



Sexual Abuse among Female Undergraduates in Tertiary Institutions in IMO State, Southeast Nigeria: Prevalence, Pattern and Determinants

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Abstract

Introduction: Sexual abuse is a global public health problem that cuts across social class, cultures, tribes etc. and has permeated the fabrics of tertiary institutions and many work places as long as humans have reasons to interact. **Aim:** To determine the prevalence, pattern and determinants of sexual abuse among undergraduates in tertiary institutions in Imo State, Nigeria. **Methodology:** This study was a descriptive, cross sectional survey of 600 female students in tertiary institutions in Imo State Nigeria. They were selected using the multistage sampling technique and data were collected using a pretested, semi-structural and self-administered questionnaire and analyzed using a computer soft-ware (EPI INFO version 3.3.2). Descriptive statistics was presented using summary indices, frequency tables and percentages. Associations between variables were done using the chi-square and logistic regression. A p-value of less than 0.05 was considered significant. **Results:** The mean age of the respondents was 21.7 + 3.2 years. The current and life-time prevalence of sexual abuse among the respondents was 15.2% and 34% respectively and the commonest form of sexual abuse experienced was founding/grabbing of sensitive body parts (52.5%). Factors found to influence current occurrence of sexual abuse among the students were; age ($p = 0.010$), tribe ($p = 0.008$), marital status ($p < 0.001$), type of student in secondary school attended ($p = 0.001$), faculty of study ($p = 0$), year in school ($p < 0.0001$), persons currently shared room with ($p < 0.0001$) and level of knowledge about sexual abuse ($p = 0.007$). **Conclusion:** The prevalence of abuse as revealed in this study was high. There is need to develop appropriated prevention strategies by the universities to curb this menace against our women.

Subject Areas

Education, Sports Science

Keywords

Sexual Abuse, Prevalence, Pattern, Determinants, Female, Tertiary Institutions, Imo State

1. Introduction

Gender-based violence against women, which is a public health problem, has been acknowledged worldwide as a violation of basic human rights. An increasing amount of research highlights the health burdens, intergenerational effects, and demographic consequences of such violence [1] [2]. The World Health Organization defines such violence as “the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, or deprivation” [3]. Sexual abuse which is a form of such violence also referred to as molestation, is the forcing of undesired sexual behavior by one person upon another. When that force is immediate, of short duration, or infrequent, it is called sexual assault [4]. American Psychological Association (APA) defined sexual abuse as an unwanted sexual activity with perpetrators using force, making threats or taking advantage of victims notable to give consent [5]. Sexual abuse may take many forms and vary in terms of frequency, duration, invasiveness of the acts involved, and the use of force or coercion [6]. The term sexual abuse also covers any behavior by an adult towards a child to stimulate either the adult or the child sexually [7]. Both sexes are affected, though most of the cases occur among females, especially female children and adolescents. Contrary to myth that most perpetrators are strangers, wide spread research has revealed that most of the assailants are usually intimate partners, friends and someone within the family. Males perpetrate the majority (80% - 95%) of sexual abuse, though there are certainly some cases in which female offenders victimize male or female children [5] [8] [9] [10] [11]. Sexual abuse or harassment is a global issue that cuts across, social class, cultures, tribes etc., and has permeated the fabrics of tertiary institutions, and many work places as long as human have reasons to interact [12] [13]. The actual prevalence of sexual abuse/violence is unknown as a result of gross under-reporting even though it has been reported as the fastest growing crime in many parts of the world [14] [15]. However, in a WHO Multi-country survey, the life-time prevalence of sexual partner violence reported by women, aged 15 - 49 years range from 6% in Japan to 59% in Ethiopia, with rates in the majority of cases falling between 10% and 50% [16] [17]. Studies have shown that 1 in 4 women may have experienced sexual violence by an intimate partner and up to a third of

adolescent girls reported their experience as being forced [18] [19] [20]. Almost 1 in 5 women has been sexually abused by a man at some time in her life [14]. In a 2011 survey of high students in US, 11.8% of girls and 4.5% of boys from grades 9 - 12 reported that they were forced to have sexual intercourse at some time in their lives [21], while a study of undergraduate women also in the US revealed that 19% of them experienced attempted or completed sexual assault since entering college [22]. In Africa the prevalence was generally high and varies between countries; it was 16% in Cameroun, 23% in Sierra Leone, 34.4% in Ethiopia, 49% in Ghana, 65.6% in Zimbabwe and 67% in Botswana [23]-[28]. In Nigeria, reports also vary from the different regions of the country. A study from a university in the South eastern part of the country reported 36.7% [29], studies from three South-south universities reported; 51.7% [30], 46.7% [31] and 18.4% [32] respectively while lower figures were reported from two institutions in Northern Nigeria (13.8% and 22.2%) [33] [34]. Some of the predisposing factors and determinants of sexual abuse/violence reported in previous studies were; age, sex, marital status of female, socioeconomic status of women and poverty, educational status of women, occupation, living in arrangement, orphan status, type of family, current parents, marital status, alcohol consumption, drug use, previous experience of rape or sexual abuse, multiple sexual partners, younger age at coitarche, history of forced coitarche, coitarche with relatives and unknown persons, year of study and living status of student and being a college or university student among others [29] [31] [33]-[41]. Studies have shown that sexual abuse/violence have negative impacts on the physical, social and mental health of the victim [31] [36] [41]. Some of the consequences include reproductive health problems like unwanted pregnancy, sexually transmitted diseases/HIV etc., all forms of injuries, depression, anxiety, social isolation, loss of self-esteem, distrust of others, substance abuse, post-traumatic disorder, disability and even death [31] [42] [43] [44]. The problem of sexual abuse against female undergraduates in our tertiary institutions has remained largely unaddressed, it prevents this students from attaining their maximum intellectual, emotional and educational potentials [31]. It is a psychological threat to a conducive learning environment [30] [31]. Various forms of sexual abuse has been reported to occur among undergraduates in university setting which include rape (attempted or completed), unwanted sexual advances, sexual harassment, demanding sex in-return for favor, sexual abuse of mentally or physically disabled people, pornography and internet sexual abuse, fondling and grabbing of sensitive body parts among others [30] [31]. Despite the problems caused by sexual violence in our environment, majority of the cases were not reported, primarily because of cultural issues and patriarchal nature of our society with male dominance [30] [31] [40]. This has led to rising cases of abuse especially in our universities, where even reported cases has not been give appropriate attention and the culprit move freely thereby worsening the state of the abused females.

