



Knowledge, Attitude and Utilization of School Health Services among Senior Secondary School Students in Egor Local Government Area, Benin City, Edo State

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Authors' contributions

This work was carried out in collaboration among all authors. Author EAO, designed the work, carried out field work wrote the first draft. Author TAE edited the first draft of the manuscript and managed data analysis. Author OI co-supervised in field work and assisted in editing the manuscript. All authors read and approved the final manuscript.

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ABSTRACT

Background: The knowledge of school health services among all students in various schools are essential in ensuring that students are equipped with the expected benefits and right attitude of utilizing the services.

Aim: The aim of this study was to assess knowledge, attitude and utilization of school health services among senior secondary school students in Egor local government area, Edo State.

Methods: Using a multistage sampling two secondary schools were selected from the thirteen public secondary schools in the Egor LGA and a sample size of 274 using Taro Yamane formula. A self-structured questionnaire was used as instrument for data collection with a Cronbach's alpha

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value of 0.82 which show that the instrument was reliable. Data collected were analyzed using descriptive statistics and hypotheses were tested using Pearson Correlation Coefficient at 5% significant level.

Results: Findings showed that majority 150(57.6%) of the respondents have good knowledge of school health services, 80(30.5%) have fair knowledge while 31(11%) have poor knowledge. All the respondents have a positive attitude toward school health services with an average grand mean of 3.078 ± 0.428 . However, 113.2(43.4%) have poor utilization of the school health services, 40(15.3%) have moderate while 107.8(41.3%) have high utilization. Positive correlation ($p = 0.01$) was found between knowledge and utilization of school health services. Significant difference was found ($p = 0.002$; < 0.05) in the utilization of school health services between male and female students.

Conclusion: Government should ensure adequate provision of facilities, inspection and supervision of the school health services. Sensitization/Awareness campaign of school health services should be made available to all school children in the state.

Keywords: Knowledge; attitude; utilization; school health services; secondary school; students.

1. BACKGROUND

School children require regular medical attention both at home and in school. Children at this age are still growing and developing both mentally and physically, therefore, efforts should be made to promote their health, prevent diseases and correct any abnormality which may have immediate or long term effect on their health [1]. Similarly, the school environment exposes children to a lot of dangers, such as infection, accident, emotional and physical stress hence, they need to be protected against these dangers [2]. The overall National Health Policy objective is to strengthen the national health system such that it will provide effective, efficient, quality, accessible and affordable health services that will improve the health status of Nigerians through the achievement of the health related Millennium development goals (MDGs) [3]. Which is to reduce child mortality, improve maternal health, and combat HIV/AIDS, malaria and other diseases. It is increasingly appreciated that such facilities and services are essential not only for the child welfare and development but also from that of the economic, and social development in general [4].

This can be achieved with a good school health services. School health services provide care for children by responding to first aid needs, establishing a prevention programme, advising children, providing health education, aiding the integration of the weak or chronically ill children [5]. Others are caring for the cleanliness of the school environment, nutritional care, dental care, immunization programmes and counseling services. Schools are expected to have sick bays manned by pediatrician, pediatric nurse and

health assistants. The activities carried out in the sick bays may include but not limited to frequent hand washing, cleaning and disinfecting commonly used surface, coughing and sneezing into your sleeves, getting vaccinated, staying at home when sick, regular medical checking for all pupils and students, administering first aid to children in cases of minor illness and injuries e.g. minor stiches and dressing, bronchodilator drugs in emergency case of asthma and referral of students to the hospital and contacting parents when the need arises [6]. However, the knowledge, attitude and utilization of school health services are important and of great concern among the students because children in schools come in contact with greater number of children than the ones at home. Infections are common in children and can occasionally result in illness in a child or outbreaks of illness in group of children. The knowledge of school health services among all students in various schools are essential in ensuring that students are equipped with the expected level of knowledge and the dangers associated with lack of utilization. However, students' attitude whether positive or negative with regard to the knowledge acquired may play an important role in the utilization of these services.

Globally, the number of children reaching school age is estimated to be 1.2 billion (18% of the world's population) and rising [7]. Despite the efforts of the government through Universal Basic Education Policies, MDGs and SDGs in ensuring that school health services are functional in schools, records of infections, high rate of childhood morbidity and mortality are still on the increase. One wonders if these students knew of the existence of school health services

in their various schools, and what could be their attitude toward its utilization? Though, many studies have been done on availability of school health services, knowledge, attitude and practice of school health services among teachers, no studies have focus on the knowledge, attitude and utilization of school health services among students who are the major recipients of the school health programmes in Nigeria and especially Edo state. Therefore this study was carried to assess knowledge attitude and utilization of school health services among senior secondary students in Egor local Government area of Edo State.

