



# An Assessment of the Level of Provision of School Health Services in Selected Secondary Schools in Calabar Municipality, Cross River State, Nigeria

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## ABSTRACT

**Purpose:** This study was conducted to assess the level of provision of school health services in selected secondary schools in Calabar Municipality.

**Methodology:** Two hypotheses were formulated to guide the study. The study employed the descriptive survey design. The multi-stage sampling technique was adopted to select a total of 314 SS2 students, 100 teachers and 20 principals from 20 schools (10 public and 10 private) and 2 policy makers to make up the sample size of 436. A well validated questionnaire, key informant interview guides and observation checklist were used to collect both qualitative and quantitative data from respondents.

**Results:** Population and independent t-test were used to test the two hypotheses formulated. The results of data analysis were presented in tables and figure. The result of the study revealed that a significant difference exist between the School Health Programme implementation guidelines and the school health services provided in schools and that school ownership significantly influenced the provision of school health services ( $P = 0.000$  at 0.05 confidence level). Private schools were observed to have more of the facilities/personnel and thus provide more health services than the public schools (school clinics/sick bays were found in 10% public and 50% private schools, school nurse/doctor in 0% public and 30% private schools, pre-entry medical examination found on-going in 10% public and 90% private schools, health records book for recording cases reported by students and staff found in 10% public and 30% private schools).

**Recommendations:** Based on the findings, recommendations made included: that copies of the School Health Programme policy and implementation guidelines be made a compulsory document for all schools to guide programme implementation and that the Government should see it as a matter of compulsion, for all schools to have a school clinic/sick bay with at least a health personnel to man it before permission will be given them to operate.

## INTRODUCTION

School health services, one of the five components of School Health Programme (SHP) is referred to as services rendered within the school with the aim of preventing diseases and or remedying health problems (Kupony and Amoran, 2016). It is the co-operative activities of school teachers, physicians, dentists, nurses and other paramedical personnel that are directed at appraising, promoting, and maintaining the health of all learners and other school personnel (Moronkola, 2012). According to Lucas and Gilles (2003) and Obembe, Osungbade and Adenokun (2016), one of the roles of the school is to perform regular examination of students for early detection of ailments that require medical attention. As indicated in the School Health Programme implementation guidelines, the school health services when in place should render services that will enhance the health of the school population (FMOE<sup>2</sup>, 2006).

According to Moronkola (2012) health appraisal of learners and school personnel includes the conduct of pre-admission screening test, routine medical examination, physical fitness test and regular health observation. Proper health records must be kept to show frequency and outcome of health appraisal. Health counseling of pupils, parents and the school community with regards to appraisal result should also be done. There should be a referral link and follow-up services between the school, home, health facility and community for cases that may pose a challenge to the health personnel in the school. The school should frequently carry out inspection/isolation of infected cases, sensitization programmes, sanitation and other epidemic control measures to keep diseases at bay from the school environment. Emergency care should be made available for the sick, injured and those with special needs.

The FMOE<sup>2</sup> (2006) in the School Health Programme implementation guidelines stated the following as the minimum requirement for implementing school health services: A large hall that can accommodate 30-50 students. This should be partitioned to provide space for waiting, examination and treatment/observation. It should have a minimum of two beds, bathroom and toilet facilities, safe water (pipe-borne, bore-hole or well), a refrigerator, regular drugs and consumables supplies, regular power supply, a means of sterilization of equipment/instrument, a means of safe disposal of medical waste, regular supply of stationary, a record keeping system and a means of transportation to referral sites.

Olsen and Allensworth (2012) opined that school health services are meant to promote health by ensuring that health problems are identified early through appraisal and remediable interventions given. Referrals should be made to the primary health care centres for cases that are above the capability of the school health personnel. To prevent disease occurrence, regular physical and medical examination should of necessity be conducted. Counseling services should be rendered to students and parents when the

need arise. Those who provide the services must of necessity be qualified professionals such as doctor, nurses, dentists, opticians and other allied health personnel.

