

Knowledge of Sexually Transmitted Infections as A Predictor of Public Schools Female Adolescent's Sexual Behaviour in Ikenne Local Government Area, Ogun State, Nigeria

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Abstract:

This study was conducted to assess the knowledge of sexually transmitted infections as a predictor of public schools female adolescent's sexual behaviour in Ikenne Local Government Area, Ogun State. A descriptive cross-sectional design was adopted for this study in which multi-stage sampling procedure was used to select 354 female adolescents from six public secondary schools. A self-administered questionnaire was used for data collection. The research instrument was validated by experts of Nursing Science and Tests & Measurement. Reliability of the instrument was tested by using Cronbach's Alpha to determine internal consistency of the instrument. The values of 0.799 and 0.821 were gotten for knowledge of STIs and sexual behaviour scale respectively. Descriptive statistics were used to answer the research questions while inferential statistics of multiple regression and t-test analysis were used to test the hypotheses at 0.05 level of significance. The findings revealed that the knowledge level of the female adolescents

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about STIs was moderate but slightly below average while the female adolescents were sexually active. In addition, the result shows that the knowledge of STIs is negatively related to female adolescents' sexual behaviour. Furthermore, the study found out that there was no significant difference between JSS and SSS female adolescents' sexual behaviour and knowledge of STIs. It was recommended among others that there is need for more aggressive efforts by all stakeholders - parents, teachers, nurses, government and non-governmental agencies to provide sexual information to adolescent girls.

Keywords: Knowledge, Sexually Transmitted Infections, Female Adolescents, Sexual Behaviour,

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Introduction:

Adolescents are those between the ages of 10 and 19 as described by UNICEF, (2019) and these people are within the range of 1.2 billion in the world today, this makes up 16 % of the world's population and over 30 million Nigerians are between the ages of 10-19 years (Esiet, 2016). However, it appears that many adolescents in Nigeria lack the skill to negotiate safe sex and delay the onset of sexual activities. This is of concern considering that age at first sexual intercourse is an important indicator of the possibility of unintended pregnancy and STIs (Nigeria demographic and health survey, 2015). As reported by WHO, (2017), Nigeria reports a yearly abortion rate of 25 abortions/1000 women of which more than a quarter are from adolescents resulting from unintended pregnancy, the report also noted that the incidence of STIs is also on the high side as every 1 in 4 female adolescent is sexually active.

Risky sexual behaviour puts adolescents at high risk for sexually transmitted infections, unintended pregnancy, unsafe abortion and being in sexual relationships before being matured enough to know what makes a healthy relationship (Blahd, 2018). Some examples of high risk sexual behaviour include; unprotected intercourse, mouth-to-genital contact, having multiple sex partners having a high-risk partner (one who has multiple sex partners or other risk factors), having anal sex or a partner who does, having sex with a partner who injects or has ever injected drugs, sex trade work and starting sexual activity at a very young age (Doster, 2018).

Sexually transmitted infections (STIs) are a group of infectious or communicable diseases in which the primary mode of transmission is through sexual contact (Geremew, 2017) and are among the major causes of illnesses in the world especially in the developing countries (Blahd, 2018; WHO, 2018). STIs are classified according to the type of organism causing the infection, which could be bacterial, fungal, viral or of parasitic origin. Some of the common STIs include: Bacterial vaginosis, herpes, Chlamydia, trichomoniasis, gonorrhoea, Hepatitis B virus, HIV and syphilis (WHO, 2016). More than 25 infectious organisms are transmitted primarily through sexual activity and studies revealed that STIs are among the many related factors that affect the broad continuum of reproductive health (Yah, 2018; Olanrewaju, 2018).

Sexually transmitted infections constitute great medical, social and economic problems in Nigeria as a lot of funds is being diverted to treatment (Amu & Adegun, 2015). Beyond the immediate impact of the infections, STIs may have severe repercussions on physical health as well as the psychological and social well-being of the adolescent girl (Low & Broutet, 2017). Over the years Nigeria has recorded high rates of sexually transmitted infections and it's still considered among the greatest challenges associated with youths' reproductive health in Nigeria. (Somefun, 2019). In their study, Akindele-Oscar and Ayodele, (2015), found out that in Nigeria, the knowledge of STI is very low (19.9%) as against the report from National Population Commission (2004) that 62% of young women and 40% of young men have good knowledge of STIs.

A lot of research work has been done so far on adolescents' sexual behaviour but there is still a dearth of research in assessing adolescents' sexual behaviour through their knowledge of STIs. Thus, there is the need for this study. However, the researcher is interested in assessing the knowledge of sexually transmitted infections among female adolescents, and to use it as a tool to check how their knowledge of STIs will predict their sexual behaviour.