2. MATERIALS AND METHODS

2.1 Study Design and Population

A descriptive cross sectional survey design was adopted for the study. This design was selected because of its high degree of representativeness and the ease in which a researcher could obtain the participants' opinion on the variables under study. The target population of study consists of all senior secondary students attending the thirteen public secondary schools in Egor local government area of Edo state which has a total number of two thousand seven hundred and sixty (2760) students. Below are the names of the schools and their population distribution.

Sampling and sample size: The sample size was determined using multistage sampling technique.

Stage one: This was done by sampling all the public secondary school in Egor local government area as listed in Table 1.

Stage two: This was done by selecting schools with school health services out of the whole. This was presented in the Table 2.

Out of these populations a sample size of 274 was calculated using the TARO YAMANE FORMULA, which was used for the study.

$$n = \frac{N}{1 + N(e)^2}$$

Where

N= Whole population under study

n=sample size from the population under study

e= is the precision or sampling error which is usually 0.01, 0.05, 0.10, to be 95% sure about result.

e = 0.05.

$$661 / (1 + 661)(0.05)^2 = 249.20$$

Attrition is 10% of the sample size (249). S.S. II students in two mixed secondary schools were used for the study.

$$249 + 25 = 274$$

Therefore, the minimum sample size used was 274 respondents. This sample size was distributed proportionately among the respective schools according to their percentage population as shown in Table 2.

2.2 Sampling Technique

Simple random sampling technique a type of probability sampling technique was used to select the respondents into the study. This was done using balloting. The researcher wrote on a piece of paper "Yes" or "No". The number of pieces of papers carrying "Yes" was equal to the sample size of each of the selected school while remaining pieces of paper making up the population bear on it "No". The students were ensemble together in a class room in each of the school, after thorough mixing of the pieces of paper it was placed on a bowl where the students were asked to pick one piece of paper without replacement. Any student who picks piece of paper written "Yes" were selected for the study while those who pick "No" were exempted from the study. This method was used to ensure that all the students have equal chance of being elected into the study without bias.

2.3 Instrument for Data Collection

A questionnaire was constructed and designed by the researcher to obtain information from the students of two mixed secondary schools that have School Health Services. The four sections of the questionnaire have the following sub-headings. Section A of the questionnaire contains the demographic detail of the respondents and section B contains six questions on knowledge of the school health services with various options to choose from the correct response. Scores obtained was converted to 100% and the level of knowledge was classified as poor (0-49%) fair (50-69%) and good (70-100%). Section C consist of five questions seeking information on attitude of students towards school health services. It was

measured using 4-point likert scale with an average mean of 2.5. items with mean average of ≥ 2.5 was consider to be positive attitude while average mean of < 2.5 was considered to be negative attitude . Section D contains five questions seeking information on the utilization of school health services. Each question contains various options with weighted scale attached ranging from “Very Often”=20 “Often” = 15, “Occasionally” = 10, “Rarely” =5, “Never” =1. The total highest score was 100 while the lowest score was 5. Level of utilization was therefore classified as poor (5-49%). Moderate (50-69%) and high (70-100%).

2.4 Reliability of the Instrument

The reliability of the instrument was determined through the administration of thirty questionnaires to the respondents who did not fall within the study of the research work and it was returned immediately. The data collected were analyzed using Cronbach's Alpha Statistics and this yielded a coefficient of 0.82. The r- value

showed that the instrument was reliable enough to measure what it was meant to measure.

2.5 Ethical Consideration

Permission letter was gotten from the management of the respective schools. Informed consent was obtained from the participants prior to administering the questionnaires. Confidentiality and anonymity was ensured throughout the execution of the study as participants were not required to disclose personal information on the questionnaire.

2.6 Method of Data Collection

Data was collected with the help of two trained research assistants who were teachers in the selected schools. After the consent have been taken from the school management as well as the students, the students who have been recruited for the study were given the questionnaire to fill which was collected immediately after filling. This was done during their break period in the school hall.