The study of Ofovwe and Ofili (2007) revealed that more private schools (51%) than public schools (27.6%) carry out medical examination of pupils pre-admission and from time to time. These examinations according to them were observed to be done by health professionals such as doctors, nurses and health education teachers. They also observed that private and public schools differ significantly with reference to the availability of sick bay. Whereas 39.4% of private schools sampled had sick bay, only 3.4% of the public schools had. In both public and private schools sampled, it was observed that there was no provision for medical health counseling. On the other hand, Ogbiji and Ekpo (2011) observed a significant difference between public and private schools regarding access to mobile health services and availability of nurses for health services. Their study revealed that public secondary schools have more access to mobile health services and that qualified nurses from government facilities are more available to them than the private schools.

Implementation of School health services has been achieved in many countries. According to a report by MOE and UNESCO (2010), in Iran, the Ministry of health in collaboration with ministry of education as part of SHP, launched a programme for screening of the pupils. The programme enhanced the screening of up to 3.1 million pupils within two years. The result of the screening revealed several disorders among the pupils which gave the school opportunity to plan intervention measures. As much as 12.48% of the pupils were observed with weight disorders, 4.77% had visual disorders, 3.95% had head lice, 2.24 had behavioural disorders, and 0.6% had hearing disorders. These cases were all referred to hospitals where they were treated free. These interventions helped to nib students problems in the bud. Another programme called "CHERISH (Championing Efforts Resulting in Improved School Health)" was launched in Singapore which gave them opportunity to pay more attention to the provision of health promotion programmes in schools using WHO standard.

Since 2003, the MOE and UNESCO (2010) report further explained that "Fit for school" programme was implemented in schools in Philippines. They intervened in ensuring: that students carry out daily supervised hand washing with soap before break, daily supervised tooth brushing with fluoride toothpaste, and the conduct of bi-annual de-worming of all children. Evaluation of this programme revealed reduction in the rate of diarrhoea and respiratory tract infections by 30 to 50%, reduced rate of teeth and mouth infections by 40 to 50%, reduction in helminthic infections by 80%, reduction in the number of stunted and underweight children by 20% and an increase in school attendance by 20 to 25%.

In India, the report records that a "comprehensive school health programme" was implemented in all the schools with the following

components: health screening and remedial measures, health and nutrition education, nutrition intervention, safe and supportive environment and capacity building for health screening. There, the central government developed the framework and guidelines while the states undertook the implementation process. Other countries such as Asia, Sri Lanka, Bangladesh, Thailand and Malaysia are also reported to have implemented some components of SHP with positive results from them.

Several problems are associated with failure to provide school health services. Paramount among them is the vicious circle of ignorance of parents and teachers of prevailing ailments and disorders among students which worsen the problem and affect learning, difficulty in learning by students results in poor performance and high dropout rates, consequently, adolescent depression and malnutrition with physical and mental retardation and low immunity with high vulnerability to infections (MOE and UNESCO, 2010).

Despite the above problems of non-provision of school health services, the situation is still poor in Nigeria. Chukwuocha, Ashiegbu, Dozie, and Aguwa (2009) whose study was done in Owerri (Imo State), observed that schools had no school clinics, the schools' environment was hygienically poor with unattended garbage, and students were kept in congested and stuffy dormitories. With these findings, it is no wonder then that the study revealed a high incidence of malaria and diarrhea amongst the students.

Nzeagwu and Nkinocha (2000) after their study in Obudu (Cross River State) observed haphazard school health services with inadequate facilities and personnel. The study by Samson and Eyo (2010) revealed that only five out of the fifteen health promotion activities sampled were available in secondary schools in Calabar. Akpabio (2010) whose study was done in Cross River and Akwa Ibom States found out that only 3% of schools in Cross River State and 7% of schools in Akwa Ibom State had school clinics; and only 30% of the respondents viewed the equipments and supplies for school health services as adequate.

It is more than a decade since the production of the school health programme policy and implementation guidelines in Nigeria. It becomes necessary to assess the different components of school health programme vis-à-vis the implementation guidelines. This study specifically assessed the level of provision of school health services in relation to the implementation guidelines and school ownership (public/private).

