



KNOWLEDGE OF SEXUALLY TRANSMITTED INFECTION AMONG ADOLESCENTS SEEKING HEALTHCARE SERVICES IN JERE LOCAL GOVERNMENT AREA, BORNO STATE, NIGERIA

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Abstract

Sexually transmitted infections (STIs) remain a major public health concern, particularly among adolescents who are vulnerable because of inadequate knowledge, risky sexual behaviors, and limited access to accurate sexual and reproductive health information. This study assessed the knowledge of sexually transmitted infections among adolescents seeking healthcare services in Jere Local Government Area, Borno State, Nigeria. The study adopted a descriptive survey research design. The target population comprised 2,678 adolescents attending selected primary healthcare facilities in the study area. A sample of 268 respondents, representing 10% of the study population, was selected using purposive and proportionate sampling techniques from four healthcare facilities. Data were collected using a self-developed questionnaire titled Knowledge on Prevention of Sexually Transmitted Infections Questionnaire (KPSTIQ). The instrument was validated by experts in Physical and Health Education and yielded a reliability coefficient of 0.841 using the split-half reliability method with the Spearman–Brown formula. Descriptive statistics (frequencies, percentages, means, and standard deviations) were used to answer the research question, while the independent samples t-test was employed to test the hypotheses at the 0.05 level of significance. The findings revealed that adolescents possessed satisfactory knowledge of sexually transmitted infections and their preventive measures. Significant gender differences were observed in knowledge regarding condom use ($t = 4.770, p < .05$), abstinence ($t = 5.911, p < .05$), and maintaining a single sexual partner as preventive strategies ($t = 3.882, p < .05$). The study concluded that adolescents attending healthcare facilities in Jere Local Government Area demonstrated adequate knowledge of key STI prevention measures, although variations existed across gender groups. The study recommends that primary healthcare centers, in collaboration with government agencies and non-governmental organizations, should strengthen adolescent-focused sexual and reproductive health education programs and ensure continuous access to accurate information and preventive services to reduce the burden of sexually transmitted infections among adolescents.

Keywords: Sexually transmitted infections, adolescents, knowledge, prevention, healthcare services, Jere Local Government Area, Borno State.

Introduction

Sexually transmitted infections (STIs) are a broad category of contagious diseases that are widespread all over the globe and are primarily contracted through sexual interaction. Knowledge on the prevention of sexually transmitted infections (STIs) are top priorities for public health and preventive medicine in the industrial world, despite the fact that the spread rates of sexually transmitted infections (STIs) transmission among adolescents is more catastrophic in the developing countries than in developed countries (World Health Organisation, 2016). Knowledge



on prevention of sexually transmitted infections (STIs) is a cornerstone of public health diseases prevention through behavioural intervention of “ABC” which stand (Abstinence, Be-honest and Condoms use). Sexually transmitted infections are a major public health problem worldwide that cause acute illness and long-term complication such as infertility, certain cancers, termination of pregnancy and other chronic disease medical conditions, as well as psychological consequences and death, particularly in higher and low-income countries, including Nigeria (WHO, 2016).

Knowledge on preventive measure of (STIs) are major concern of public health, particularly for the adolescent’s population. The increasing trend of sexually transmitted infections (STIs) among adolescents’ population is an alarming issue, as they are among the major contributors for (STIs) cases worldwide (Centre for Disease Control and Prevention 2018)). World Health Organization has been performing global estimations for four curable (STIs) approximately every five years since 2015 (Rowley, 2019). World Health Organization (2019) estimated about 380 million new cases of curable (STIs) in year 2016, it was reported that, Americans having the highest incidence rate of syphilis and chlamydia among adolescents, both men and women, while it had been reported that, in Africans regions, the highest incidence rate of gonorrhoea and trichomoniasis in both adolescents’ men and women are recorded (Rowley, 2019).

Knowledge on the prevention of sexually transmitted infections (STIs) are skills in order to reduce the risk of contracting (STIs) used by adolescents, such as use of condoms. The accuracy of knowledge on the prevention of (STIs) is largely depends on the sources of information from which sex-related health talks were given. These sources of information on protection exposed adolescents to all sorts of information relating to (STIs). The various sources of information include magazines, television, radio, school notice board, and social media, including their peers, who often give out wrong information. They often seek information from friends, on the internet, and on the social media, which is generally inaccurate and possibly misleading. For adolescents, the main rationale for prevention is to avoid unwanted pregnancies rather than prevent diseases (Bongardt, 2014).