Table 1. Population of senior secondary school students in SS II in Egor local government area of Edo State

	School type	No of boys	No of girls	Total
Edo Boys High School	All boys	169	-	169
Evbuotubu Secondary School	Mixed	81	95	176
Ohonre secondary School	Mixed	17	31	48
Evbareke Secondary School	Mixed	209	180	389
Iyoba Girls Secondary School	All girls	-	204	204
Asoro Secondary School	Mixed	210	245	455
Eweka Sec School	Mixed	70	45	115
Egor Secondary School	Mixed	150	136	286
Uselu Secondary School	Mixed	130	145	276
Okhokhugbo Comprehensive High School	Mixed	36	46	82
Use Secondary School	Mixed	25	36	61
Uwelu Secondary School	Mixed	56	69	125
Benin Technical College	Mixed	326	49	375
Total		1479	1281	2760

Source [8]

Table 2 School with school health services and proportion distribution of sample size

School with school health services	School Type	No of Boys	No of Girls	Total		
Egor Secondary School	Mixed	150	136	286		
Benin Technical College	Mixed	326	49	375		
Total				661		
Percentage distribution of sample size						
School with school health services	School type	No of boys	No of girls	Total	%	Sample size
Egor Secondary School	Mixed	150	136	286	43.3	119
Benin Technical College	Mixed	326	49	375	56.7	155
Total				661	100	274

2.7 Method of Data Analysis

To analyze the data collected, research questions was answered by applying descriptive statistics of Mean, frequency count and percentages. The hypotheses were tested at $P < 0.05$ level of significance using Pearson Correlation to assess relationship as well as t-test to compare means using IBM Special Packages for Social Sciences(SPSS) version 21.

3. RESULTS

In this study, of the two hundred and Seventy Four (274) questionnaire administered, only two hundred and sixty one (261) were completely filled and retrieved. This gave a response rate of 95.3%.

Table 3 shows demographic characteristics of respondents. Majority 166(63.6%) were males, 95(36.4%) were females. Majority were within the age group of 15-19 years, 58(22.2%) were 10-14 years, 33(12.6%) were 20 years and above. Majority 229(87.7%) were Christians, 21(8%) were Muslims, 5(1.9%) were traditionalist and 6(2.3%) practiced other religions.

Table 4 shows students' knowledge of school health services. It shows that 232(88.9%) knows that School health services is a place where students are seen when they fall sick while in school. 174(66.7%) among the participants agrees that any of the teachers in the school cannot takes care of sick students in the school health service center there must be a health care professional such as the nurse or doctor. 195(74.7%) knows that school health services are services from medical, teaching and other professionals to improve health and wellbeing. 185(70.9%) among them knows that comprehensive health education is one of the major components of school health services. Around 158(60.5%) agrees that counseling, psychological support and social services are part of school health services. 199(76.2%) of them knows that physical education is an essential component of school health services. The above stated means shows that 190.5(73.0%) of the respondents have correct answers to the questions asked while 70.5(27.0%) recorded wrong answers to the knowledge questions on school health services. Generally majority 150(57.6%) of the respondents have good knowledge of school health services, 80(30.5%) have fair knowledge while 31(11%) have poor knowledge.

Table 5 shows student's attitude towards school health services. In all the items assessed the respondents show a positive attitude as the average mean were all above 2.5. It show that generally the respondents have a positive attitude toward school health services with an average grand mean of 3.078 ± 0.428 .

Table 6 shows students' level of utilization of school health services. It was reported by 40(15.3%) that they never accessed school health services when sick, 34(13%) reported they rarely did, 23(8.8%) reported they occasionally did, 55(21.1%) reported they often did, majority 109(41.8%) reported they did very often. It was reported by 52(19.9%) that their school health services never refer sick students to the hospital, 32(12.3%) reported they rarely did, 38(14.6%) reported they occasionally did, 96(36.8%) reported they did often, 43(16.5%) reported they did very often. It was reported by 46(17.6%) that they never apply the health education taught in school, 24(9.2%) reported they rarely did, 99(37.9%) reported they occasionally did, 45(17.2%) reported they often did, 47(18%) reported they did very often. It was reported by 77(29.5%) that school health officials never carry out medical examination on students, 38(14.6%) reported they rarely did, 19(7.3%) reported they occasionally did, 40(15.3%) reported they often did, 87(33.3%) reported they did very often. It was reported by majority 180(69%) that their school never provide midday meal, 43(16.5%) reported they rarely did, 21(8%) reported they did occasionally, 10(3.8%) reported they did often, 7(2.7%) reported they did very often. Generally the result show that 113.2(43.4%) have poor utilization of the school health services, 40(15.3%) have moderate while 107.8(41.3%) have high utilization.