## **METHODOLOGY**

### **Study setting**

The study was conducted in 'Calabar Municipality', one of the 18 Local Government Areas (LGA) in Cross River State, and in fact, the capital city of the state. . Records from the secondary school

education board and the inspectorate department of Ministry of Education Calabar, revealed that as at June 2015, there were 15 public and 36 private secondary schools in Calabar Municipality, bringing it to a total of 51 secondary schools.

This study assessed the level of provision of school health services as a component of School Health Programme in the secondary schools (public and private). The study was delimited to SS2 students, teachers of health-related subjects (health and physical education, nutrition, agriculture, biology and integrated science), principals of the secondary schools and policy makers in the Ministry of Health.

### **Study design/population**

The study adopted a descriptive survey design which involved the systematic collection and presentation of data to explain the current status of school health services in the secondary schools in Calabar Municipality. The study population consisted of all students, teachers and principals in private and public secondary schools in Calabar Municipality and policy makers in the state ministry of health.

### **Sample size determination**

The sample size was determined using the formula for Dichotomous descriptive study as cited in Ejemot-Nwadiaro (2009). The sample size for students was 314 while that of teacher was 101. The principals of all the 20 selected secondary schools were interviewed as well as two policy makers from the State Ministry of Health. That made up the sample size to 437.

### **Sampling procedure/ Instruments for data collection**

The multi-stage sampling and the purposive sampling techniques were used for this study. The multi-stage sampling technique was applied for selection of Local government area (LGA), selection of schools, selection of students and selection of teachers while purposive sampling technique was used to select principals and policy makers. The instruments for data collection were a well validated questionnaire called the School Health Programme Questionnaire (SHPQ), key-informant interview guide and a guide for observation.

### **Data collection**

The quantitative data were collected from 300 students (out of the 314 students enumerated – 96% response rate) and 100 teachers (out of the 101 enumerated - 99% response rate) with the use of copies of the questionnaire. Qualitative data were collected from 20 principals and 2 policy makers using the key informant interview guides and from the school directly during a physical observation exercise in the 20 selected schools.

## Data analysis

The data collected from the field were collated and verified to ensure completeness and accuracy in documentation. The questionnaire responses for the different components of school health services were scored and then t-test used to test for the transformed data set from discrete to continuous. Qualitative data obtained from observation and key informant interviews conducted were critically examined and relevant information sifted and used. The information were organized and presented in percentages, tables and figures.

## Ethical consideration

Ethical approval was obtained from the 'ethical board' in the Ministry of Health, Calabar. The respondents/key informants were presented with the study objectives and were informed of their freedom to participate in the study or to opt out. Their permission was sought and verbally obtained. All respondents were assured of confidentiality and anonymity.

## RESULTS

### Respondents' characteristics

The 300 students were made up of 131 males (43.7%) (86 from private schools and 45 from public schools) and 169 females (56.3%) (71 from private schools and 98 from public schools). The 100 teachers were made of 35 males (35%) (25 from private schools and 10 from public schools) and 65 females (65%) (25 from private schools and 40 from public schools). The 20 principals comprised of 11 males (55%) (8 from private schools and 3 from public schools) and 9 females (45%) (2 from private schools and 7 from public schools). The two policy makers were made of a male and a female (Table 1). Students within 12-14 years constituted 33.7%; those within 15-17 years were 62% while those who were 18 years and above made up only 4.3%. All the 100 teachers, 20 principals and 2 policy makers were all adults above 30 years of age.

**TABLE 1: Respondents' characteristics**

Characteristics	Private schools		Public schools		Total	
	n	(%)	n	(%)	n	(%)
<b>Students:</b>						
Gender:						
Males	86	(28.7)	45	(15.0)	131	(43.7)
Females	71	(23.6)	98	(32.7)	169	(56.3)
Total	157	(52.3)	143	(47.7)	300	(100)
Age:						
12 - 14 years	76	(25.4)	25	(8.3)	101	(33.7)
15 - 17 years	77	(25.7)	109	(36.3)	186	(62.0)
18 years and above	4	(1.3)	9	(3.0)	13	(4.3)
Total	157	(52.3)	143	(47.7)	300	(100)
<b>Teachers:</b>						
Gender:						
Males	25	(25)	10	(10)	35	(35)
Females	25	(25)	40	(40)	65	(65)
Total	50	(50)	50	(50)	100	(100)
<b>Principals:</b>						
Gender:						
Males	8	(40)	3	(15)	11	(55)
Females	2	(10)	7	(35)	9	(45)
Total	10	(50)	10	(50)	20	(100)
<b>Policy makers:</b>						
Ministry of Health						
Gender:						
Males	1					
Females	1					

Figures in parenthesis are percentage.

