ORIGINAL ARTICLE

Knowledge and Risks Perception of Sexually Transmitted Diseases Among Secondary School Students in Bauchi Metropolis, Northeast, Nigeria

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ABSTRACT

Background: Sexually transmitted diseases (STDs) are diseases that spread mainly through sexual activities with some exceptions which can spread via other routes. These diseases frequently go undetected and untreated with consequent serious reproductive morbidity and mortality. This study determined the knowledge and risks perception of STDs among secondary school students in Bauchi metropolis, Northeastern Nigeria.
Methods: A cross-sectional study was carried out among 332 senior secondary school students in Bauchi metropolis. A semi-structured questionnaire was used to collect data on knowledge and risks perception on STDs and analyzed using Statistical product and service solutions (SPSS version 23.0). Alpha level of significance was set at 0.05. **Results**: The mean age and standard deviation of the respondents was 16.25±1.714, more than half (59%) of the respondents were males and 51.2% the respondents were from senior secondary school (SSS1). The participants were mainly Hausa (66%) and Muslims (95%). The proportion of students that previously tested positive for STDs was 20.2% and the level of good knowledge and good perception were 82.5% and 62.3% of STDs respectively among the students. Factors associated with previously testing positive for STDs among secondary school students were: gender, category of school, nature of the school and the care/supervisor of the respondents. While gender, tribes and nature of the school were also factors associated with knowledge of STDs, the significant predictor of knowledge of STDs was tribe [OR =2.8, CI (1.22 – 6.43)]. **Conclusion:** There was good knowledge, good perception and low proportion of students that previously tested positive for STDs in Bauchi metropolis and there was association between knowledge with tribe, gender, and other factors. Adolescent sex education and strengthening of screening services may further reduce the risks of STDs in addition to detecting students with STDs.

Keywords: Knowledge, STDs, perception, adolescents, Bauchi

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Access this article online

QuickResponse Code

website:www.bornomedicaljournal.com

DOI: 10.31173/bomj.bomj_2434_22

Date Submitted 12th December, 2024
Date Accepted 20th March, 2025
Date Published online 30th June, 2025

Introduction

Diseases that are spread primarily through sexual activities are referred to as sexually transmitted diseases (STDs). Some STDs, like gonorrhoea, syphilis, and Chlamydia, can be cured with the right treatment. Others, such as HIV, herpes simplex, HPV, and hepatitis B, are not curable but can be managed with medication.[1] Sexually transmitted diseases like HIV, pose a significant threat to the reproductive health of individuals who are sexually active. These infections can have both immediate and long-lasting consequences, including cancer, pelvic inflammatory disease, ectopic pregnancies, infertility, and potentially harmful pregnancy outcomes such as premature delivery and low birth weight.[2]

Adolescents make up a significant portion (over 31%) of Nigeria's population, and this age is typically defined as those between ages 10 and 19 years old.[3] this transitional stage between childhood and adulthood presents both opportunities and challenges. While known for their desire for independence, curiosity, and exploration, adolescents are also susceptible to various health risks, including those related to sexual and reproductive health.[3]

Adolescence is a diverse stage marked by varying sexual behaviors, exposure to a greater risk of contracting STDs, limited access to healthcare information, and poverty.[4] Adolescents in Nigeria are also exposed to cultural and social circumstances, which may have an impact on their utilization and availability for reproductive health treatments[5]

Each year, an estimated 333 million new cases of curable STDs occur worldwide with highest rates among 20-24year old, followed by 15–19-year-old. One in 20 young people is believed to contract a STD each year, excluding HIV and other viral infections.[6] Only a minority of adolescents have access to any acceptable and affordable STD services.[6] It is estimated that 2500 new infections of STDs occur each day among adolescents, 79% of which occur in the sub-Saharan Africa.[7] STDs have constituted a silent epidemic and a major health problem.[7] It is reported that in Nigeria, adolescents start dating at a young age and participate in high-risk sexual behaviors like unprotected sex and multiple partners, which put them at risk for STDs, unintended pregnancies, and illegal abortions, among other things.[8]

The high rates of sexual activity and STDs among adolescents in Nigeria have been attributed to a number of factors, including the country's declining socioeconomic status, the eroding of traditional African values, early menarche, a growing age difference between menarche and marriage, infrequent and ineffective use of barrier contraceptives, and a declining value placed on virginity.[9] In Africa, people with STDs are more likely to visit pharmacies, patent medicine stores, and traditional healers, in addition, teens and young adults often self-medicate in order to avoid embarrassment and shame in standard health facilities.[9] The entire STD prevention plan includes investments in rapid point-of-care diagnostic testing, antibiotic treatment, vaccine research, and other related treatments, in addition to case management, counseling, and behavioral interventions.[10]

This study identified the determinants of STDs among secondary school students in Bauchi metropolis, Northern-Nigeria, as this was not studied in the past.