Table 7 shows the relationship between knowledge of school health services and utilization. It reveals that there is positive relationship between knowledge and utilization. The more knowledgeable they are about the school health services more they utilize the services. We therefore reject the null hypothesis.

Table 8 shows comparison of utilization of school health services by gender. Males had a mean and SD of 2.76 ± 1.01 while the females had a mean and SD of 3.16 ± 1.01 with a p-value of 0.002. The p-value was significant ($p < 0.05$). This implies that there is a difference in utilization of school health services based on gender; we therefore reject the null hypothesis.

Table 3. Demographic characteristics of respondents n=261

Variables	Tenets	Frequency	Percentage
Gender	Male	166	63.6
	Female	95	36.4
Age	10-14 years	58	22.2
	15-19 years	170	65.1
	20 and above	33	12.6
Religion	Christian	229	87.7
	Islam	21	8.0
	African Tradition	5	1.9
	Others	6	2.3

Table 4. Students' knowledge of school health services n=261

Knowledge items	Wrong response F (%)	Correct responses F (%)	
School health services is a place where students are seen when they fall sick while in school	29(11.1)	232(88.9)	
Any of the teachers in the school cannot takes care of sick students in the school health service center there must be a health care professional such as the nurse or doctor.	87(33.3)	174(66.7)	
School health services are services from medical, teaching and other professionals to improve health and wellbeing	66(25.3)	195(74.7)	
Comprehensive health education is one of the major components of school health services	76(29.1)	185(70.9)	
Counseling, psychological support and social services are part of school health services	103(39.5)	158(60.5)	
Physical education is an essential component of school health services	62(23.8)	199(76.2)	
Mean responses	70.5(27.0%)	190.5(73.0%)	
Classification of knowledge			
Level of knowledge	Score range (%)	Frequency(f)	Percentage (%)
Poor	0-40	31	11.9
Fair	41-69	80	30.5
Good	70-100	150	57.6
Total		261	100

4. DISCUSSION

The study shows that majority of the respondents were males, also majority were within the age group of 15-19 years and are Christians. This is similar to findings of a study carried out in Katsina state Nigeria, where majority (73.33%) of the respondents were males [9].

Findings of this study showed that majority of the respondents had good level of knowledge of school health services. This good knowledge may be attributed to the fact that the Egor local government is located at the heart of Benin City surrounded many institutions; University of Benin, University of Benn Teaching Hospital,

Federal Neuropsychiatric Hospital among others. Majority of the respondent's parents and guardian works in these institutions and by implications are literate and possesses high level of awareness to educate their children on these school health services. Also availability and accessibility of modern communication technology being an urban area couple with the high level of awareness of health safety on social-media may be responsible for this good knowledge reported. Though the level of good knowledge reported in this study was commendable, there is need for school management including teacher to continue to emphasis the importance of school health services among the students because increase

in knowledge may translate in to positive attitude for school health services among the students. Findings from the study also revealed that attitude towards school health services among respondents was positive. Supporting this finding is a study in India where it was reported that 90%

of the respondents had favorable attitude to school health services [10]. No doubt this positive attitude in this present study must have resulted from good knowledge on school health services which has led to a concomitant development of positive attitude towards it.

Table 5. Students' attitude towards school health services n=261

ITEMS	SA=4	A=3	D=2	SA=1	M±SD	RMK
Am interested in any of the services rendered by the school health services center	110 (42.1)	80 (30.6)	18 (6.9)	53 (20.3)	2.92 ±0.438	Positive
I always ensure that the waste bin in your class and school environment are emptied and kept clean	137 (52.5)	90 (34.5)	8 (3.1)	26 (10.0)	3.27±0.393	Positive
I have pleasure in seeking the help of a health professional when in need of such services	100 (38.3)	73 (28.0)	4 (1.5)	84 (32.2)	2.72±0.450	Positive
I feel disturbed when there are no drugs in the school health center	108 (41.4)	90 (34.5)	8 (3.1)	55 (21.1)	2.95±0.435	Positive
I feel worried when your school health service center lack competent staff	115 (44.1)	100 (38.3)	5 (1.9)	41 (15.7)	3.08±0.427	Positive
Grand average mean(SD)	3.078±0.428					Positive
SA; strongly agree, A; agree, D; disagree SD; strongly disagree *average mean of ≥ 2.5 is consider as positive attitude while < 2.5 is negative attitude toward school health services						