Therefore our study aim is to assess the prevalence, pattern and determinants of sexual abuse among females in tertiary institutions in Imo State with a view of informing policy makers and the public of the burden of sexual abuse and how this can be greatly reduced and save our women from its long term effects. These study findings will help to reveal the magnitude of sexual abuse, the prevalent patterns of sexual abuse and the main perpetrators of this senseless act in our tertiary institutions in Imo state, Nigeria. Also the short and long term health and mental consequences of sexual abuse will be revealed which will in turn guide our policy makers in developing appropriate policies that will help curb this menace in our institutions of higher learning.

2. Methodology

2.1. Study Area

Imo State is one of the 36 States of Nigeria in the South Eastern Region of the country. It has a total population of about 3.93 million people, comprising more males than females (2.03 million and 1.9 million people respectively) and an annual growth rate of about 3.0%. The majority of the people living in the State are of Igbo tribe extraction and the state has one the highest literacy rate in the country of over 95%. Important educational institutions in the state include; Imo State University, Federal University of Technology, Eastern Palm University, Alvan Ikoku Federal College of Education, Federal Polytechnic, Nekede, Imo State Polytechnic, School of Nursing and Health Sciences, African Institute of Science and Technology, Seat of Wisdom Seminary School among others.

2.2. Study Population and Design

The study population comprised female undergraduate students of the selected institutions in Owerri Imo state. This is a descriptive cross sectional study on the prevalence, pattern and determinants of sexual abuse among female students in tertiary institutions in Imo State, South East, Nigeria.

2.3. Inclusion and Exclusion Criteria

1) Inclusion: Only female students of the selected institutions were studied whether they were on part time or full-time basis were enrolled and studied

2) Exclusion criteria: All visitors to the institution were excluded no matter their status. All male students, lecturers and staff of the institution were excluded for the survey.

2.4. Sample Size Determination

Using the Cochran sample size formula for cross sectional studies in populations greater than 10,000 people and the prevalence of sexual abuse in a closely related study from Nigeria, with a prevalence of 46.7% [31], and applying the formula below, the minimum sample size required for the study was 366 students.

$$n = Z^2 Pq/d^{245}$$

where n is the minimum sample size, Z = standard normal deviate set at 95% significance level ≈ 1.96 , p = the prevalence of life-time abuse from a previous study = 46.7%, $q = 1 - p$, d = the degree of accuracy set at 0.05. But a sample size of 600 students were enrolled and studied to cover for attrition.

2.5. Sampling Technique

The study was carried out using the multistage sampling technique.

STAGE 1: This involved the stratification of the institutions into two categories; category A comprised Universities while category B comprised other higher institutions excluding universities and using simple random sampling by balloting one institution was selected from each category. Three Hundred students each was studied in both institutions.

STAGE 11: This involved selection of the Faculties and Departments to be studied. This was done using proportionate simple random sampling by balloting based on population size of the selected Faculties and Departments.

STAGE 111: This involves the selection of study participants. This was done using cluster sampling technique. The classes studied were grouped into clusters from 100 - 600 level. And one cluster from each class was selected using simple random sampling. All selected clusters were studied.

2.6. Data Collection and Analysis

Data was collected using a pretested, semi-structured, self-administered questionnaire. The questionnaire contained three sections; Section A: Socio demographic characteristics of respondents, Section B: Awareness and knowledge about sexual abuse, Section C: Prevalence and experience of sexual abuse among students. Quantitative data collected were cleaned and validated manually, while a computer software package (EPI INFO version 3.3.2) was used for data entry and analysis. Frequencies and percentages of relevant variables were generated, bivariate analysis conducted using Chi-square and logistic regression to test associations between variables. For the purpose of this study, knowledge of respondents about sexual abuse was scored using five awareness questions, each question assigned scores 0 - 5 with a maximum total score of 25 for all the five questions. The score was graded as poor if the respondent scored 0% - 49% of the total, fair if the respondent scored 50% - 69% of the total and high/good knowledge if the respondents scored $\geq 70\%$ of the total score. A p-value < 0.05 was considered statistically significant.

2.7. Ethical Approval

Ethical approval was gotten from the Faculty of Clinical Medicine, Madonna University Nigeria, before proceeding to the study. Approvals were gotten from the relevant university authorities and verbal consent was obtained from all participants after full explanation of the purpose of the study before proceeding to the interview. The research was conducted in line with laid down procedures at

Helsinki (1964) in use of human subjects.

3. Result

3.1. Socio-Demographic Characteristics of Respondents

The mean age of respondents was 21.7 ± 3.2 years and the majority of the undergraduates studied were singles (87%). A higher proportion of them attended private secondary schools 241 (40.2%), that were mainly situated in the urban areas (66.7%). Majority of them attended mixed schools 356 (59.3%), were day students only, (60.7%) and were in the faculty of Arts/Education, (61.7%). Most of the students were above 100 level, (93.5%), of which majority of them reside off campus (53.5%), share room with someone (80.5%) and many of those who share room with someone do that with their female friends 295 (61.1%). Most of the respondents were sponsored in school by family members (95.8%) and were of Igbo extraction, (92.5%). A higher proportion of them were Catholics (48.7%) (**Table 1** and **Table 2**).

3.2. Awareness and Knowledge about Domestic Violence

Most of the respondents, (81.8%) have heard about sexual abuse and the common sources of information were from; television, (61.1%), newspaper, (53.8%), friends, (53.0%), and radio (51.9%). The most common definition of sexual abuse known was sexual act without consent (89.2%), and common forms of sexual abuse mentioned were; Fondling/grabbing of private body parts (86.4%), rape (66.8%) and exposure to pornography (46.4%). Common victims of sexual abuse mentioned were; children, (74.1%), females, (69.0%) and singles, (57.2%). Majority of the respondents (96.3%) mentioned females as the genders most affected. Teacher/lecturers (72.3%), intimate partners (44.2%) were the common perpetrators of abuse mentioned. Commonest place that abuse takes place was in secret corners (71.1%), followed closely by school/office (67.4%) and clubs (58.7%). Transmission of STI (77.8%) was the commonest consequence of abuse mentioned. A higher proportion of the students had poor knowledge about sexual abuse, (47.0%). The commonest factor leading to sexual abuse suggested by respondents was ignorance, 214 (14.4%) followed by financial problem, 196 (13.2%) and indecent dressing, 158 (10.6%). The commonest preventive measures to stop sexual abuse suggested by respondents were self-control 336 (17.3%) followed by stopping of lonely visits 225 (11.6%), punishment for offenders 215 (11.1%), and avoidance of bad company 185 (9.5%) (**Table 3**).