### Level of provision of school based health services

Only 17 (34%) teachers from private schools and 1 (2%) from a public school, and 49 (31.2%) students from private schools and 18 (12.6%) from public schools said they had school nurses. Availability of school based clinics was reported by 26 (52%) teachers from private schools and 6 (12%) from

public schools, and 77 (49%) students from private schools and 28 (19.6%) from public schools. Much more respondents from private schools than public schools said regular physical examination of students was part of the activities in their school (32 (64%) teachers and 87 (55.4%) students from private schools whereas only 4 (8%) teachers and 23 (16.1%) students from public schools). The same trend was

also observed for the conduct of pre-entry medical examination. Whereas up to 34 – 68% teachers and 98 (62.4%) students from private schools reported that their schools insist on pre-entry medical examination, only 8 (16%) teachers and 16 (11.2%) students from public schools reported same. Not many respondents affirmed that their schools carry out periodic medical examination [12 (24%) teachers and 36 (22.9%) students from private schools and 4 (8%) teachers and 17 (11.9%) students from public schools], dental examination [12 (24%) teachers and 30 (19.1%) students from private schools and 3 (6%) teachers and 12 (8.4%) students from public schools] and screening test for eye [5 (10%) teachers and 16 (10.2%) students from private schools and 1 (2%) teacher and 2 (1.4%)

students from public schools]. When asked if the school's clinic/sick bay maintains a record book, 21 (42%) teachers and 16 (10.2%) students from private schools and 2 (4%) teachers and 16 (11.2%) students from public schools gave positive responses. The question on whether schools used to give emergency health care to students when necessary attracted positive responses from 15 (30%) teachers and 70 (44.6%) students from private schools and 29 (58%) teachers and 77 (53.8%) students from public schools whereas the availability of counseling unit was reported by 20 (40%) teachers and 68 (43.3%) students from private schools and 38 (76%) teachers and 88 (61.5%) students from public schools (Table 2 and 3).

**TABLE 2: School health services in private schools**

Item	Number of students	(%)	Number of teachers	(%)
Availability of school nurse				
Yes	49	(31.2)	17	(34)
No	108	(68.8)	33	(66)
Total	157	(100)	50	(100)
Functional school based clinic				
Yes	77	(49.0)	26	(52)
No	80	(51.0)	24	(48)
Total	157	(100)	50	(100)
Regular conduct of physical examination				
Yes	87	(55.4)	32	(64)
No	70	(44.6)	18	(36)
Total	157	(100)	50	(100)
Conduct of pre-entry medical examination				
Yes	98	(62.4)	34	(68)
No	59	(37.6)	16	(32)
Total	157	(100)	50	(100)
Conduct of periodic medical examination				
Yes	36	(22.9)	12	(24)
No	121	(77.1)	38	(76)
Total	157	(100)	50	(100)
Regular conduct of dental examination				
Yes	30	(19.1)	12	(24)
No	127	(80.9)	38	(76)
Total	157	(100)	50	(100)
Regular screening of eyes and ears				
Yes	16	(10.2)	5	(10)
No	141	(89.8)	45	(90)
Total	157	(100)	50	(100)
Available records in school clinic				
Yes	16	(10.2)	21	(42)
No	141	(89.8)	29	(58)
Total	157	(100)	50	(100)
Emergency health care				
Yes	70	(44.6)	15	(30)
No	87	(55.4)	35	(70)
Total	157	(100)	50	(100)
Availability of school counseling unit				
Yes	68	(43.3)	20	(40)
No	89	(56.7)	30	(60)
Total	157	(100)	50	(100)

Figures in parenthesis are percentage.