This study, therefore, examined the knowledge of sexually transmitted infections as a predictor of sexual behaviour among female adolescents in Ikenne Local Government Area, Ogun State. Specifically, the study examined:

- i. the knowledge level of female adolescents about STIs;
- ii. the sexual behaviour of the female adolescents;
- iii. the influence of STIs knowledge components on the sexual behaviour of the female adolescents;
- iv. the difference between JSS and SSS female adolescents' sexual behaviour; and
- v. the difference between JSS and SSS female adolescents' knowledge of STIs.

Research Questions

The following research questions were raised for the study:

1. What is the knowledge level of female adolescents about STIs?
2. What is the sexual behaviour of the female adolescents in the study area?

Research Hypotheses

The following hypotheses were generated:

1. There is no significant influence of STIs knowledge components on the sexual behaviour of the female adolescents
2. There is no significant difference between JSS and SSS female adolescents' sexual behaviour
3. There is no significant difference between JSS and SSS female adolescents' knowledge of STIs

Methodology

This study adopted a descriptive cross-sectional research design to assess the knowledge of sexually transmitted infections as a predictor of sexual behaviour among in-school female adolescents in Ikenne Local Government Area. The population for this study covered all the 3,232 female adolescent students in public secondary schools in Ikenne, Local Government of Ogun State, Nigeria. The sample for the study consisted of 354 female students in 6 public secondary schools. The sample was selected using multi-stage sampling procedure.

A self-structured questionnaire was used to elicit information from the respondents. The questionnaire consisted of three sections. Section A sought for information about Socio-Demographic characteristics of the Respondents. Section B sought for female adolescent's knowledge about sexually transmitted infections which had 12 items. Section C sought for sexual behaviours of the female adolescents which was examined using a sexual behaviour scale with 18 items.

The face and content validity of the instrument was validated by experts of Nursing Science and Tests & Measurement. The questionnaire was structured in a way that will enable respondents to select from the options provided. Reliability of the instrument was tested by using Cronbach's Alpha to determine internal consistency of the instrument. The values of 0.799 and 0.821 were gotten for knowledge of STIs and sexual behaviour scale respectively.

Data for this study were collected and analysed using statistical package for social science Version 23. Descriptive and inferential statistics were used. Descriptive statistics (frequency distribution table, percentages, mean and standard deviation) was used to answer the research questions. Multiple regression analysis was used to test hypothesis 1 while t-test was used for hypotheses 2 and 3. All the hypotheses were tested at 0.05 level of significance.

Results

Research Question 1: What is the knowledge level of female adolescents about STIs?

Table 1: Descriptive results of the knowledge level of female adolescents about STIs

	N	Minimum	Maximum	Mean	Std. Deviation	Percentage
STI knowledge	354	8.00	67.00	32.94	12.34	49.16

Table 1 reveals the knowledge level of female adolescents about STIs. The secondary school female adolescents had a mean score of 32.94 which is equivalent to 49.16%. It could be said that the secondary school female adolescent's knowledge of STIs is below average. Table 2 below further revealed the summary of knowledge level of female adolescents about

Table 2: Summary of the knowledge level of female adolescents about STIs

Category	Criteria	Frequency	%
45-67	High	112	31.6
23-44	Moderate	153	43.2
1-22	Low	89	25.1
Mean =32.94, Std. Dev = 12.34			

The result presents the knowledge level of female adolescents about STIs. Their knowledge was categorized as high (45-67), moderate/average (23-44) and low (1-22). It was revealed that 153 (43.2%) respondents had moderate knowledge level of STIs, 112

(31.6%) had high knowledge level and 89 (25.1%) had low knowledge of STIs. The knowledge level of the female adolescents about STIs could be said to be moderate. Figure i further revealed the knowledge level of the female adolescents about STIs at a glance