Table 6. Respondents ' level of utilization of school health services n=261

Items	Never	Rarely	Occasio nally	Often	Very often
How often do students access school health services when sick	40(15.3)	34(13.0)	23(8.8)	55(21.1)	109(41.8)
How often does your school health services refer sick students to the hospital	52(19.9)	32(12.3)	38(14.6)	96(36.8)	43(16.5)
How often do you apply the health education taught in school	46(17.6)	24(9.2)	99(37.9)	45(17.2)	47(18.0)
How often do school health officials carry out medical examination on students	77(29.5)	38(14.6)	19(7.3)	40(15.3)	87(33.3)
How often does your school provide midday meal	180(69.0)	43(16.5)	21(8.0)	10(3.8)	7(2.7)
Total	79(30.2)	34.2(13.1)	40(15.3)	49.2(18.8)	58.6(22.5)
Classification of Level of utilization of school health services					
Level of utilization	Frequency (f)		Percentage (%)		
Poor (5-49%)	113.2		43.4		
Moderate (50-69%)	40		15.3		
High (70-100%)	107.8		41.3		
Total	261		100		

Never =1, rarely =5, occasionally =10, often =15 very often 20 (highest total score 100 lowest 5)

Table 7. Relationship between knowledge of school health services and utilization

		Utilization	Knowledge
Utilization	Pearson Correlation	1	0.203**
	Sig. (2-tailed)		0.001
	N	261	261
Knowledge	Pearson Correlation	0.203**	1
	Sig. (2-tailed)	0.001	
	N	261	261

** . Correlation is significant at the 0.001 level (2-tailed).

Table 8. Comparison of utilization of school health services by gender

	Mean	Std. Deviation	T	p
Male	2.76	1.01	3.084	0.002
Female	3.16	1.01		

Furthermore, findings from the study showed that a little below average of the respondents have poor utilization of the school health services, while the remaining have moderate to high level utilization. This findings agrees with that conducted in Dutsin-Ma, Kastina state Nigeria, where it was reported that 227(68.79%) of the students agreed that they utilize school health services while 103(31.21%) don't utilized it. Although the percentage of utilization is higher than that reported in the present study [9]. This variance may be attributed to the fact that the study in Kastina state was done among college students who are more advance in age, exposure and possibly are more knowledgeable and by implications are better informed to take better decision when sick to use the school health services. Also a study in Calabar, Nigeria reported that 92.3% of the respondents utilized school health services compared to the present study which reported a far lower percentage of utilization [11]. The higher level of utilization in this study as against the present study may be as a result of difference in socio-demographic characteristics of respondents.

Pearson correlation analysis showed that there is a significant positive relationship ($p=0.001$) between knowledge and utilization. This implies that the more knowledgeable they are about the school health services they will more utilize the services. Also comparison of utilization of school health services by gender shows that there is a significant difference ($p=0.002$) in the level of utilization between male and female as female were found to utilize school health services more than their male counterpart. This findings differ from that of Dutsin-Ma, Kastina state Nigeria who found that there is no significant difference (χ^2 of 2.16 at df 1, ($p>0.05$)) in the level of utilization of school health services among male and female

students [9]. This differences can be attributed to the age of the female respondents in both study. As noted before, the study in Kastina was among college female students who are older and more matured as such can take care of themselves when sick without visiting the school health services except when symptoms becomes severe. However, the female students in the present study are mostly teenagers and less expose as such may decide to frequent the school clinic with any little complain especially during their menstrual period which for some might be a great challenge to cope with. This will obviously lead to increase in female's level of utilization of school health services compared to their male counterpart.

5. CONCLUSION AND RECOMMENDATION

The study revealed that the respondents had good knowledge of school health services with positive attitude and moderate to good of utilization. Nevertheless there is need to continue sensitization /awareness campaign on school health services among students especially during the period of erratic upsurge of infectious/communicable diseases. This will help to internalize and develop the habit/culture of always visiting the school health services when they notice any strange sign/symptoms in their body. As early detection will lead to early treatment and prevent the spread of infections in addition to reducing mortality and morbidity among school children.

6. LIMITATION OF THE STUDY

- This study was conducted in only two secondary school with school health services in one local government

area, it would have been good for better generalization if more schools from other local government areas in the state or even across different states were used.

- There were lack of empirical studies focusing on this area among secondary school students to compare the findings with, as this study seems to be among the very few if not the first focusing on secondary school students. Based on this, the researchers recommend that more studies should be conducted in this area focusing on secondary school students and involving a larger population.

CONSENT AND ETHICAL APPROVAL

As per international standard or university standard guideline participant consent and ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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