3.3. Prevalence and Pattern of Sexual Abuse

About one-third (34%) of the students had experienced sexual abuse in their life-time with majority of them, (54.9%) experiencing it more than once in their life-time. The major forms of sexual abuse ever experienced were; fondling/grabbing of sensitive body parts/kissing, (52.5%), rape, (19.1%) and sex for favor, (13.2%). The commonest scene of occurrence of life-time sexual abuse

Table 1. Sociodemographic characteristics of respondents.

VARIABLE	FREQUENCY	PERCENTAGE
AGE GROUP		
<20	230	38.3
21 - 25	306	51.0
>26	64	9.7
Total	600	100
MARITAL STATUS		
Single	522	87.0
Ever married	78	13.0
Total	600	100
TYPE OF SECONDARY SCHOOL ATTENDED		
Public	239	39.8
Private	241	40.2
Missions	120	20.0
Total	600	100
LOCATION OF SECONDARY SCHOOL ATTENDED		
Urban	400	66.7
Rural	200	33.3
Total	600	100
FORM OF SECONDARY SCHOOL ATTENDED		
Girls only	244	40.7
Mixed school	356	59.3
Total	600	100
TYPE OF STUDENT IN SECONDARY SCHOOL		
Boarding student only	176	29.3
Day student only	364	60.7
Both	60	10.0
Total	600	100
FACULTY OF STUDY		
Art/Education	370	61.7
Social sciences/Sciences	150	25.0
Health sciences	80	13.3
Total	600	100
LEVEL		
100	39	6.5
200	118	19.7
300	246	41.0
>400	197	32.9
Total	600	100
RESIDENCE IN CURRENT SCHOOL		
In-school hostel	155	25.8
Off campus hostel	321	53.5
Family house	124	20.7
Total	600	100
SHARING ROOM WITH SOMEONE		
Yes	483	80.5
No	117	19.5
Total	600	100

Continued

PERSON SHARED ROOM WITH (n = 483)		
Female friend	295	61.1
Boyfriend	70	14.5
Relative	118	24.4
Total	483	100
SPONSORSHIP IN SCHOOL		
Non-self	575	95.8
Self	25	4.2
Total	600	100
RELIGION		
Catholic	292	48.7
Pentecostal	179	29.8
Orthodox	122	20.3
ISLAM	7	1.2
Total	600	100
TRIBE		
Igbo	555	92.5
Non-Igbo	45	7.5
Total	600	100

reported was home of perpetrators, (72.6%). The common circumstances that lead to the abuse were; visiting the house of the perpetrator, (62.7%) and violence/force, (34.8%). Current experience of sexual abuse among the students was 15.2% and the commonest form of sexual abuse experienced was fondling/grabbing of sensitive body parts/kissing, (59.3%) followed by rape, (40.7%) and sex for favor, (29.6%). The common perpetrators of current sexual abuse were; casual partners, (57.1%), teachers/lecturers/boss, (51.7%) and intimate partner, (33.0%). The commonest place of occurrence is the home of the perpetrator (68.1%) followed by office, (58.3%). Visiting of the perpetrator, (56%) was the highest circumstances leading to abuse followed by violence/force, (47.3%). The commonest consequence of abuse mentioned was emotional problem, (57.8%) followed by psychological problems, (33.8%) (Table 4).

Factors found to be significantly associated with life-time experience of sexual abuse were; tribe of respondent, ($X^2 = 8.103$, $p = 0.004$), type of secondary school attended, ($X^2 = 10.432$, $p = 0.001$), type of student in secondary school attended, ($X^2 = 11.812$, $p = 0.001$), faculty of study, ($X^2 = 41.147$, $p = 0$), level/year in school, ($X^2 = 7.321$, $p = 0.007$), persons shared room with, ($X^2 = 44.813$, $p = 0$), and level of knowledge about sexual abuse, ($X^2 = 15.454$, $p < 0.001$). Students who were non-Igbos, (OR: 2.38; 1.29 - 4.39), attended private secondary schools, (OR: 1.57; 1.08 - 2.29), were day students in secondary schools attended, (OR: 2.19; 1.21 - 3.97), currently studying in Faculty of Health Sciences, (OR: 12.19; 6.64 - 22.39) and at 100 level of their study, (OR: 2.41; 1.25 - 4.63) were more likely to have experienced sexual abuse in their life-time than others. On the other hand students who attended mission secondary schools, (OR: 0.59; 0.36 - 0.99), shared room currently with their boyfriend, (OR: 0.09; 0.04 - 0.20) and

Table 2. Awareness and knowledge of respondents about sexual abuse.

VARIABLE	FREQUENCY	PERCENTAGE
AWARE ABOUT SEXUAL ABUSE (n = 600)		
Yes	491	81.8
No	109	18.2
Total	600	100
**SOURCE OF INFORMATION (n = 491)		
Television	300	61.1
Newspaper	264	53.8
Friends	260	53.0
Radio	255	51.9
School	232	47.3
Internet	223	45.4
Parents/relatives	179	36.5
Seminar/workshop	161	32.8
Health personnel	156	31.8
Books	155	31.6
Church	145	29.5
Market	114	23.2
Billboards	106	21.6
Government agencies	94	19.1
Non-Governmental Organization	89	18.1
**MEANING OF SEXUAL ABUSE (n = 491)		
Sexual act without consent	438	89.2
Rape	287	58.5
Verbal excuse of sexual nature	156	31.8
Sexual act by family member	153	31.2
Sexual act for favor	152	31.0
Sexual act by relatives/friends	94	19.1
**FORMS OF SEXUAL ABUSE KNOWN (n = 491)		
Fondling/Grabbling of sensitive body parts	424	86.4
Rape	328	66.8
Exposure to pornography	228	46.4
Sex for favor	154	31.4
Incest	153	31.2
Degrading sexual comments	138	28.1
Oral contact with genitalia	135	27.5
Penetration with digits	117	23.8
**VICTIMS OF SEXUAL ABUSE (n = 491)		
Children	364	74.1
Females	336	69.0
Singles	281	57.2
Married women	214	43.6
Elderly women	186	37.9
Males	180	36.7
GENDER MOST AFFECTED (n = 600)		
Female	578	96.3
Male	22	3.7
Total	600	100