**TABLE 3: School health services in public schools**

Item	Number of students (%)		Number of teachers(%)	
Availability of school nurse				
Yes	18	(12.6)	1	(2)
No	125	(87.4)	49	(98)
Total	143	(100)	50	(100)
Functional school based clinic				
Yes	28	(19.6)	6	(12)
No	115	(80.4)	44	(88)
Total	143	(100)	50	(100)
Regular conduct of physical examination				
Yes	23	(16.1)	4	(8)
No	120	(83.9)	46	(92)
Total	143	(100)	50	(100)
Conduct of pre-entry medical examination				
Yes	16	(11.2)	8	(16)
No	127	(88.8)	42	(84)
Total	143	(100)	50	(100)
Conduct of periodic medical examination				
Yes	17	(11.9)	4	(8)
No	126	(88.1)	46	(92)
Total	143	(100)	50	(100)
Regular conduct of dental examination				
Yes	12	(8.4)	3	(6)
No	131	(91.6)	47	(94)
Total	143	(100)	50	(100)
Regular screening of eyes and ears				
Yes	2	(1.4)	1	(2)
No	141	(98.6)	49	(98)
Total	143	(100)	50	(100)
Available records in school clinic				
Yes	16	(11.2)	2	(4)
No	127	(88.8)	48	(96)
Total	143	(100)	50	(100)
Emergency health care				
Yes	77	(53.8)	29	(58)
No	66	(46.2)	21	(42)
Total	143	(100)	50	(100)
Availability of school counseling unit				
Yes	88	(61.5)	38	(76)
No	55	(38.5)	12	(24)
Total	143	(100)	50	(100)

Figures in parenthesis are percentage.

### Test of hypotheses

The result of t-test analysis for the responses of teachers and students for hypothesis one which states that, the provision of school health services in secondary schools in Calabar Municipality does not significantly differ from the recommendation in the

implementation guidelines revealed a calculated t value of 8.8 for teachers' responses and 13.250 for students' responses. These values were higher than 1.960 which is the critical t value at 0.05 level of significance, thus the null hypothesis was rejected. Implying that, there is a significant difference between the health services provided in the secondary schools

in Calabar Municipality and the recommendation in the implementation guidelines (Table 4).

Analysis of data for hypothesis two which states that, the provision of school health services in secondary schools in the study area is not significantly influenced by school ownership (public/private) revealed calculated t values (for both teachers' and students' responses) of 4.564 and 4.227 which are both higher than the critical value of 1.960 at 0.05 level of significance with df of 98 and 298. With this result, the null hypothesis was rejected, which implies that the provision of school health services is significantly influenced by school ownership (Table 5).

### Observation results

Findings from observation conducted revealed that, only 15% of the schools (all private) had school nurses, 30% (10% public and 50% private) had functional sick bay, 50% (from public and private schools) conduct regular physical examination, 50% (10% public and 90% private schools) insist on medical examination before admission, and only 10% (private schools) carry out periodic medical examination, dental examination and screening test. Among the 30% schools that had school clinic, 20% of them (10% Public and 30% private) had health records book. Up to 65% schools (70% public and 60% private) were providing emergency health care and 60% (70% public and 50% private) had functional counseling unit (Figure 1).

**TABLE 4: Result of t-test analysis on difference between the SHP implementation guidelines and school health services in schools**

Variable	N	Df	Mean	$\mu$	SD	T	P-value
Teachers' responses:							
SHP in secondary schools	100	99	2.89	1.24	1.875	8.8	0.000
Students' responses:							
SHP in secondary schools	300	299	2.949	1.31	2.143	13.250	0.000

P < at 0.05, Critical t = 1.960

**TABLE 5: Result of t-test analysis on influence of school ownership on the provision of school health services in secondary schools.**

Variable	N	Df	Mean	SD	t	P-value
School health services:						
Teachers:						
Private schools	50	98	3.78	2.410	4.564	0.000
Public schools	50		2.0	1.340		
Students:						
Private schools	157	298	3.471	2.212	4.227	0.000
Public schools	143		2.427	2.074		

P < at 0.05, df 98 for teachers and 298 for students, Critical t = 1.960.