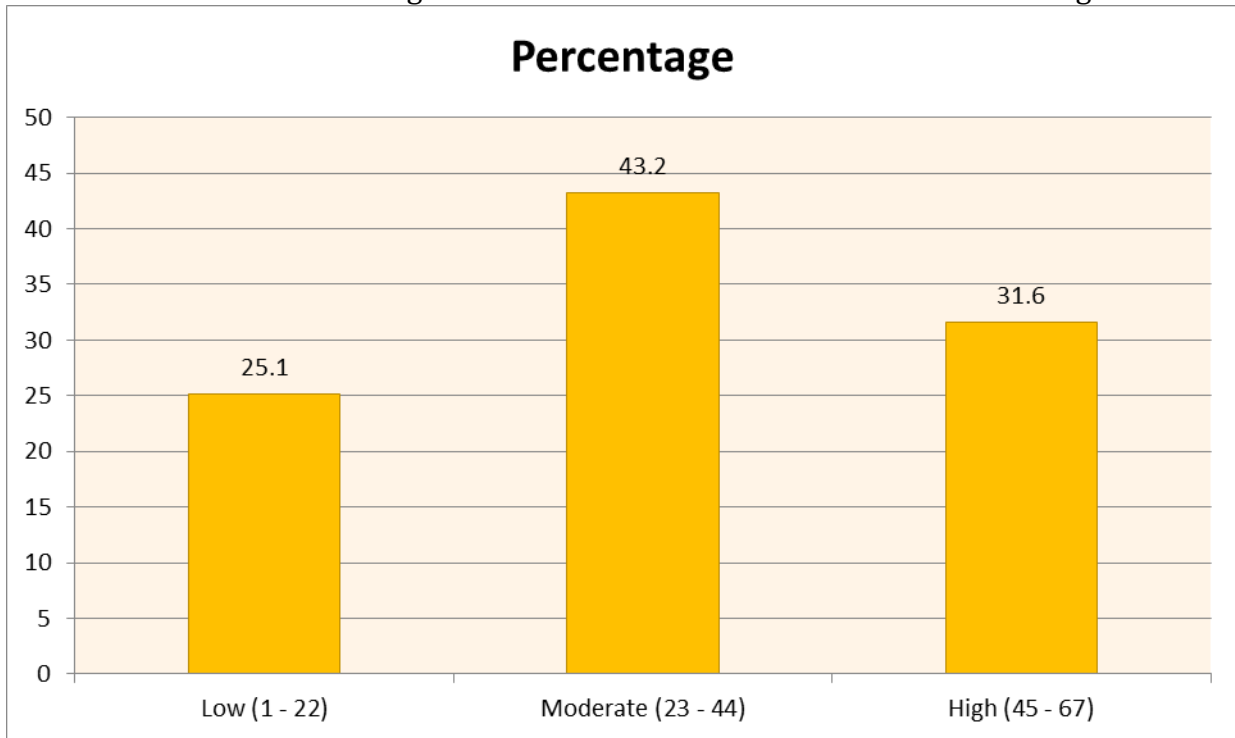


Figure i: Bar Chart showing the knowledge level of female adolescents about STIs

Research Question 2: What is the sexual behaviour of the female adolescents in the study area?

Table 3: Descriptive analysis showing the sexual behaviour of female adolescent

Category	Criteria	Frequency	%	Remark
73-108	Highly active	121	34.2	Number of secondary school female adolescents are highly sexually active
37-72	Moderately active	154	43.5	Number of secondary school female adolescents are moderately sexually active
1- 36	Not/less active	79	22.3	Number of secondary school female adolescents are not or less sexually active

Table 3 above presents the baseline sexual behaviour of secondary school female adolescents into three (3) different domains. The domain was categorized as not or less sexually active (1-36), moderately sexually active (37-72) and highly active (73-108). Majority 154 (43.5%) of the secondary school female adolescents are moderately sexually active, 121 (34.2%) secondary school female adolescents are highly sexually active, and the remaining 79 (22.3%) secondary school female adolescents are not or less sexually active. It could be said that the secondary school female adolescents are moderately active. Figure ii further revealed the sexual behaviour of secondary school female adolescents at a glance