Methods

Study Area

Study was conducted in Bauchi metropolis, Bauchi, Nigeria. According to the State Ministry of Education, there were about 24 Government Secondary Schools within Bauchi metropolis, with 7 female only secondary schools, 7 male only secondary schools and 10 mixed secondary schools. The private secondary schools are said to be numerous but only 468 are registered under the Ministry.

Study Design

The study was a school-based descriptive cross-sectional study.

Study Population

The study population included adolescents studying in secondary schools within Bauchi metropolis and excluded those who were sick or absent during the study.

Sample size

The minimum sample size was determined using this formula $n= Z^2pq/d^2$ Where, n = minimum required sample size, Z is the standard normal deviant at 95% confidence interval = 1.96 and P is the prevalence of sexually transmitted diseases/infection in a study done in southern Nigeria was 27% =0.27.[10] d= is the maximum sample error allowed (level of precision) at 95% confidence limit =5 %(0.05) and to account for non-responses the sample size was 334.

Sampling technique

Multi-stage sampling technique was used as follows:

Stage 1: Selection of wards; of the 8 wards within the metropolis, 25% were selected using simple random sampling by balloting.

Stage 2: Selection of school; from the total schools within each ward, 25% of schools were selected from each of the selected wards.

Stage 3: Selection of respondents, systematic sampling was used to select the respondents from each of the schools. Sampling frame was the number of all senior student of each selected school. Sample fraction was calculated as ratio of the sample size and sample frame and the sample interval was the inverse of sample fraction; proportionate allocation was made based on the number of participants in each school. School register was used to select respondents.

The first respondents was selected using simple random sampling by balloting and subsequent participants were selected by adding the first sampled

respondents to the sample interval and the process continued until the minimum sample size was exhausted.

Study Instrument and data collection method

Semi-structured, self-administered questionnaire was used to collect information from selected respondents. The questionnaire comprised four sections as follows:

Section A: Socio-demographic variables,

Section B: Prevalence of sexually transmitted diseases,

Section C: Knowledge of sexually transmitted diseases and

Section D: Perception of sexually transmitted diseases.

Data management

Dependent variables were: prevalence, knowledge and perception while independent variables were: Age, religion, tribe, sex, and relationship status. The items under knowledge were measured using a 2 points scale, awarded from 0-1**, t**otal score of 50% and above was considered good knowledge while less than 50% was considered poor knowledge. The items under perception were measured using a 5 points likert scale, total score of 50% and above was awarded good perception while less than 50% was considered poor knowledge

Data analysis

Data obtained was appropriately sorted, coded, categorized, entered into excel spread sheet, cleaned and validated to ensure accuracy and consistency. Data was analyzed using statistical product and service solutions (SPSS) software version 23.0.

Univariate analysis: This included the use of percentages, proportions, and charts for qualitative variables such as sex, tribe, religion, relationship status, and class. A quantitative variable such as age was summarized using mean and standard deviation (S.D).

Bivariate analysis: Pearson's Chi-square test or Fischer's exact was used to test for association of independent and dependent variables such as age, sex, relationship status, with prevalence, knowledge and perception of sexually transmitted diseases with alpha level of significance set at 0.05.

Multivariate analysis: Logistic regression was used to determine the predictors of knowledge of sexually transmitted diseases among secondary school students in Bauchi metropolis with p-value of <0.05 considered as statistically significant.

Ethical considerations

An ethical clearance was obtained from the State Ministry of Health, health research ethics committee and permission from the State Ministry of Education and Helsinki declaration was respected throughout the study.

Results

The study was conducted from April to November, 2024. The socio-demographic characteristics of the study population are shown in table I.