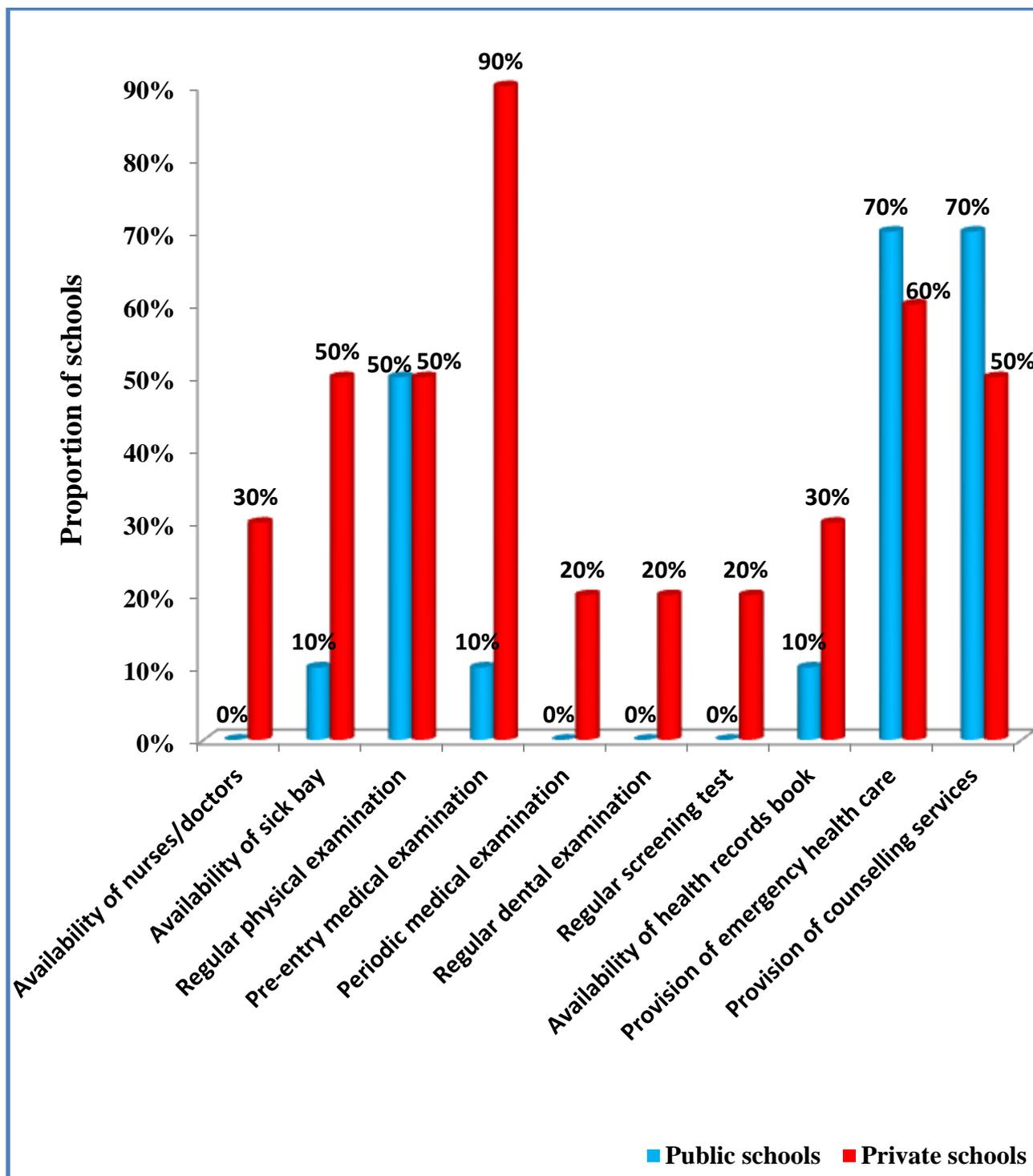


FIG. 1: School health services in public and private schools

## DISCUSSION

Students are by their disposition more vulnerable to accidental injuries, and are also prone to sudden attack of ill-health. As a proof of the fact that the government and school administrators have low perception of susceptibility and severity, schools were observed to be poorly equipped to manage these unforeseen situations. More so, Olsen and Allensworth (2012) and Kupony and Amoran (2016) opined that it is the duty of schools to carry out regular health appraisal of the students for prompt identification and

