Original Article

Assessment of Sexual and Reproductive Health Knowledge of Adolescents in Makurdi, Benue State, Nigeria

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ABSTRACT

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In Nigeria, National data indicates that the age group 15 to 24 years contributes the highest (40%) to all reported new cases of HIV and not much is been done to understand and address adolescent sexual and reproductive health (ASRH) concerns. New evidences are required to design cost effective programs on ASRH. This study was aimed at assessing in-school adolescents' knowledge on SRH and associated factors. The study was a cross sectional Study conducted among 250 adolescents in secondary schools in Makurdi selected through multi-stage sampling technique. Pretested, self-administered questionnaire was used to collect data. Knowledge was assessed via an 18-point knowledge scale and the data was analyzed using the Statistical Package for Social Science (SPSS) version 21 software. The mean age of the respondents was 15.15±1.82 years. More than half of the respondents had good knowledge of ASRH (56.8%) while 43.2% had poor knowledge. The main sources of information on Sexually Transmitted Infections (STI) were Parents (90.8%), School Teacher (82.4%), Friends (35.2%) and Social Media (34.4%). Respondents in the senior classes were more knowledgeable about SRH while age and having a girl/boyfriend affected their knowledge. In conclusion, on the adolescents' knowledge on ASRH, more than half of them had good knowledge, however more measures need to be put in place to reach the adolescent population with poor knowledge which will ultimately help to prevent risky sexual behaviors.

Keywords: Adolescent reproductive health, Knowledge, Sexuality

INTRODUCTION

Sexual and Reproductive health knowledge is a prerequisite for good sexual health and it is a core part in models of human behavior and decision-making, especially when it comes to the ability to take informed protective action.¹ About 1.2 billion people, one in six of the world's population, are adolescents aged 10-19 years. Nearly nine out of ten live in low- and middle-income countries (LMICs) where

access to sexual and reproductive health and social services, jobs, and livelihoods are strained.² Given that the number of adolescents is expected to rise through 2050, achieving the Sustainable Development Goals (SDGs), including for universal health coverage (UHC) requires addressing the needs of this age group especially their knowledge gap.³ As they transition from childhood to adulthood, adolescents undergo a number of physical, emotional and social changes. Studies demonstrate that they are often unprepared for these changes.⁴ For example, substantial numbers of girls in many countries have knowledge gaps and misconceptions about menstruation that cause fear and anxiety and leave them unprepared when they begin menstruating.⁵ Consequently, they often engage in risky sexual behaviors, which increases their susceptibility to HIV and other sexually transmitted infections, some of which cause life-long problems including infertility, if left untreated.

Annually, about 16 million adolescent girls (15-19 years) of age give birth. For many young women, the pregnancy and childbirth are neither planned nor wanted. The complications of pregnancy and childbirth are the leading causes of death among young women in low- and middle-income countries.⁶ Research shows that unsafe abortions remains one of the most neglected problems within sexual and reproductive health worldwide.⁷ The Nigerian Association for the Promotion of Adolescent Health and Development (NAPAHD) has also alerted that in a hospital based research in Nigeria, 80% of patients with abortion complications are adolescents and over 16% of teenage females reported first sexual intercourse by age 15 while 8% of boys at age 15 had also had their first sexual encounters. One in 20 adolescents contracts a sexually transmitted infection each year and half of all cases of HIV infection occurs among people under the age of 25 years.⁸ Regardless of the fact that comprehensive knowledge about HIV had increased, still only around 1 in 3 young men and women aged 15-24 years from 37 countries surveyed between 2011

and 2016 had comprehensive knowledge on how to prevent HIV transmission.⁹ Little wonder why recent estimates put the number of adolescents- aged 10-19 years- living with AIDS to be 160,000. National data also suggests that 40 percent of all reported new cases of HIV occur in young persons aged 15 to 24 which is the highest when compared to other age groups.¹⁰