Table 1: Socio-demographic characteristics of the respondents

Variables	Frequency (n=332)	Percentage (%)
Age (years)		
11-13	12	3.6
14-16	183	55.1
≥17	137	41.3
Mean ± SD		
16.25±1.7		
Tribes		
Fulani	83	25.0
Hausa	219	66.0
Igbo	4	1.2
Yoruba	11	3.3
Others	15	4.5
Care/supervision		
Both parents	253	76.2
Father	25	7.5
Guardian	17	5.1
Mother	34	10.2
Others	3	0.9
Parents' monthly income		
<50,000 naira	77	23.2
More than 100,000 naira	179	53.9
50,000-100,000 naira	76	22.9

Majority of the respondents were within the age bracket of 14-16 years (55.1%) with mean age and standard deviation of 16.25±1.75 years, and more than half of the respondents were Hausa 219 (66.0%), Fulani 83 (25.0%), Yoruba 11 (3.3%) Igbo 4 (1.2%) and other tribes 15 (4.5%).

Class of study of the respondents is shown in figure 1, below.

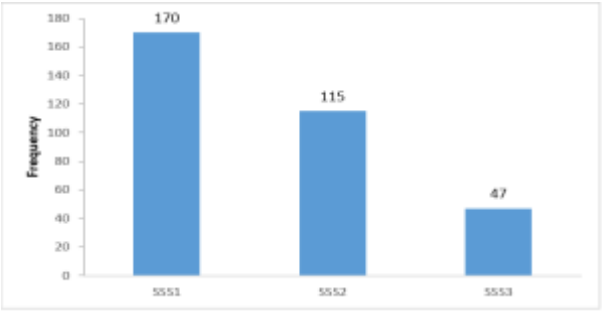

Figure 1: Showing secondary school class of the participants

The proportion of students that tested positive for STDs in the past was 67 (20.2%) and 265 (79.8%) never tasted positive for STDs. The respondents were predominantly from mixed school 229 (69%), all boys' school had 103 (31%)

Table 2: Responses on sexually transmitted diseases among secondary school students in Bauchi metropolis

STDs tested positive	Frequency (n = 332)	Percent (%)
HIV/AIDs	32	47.1%
Syphilis	7	10.2%
Gonorrhea	14	20.6%
Chlamydia	15	22.1%
How did you treat it?		
Antibiotics	33	48.5%
Herbal medication	21	30.9%
Anti-retroviral therapy	14	20.6%
Where were you treated?		
Hospital	43	63.2%
Pharmacy	1	1.5%
Laboratory	1	1.5%
Patent medicine store	3	4.4%
Herbal healer home	20	29.4%
Have you experienced sexual intercourse?		
Yes	80	24.1%
No	252	75.9%
If yes, at what age did you start having sexual intercourse?		
≤14 years	23	28.7%
15-19 years	57	71.3%
Did you experience genital ulcers?		

Yes	59	17.8%
No	273	82.2%
Did you experience abnormal vaginal/penile discharge?		
Yes	73	22%
No	259	78%
Did you experience vaginal/penile itching?		
Yes	80	24.1%
No	252	75.9%

Table 3: Levels of knowledge and perception of sexually transmitted diseases among secondary school students in Bauchi metropolis

Grading	**Frequency (n=332)**	**Percentage (%)**
Good knowledge	274	82.5
Poor knowledge	58	17.5
Good perception	207	62.3
Poor perception	125	37.7

Table 3 above shows that majority of the respondents (82.5 and 62.3%) have good knowledge and perception of Sexually Transmitted Diseases, while (17.5 and 37.7%) have poor perception of Sexually Transmitted Diseases.

Table 4: Factors associated with testing positive for STDs previously among secondary school students in Bauchi metropolis

Variables	Yes	No	χ^2	p-value
Age(years)				
11-13	0	12(100%)		
14-16		148(80.9%)	4.019	0.134
>17	35(19,1%)	105(76.6%0		
	32(23.4%)			
Gender			8.437	**0.004**
Male	50 (25.5%)	146 (74.5%)		
Female	17 (12.5%)	119 (87.5%)		
Class				
SSS1	36(21.2%)	134(78.8%)	3.182	0.204
SSS2	26(22.6%)	89(77.4%)		
SSS3	5(10.6%)	42(89.4%)		
Religion				
Islam	63(19.9%)	254(80.1%)	0.410	0.522
Christianity	4(26.7%)	11(73.3%)		
Tribes				
Fulani	16(19.3%)	67(80.7%)		
Hausa	44(20.1%)	175(79.9%)		
Igbo	2(50%)	2(50%)	3.031	0.553
Yoruba	3(27.3%)	8(72.7%)		
Others	2(13.3%)	13(86.7%)		
Category of school				
Public				
Private	27(12.7%)	185(87.3%)	20.182	**<0.001**
	40(33.3%)	80(66.7%)		
Nature of school				
All boys		67(65%)	20.226	**<0.001**
Mixed	6(35%)	198(86.5%)		
	31(13.5%)			
Family type				
Nuclear	13(15.3%)	72(84.7%)		
			1.694	0.193
Extended	54(21.9%)	193(78.1%)		
Care/supervisor				
Both parents				
	41(16.2%)	212(83.8%)		
Mother				
	8(32%)	17(68%)		
Father			10.510	**0.033**
	6(35.4%)	11(64.7%)		
Guardian				
	11(32.4%)	23(67.6%)		
Others				
	1(33.3%)	2(66.7%)		