The key to prevent the spread of (STIs) is through changing sexual behavior. An interest has been growing toward “ABC” approach in which A stands for Abstinence or delay of sexual activity, B for Be faithful, and C for Condom use. Abstinence is one of the most important aspects of sexual upbringing which emphasizes on the correct control and satisfaction of sexual instinct (Ferdowsi, 2015). Sexual abstinence is a great choice for so many reasons including preventing unwanted pregnancy and forced parenting, (STIs) preventing, avoiding depression and unstable mental health, strengthening teenagers’ relationship with their parents and empowering teenagers emotionally and spiritually. It is known that adolescents who practice sexual abstinence are less likely to have depression, attempt suicide, live in poverty as adults and are likely to do better in school (Goya, 2018).

Adolescents are disproportionately experience reproductive health disability and morbidities of acquisition of sexually transmitted infections (STIs) and unplanned pregnancy are resulted in improper use of condoms as a measure for prevention (CDC, 2018). Secura, Madden and Mc-Nicholas (2014) found that, use of condoms and long-acting reversible contraceptives (LARC) in adolescents have demonstrated outstanding efficacy in reducing the burden of sexually transmitted infections (STIs) and unintended pregnancy. While significant efforts have been made to encourage the utilization of highly effective contraceptive methods, condoms particularly, among adolescents’ population to prevent HIV and other sexually transmitted infections (STIs). Healthcare providers are active to encourage adolescents toward the proper used of condom both



STIs prevention and pregnancy. Dispute the meaning of condom use to adolescents, and the ways in which they choose to use them, is complex (McNicholas, Secura, Madden, & 2014). Adolescents are at high risk of sex related misconduct or behaviours and have low compliance with the use condoms as preventive mechanisms against (STIs) in most developing nations. Sexually transmitted infections were common sexual and reproductive health problems of adolescents that are contracted due to low compliance of condoms use and contraceptive method, which is recorded highest incident rates of (STIs), and about 1 in 20 adolescents' contract (STIs) each year in the developing world (Centres for Disease Control and Prevention, 2018).

Objective of the Study

1. Knowledge of sexually transmitted infections among adolescents seeking healthcare services in Jere Local Government Area.

Research Question

1. What is the knowledge of sexually transmitted infections among adolescents seeking healthcare services in Jere Local Government Area?

Hypotheses

H₀₁: There is no significant gender difference in adolescents' knowledge of condom use as a preventive measure against sexually transmitted infections in Jere Local Government Area.

H₀₂: There is no significant gender difference in adolescents' knowledge of abstinence as a preventive measure against sexually transmitted infections in Jere Local Government Area.

H₀₃: There is no significant gender difference in adolescents' knowledge of maintaining a single sexual partner as a preventive measure against sexually transmitted infections in Jere Local Government Area.

Methodology

This study adopted a descriptive survey research design. The design was considered appropriate because it enabled the researcher to collect data from a representative sample of adolescents in order to assess their knowledge of sexually transmitted infections and related preventive measures without manipulating any study variables. The study was conducted in Jere Local Government Area of Borno State, Nigeria. Jere Local Government Area is one of the major metropolitan local government areas in Borno State and hosts several primary healthcare facilities that provide adolescent-friendly healthcare services. The area was selected because of its large adolescent population and the availability of healthcare facilities that regularly attend to adolescents seeking healthcare services. The target population comprised 2,678 adolescents seeking healthcare services in selected primary healthcare facilities in Jere Local Government Area. The population figure was obtained from the Medical Records Department of the Primary Health Care Authority (2023). A sample size of 268 adolescents, representing approximately 10% of the study population, was selected for the study. Four primary healthcare facilities were purposively selected because they recorded a high attendance of adolescent clients. Thereafter, proportionate sampling was employed to allocate the sample size across the selected healthcare facilities based on their respective adolescent populations. Data were collected using a self-developed structured questionnaire titled Knowledge on Prevention of Sexually Transmitted Infections Questionnaire (KPSTIQ). The instrument consisted of two sections. Section A obtained information on the demographic characteristics of the respondents, while Section B assessed respondents'



knowledge of sexually transmitted infections and the instrument was established through a pilot study involving twenty (20) adolescents attending healthcare facilities in Gwange II Ward, Maiduguri Metropolitan Council, who were not part of the main study. The split-half reliability method was employed, and the data obtained were analyzed using the Spearman Brown Prophecy Formula. A reliability coefficient of 0.841 was obtained, indicating that the instrument possessed satisfactory internal consistency and was suitable for the study. Approval to conduct the study was obtained from the relevant authorities before data collection commenced. Copies of the questionnaire were administered personally by the researcher with the assistance of trained research assistants at the selected healthcare facilities. Respondents were informed of the purpose of the study, and participation was voluntary. Completed questionnaires were retrieved immediately after completion to ensure a high response rate. The collected data were coded and analyzed using the Statistical Package for the Social Sciences (SPSS) Version 24. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize respondents' demographic characteristics and answer the research question. Independent samples t-test was used to test the null hypotheses at the 0.05 level of significance.