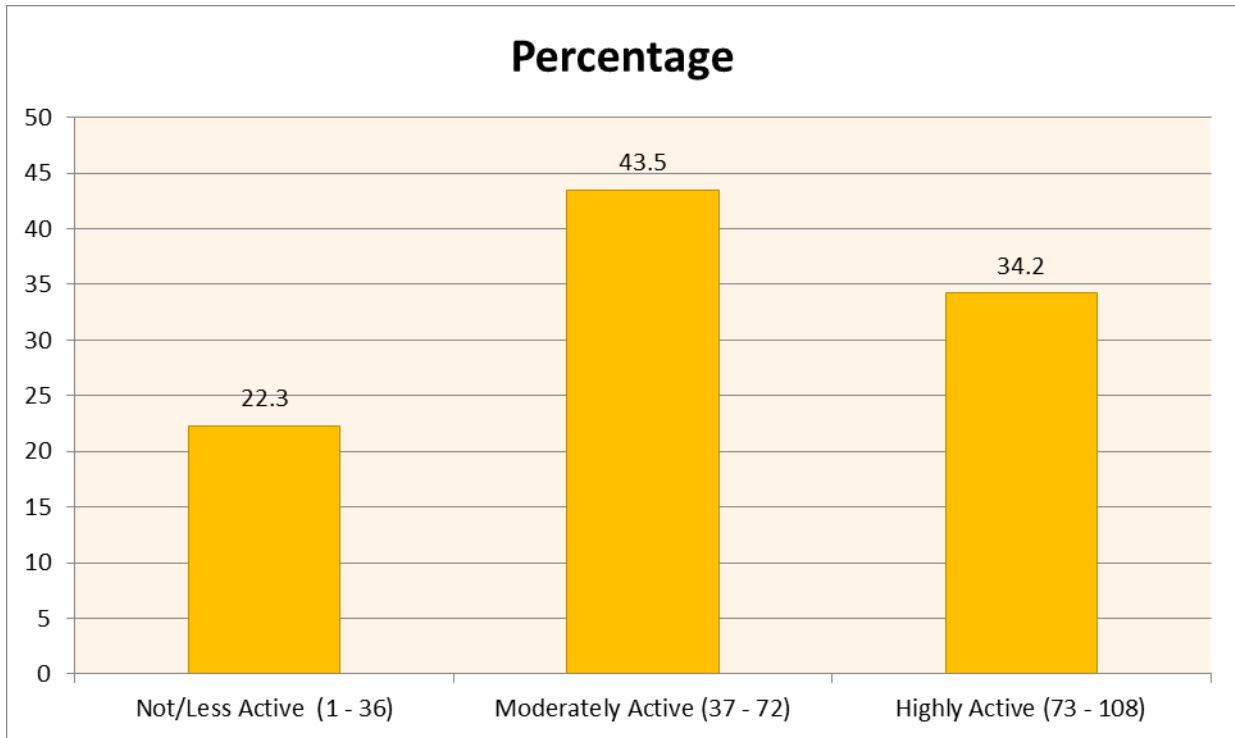


Figure ii: Bar Chart showing the sexual behaviour of secondary school female adolescents

Test of Hypotheses

Hypothesis 1: There is no significant influence of STIs knowledge components on the sexual behaviour of the female adolescents

Table 4: Summary of the multiple regression on the influence of STI knowledge components on the sexual behaviour of the female adolescents

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
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	B	Std. Error	Beta		
(Constant)	43.939	2.578		17.045	.000
STIs types knowledge	1.315	.323	.313	4.070	.000
STIs signs knowledge	-1.473	.612	-.207	-2.406	.017
STIs preventions knowledge	-.498	.565	-.072	-.881	.379
STIs complications knowledge	-1.308	.749	-.152	-1.747	.082

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	11688.663	4	2922.166	7.051	.000 ^b
Residual	144641.462	349	414.445		
Total	156330.124	353			

R = .273; R² = .075, R² (Adjusted) = .064, Stand error estimate = 20.36

a. Dependent Variable: sexual behaviour

b. Predictors: (Constant), STI complications knowledge, STI types knowledge, STI preventions knowledge, STI signs knowledge

The results on Table 4 revealed a significant influence of STI knowledge components on the sexual behaviour of the female adolescents [$R = .273$, $R^2 = .075$, $\text{Adj. } R^2 = .064$, Stand error estimate = 20.36, $f_{(4,353)} = 7.051$, $p = .000$]. This shows that 6.4% of the total variance in the sexual behaviour of the female adolescents is accounted for by the STI's knowledge. However, the relative contribution of each the STI knowledge (STI complications, STI types, STI preventions, and STI signs) to the variance in the sexual behaviour of the female adolescents. Two out of the four components of STI knowledge were predictors of sexual behaviour among the respondents. These are: Knowledge on STI's types has a beta value of .313 and t-value of 4.070 significant at less than .05 (.000) alpha level and followed by STI signs (beta = .207, $t = 2.406$). STI preventions knowledge (beta = .072, $t = .881$) and STI complications knowledge (beta = .152, $t = 1.747$) failed to influence the sexual behaviour of the female adolescents. Thus, STI knowledge components combined significantly to influence the sexual behaviour of the female adolescents.