Average monthly income of parent				
<50,000	22(28.6%)	55(71.4%)		0.111
50,000-100,000	32(17.9%)	147(82.1%)		
>100,000	13(17.1%)	63(82.9%)	4.401	
Marital status of parent				
Married	5(25%)	15(75%)	0.307	0.569*
Divorced	62(19.9%)	250(80.1%)		

*Fischer's exact test

Gender, category of school, nature of school and care/supervisor were the factors associated with prevalence of sexually transmitted diseases among secondary school in Bauchi metropolis.

Table 5: Factors associated with knowledge of STDs among secondary school students in Bauchi metropolis

Variables	Good (n=274)	Poor (n=58)	χ^2	p-value
Age(years)				
11-13	12 (100%)	0 (0%)		
14-16	152 (83.1%)	31 (16.9%)	3.052	0.217
≥17	110 (80.3)	27 (19.7%)		
Gender				
Male	153 (78.1%)	43 (21.9%)	6.628	**0.010**
Female	121 (89.0%)	15 (11.0%)		
Class				
SSS1	135 (79.4%)	35 (20.6%)	3.835	0.147
SSS2	96 (83.5%)	19 (16.5%)		
SSS3	43 (91.5)	4 (8.5%)		
Religion				
Islam	263 (83.0%)	54 (17.0%)	0.922	0.309*
Christianity	11 (73.3%)	4 (26.7%)		

Tribes				
Fulani	76 (91.6%)	7 (8.4%)		
Hausa	171 (78.1%)	48 (21.9%)	9.613	**0.047**
Igbo	3 (75.0%)	1 (25.0%)		
Yoruba	10 (90.9%)	1 (9.1%)		
Other	14 (93.3%)	1 (6.7%)		
Category of school				
Public	93 (77.5%)	27 (22.5%)	3.298	0.069
Private	181 (85%)	31 (14.6%)		
Nature of school				
All boys	78 (75.7%)	25 (24.3%)	4.792	**0.029**
Mixed	196 (85.6%)	33 (14.4%)		
Family type				
Nuclear	208(84.2%)	39(15.8%)	1.889	0.169
Extended	66(77.6%)	19(22.4%)		
Who do you live with?				
Both parents	212(83.8%)	41(16.2%)		
Mother	30 (88.2%)	4 (11.8%)	7.526	0.111
Father	16 (64.0%)	9 (36.0%)		
Guardian	14 (82.4%)	3 (17.6%)		
Others	2 (66.7%)	1 (33.3%)		
Average monthly income of parent				
<50,000	61 (79.2%)	16 (20.8%)	2.338	0.311
50,000-100,000	60 (78.9%)	16 (21.1%)		
>100,000	153 (85.5%)	26 (14.5%)		
Marital status of parent				
Married	255(81.7%)	57(18.3%)	2.295	0.220
Divorced	19(95.0%)	1(5.0%)		

*Fischer's exact test

Gender, tribes and nature of schools were the factors associated with prevalence of sexually transmitted diseases among secondary school in Bauchi metropolis.

Table 6: Logistic regression showing predictors of knowledge of STDs among secondary school students in Bauchi metropolis

Variables	Odd ratio	95% CI	p-value
Tribes			
Fulani	2.79	1.216-6.433	**0.016**
Others	1		
Gender			
Males	0.517	0.246-1.086	0.082
Females	1		
Nature of school			
All boys	0.749	0.378-1.484	0.407
Mixed	1		

From the table above, tribe of the respondents was significant after subjecting the variables to logistic regression, with Fulani having 2.79 times more odds of having good knowledge of sexually transmitted diseases compared to others.