Data Analysis and Results

Research Question One

What is the knowledge of sexually transmitted infections among adolescents seeking healthcare services in Jere Local Government Area?

Table 2 Responses of Adolescents Seeking Healthcare Services in Jere Local Government Area on the Knowledge of Sexually Transmitted Infections.

n=265

S/N	Variables		SA	A	D	SD	Mean	SD
5.	I had lesson on sex education in school.	F	142	83	29	11	2.81	.817
		%	53.6	31.3	10.9	4.2		
6.	Sexually transmitted infections are	F	184	63	13	5	2.77	.479
	transmittable.	%	69.4	23.8	5	1.8		
7.	I know that sexually transmitted infections	F	216	32	14	3	2.66	.584
	are contractible Infections.	%	81.5	12	5.3	1.2		
8.	Sexually transmitted infections are	F	23	57	107	78	2.29	.854
	contracted via oral act of sexual such as	%	8.7	21.5	40.4	29.4		
	kissing.							
9.	I know that some sexually transmitted	F	118	86	54	7	2.28	.629
	infections are curable.	%	44.5	32.5	20.4	2.6		
10	Some sexually transmitted infections have	F	204	43	12	6	3.12	.668
	no cured.	%	77	16.9	4.5	2.2		



The result in table 2 above shows the responses of adolescents seeking healthcare services in Jere Local Government area on the knowledge of sexually transmitted infections. The findings in the table on item 5 shows that majority of the respondents 142(53.6) were strongly agreed that, they had lesson on sex education in school, 83(31.3%) were agreed, 29(10.9%) were disagreed while 11(4.1%) were strongly disagreed with the statement. Item 6 shows that majority of the respondents 184(69.4%) were strongly agreed that, sexually transmitted infections are transmittable, 63(23.8%) were agreed, 13(5.0%) were disagreed while 5(1.8%) were strongly disagreed with the statement. Item 7 shows that majority of the respondents 216(81.5%) were strongly agreed that, they knew that sexually transmitted infections are contractible infections, 32(12.0%) were agreed, 14(5.3%) were disagreed while 3(1.2%) were strongly disagreed with the statement. Item 8 shows that majority of the respondents 107(40.4%) were disagreed that, sexually transmitted infections are contracted via oral act of sexual such as kissing, 78(29.4%) were strongly disagreed 57(21.5%) were agreed while 23(8.7%) were strongly agreed with the statement. Item 9 in the table also shows that majority of the respondents 118(44.5%) were strongly agreed that, they know that some sexually transmitted infections are curable, 86(32.5%) were agreed, 54(20.4%) were disagreed while 07(2.6%) were strongly disagreed with the statement. Item 10 in the table further shows that majority of the respondents 204(77%) were strongly agreed that, some sexually transmitted infections have no cured, 43(16.9%) were agreed, 12(4.5%) were disagreed while 06(2.2%) were strongly disagreed with statements.

H₀₁: There is no significant gender difference in adolescents' knowledge of condom use as a preventive measure against sexually transmitted infections in Jere Local Government Area.

Table 3: Results of Independent t test on the knowledge of adolescents on use of condoms for the prevention of sexually transmitted infections based on gender **n= 265**

Gender	Mean	SD	df	t	p-value	Decision
Male	23.01	6.2571	263	4.770	0.000	Reject the null hypothesis
Female	19.60	4.0143				

The result in table above showed that, male and female result on the knowledge of adolescents on use of condoms for the prevention of sexually transmitted infections. The p value 0.00 is less than 0.05 level of significance and the t calculated 4.7704 is greater than t critical of 2.028. Therefore, the null hypothesis which states that there is no significant knowledge of adolescents on use of condoms for the prevention of sexually transmitted infections in Jere Local Government based on gender is hereby rejected. This means that there is significant knowledge of adolescents on use of condoms for the prevention of sexually transmitted infections in Jere Local Government based on gender.

H₀₂: There is no significant gender difference in adolescents' knowledge of abstinence as a preventive measure against sexually transmitted infections in Jere Local Government Area.