Continued

**COMMON PERPETRATORS OF ABUSE (n = 491)		
Teachers/Lecturers	355	72.3
Intimate partner	217	44.2
Casual partners	208	42.4
Family members/Friends	192	39.1
Colleagues	171	34.8
Spiritual leaders	131	26.7
Parents	127	25.9
COMMON PLACE OF ABUSE (n = 491)		
Secret corners	349	71.1
School/office	331	67.4
Clubs	288	58.7
Home	282	57.4
Hotels	254	51.7
Public places	211	43.0
**FACTORS LEADING TO SEXUAL ABUSE (n = 491)		
Ignorance	214	14.4
Financial problems	196	13.2
Indecent dressing	158	10.6
Poor family upbringing	130	8.8
Lack of self-control	128	8.6
Social problems	128	8.3
Pornography	116	7.8
Peer group pressure	103	6.9
For favor done	97	6.1
Love for pleasure	80	5.4
Internet/social media	75	5.1
Personal greed	63	4.2
Others ¹	25	1.7
**HOW TO PREVENT OF SEXUAL ABUSE (n = 491)		
Self-control	336	68.4
Avoid lonely visitations	225	45.8
Punish offenders	215	43.8
Avoid bad company	185	37.7
Adequate security	170	34.6
Strict regulations	154	31.4
Use of law enforcements agents	152	31.0
Empowerment of women	130	26.5
Information dissemination	122	24.9
Proper psychiatric examinations	120	24.4
Proper monitoring of event	106	21.6
**CONSEQUENCES MENTIONED (n = 491)		
Sexually transmitted infections	382	77.8
Emotional problems	338	67.2
Psychological problems	315	64.2
Physical injuries	304	61.9
Social problems	200	40.7
Morbidities	176	35.8
Mortalities	169	34.4
LEVEL OF KNOWLEDGE (n = 600)		
Poor (0% - 49%)	282	47.0
Moderate (50% - 79%)	243	40.5
Good (≤80%)	75	12.5
Total	600	100

**= Multiple Response Applicable, Others¹ = war/crisis, family problems.

Table 3. Prevalence and pattern of sexual abuse.

VARIABLE	FREQUENCY	PERCENTAGE
EVER BEEN ABUSED (n = 600)		
Yes	204	34.0
No	396	66.0
Total	600	100
FREQUENCY OF ABUSE (n = 204)		
Once	94	46.1
2 - 4 times	69	33.8
Many times	41	20.1
Total	204	100
**FORMS OF SEXUAL ABUSE EXPERIENCED (n = 204)		
Fondling/grabbing of sensitive body parts/kissing	107	52.5
Rape	39	19.1
Sex for favor	27	13.2
Degrading sexual comments	26	12.8
Anal intercourse	17	8.3
Exposure to pornography	14	6.8
Penetration with digits	14	6.8
Incest	12	5.8
Oral sex	9	4.4
**PLACES OF OCCURRENCE (n = 204)		
Home of perpetrator	148	72.6
Office	54	26.5
Hostel	33	16.2
Road	32	15.7
Hotel	31	15.2
Car	23	11.3
Classroom	21	10.3
Home of victim/Bush/party place	7	3.4
**CIRCUMSTANCES LEADING TO ABUSE (n = 204)		
Visitation to home of perpetrator	137	67.2
Violence/force	71	34.8
Seeking favor	44	21.6
Indecent dressing	38	18.6
Drunkenness	25	12.3
Drugs/Displacement/Crises	6	2.9
CURRENT ABUSE IN LAST ONE YEAR (n = 600)		
Yes	91	15.2
No	509	84.8
Total	600	100.0
**FORM OF ABUSE CURRENTLY EXPERIENCED (n = 91)		
Fondling/Grabbing of body parts/kissing	56	61.5
Rape	37	40.7
Sex for favor	27	29.6
Degrading sexual comment	26	28.6
Exposure to pornography/internet sex	14	15.4
Incest	12	13.2
Penetration with digits	10	11.0
Oral sex	9	9.9

Continued

**MAIN PERPETRATORS (n = 91)		
Casual partner	52	57.1
Teacher/Lecturer/Boss	47	51.7
Intimate partner	30	33.0
Family member	16	17.6
Friend	14	15.4
Spiritual leader	12	13.2
Colleague	12	13.2
Stranger	5	5.5
**PLACES OF ABUSE (n = 91)		
Home of perpetrator	63	69.2
Office	53	58.2
Hostel	31	36.3
Road	22	24.2
Car	18	19.8
Classroom	14	15.4
Hotel	12	13.2
Victims home/bush/party place	3	3.3
**CIRCUMSTANCES LEADING TO ABUSE (n = 91)		
Visitation	51	56.0
Violence/force	43	47.3
Seeking favor	22	24.1
Indecent dressing	22	24.1
Drunkenness	19	9.9
Drugs/Displacement/Crises	4	4.4
**CONSEQUENCES OF THE ABUSE (n = 204)		
Emotional problems	118	57.8
Psychological problems	69	33.8
Had STI	49	24.0
Physical injury	38	18.6
Mental problems	27	13.2
Social problems	26	12.7
UTI/other morbidities	16	7.8
Infertility	8	3.9

**= Multiple response.

had good knowledge about sexual abuse, (OR: 0.24; 0.12 - 0.51) were the least likely to have experienced sexual abuse in their life-time (**Table 5**).