Table 7: Factors associated with perception towards STDs among secondary school students in Bauchi metropolis

Variables	Good perception (n=207)	Poor perception (n=125)	χ^2	p-value
Age				
11-13	6 (50%)	6 (50%)	1.316	0.518
14-16	118 (64.5%)	65(35.5%)		
≥17	83 (60.6%)	54 (39.4%)		
Gender				
Male	119(60.7%)	77(39.3%)	0.545	0.460
Female	88(64.7%)	48(35.3%)		
Class				
SSS1	111 (65.3%)	59 (34.7%)	2.552	0.279
SSS2	65 (56.5%)	50 (43.5%)		
SSS3	31 (66.0%)	16 (34.0%)		
Religion				
Islam	199 (62.8%)	118 (37.2%)	0.544	0.461
Christianity	8 (53.3%)	7 (46.7%)		

Tribe				
Fulani	54 (65.1%)	29 (34.9%)		
Hausa	132 (60.3%)	87 (39.7%)		
Igbo	3 (75.0%)	1 (25.0%)	1.713	0.788
Yoruba	7 (63.6%)	4 (36.4%)		
Others	11 (73.3%)	4 (26.7%)		
Category of school				
Private	132 (62.3%)	80 (37.7%)	0.002	0.966
Public	75 (62.5%)	45 (37.5%)		
Nature of school				
All boys	67 (65.0%)	36 (35.0%)	0.463	0.496
Mixed	140 (61.1%)	89 (38.9%)		
Family type				
Extended family	46 (54.1%)	39 (45.9%)	3.298	0.069
Nuclear family	161 (65.2%)	86 (34.8%)		
Who do you live with				
Both parents	159 (62.8%)	94 (37.2%)		
Father	19 (76.0%)	6 (24.0%)		
Guardian	9 (52.9%)	8 (47.1%)	4.334	0.363
Mother	19 (55.9%)	15 (44.1%)		
Others	1 (33.3%)	2 (66.7%)		
Parent(s) monthly income				
<50,000naira	46 (59.7%)	31 (40.3%)		
>100,000naira	117 (65.4%)	62 (34.6%)	1.558	0.459
50,000-100,000naira	44 (57.9%)	32 (42.1%)		
Marital status of parents				
Married	195 (62.5%)	117 (37.5%)	0.050	0.823
Divorced	12 (60.0%)	8 (40.0%)		

None of the variable was significantly associated with perception of sexually transmitted diseases among secondary school in Bauchi metropolis.

Discussion

The predominant age group of the respondents was 14-16 years of age, with mean and standard deviation of 16.25±1.714 years. This shows that majority are mid-adolescents and this age is associated with a number of challenges related to the sexual health, as adolescent tend to have intense sex drive and likely to engage in experimental adventures.6 This study is similar to a study conducted in Jos North LGA of Plateau State that showed the mean age of the respondents was 16.2 ±1.6 years with age range of 12-23years.7 In the same study, knowledge was found to be poor in 56% of them.7 This similarity may be due to the fact that both studies were conducted among secondary school students. More than half 196 (59%) of the respondents were males and most the respondents 170 (51.2%) were from Senior secondary school one (SSS1) as compared to the study in Jos north, where the respondents were also predominantly males 202 (61.0%) however with more respondents from SSS2.7 The participants were primarily Hausa 219 (66%) and Muslims 316 (95%) which is in contrast to a similar study done in Lagos State where most were Yoruba 226 (68.0%) and Christians 213 (64.0%) which showed that about two-third of the respondents 218 (65.6%) had good knowledge about sexually transmitted diseases.11,12 The age distribution is in line with the expected age group of secondary school students and the religious and ethnic compositions reflect the characteristics of the catchment population of the community.

From the respondents, 20.2% reported having ever tested positive of at least one sexually transmitted disease, in comparison with a study conducted in Benin city which was slightly higher.13 Reason may be because the study in Benin city was among university students, which is not surprising that they are more exposed to sexual activities as adults in social environment and campus culture after undergoing screening test. Whereas secondary school students tend to have less autonomy and more parental supervision. Among the respondents in this study, less than half had tested positive for HIV/AIDS, 22.1% for chlamydia, 20.6% for gonorrhea and 10.12% for syphilis using blood and swap samples. The most prevalent STDs from the study in Benin city was gonorrhea, with HIV/AIDs being the least (6.5%). Possible explanation to this finding is the difference in geographical locations of the conducted studies. In keeping with the study conducted among university students, where majority used antibiotics for the treatment of STDs after testing positive, followed by herbal mixture and antiretroviral therapy.13 The likely rationale being that the caregiver role of parents/guardians increases hospital utilization for health care needs of their wards. This is contrasts to the study conducted in the university where most of them were treated in pharmacies, with traditional healers' homes being the least. This outcome may be attributed to fear of judgements and avoidance of hospital associated stigma, as pharmacies offer more privacy and less bills. Majority of the respondents in this study reported to have experienced sexual intercourse with the most common ages at onset being the middle to late adolescent age.13