These critical gaps in knowledge exist among adolescent girls, especially in Africa and Asia, about where to obtain and how to use a range of modern contraceptive methods among other services.¹¹ Adolescents need knowledge and skills to make well informed choices about their lives, learn how to avoid and deal with problems, and know where to seek help if necessary.¹² Consequently, in 2013 health and education ministers and representatives from 20 countries in eastern and southern Africa made a regional commitment to support adolescents' access to sexual and reproductive health services.¹³ In Nigeria, one major objective of the National Strategic Health Development Plan (II) is to scale-up implementation of adolescent sexual and reproductive health education in the school curriculum via implementation of the Family Life Health Education (FLHE) school program in all states of federation, introduction of peer to peer education in school and training students and teachers on sexual and reproductive health.¹⁴ This has suffered some lapses with consequent rise in the incidence of STIs. However, this study was intended to investigate the level of knowledge on Sexual and Reproductive Health among in-school adolescents.

MATERIALS AND METHODS

Study setting

This study was conducted in Makurdi the Benue State capital. The state derives its name from the river Benue which is the second largest river in the country. Makurdi is one of the twenty three Local Government Areas in Benue state with a 2017 projected population estimate of 500,797 out of the 5,741,815 people in the State.¹⁵

The adolescents make up about 16.9% of the total population.¹⁶ It is made up of eleven Wards but also naturally divided by the River Benue into North and South Bank. The official language in Benue State is English with two major tribes Tiv and Idoma. Other tribes include Igede, Etulo and Jukun. The major occupation in the state is farming hence the moniker of the state, 'Food basket of the Nation'. Other occupations include civil service and trading. The predominant religion is Christianity.¹⁶ There are six public secondary schools in Makurdi LGA (List attached as Appendix 1)

Study design

A cross sectional study was carried out within the period of 25th of March to 30th May 2019 which investigated the knowledge regarding sexual and reproductive health among in school adolescents Makurdi LGA of Benue State.

Sample size determination

The sample size was calculated using the appropriate formula by taking the proportion of adolescents that received parent-adolescent sexuality education to be 46.7%.¹⁷ The assumptions of 95% confidence level, 5% error margin, and 10% non-response rate were used to determine the sample size. Accordingly, the total sample size was approximately 250 students each in the control and study group.

Sampling Technique

A multi-stage sampling technique was used to select the students for the study.

Stage 1 (Selection of the LGAs)

The Makurdi LGA used were selected via non probability, purposive sampling technique.

Stage 2 (Selection of the Schools)

Three Secondary Schools were selected out of the six public schools in Makurdi via simple random sampling method (balloting) to achieve the sample size.

Stage 3 (Selection of classes)

Out of the four arms of each class in each school, one was picked by simple random sampling technique (balloting)

Stage 4 (Selection of actual respondents)

A systematic random sampling technique was used. The list of students in the selected schools was used as the sampling frame. A sampling interval of 2 was derived by dividing the number of students in the classes (between 35-40 per class) by the proportionate sample size for each school. Seventeen students were picked from each of the five classes in the three schools to make up the sample size population of 250 students. The parents of the selected students were used for the study.

Sampling Interval =

$\frac{\text{Size of population in each class (35)}}{\text{Size of the sample needed (17)}}$

Therefore, Sample Interval = 2

Data collection

An interviewer-administered questionnaire was used to obtain information on adolescent sexual and reproductive health knowledge. The adolescents were asked questions to determine their knowledge on reproductive health. The students also had two sessions of Focused Group Discussion (within the school premises) for males and females separately comprising of 8-12 discussants in each group selected from the study population.

The questionnaire was pretested using 10% of the sample size in a secondary school in Makurdi LGA with similar characteristics as the schools to be used for the study. This was to help validate the questionnaire.

Questionnaire administration

A courtesy visit was made to the Principal of the schools. The students were selected from the 5 classes

of JSS1-SS2 in each of the selected schools (SS 3 students were left out because of their exams). Data were collected with the aid of the research assistants. Also FGD sessions were held within the school premises.

Statistical analysis

Data was analyzed electronically using statistical package for social sciences software (SPSS) version 21, and presented as tables and charts.