treatment of conditions that need medical attention. Only 15% of schools were observed to have school nurse/doctor and only 30% had sick bay. These findings corroborate that of a number of authors whose studies were carried out within the country. Nwachukwu (2003) observed the presence of school clinics only in 40% of schools in Imo state, Nzeogwu and Nkinocha (2000) observed that none of the schools sampled in Obudu had school nurse nor sick bay, Buba (2005) observed that only 25% of the Secondary schools in Taraba state had school nurse and Akpabio (2010) found out that only 3% of schools

in Cross River state and 7% of schools in Akwa Ibom state had school clinics. Even though up to 50% of schools were observed to be carrying out regular physical examination and pre-entry medical examination of the students, only 10% (all private schools) were observed to be carrying out periodic medical examination, screening test for eye and dental examination. It is not a surprise therefore to see the survey report of WHO (2012) which revealed that several students in Nigerian schools were observed with various ailments. According to them, 30% of students had low body mass index (BMI), 3% had skin rashes, 20% had visual problems, 10% had dental plague and 19% had hearing defect. To worsen the situation, they found nurses in only 17% of schools and only 6% were linked to government clinics. This situation may be as a result of the poor collaboration between the Ministry of Health and Education and also due to the problem of shortage of nurses that has plagued the State Ministry of Health as indicated by the Programme Manager, School Health Programme during a session of key informant interview with her. This situation necessitates the organization of communication programmes for all stakeholders as a cue to action towards the planning and implementation of effective school health programme.

This study revealed that 30% of private schools and none of public schools have school nurse and 50% of private and 10% of public schools have functional sick bay. No difference was observed in the conduct of regular physical examination of students (50% of both public and private schools), but the conduct of medical examination before admission revealed 10% public schools and 90% private schools. Despite the counsel of Lucas and Gilles (2003) and Obembe et al (2016) concerning the performance of regular medical examination of students by schools, the results showed that none of the public schools conducted medical examination and screening test for eye and ear, and only 20% of the private schools were observed to be doing so. Functional counseling unit was found in 70% of public schools and 50% of private schools. These findings are not a surprise because of the obvious cold feet suddenly developed by the state ministry of health towards the school health programme. The director of public health during a session with him remarked: "where are the nurses for us to send to the schools when we do not have enough to work in the facilities. Instead of allowing the hospitals to suffer, we had to withdraw the nurses from the schools."

This study gives credence to the work of Ofofwe and Ofili (2007) who found that more private schools (51%) than public schools (27.6%) carry out medical examination of pupils pre-admission and that more private (39.4%) than public schools (3.4%) had sick bay. However, their observation that none of the schools had counseling unit is at variance with the findings of this study. On the other hand, the report of Ogbiji and Ekpo (2011) that public secondary schools had more access to mobile clinics and qualified nurses greatly contradicts the result of this study.

## CONCLUSION

In line with the findings of this study it can be unequivocally concluded that there is an obvious difference between the health services provided in secondary schools in Calabar Municipality and what is recommended in the School Health Programme implementation guidelines and that the level of provision of school health services is significantly influenced by school ownership.

## RECOMMENDATIONS

1. A copy of the national policy on SHP and the implementation guidelines should be made compulsory documents for all schools to guide programme implementation.
2. All schools should form school health clubs so that students will be exposed to trainings on contemporary health issues.
3. The government should ensure that no one gets approval to operate a school without ensuring the availability of essential facilities for school health services.
4. As a matter of compulsion, all schools should have a school clinic/sick bay with a health personnel assigned to man it. If specialized nursing services whereby school nurses are posted to schools are not immediately practicable on account of the dearth of nurses, the government should encourage generalized nursing services whereby nurses working in primary health care centres cover the schools nearest to them (paying regular visits) until adequate number of nurses are trained/employed to take up the duty.
5. The recommendation of pre-entry medical examination of students and subsequent regular health appraisal should be upheld by all school administrators and the records adequately kept.

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