The level of knowledge of STDs among Secondary School Students in Bauchi metropolis was generally found to be good and few had poor knowledge. This finding is in keeping with a study done in Ekiti State, Nigeria, Ghana and Germany.12,14 The finding maybe a direct result of the successful implementation of STDs education programs in schools and other educational settings for adolescents. Similarity in findings may be connected with methodologies used. Contrary to the study in Plateau and Oyo State, Nigeria,7,15 and Tanzania.16 It is plausible that some schools have yet to incorporate the syllabus into their curriculum, or that specific students were absent when the relevant lectures were covered in class. The category of school (public and private) was a factor found to be associated with the level of knowledge of STDs. This study showed that the private school students possessed greater knowledge compared to their public school peers. This may be because public schools may partner with local health organizations, providing access to STDs education resources. Also, public school teachers are more likely to receive comprehensive training on the topic. In contrast to a study done in Jos North, Nigeria,6 furthermore, an association was found between tribe and knowledge, where Fulani were found to have more 2.79 odds of having good knowledge towards sexually transmitted diseases. This finding was found to be statistically significant.

This study revealed that majority of the participants have a good perception about STDs Access to reliable online resources and schools encompassing students from various cultural, ethnic and religious backgrounds may explain the reason for their good

perception of STDs This is in contrast to a study in Oyo state, Nigeria17 and South Africa18,19 were the results revealed poor perception about STDs. Resistance from some communities or parents are potential backlash which may negatively influence the perception of their wards. Cultures also have different perspectives on sexuality which may perpetuate stigma around Sexually Transmitted Diseases, hindering open discussions.

Most of the participants with a response rate of 99.4% in this study, gained information about Sexually Transmitted Diseases from multiple sources, with teachers being the primary source, followed by parents, internet, TV/radio, friends with the least being guardians. Similarly, from a study in Jos North Local Government Area, Plateau State, the main source of information was school, mass/social media, parent/guardians and peers.6 Whereas a total of 334 were sampled in a study conducted in Anambra State, Nigeria, where the findings indicated X (89%) understanding of STIs, with principal information sources being TV/Radio, teachers and then mothers. Another study in South Africa, found that the main sources of information were health care workers, the media, school and friends.19 These studies revealed that teachers and internet were the most influential factors in enhancing students' knowledge about STDs Likely because teachers are equipped to discuss sensitive topics and provide comprehensive education, and online resources offer private and confidential information seeking which are usually current. The minimal parental involvement regarding STDs education plausibly attributed to their knowledge deficits.

Conclusion

There was good knowledge, good perception and low prevalence of STDs among secondary school students in Bauchi metropolis and there were association between knowledge and tribe, gender, category of school, nature of the school and care/supervisor of the students. Tribe was a predictor of knowledge of STDs among the respondents. Strengthening the provision of screening services and health care workers confidentiality would further reduce the prevalence of STDs among the respondents.