The knowledge grading

Each correctly answered question on knowledge (questions 1-6 with stem questions on the part A section of adolescent questionnaire), earned a score of 1 point. The maximum score on the knowledge was 18 points (which was scored as 100%) and all wrong answers were scored zero. Scores of 9 points (which is 50%) and above were graded as good knowledge on reproductive health, while poor knowledge means a score of less than 9 points.¹⁸

The results from FGDs were presented in narrative essay form. In analyzing, the transcripts of the discussions were transcribed verbatim and translated according to Manual Content Analysis. The contents were analyzed according to the themes discussed.

Ethical consideration

Ethical clearance was obtained from Benue State University Teaching Hospital (BSUTH) Health Research Ethics Committee (HREC) and the Benue State Teaching Service Board. Informed consent was obtained from each school authority before enrolment into the study. For those above 18 years, their consent was sought. The data collected from this study was anonymously done by removing name, addresses and other direct identifiers. Participation was voluntary.

RESULTS

Majority of the adolescents were between 10-15 years

(60.0%) with a mean age of 15 ± 2 years. There were more females than male participants (68.4%) with a male to female ratio of 1.7:1. The predominant tribe among the adolescents was Tiv (64%). Other tribes were predominantly Etilo, Ijaw, Igala and Igbo. The predominant class was JSS 2 (25.6%) and the least was JSS3 (12.4%).

Table 1: Socio-demographic characteristics of the Adolescents

Variables	Frequency	Percentage (%)
Age		
=15	150	60.0
=16	100	40.0
Gender		
Male	79	31.6
Female	171	68.4
Class		
JSS1	44	17.6
JSS2	64	25.6
JSS3	31	12.4
SS1	50	20.0
SS2	61	24.4
Tribe		
Tiv	160	64.0
Idoma	37	14.8
Igede	9	3.60
Others	44	17.6

Table 2: Adolescents' source of information on STI

Variables	Frequency	Percentage (%)
Heard of STI		
Yes	250	100.0
No	0	0.0
Source		
School Teacher	206 *	82.4
Social Media	86*	34.4
Friends	88*	35.2
Parents	227*	90.8

*= Multiple responses

The information here on table 2, depicts adolescents' information on STI. All of the respondents had heard of STI and the predominant source of information was their Parents (90.8%) followed by School teacher (82.4%), friends (35.2%) and social media (34.4%) was the least.

Table 3: Adolescents' knowledge on STI prevention

Variables	Frequency	Percentage (%)
Abstinence	133	55.9
Contraceptives	40	16.8
Avoiding sexual relationship with the opposite sex	64	26.9
Avoiding sharing of plates and cups with an infected person	20	8.4
Avoiding sharing of toilets	25	10.5
Avoiding sharing of sharp objects	135	56.7

According to the information on table 3 above on adolescents' knowledge on prevention of STI, a little above half of the adolescents (55.9%) knew about abstinence.

Table 4: Adolescents' knowledge on pubertal changes

Variables	Frequency	Percentage (%)
Sexual maturity at puberty	241	96.4
Girls reach puberty before boys	244	97.6
Girls age 10-14 who experience puberty cannot become pregnant because they are too young	177	70.8
Boys 11-14 yrs who have wet dreams are not masturbating	155	62
Adolescent who didn't have sex occasionally are sexually healthy	168	67.2

From table 4 above, on the adolescents' knowledge on pubertal changes, among the respondents, majority of them (96.4%) knew that sexual maturity occurs at puberty. However, above 70% had a wrong knowledge on the association between puberty and getting pregnant.

Table 5: Adolescents' knowledge on effect the of risky sexual behavior

Variables	Frequency	Percentage (%)
Sex before marriage affects your health negatively	134	69.4
Kissing before marriage affects your health negatively	140	72.5
Masturbation affects your health negatively	138	71.5
Pornography affects your health negatively	143	74.1
Teenage pregnancy affects your health negatively	146	75.6
Abortion affects your health negatively	139	72.0
Anal sexual practice in homos exual relationship affects your health negatively	134	69.4

For the findings on table 5 above, the highest knowledge (75.6%) was on the effect of teenage pregnancy whereas the least (69.4%) was on effect of sex before marriage.