Factors found to be significantly associated with current experience of sexual abuse among the students were; age of the respondents, ($X^2 = 6.630$, $p = 0.010$), tribe of respondents, ($X^2 = 7.120$, $p = 0.008$), marital status, ($X^2 = 14.290$, $p < 0.001$), type of student in secondary school attended, ($X^2 = 10.746$, $p = 0.001$), Faculty of study, ($X^2 = 38.005$, $p = 0$), level/year in school, ($X^2 = 22.205$, $p < 0.0001$), persons currently shared room with, ($X^2 = 19.520$, $p < 0.0001$), and level of knowledge about sexual abuse, ($X^2 = 7.170$, $p = 0.007$). Students who were non-Igbos, (OR: 2.48; 1.25 - 4.94), ever married, (OR: 2.79; 1.61 - 4.84), currently studying in Faculty of Health Sciences, (OR: 8.09; 4.60 - 14.22) and in 100 level of their study, (OR: 4.61; 2.32 - 9.18) were more likely to have currently experienced sexual abuse than others. On the other hand students within the age

Table 4. Determinants of life-time experience of sexual abuse among students.

VARIABLES	EVER EXPERIENCE OF SEXUAL ABUSE			STATISTICS/(X ²) P-VALUE	OR (95% CI)
	YES (%)	NO (%)	TOTAL (%)		
AGE GROUP					
<20	67 (29.1)	163 (70.9)	230 (100)	0.042 p = 0.838	1.00
21 - 25	111 (36.3)	195 (63.7)	306 (100)		1.37 (0.96 - 2.00)
>26	26 (40.6)	38 (59.4)	64 (100)		1.67 (0.94 - 2.96)
Total	204 (34.0)	396 (66.0)	600 (100)		
TRIBE					
Igbo	180 (32.4)	375 (67.6)	555 (100)	8.103 p = 0.004*	1.00
Non-Igbo	24 (53.3)	21 (46.7)	45 (100)		2.38* (1.29 - 4.39)
Total	204 (34.0)	396 (66.0)	600 (100)		
RELIGION					
Catholic	98 (33.6)	194 (66.4)	292 (100)	0.074 p = 0.785	1.00
Orthodox	42 (34.4)	80 (65.6)	122 (100)		1.04 (0.67 - 1.62)
Pentecostal	64 (35.8)	115 (64.2)	179 (100)		1.10 (0.75 - 1.63)
Others ¹	0 (0.0)	7 (100.0)	7 (100)		Na
Total	204 (34.0)	396 (66.0)	600 (100)		
MARITAL STATUS					
Single	177 (33.9)	345 (66.1)	522 (100)	0.015 p = 0.902	0.97 (0.59 - 1.60)
Ever married	27 (34.6)	51 (65.4)	78 (100)		1.00
Total	204 (34.0)	396 (66.0)	600 (100)		
TYPE OF SECONDARY SCHOOL ATTENDED					
Public	76 (31.8)	163 (68.2)	239 (100)	10.432 p = 0.001*	1.00
Private	102 (42.3)	139 (57.7)	241 (100)		1.57* (1.08 - 2.29)
Missionary	26 (21.7)	94 (78.3)	120 (100)		0.59* (0.36 - 0.99)
Total	204 (34.0)	396 (66.0)	600 (100)		
LOCATION OF SECONDARY SCHOOL ATTENDED					
Urban	129 (32.3)	271 (67.7)	400 (100)	1.638 p = 0.200	1.00
Rural	75 (37.5)	125 (62.5)	200 (100)		1.26 (0.88 - 1.80)
Total	204 (34.0)	396 (66.0)	600 (100)		
FORM OF SECONDARY SCHOOL ATTENDED					
Girls only	86 (35.2)	158 (64.8)	244 (100)	0.285 p = 0.594	1.00
Mixed	118 (33.1)	238 (66.9)	356 (100)		1.10 (0.78 - 1.55)
Total	204 (34.0)	396 (66.0)	600 (100)		
TYPE OF STUDENT IN SECONDARY SCHOOL ATTENDED					
Boarding	63 (35.8)	113 (42.9)	176 (100)	11.812 p = 0.001	1.00
Day student	108 (29.7)	256 (44.0)	364 (100)		0.76 (0.52 - 1.12)
Mixed	33 (55.0)	27 (13.1)	60 (100)		2.19* (1.21 - 3.97)
Total	204 (34.0)	396 (66.0)	600 (100)		
FACULTY					
Arts/Education	97 (26.2)	273 (73.8)	370 (100)	41.147 p = 0*	1.00
Social/Sciences	42 (28.0)	108 (72.0)	150 (100)		1.10 (0.72 - 1.67)
Health Sciences	65 (81.3)	15 (18.7)	80 (100)		12.19* (6.64 - 22.39)
Total	204 (34.0)	396 (66.0)	600 (100)		
LEVEL IN SCHOOL					
100	21 (53.8)	18 (46.2)	39 (100)	7.321 p = 0.007*	2.41* (1.25 - 4.63)
≥200	183 (32.6)	378 (67.4)	561 (100)		1.00
Total	204 (34.0)	396 (100)	600 (100)		

Continued

RESIDENCE IN SCHOOL						
School hostel	47 (30.3)	108 (69.7)	155 (100)			1.00
Off campus	118 (36.8)	203 (63.2)	321 (100)	2.237		1.34 (0.89 - 2.01)
Family house	39 (31.5)	85 (68.5)	124 (100)	p = 0.135		1.05 (0.63 - 1.76)
Total	204 (34.0)	396 (66.0)	600 (100)			
SHARING ROOM						
Yes	169 (35.0)	314 (65.0)	483 (100)	1.081		1.00
No	35 (29.9)	82 (70.1)	117 (100)	p = 298		0.79 (0.51 - 1.23)
Total	204 (34.0)	396 (66.0)	600 (100)			
PERSON SHARED ROOM WITH n=483						
Female friend	111 (47.4)	123 (52.6)	234 (100)			1.00
Boy friend	7 (7.4)	87 (92.6)	94 (100)	44.813		0.09* (0.04 - 0.20)
Relative	51 (32.9)	104 (67.1)	155 (100)	p = 0*		0.54* (0.36 - 0.83)
TOTAL	169 (35.0)	314 (65.0)	483 (100)			
SOLE SPONSOR IN SCHOOL						
Self	13 (52.0)	12 (48.0)	25 (100)	3.767		1.00
Non-self	191 (33.2)	384 (66.8)	575 (100)	p = 0.052		0.46 (0.21 - 1.03)
Total	204 (34.0)	396 (66.0)	600 (100)			
LEVEL OF KNOWLEDGE						
Poor	101 (35.8)	181 (64.2)	282 (100)			1.00
Moderate	94 (38.7)	149 (61.3)	243 (100)	15.454		1.13 (0.79 - 1.61)
Good	9 (12.0)	66 (88.0)	75 (100)	p < 0.001		0.24* (0.12 - 0.51)
Total	204 (34.0)	396 (66.0)	600 (100)			

