidence to accept the null hypothesis ( $H_0$ ). This means that some of the students of college of medical sciences practice safe sex

not practice it. The findings of this study however differ from that of Amit et al (2014); Atef, Max, Ehab and Remon (2014) whose studies revealed participants especially the female lacked basic knowledge about sexuality and related concepts, and that average scores on safe sex sexual behaviours were low respectively. This discrepancy could be due to the difference in educational background of the participants. As students of college of medical sciences, it is expected that they should have more knowledge about sexuality in comparison to students from other faculties.

#### Practice of safe sex among students of College of Medical Sciences

From table 3 above, most of the items in the table have mean scores below 2.50. The cluster mean of 2.64 showed that even though some of the student of college

of medical sciences practice safe sex, majority do not practice it. This finding is supported by that of Collen, Margaret, Sally, Daniel and Joyce (2017) whose study on safer sex practices among college freshmen found that the participants have good knowledge on safer sex but do not practice it. The findings are also supported by Colins and Jane-Francis (2016) whose similar study found unsafe, risky sex behavior among the participants.

#### Source of information on safe sex among students of College of Medical Sciences

Table 2 showed that 60% of the respondents heard about safe sex first through friends while 34% have had discussion with their parents/guardian on safe sex/sex education. Of those who had sex education from parents/guardian 63% was on the need to wait for sex until marriage to avoid STIs and unwanted pregnancy

**Table 8:** Chi-Square ( $\chi^2$ ) Test on Source of Information on Safe Sex

O	E	(E-O)	(E-O) <sup>2</sup>	(E-O) <sup>2</sup> /E = $\chi^2$
69	61.7	7.3	53.29	0.86
104	87.0	17.0	289.00	3.32
58	73.5	-15.5	240.25	3.27
49	57.8	-8.8	77.44	1.34
71	61.7	9.3	86.49	1.40
105	87.0	18.0	324.00	3.72
82	73.5	8.5	72.25	0.98
22	57.8	-35.8	1281.64	22.17
87	61.7	25.3	640.09	10.37
125	87.0	38.0	1444.00	16.60
41	73.5	-32.5	1056.25	14.37
27	57.8	-30.8	948.64	16.41
29	61.7	-32.7	1069.29	17.33
33	87.0	-54.0	2916.00	33.52
107	73.5	33.5	1122.25	15.27
111	57.8	53.2	2830.24	48.97
31	61.7	-30.7	942.49	15.28
42	87.0	45.0	2025.00	23.28
88	73.5	14.5	210.25	2.86
119	57.8	61.2	3745.44	64.80
83	61.7	21.3	453.69	7.35
113	87.0	26.0	676.00	7.77
65	73.5	-8.5	72.25	0.92
19	57.8	-38.8	1505.44	26.05
<b>Total</b>				<b>358.21</b>

The calculated  $\chi^2=358.21$

The tabulated  $\chi^2 = 28.87$

Since the Chi-square ( $\chi^2$ ) test (calculated) =358.21 is greater than the tabulated value =28.87 There is therefore no statistical evidence to reject the null hypothesis ( $H_0$ ). This means that the source of information of the students of college of medical sciences has a relation to their practice of safe sex.

while 37% was on the need to stick to one partner to minimize the risk of contracting STIs. The above response is similar to the findings by Nell H. G. et al (2003) on safe sex related knowledge, attitude, behaviors and intentions among Texas College students which recalled that 86% of the respondents have knowledge about safe sex out of which 75% got their information through friends. This brings to light the importance of sex education by parents on their children in order to give them the right information.

#### **Factors influencing the choice of safer sex on students of College of Medical Sciences**

Response in table 4 showed 59% of the respondents said that what influenced their choice of safe sex was prevention of pregnancy and avoidance of STIs. This result is similar to findings of National Council on family

relations (2004) on attitudes of Midwestern high school students towards AIDS and safe sex using 297 students where the result showed that 75% of the respondents were not using protective measure, and those that used it were to prevent pregnancy.

The response is also similar to the findings by Alice Prince and Amy L. B. (1998) on sexual behaviour and safer sex practices of college students at a Midwestern Commuter University using a student sample of 1,919, 72% of the respondents said that the leading reason for consistent practice of safe sex was fear of STI (HIV).

#### **Implications for nursing**

From the result of the study, it is obvious that majority of students of college of medical sciences have knowledge on safer sex practice, but do not practice it. The study will help health personnel see the need of joining hands in

**Table 9:** Chi-Square ( $X^2$ ) Test on Factors Influencing Choice of Safe Sex

O	E	(E-O)	(E-O) <sup>2</sup>	(E-O) <sup>2</sup> /E = $X^2$
121	62.2	58.8	3457.44	55.59
97	80.7	16.7	265.69	3.29
54	77.0	-23	529.00	6.57
8	60.2	-52.2	2724.84	45.26
48	62.2	-14.2	201.64	3.24
91	80.7	10.7	106.09	1.31
73	77.0	-4.0	16.00	0.21
68	60.2	78	60.84	1.01
78	62.2	15.8	249.64	4.01
95	80.7	14.3	204.49	2.53
64	77.0	-13.0	169.00	2.19
43	60.2	-17.2	295.84	4.94
17	62.2	-45.2	2043.04	32.85
51	80.0	-29.7	882.09	10.93
103	77.7	26.0	676.00	8.78
109	60.2	48.8	2381.44	39.55
21	62.2	-41.2	1697.44	27.29
53	80.7	-27.7	767.29	9.51
99	77.0	52.0	484.00	6.29
107	60.2	46.8	2190.24	36.38
88	62.2	25.8	665.64	10.70
97	80.7	16.3	265.69	3.29
69	77.0	-8.0	64.0	0.93
26	60.2	-34.2	1169.64	19.43
				<b>336.24</b>

The calculated  $X^2=336.24$

The tabulated  $X^2 = 28.87$

Since the Chi-square ( $X^2$ ) test (calculated) =336.24 is greater than the tabulated value =28.87 There is therefore no statistical evidence to accept the null hypothesis ( $H_0$ ). This means that there are factors influencing the choice of safe sex among the students of college of medical sciences.

educating students while in their clinical area on the need to practice consistently safer sex especially in this era of STIs such as HIV/AIDS. The finding of this study will also help health workers plan health talks or organize programmes aimed at educating the youths especially on the need for consistent practice of safe sex.

## CONCLUSION

Unsafe sex is a problem affecting everybody, both youths, young and old, and the society at large. Thus, parents/guardians, health personnel, teachers and lecturers have a greater role to play in educating the

youths especially on the need for consistent practice of safe sex. The purpose of this study was to determine the knowledge and practice of safe sex among University of Maiduguri College students, where do they get their information on safe sex and to find out what are the factors influencing their choice of safer sex. Some researchers have studies on related topics and these were reviewed during the study. The data collected was analyzed using tables of percentage. The findings showed that majority of the student of college of medical sciences have knowledge on safe sex but do not always practice it and of those who practice it avoidance of STIs and pregnancy were the leading factors. The study also revealed that majority of the respondents got their



information on safe sex through friends as against parents.

## RECOMMENDATIONS

Based on the findings of the study, the following recommendations are made:

1. Parents/guardian should put serious effort in adequately educating their children about the importance of safe sex practice.
2. Government should make education on practice of safe sex a must in our primary, secondary and tertiary institutions.
3. Health personnel should from time to time organize workshops or programmes aimed at educating the youths on the importance of safe sex practice.

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