Table 6: Adolescents' knowledge score on ARH

Variables	Frequency	Percentage (%)
Good	142	56.8
Poor	108	43.2

The findings on table 6 above, on the knowledge score of the ARH (pubertal changes, STI and adolescent sexual behaviors) among adolescents 56.8% had good knowledge score over all whereas 43.2% had a poor knowledge score.

DISCUSSION

Majority of the adolescents who participated in the study were between 10-15 years in both study (60.0%). The adolescents who participated in this study mostly had good knowledge of reproductive health issues. However, a study in Ibadan agrees with this finding on adolescents' good knowledge on Adolescent Reproductive Health but practice and quality of communication was poor.¹⁹ The good knowledge among adolescents maybe due to increase information on from parents (as reported as the highest source of information on STI on table 2) social media, at school among other places. But this study finding disagrees with a situation analysis of adolescent reproductive health in selected Pacific Island countries revealed that adolescents were not adequately informed about family planning, reproductive and sexual health as well as services available for young people.²⁰ They therefore lacked negotiation skills for safe sex, had low motivation for preventing teenage pregnancies through contraceptive methods and sexuality education was going at a slow pace.²⁰ This could be as a result of poor educational background of the respondents and also poor parent-adolescent communication on sexuality education.

Three main adolescent reproductive health knowledge domains were assessed namely prevention of STI, sexual behavior and knowledge of adolescent physiological development. However there was still some deficiency as 43.2% of the respondents still had

poor knowledge even though they are within school environment. A different result occurred in a study done in Malaysia showed that 92% of the respondents knew of at least one STD (syphilis, gonorrhoea, chlamydia, herpes, genital warts, yeast infection, trichomoniasis or HIV/AIDS). About 95% of them knew of at least one method of STD transmission.²¹

The adolescents' educational level was found to have influenced their knowledge. Those in SS2 were more knowledgeable than those respondents in JSS 1 and 2. This maybe due to their recent entrance into secondary school as compared to those who are in the senior classes. This corroborates with a study done in the rural region of South Africa which reported that adolescents who stayed in school longer were less likely to engage in sexual risk behaviors as they have acquired more knowledge compared to the incoming students.²² It is therefore imperative to give attention to this group in order to keep them from becoming victims of wrong information from peers and other sources. The implication of the good knowledge among adolescents on sexual and reproductive health knowledge can account greatly for informed decision making among adolescents on ARH issues. It is therefore imperative to continue raising awareness about reproductive health matters to curtail these issues.

The result from the adolescents' in this study narrowed down to their knowledge as it relates to their decisions and behavior on matters such as abstinence, contraceptives, avoiding masturbation, pornography, homosexual relationships and prevention of teenage pregnancy was also analyzed. Parents were the highest source of information on STI as reported by 90.8 % of the adolescents which disagreed with the findings in Ado Ekiti in south western part of Nigeria showed that 92.4% respondents had heard about sexually transmitted infections before and the three most important sources of information being electronic media (68.7%); teachers (68.1%); and print media (44.9%).²³ Whereas, similar studies in the US showed that talking to teens on STIs among other topics, is a

commendable parenting practice that yielded positive results.²⁴

The advent of multiple information channels has helped to improve sexual and reproductive health knowledge among parents and their adolescents. However, the details of the various aspects of ARH such as the relationship between puberty and teenage pregnancy, the negative effect of abortion, sex before marriage on health among other areas explored are still grey to some of the respondents therefore more efforts to improve their knowledge is still needed to provide detailed teaching on ARH via various available platforms.

CONCLUSION

For the adolescents' knowledge on ARH, most of them had good knowledge, however more measures need to be put in place to help reach adolescents with poor knowledge to help prevent risky sexual behaviors.

Limitation of the study

- 1) The topic of sex is quite private and some respondents felt inhibited to discuss it. However, they were reassured of confidentiality and their names were not required in the questionnaire.
- 2) Financial constraint prevented the research from been carried out on a larger scale (in all the LGAs in Benue state).

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Conflict of interest

The authors declare that there is no conflict of interests that might bias their work or inappropriately influence their judgment.

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