*= statistically significant.

group of 21 - 25 years of age, (OR: 0.44; 0.22 - 0.86) who were day students during their secondary school education, (OR: 0.43; 0.27 - 0.70), currently shared room with their boyfriend, (OR: 0.12; 0.04 - 0.38) and had good knowledge about sexual abuse, (OR: 0.21; 0.06 - 0.71) were the least likely to have currently experienced sexual abuse in the last one year than their counterparts.

4. Discussion

The mean age of the respondents in this survey was 21.7 ± 3.2 years which was similar to mean ages found in others studies conducted among students in tertiary institutions in Nigeria [10] [12] [29] [30] [31] [33] [34]. This is expected in university setting where majority of them are within the age range of youth and young adults. A higher proportion of the students (81.8%) were aware of sexual abuse; though a small proportion of them (12.5%) had good knowledge about sexual abuse and the common sources of information were from the mass media, friends, school, internet, parents and relatives. This level of awareness was similar to that reported among female students in Malawi [45] but lower than figures reported from Osun State, Nigeria (97%) [12] and from India, (88.1%) [46]. The common sources of information were similar to what was reported in some of the reviewed studies [46] [47]. This high awareness and low level of knowledge found in this study is worrisome which puts to question the quality

Table 5. Determinants of current sexual abuse among students.

VARIABLES	CURRENT EXPERIENCE OF SEXUAL ABUSE			STATISTICS (χ^2)	
	YES (%)	NO (%)	TOTAL (%)	P-VALUE	OR (95% CI)
AGE GROUP					
<20	40 (17.4)	190 (82.6)	230 (100)	6.630 p = 0.010*	0.69 (0.35 - 1.35)
21 - 25	36 (11.8)	270 (88.2)	306 (100)		0.44* (0.22 - 0.86)
>26	15 (23.4)	49 (76.6)	64 (100)		1.00
Total	91 (15.2)	509 (84.8)	600 (100)		
TRIBE					
Igbo	78 (14.1)	477 (85.9)	555 (100)	7.120 p = 0.008*	1.00
Non-Igbo	13 (28.9)	32 (71.1)	45 (100)		2.48* (1.25 - 4.94)
Total	91 (15.2)	509 (84.8)	600 (100)		
RELIGION					
Catholic	47 (16.1)	245 (83.9)	292 (100)	0.382 p = 0.536	1.00
Orthodox	20 (16.4)	102 (83.6)	122 (100)		1.02 (0.58 - 1.81)
Pentecostal	24 (13.4)	155 (86.5)	179 (100)		0.81 (0.47 - 1.37)
Islam	0 (0.0)	7 (100.0)	7 (100)		0.0
Total	91 (15.2)	509 (84.8)	600 (100)		
MARITAL STATUS					
Single	68 (13.0)	454 (87.0)	522 (100)	14.290 p < 0.001	1.00
Ever married	23 (29.5)	55 (70.5)	78 (100)		2.79* (1.61 - 4.84)
Total	91 (15.2)	509 (84.8)	600 (100)		
TYPE OF SECONDARY SCHOOL ATTENDED					
Public	40 (16.7)	199 (83.3)	239 (100)	0.062 p = 0.804	1.00
Private	32 (13.3)	209 (86.7)	241 (100)		0.76 (0.46 - 1.26)
Missionary	19 (15.8)	101 (84.2)	120 (100)		0.94 (0.52 - 1.70)
Total	91 (15.2)	509 (84.8)	600 (100)		
LOCATION OF SECONDARY SCHOOL ATTENDED					
Urban	54 (13.5)	346 (86.5)	400 (100)	2.591 p = 0.108	1.00
Rural	37 (18.5)	163 (81.5)	200 (100)		1.45 (0.92 - 2.30)
Total	91 (15.2)	509 (84.8)	600 (100)		
FORM OF SECONDARY SCHOOL					
Girls only	44 (18.0)	200 (82.0)	244 (100)	2.626 p = 0.105	1.00
Mixed school	47 (13.2)	309 (86.8)	356 (100)		1.45 (0.92 - 2.26)
Total	91 (15.2)	509 (84.8)	600 (100)		
TYPE OF STUDENT IN SECONDARY SCHOOL ATTENDED					
Boarding	39 (22.2)	137 (77.8)	176 (100)	10.746 p = 0.001*	1.00
Day student	40 (11.0)	324 (89.0)	364 (100)		0.43* (0.27 - 0.70)
Mixed	12 (20.0)	48 (80.0)	60 (100)		0.87 (0.43 - 1.82)
Total	91 (15.2)	509 (84.8)	600 (100)		
FACULTY					
Art/Education	34 (9.2)	336 (90.8)	370 (100)	38.005 p = 0*	1.00
Social/Sciences	21 (14.0)	129 (86.0)	150 (100)		1.61 (0.90 - 2.88)
Health sciences	36 (45.0)	44 (55.0)	80 (100)		8.09* (4.60 - 14.22)
Total	91 (15.2)	509 (84.8)	600 (100)		
LEVEL IN SCHOOL					
100	15 (38.5)	24 (61.5)	39 (100)	22.205 p < 0.0001	4.61* (2.32 - 9.18)
≥200	76 (13.5)	485 (86.5)	561 (100)		1.00
Total	91 (15.2)	509 (84.8)	600 (100)		