Hypothesis 2: There is no significant difference between JSS and SSS female adolescents' sexual behavior

Table 5: Results of t-test on the difference between JSS and SSS female adolescents' sexual behaviour

	Class	N	Mean	Std. Deviation	df	t-value	P	Decision
Sexual behaviour	JSS	179	54.91	22.61	352	1.202	.119	NS
	SSS	175	52.22	19.29				

The results presented in Table 5 on the differences between JSS and SSS female adolescents' sexual behaviour revealed no significant difference between JSS (mean = 54.91, SD = 22.61) and SSS (mean = 52.22, SD = 19.29) female adolescents' sexual behaviour ($t = 1.202, p = .119$). Further analysis of the result based on the respondents' mean scores reveal that JSS female students' sexual behaviour with average mean score of 54.91 do not significantly differ from their SSS female counterparts with mean score of 52.22. The implication of this is that the female adolescents are sexually active regardless of their class and their sexual behaviour are same.

Hypothesis 3: There is no significant difference between JSS and SSS female adolescents' knowledge of STIs

Table 6: Results of t-test on the difference between JSS and SSS female adolescents' knowledge of STI

	Class	N	Mean	Std. Deviation	df	t-value	P	Decision
STI knowledge	JSS	179	32.30	12.38	352	.427	.981	NS
	SSS	175	33.59	12.30				

The results presented in Table 6 on the differences between JSS and SSS female adolescents' knowledge of STI revealed no significant difference between JSS (mean = 32.30, SD = 12.38) and SSS (mean = 33.59, SD = 12.30) female adolescents' knowledge of STI ($t = .427, p = .981$). Further analysis of the result based on the respondents' mean scores reveal that JSS female students' knowledge of STI with average mean score of 32.30 do not significantly differ from their SSS female counterparts with mean score of 33.59. The implication of this finding is that female adolescents in JSS and SSS had knowledge of STI that is below average.

Discussion

It could be said that the public secondary school female adolescent's knowledge of STIs was moderate. The overall mean score of the knowledge level of female adolescents about STIs could be said to be below average. Findings of this study and the others compared have proved that, adolescents have a general idea on STIs and the common mode of transmission. It is also a problem that the signs and symptoms that were known were basic especially for those who did not know. This corroborates the findings of Kyilleh, Tabong and Konlaa (2018) who found out that adolescents lack adequate knowledge about sexually transmitted infections. Also, it is in tandem with the findings of Olanrewaju and Idowu (2018) who concluded that students had moderate knowledge of the signs and symptom of various STIs.

The outcome of this finding also revealed the secondary school female adolescents are sexually moderately active. The implication of this is that sexually active female adolescents are at increased risk of STIs. This corroborate the findings of Inyang (2017) that most adolescents were actively engaged in indiscriminate sexual experiences and such practices exposes them to the risk of contracting sexually transmitted infections including HIV/AIDS.

The results revealed that STIs knowledge accounted for some influence in the sexual behaviour of the female adolescents. It was found that female adolescents were more knowledgeable on STI's types and STIs signs but not on STIs preventions and STIs complications. The implication of this is that the family which is meant to orient the child is neglecting her duties so fast and parents shy away from their responsibility to educate their adolescents on sex and sexual behaviour. This is in line with study done by Kemigisha, Bruce, Ruzaaza, Ninsiima, Mlahagwa, Leye, Coene and Nichielsen (2018) as the result showed that regarding the knowledge of sexually transmitted infections 95% knew about HIV, 37% knew other forms of STIs other than HIV/AIDS, 47% knew at least one way in which HIV is acquired.

The results presented no significant difference between JSS and SSS female adolescents' sexual behaviour. The implication of this is that the female adolescents are sexually active regardless their class and their sexual behaviour are same. This corroborate with the findings Chukwunonye et al (2015) who concluded that class level has no influence on adolescents' sexual behaviour. Also, the results presented no differences between JSS and SSS female adolescents' knowledge of STI. This implies that there is no significant difference between JSS and SSS female adolescents' knowledge of STI. This study was consistent with Adebowale, Titiloye, Fagbamigbe and Akinyemi (2013) who concluded that there was no significant difference in the knowledge level among respondents based on their class.

Conclusion

This study's results show a moderate but below average knowledge of STIs among female adolescents and that they were equally sexually active. A low and negative association of highly risky sexual behaviour for the emergence of sexually transmitted diseases among the female adolescents was reported. In addition, class level of respondents had no effect on female adolescents' sexual behaviour and knowledge of STIs.

Recommendations

The following recommendations are made.

1. There is need for more aggressive efforts by all stakeholders - parents, teachers, nurses, government and non-governmental agencies to provide sexual information to adolescent girls.
2. Health talks, symposia, seminars could provide avenue for in-school adolescent girls to have access to sexual behavioural information that could affect their knowledge towards STIs and sexual behaviour.
3. Preventive programs promoting abstinence or delay of sexual activity rather than preventive approaches focusing on decision making by the adolescents following full knowledge and understanding of STIs will yield better result by reducing risk behaviours.

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