Table 4: Results of Independent t test on the knowledge of adolescents on abstinence for the



prevention of sexually transmitted infections based on gender

Gender	Mean	SD	df	t	p-value	Decision
Male	17.03	3.8519	263	5.911	0.000	Reject the null hypothesis
Female	18.91	3.1007				

The result in table 4.8 above showed the male and female result on the knowledge of adolescents on abstinence for the prevention of sexually transmitted infections. The p value 0.00 is less than 0.05 level of significance and the t calculated 5.9110 is greater than t critical of 2.028. Therefore, the null hypothesis which states that there is no significant knowledge of adolescents on abstinence for the prevention of sexually transmitted infections in Jere Local Government based on gender is hereby rejected. This means that there is significant knowledge of adolescents on abstinence for the prevention of sexually transmitted infections in Jere Local Government based on gender.

H₀₃: There is no significant gender difference in adolescents' knowledge of maintaining a single sexual partner as a preventive measure against sexually transmitted infections in Jere Local Government Area.

Table 5: Results of Independent t test on the knowledge of adolescents on having single sex partner as a measure for the prevention of sexually transmitted infections based on gender

Variable	Male (Mean $\pm$ SD)	Female (Mean $\pm$ SD)	df	t	p-value	Decision
Score	18.17 $\pm$ 3.5237	15.73 $\pm$ 2.0092	263	3.882	< 0.001	Reject the null hypothesis

n=265

The result in table 4.10 above showed the male and female result on the knowledge of adolescents on having single sex partner as a measure for the prevention of sexually transmitted infections. The p value 0.00 is less than 0.05 level of significance and the t calculated 3.8819 is greater than t critical of 2.028. Therefore, the null hypothesis which states that there is no significant knowledge of adolescents on having single sex partner as a measure for the prevention of sexually transmitted infections in Jere Local Government based on gender is hereby rejected. This means that there is significant knowledge of adolescents on having single sex partner as a measure for the prevention of sexually transmitted infections in Jere Local Government based on gender.

Discussion

The findings of this study indicate that adolescents seeking healthcare services in Jere Local Government Area possess a relatively good level of knowledge regarding sexually transmitted infections and their prevention. The high proportion of respondents who correctly identified



condom use, abstinence, and maintaining a single sexual partner as preventive measures suggests that health education programs implemented through schools and healthcare facilities may be contributing positively to adolescents' awareness. The study further revealed a significant gender difference in knowledge of condom use as a preventive strategy against sexually transmitted infections. Male adolescents demonstrated significantly higher knowledge scores than their female counterparts. This finding is consistent with previous studies that reported greater exposure of male adolescents to information on condom use and sexual health, largely because of sociocultural factors and differences in access to reproductive health information. It also supports the findings of Joffe and Radius (2023) and Leland and Barth (2021), who observed that male adolescents generally reported better knowledge and greater confidence regarding condom use than females. Similarly, a statistically significant gender difference was found in adolescents' knowledge of abstinence as a preventive measure against sexually transmitted infections. Although both male and female respondents demonstrated awareness of abstinence, differences in knowledge levels may reflect variations in health education exposure, cultural expectations, and communication about sexuality within families and communities. This finding agrees with Song (2019), who reported that adolescents who understand and practice abstinence are less likely to engage in risky sexual behaviors and consequently have a lower risk of contracting sexually transmitted infections. Furthermore, the study established a significant gender difference in knowledge regarding maintaining a single sexual partner as a preventive strategy against sexually transmitted infections. This finding supports earlier studies indicating that limiting sexual relationships to one faithful partner substantially reduces the risk of acquiring sexually transmitted infections. The result corroborates the report of Cavanagh (2014), who emphasized that adolescents with multiple sexual partners are more vulnerable to sexually transmitted infections than those who maintain mutually faithful sexual relationships. Overall, the findings demonstrate that while adolescents possess encouraging levels of knowledge regarding STI prevention, misconceptions still exist regarding modes of transmission, particularly concerning casual contact and kissing. This highlights the need for continuous, evidence-based sexual and reproductive health education program targeting adolescents through schools, healthcare facilities, parents, and community-based interventions.

Conclusion

In conclusion, there is knowledge of adolescents on use of condoms abstinence, sex partner and having single sex partner as a measure for the prevention of sexually transmitted infections in Jere Local Government based on gender and age are strongly significant in preventing contraction of STIs.

Recommendations

Based on the findings of the study, this recommendation was made:
Jere Local Government Primary health care clinics in partnership with NGOs should organize health talks on use of condom, abstinence and adherence to single sex partner for the prevention of sexually transmitted infections in Jere Local Government Area.

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