Continued

RESIDENCE IN CURRENT SCHOOL						
School hostel	28 (18.1)	127 (81.9)	155 (100)			1.00
Off campus	46 (14.3)	275 (85.7)	321 (100)	0.242		0.76 (0.45 - 1.27)
Family house	17 (13.7)	107 (86.3)	124 (100)	p = 0.623		0.72 (0.37 - 1.39)
Total	91 (15.2)	509 (84.8)	600 (100)			
SHARING ROOM						
Yes	75 (15.5)	408 (84.5)	483 (100)	0.251		1.00
No	16 (13.7)	101 (86.3)	117 (100)	p = 0.616		0.86 (0.48 - 1.54)
Total	91 (15.2)	509 (84.8)	600 (100)			
PERSONS SHARED WITH (n= 483)						
Female friend	52 (22.2)	182 (69.3)	234 (100)			1.00
Boyfriend	3 (3.2)	91 (96.8)	94 (100)	19.520		0.12* (0.04 - 0.38)
Relative	20 (12.9)	135 (87.1)	155 (100)	p < 0.0001		0.52* (0.30 - 0.91)
Total	75 (15.5)	408 (84.5)	483 (100)			
SOLE SPONSOR IN SCHOOL						
SELF	2 (8.0)	23 (92.0)	25 (100)	1.041		1.00
Non-self	89 (15.4)	486 (84.5)	575 (100)	p = 0.308		2.11 (0.49 - 9.09)
Total	91 (15.2)	509 (84.8)	600 (100)			
LEVEL OF KNOWLEDGE						
Poor	46 (16.3)	236 (83.7)	282 (100)			1.00
Moderate	42 (17.2)	201 (82.7)	243 (100)	7.170		1.07 (0.68 - 1.70)
Good	3 (4.0)	72 (96.0)	75 (100)	p = 0.007*		0.21* (0.06 - 0.71)
Total	91 (15.2)	509 (84.8)	600 (100)			

* = statistically significant.

of information they heard about sexual abuse and who was the person that taught them about it. The mass media which is the commonest source of information in this study will not be able to always give an in-depth information on most health related matters and therefore should not usually be a reliable source when it comes to appropriate knowledge about health issues. The prevalence of life-time experience of sexual abuse in this study was 34.0%. This figure was within the range reported in WHO multi-county life-time prevalence of sexual partners violence among women aged 15 - 49 years, (6% to 59%) [16] [17]. It was also comparable to the prevalence rate reported in a university from the same region of the country, (36.7%) [29] but studies from two other regions of the country; South-South region, (51.7% and 46.7%) [30] [31] and South West, (58%) [48] reported higher prevalence rates. Nevertheless, lower figures were reported among students from universities in Northern region of the country, (13.8% and 22.2%) [33] [34]. This variation in life-time prevalence rates from different studies could be due to the differences that might have existed in the methodologies used, definition criteria applied, cultural and religious issues and level of awareness about sexual abuse. The prevalence of current sexual abuse in the last one year preceding study was 15.2%. This was lower than the figure reported among female students in Ethiopia which stood at 24.4% [41]. The commonest form of sexual abuse reported in this study was fondling/ grabbing of sensitive body parts which was followed by rape. This was similar to what was

reported in a study among female university students in the south-south region of the country [31], and also from Malawi where they reported touching of breast in a sexual manner as the most common form [47], but differs with the report among female students from Calabar, Nigeria which reported unwanted sexual remarks and advances as the commonest form [30]. Majority of the perpetrators were men known to the victims which were mostly casual partners, teachers/lectures or intimate partners and this act occurs mostly during visitations at the home or office of the perpetrators. The study in Port-Harcourt, South-south, Nigeria [31], also revealed that most of the perpetrators were known to the victims but reported intimate partners as the commonest perpetrators while our study reported casual partners. Other studies also reported similar pattern with slight differences, with a study in Calabar, Nigeria [30] implicating lectures as one of the common perpetrators while the study in Kano, Nigeria, did not implicate lectures as major perpetrators.

Factors found to influence current occurrence of sexual abuse in this study were; age, tribe, marital status, type of student in secondary school attended, faculty of study, persons currently shared rooms with, year in school and level of knowledge about sexual abuse. Those within the ages of 21 - 25 years were least likely to have been currently abused when compared to others. A study among Ethiopia female students [41] reported a similar pattern which showed that students 20 - 24 years of age were about 2 times more likely to have been currently abused than their counterparts in other age group. Nevertheless on the contrary Ogbonnaya *et al.*, reported higher prevalence of sexual assaults in students greater than 30 years of age [29]. Also a special report from the US Department of Justice revealed that females aged 18 - 24 had higher rates of rape and sexual assaults than females in other age groups [49]. This could be explained by the fact that at this age group many young adults engage in risky behaviours that could expose them to sexual violence and abuse. Married non-Igbo female students were more likely to have been currently abused than singles Igbo girls. This was similar to what was reported in Ebonyi [29] but differs with that reported from the North East Nigeria which showed that singles were more abused than their married counterparts [33]. Yet some other studies did not show any association between marital associated and occurrence of sexual abuse [38] [50]. This higher prevalence among the married as reported in this survey could have been contributed to by their partners who could be living together with them, irrespective of the challenges they face in school with other students. Female students in the Faculty of Health Sciences, who shared room with a female friend, lived in a boarding school during secondary education and being a 100 level student were more likely to have been currently abused than their counterparts. The study in Port-Harcourt [31] reported a similar higher prevalence among students in their first year of study though a study from the North Eastern part of the country showed no association [33]. This could be due to the fact that most students in their first year, are usually young and naive and can be usually deceived by the perpetrators with little or no resistance. Another study in

Nigeria [37], also reported some important family determinants of sexual abuse which were; parents not living together, not living with parents, family type and current parents marital status, which is similar to finding in our study in which those who shared room with a female friend outside family care and those who lived in school hostels during their secondary school days were more likely to have been currently abused than others. This finding of protective role of the family is not new in this part of the world where family ideals are kept and transferred from generation to generation, and must be obeyed by all members especially the young people. Knowledge about sexual abuse was found to influence the occurrence of reported sexual abuse with those that have high knowledge about sexual abuse being more likely to have been currently abused than those with low knowledge. This was not consistent with what was reported in Malawi⁴⁵ which showed that there was no association between knowledge and occurrence of sexual abuse. It is only those who have in-depth knowledge about sexual abuse that could ascertain when it occurred and what really constitutes an abuse. This could be the reason why female students in Health Science were more likely to report abuse in this study than others. The common health consequences of sexual abuse reported by those abused were emotional problems, psychological problems and transmission of sexually transmitted infections (STI) among others. This was similar to what was reported from other studies which were largely mental health problems like depression and guilty, physical injury and transmission of STI [30] [33].