Authors' contribution: Contributed equally

Conflict of interest: Nil

References

1. Elom NA, Ede-Marthias UM, Nwimo IO, Ilo CI, Nkwoka JI, Alegu DN, et al. Knowledge of Sexually Transmitted Infections Among Secondary Schools Students in Ebonyi State , Nigeria. Journal of Education and Practice. 2018; 9(32): 24-67.
2. Aral SO. Sexually transmitted diseases: Magnitude, determinants and consequences. International Journal of STD and AIDS. 2001; 12(4):211-215.
3. Habu H, Emmanuel OC, Inuwa A, Dahiru H, Maigari B, Lona N, et al. Awareness and Practice of Prevention of Sexually Transmitted Diseases Among Demonstration Secondary School Students, University of Maiduguri, Borno State. J Heal Educ Res Dev. 2018;6(3):1-6.
4. Kaptanoğlu AF, Süer K, Diktaş H, Hinçal E. Knowledge, attitudes and behaviour towards sexually transmitted diseases in Turkish Cypriot adolescents. Cent Eur J Public Health. 2013;21(1:):54-58.
5. Oyewusi S, Sabo A, Uchenna EA. Assessment of the Awareness Levels on Sexual Transmission Diseases among Secondary School Students in Northern Nigeria. Nurs Health Care Int J. 2022;6(5):1-8.
6. Dehne KL, Riedner G. Sexually transmitted infections among adolescents: The need for adequate health services. Reprod Health Matters. 2001;9(17):170-183.
7. Okoh EO, Banwat ME, Okoh AF, Ogbonna C. Knowledge of Sexually Transmitted Infections Among Senior Secondary School Students in Jos North LGA of Plateau State. Jos Journal of Medicine2020; 1491):1–9.
8. Oluyemi JA, Yinusa MA, Abdullateef R, Sunday A, Kehinde K. Knowledge of Sexually Transmitted Diseases among Secondary School Adolescents in Asa Local Government Area of Kwara State Nigeria. African Sociol Rev / Rev Africaine Sociol. 2015;9(1):63-76.
9. Temin MJ, Okonofua FE, Omorodion FO, Renne EP, Coplan P, Heggenhougen HK, et al. Perceptions of Sexual Behavior and Knowledge about Sexually Transmitted Diseases among Adolescents in Benin City, Nigeria. Int Fam Plan Perspect. 1999;25(4): 186-195.
10. Nzoputam C, Adam VY, Nzoputam O. Knowledge, Prevalence and Factors Associated with Sexually Transmitted Diseases among

Female Students of a Federal University in Southern Nigeria. Venereology. 2022;1(1):81-97.

11. Oluwole EO, Oyekanmi OD, Ogunyemi DO, Osanyin GE. Knowledge, attitude and preventive practices of sexually transmitted infections among unmarried youths in an urban community in Lagos State, Nigeria. African J Prim Heal Care Fam Med. 2020;12(1):e1–e7.
12. Amu EO, Adegun PT. Awareness and Knowledge of Sexually Transmitted Infections among Secondary School Adolescents in Ado Ekiti, South Western Nigeria. J Sex Transm Dis. 2015;2015:1-7.
13. Mansor N, Ahmed N, Rahman HA, Determinants of knowledge on sexually transmitted infections among students in public higher education institutions in Melaka State, Malaysia. PLoS One. 2020;15(10); 16-28.
14. Samkange-Zeeb F, Mikolajczyk RT, Zeeb H. Awareness and knowledge of sexually transmitted diseases among secondary school students in two German cities. J Community Health. 2013;38(2); 293-300.
15. Iyabo AO, Oladeni AA. Factors influencing Sexually Transmitted Diseases Among Selected Secondary School Students in Egbeda Local Government Area. Oyo State, Nigeria. J Community Med Public Heal Reports. 2024;5(4):10-13.
16. Mwambete KD, Mtaturu Z. Knowledge of sexually transmitted diseases among secondary school students in Dar es Salaam, Tanzania. Afr Health Sci. 2006;6(3):165–169.
17. Asuke S, Kurya J, Olusanmi B, Hikon Y, Eseigbe P. Knowledge of sexually transmitted infections and practice of risky sexual behaviours among senior secondary school students in Jos North local government area, Plateau State, Nigeria. PortHarcourt Med J. 2019;13(3): 87-92.
18. Ditshwane B, Mokgatle MM, Oguntibeju OO. Awareness, Utilization and Perception of Sexually Transmitted Infections Services Provided to Out-of-School-Youth in Primary Health Facilities in Tshwane, South Africa. Int J Environ Res Public Health. 2023;20(3):17-38.
19. Bana A, Bhat VG, Godlwana X, Libazi S, Maholwana Y, Marafungana N, et al. Knowledge, attitudes and behaviours of adolescents in relation to STIs, pregnancy, contraceptive utilization and substance abuse in the Mhlakulo region, Eastern cape. South African Fam Pract. 2010;52(2):154–8.

Cite this Article as: Musa A, Abba U, Gaini FM, Mato MN, Bappah MY, Jibril MB. Knowledge and Risks Perception of Sexually Transmitted Diseases among Secondary School Students in Bauchi Metropolis, Northeast, Nigeria. **Bo Med J** 2025; 21 (1):14 -26 **Source of Support**: Nil, **Conflict of Interest**: None declared