5. Conclusion

In conclusion our study revealed a high prevalence of sexual abuse among the female students and a sizable proportion of them experienced rape. We found that younger age group, women in their first year of study, women with low knowledge about sexual abuse and those living with female friends outside family care were more likely to have been currently sexually abused. Thus there is need to institute preventive strategies targeted at those at risk of being abused and also to teach reproductive health issues in their general courses. Universities should establish youth friendly centers to tackle specialized reproductive health problems associated with the youths. There is need to implement already existing laws to help manage issues of sexual abuse in our universities and also develop new policies where necessary to curb this public health menace that is capable of affecting the full development of our women.

Limitation

The study information was self-reported and could be subject to some form of bias, thus caution should be taken in generalizing the findings of this study.

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Author's Contributions

We hereby declare that all the authors contributed to this research.

Conflicting Interest

We hereby declare no conflicting interest.

Source of Finding

There was no external source of finding.

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Appendix

Questionnaire Design

Section A—Socio Demographic Characteristics of Respondents

- 1) Age as at last birthday _____years
- 2) Marital Status (a) single [] (b) married [] (c) separated [] (d) divorced [] (e) widowed [] (f) living with partner []
- 3) Type of secondary school attended (a) public/government school [] (b) private school []
- 4) Location of secondary school attended (a) Urban area [] (b) Rural area []
- 5) Form of secondary school attended (a) girls only school [] (b) mixed secondary school
- 6) Type of residence in secondary school attended (a) lived in the boarding school [] (b) was a day student [] (c) mixed both as a student []
- 7) Faculty/department
- 8) Level in school (a) 100 level [] (b) 200 level [] (c) 300 level [] (d) 400 level [] (e) 500 level [] (f) 600 level []
- 9) Place of residence (a) school hostel [] (b) off campus [] (c) living with family members []
 - 10a) Do you share room with anybody yes [] No []
 - 10b) If yes, who are you sharing g with (a) female friend [] (b) boyfriend [] (c) relative [] (d) Others please specify
- 11) Who is your sole sponsor in school? (a) Both parents [] (b) father only [] (c) mother only [] (d) relative/family member [] (e) self [] (f) community/scholarship [] (g) others please specify
- 12) Religion (a) catholic [] (b) orthodox (Anglican, Methodist, Baptist) [] (c) Pentecostal [] (d) Islam [] (e) others please specify
- 13) Tribe? (a) Igbo [] (b) Yoruba [] (c) Hausa [] (d) Others

Section B—Awareness and Knowledge of Respondents about Sexual Abuse

- 14a) Have you heard about sexual abuse (a) yes [] (b) No []
- 14b) If yes what is your source (multiple response applied) (a) radio [] (b) television [] (c) newspaper [] (d) school [] (e) friends [] (f) parents [] (g) health personnel [] (h) church [] (i) market [] (j) seminars/workshop [] (k) books [] (l) bill board [] (m) non-governmental organization [] (n) government agencies [] (o) internet [] (p) others please specify
- 15) What do you understand as sexual abuse? (a) Sexual act without consent [] (b) sexual act for favour [] (c) verbal abuse of sexual nature [] (d) sexual act by family member/relative []
- 16) What are the forms of sexual abuse that you know? (Multiple response applied) (a) fondling/grabbing of sensitive body part/unwanted touching [] (b) sex for favour [] (c) incest [] (d) exposure to pornography [] (e) degrading sexual comments [] (f) oral contacts with genitalia [] (g) penetration with digits [] (h) rape [] others please specify

17) Who can be a victim (multiple response applicable) (a) children (b) married (c) singles (d) elderly

18) What gender is commonly affected? (a) Male (b) female

19) Who are common perpetrators (multiple response applicable) (a) parents (b) teachers/lecturers (c) intimate partner (d) colleagues (e) casual partner (f) family / parents friends (g) spiritual leaders (h) others please specify

20) Where do you think sexual abuse occurs (multiple response applicable) (a) the home (b) the schools/offices (c) the public places (d) the hotels (e) the clubs (f) others please specify

21) What are the consequences of sexual abuse (multiple response applicable) (a) physical injuries (b) a sexually transmitted infection (c) emotional problems (d) infertility (e) psychological problem (f) social problem/stigma (g) morbidities (h) dissociation (i) mortality (j) others please specify

Section C—Prevalence and Pattern of Sexual Abuse Experienced

22a) Have you ever been sexually abused before? (a) Yes (b) No

22b) If yes, how many times? (a) Once (b) twice (c) three times (d) four times (e) Many

23) How were you abused?

24) Where did it occur? (Multiple response applicable) (a) Home of perpetrator (b) home of office (c) office (d) classroom (e) hostel (f) road (g) in a car (h) hotel (i) others please specify.....

25) What circumstances led to the event (multiple response applicable) (a) Violence/force (b) visiting (c) drunk (d) seeking favour (e) indecent dressing (f) other please specify.....

26a) Have you been sexually abused in the last one year? (a) Yes (b) No

26b) If yes, what form of sexual abuse have you had? (Multiple response applicable) (a) fondling/grabbing of sensitive body part/unwanted touching (b) vaginal/anal intercourse (c) sex for favour (d) incest (e) exposure to pornography (f) degrading sexual comments (g) oral contact with genitalia (h) penetration with digits (i) rape (j) other please specify.....

27) Who were the persons that sexually abused you (Multiple response applicable) (a) My parents (b) teachers/lecturers/boss (c) intimate partner (d) colleagues (e) casual partner (f) family/parent's friends (g) Spiritual leaders (h) others please specify.....

28) Place the abused took place? a) Home of perpetrator (b) home of office (c) office (d) classroom (e) hostel (f) road (g) in a car (h) hotel (i) others please specify.....

29) Circumstances of the abuse (Multiple response applicable) (a) Violence/force (b) visiting (c) drunk (d) seeking favour (e) indecent dressing (f) other please specify.....

30) Problems that the abuse cause you (multiple response applicable) (a) emo-

tional [] (b) physical injury [] (c) transmission STI [] (d) mental problems []
(e) psychological problem [] (f) Social problem (g) morbidities [] (h) other
please specify.....