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An Assessment of School Health Services in Private and Public Primary Schools in Ado-Ekiti, Nigeria

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ABSTRACT

Background: The School Health Service is to help children at school to achieve the maximum health possible for them to obtain full benefit from their education. This study aimed to examine the difference in the knowledge and practice of school health services between public and private primary schools in Ado Ekiti.

Methods: This was a comparative cross-sectional study of public and private primary schools. A multistage sampling technique was used to recruit 425 teachers in 80 public and private schools into the study. A semi-structured, self-administered questionnaire and observational checklist were used for data collection. Data were analysed using SPSS version 25. Descriptive statistics such as percentages, the sample mean, and frequency tables were done. Inferential statistics were used to test for associations between categorical variables and statistical significance set at p-value < 0.05.

Results: The mean age of the teachers in public schools was 42.0 ± 7.5 years, compared to 30.46 ± 7.2 years for teachers in private schools. Married teachers in public and private schools were 202 (92.7%) and 125 (60.4%) respectively. In the public schools, 64 (29.4%) teachers had more than 15 years' experience and 11 (5.3%) in private schools. More than half of the teachers in both public and private schools had good knowledge of school health services, 118 (59.0%) and 89 (55.3%) respectively with p value of 0.477. Only 4 (10%) of the public schools investigated had good practice of school health service while it was 23 (57.5%) in private schools, this was statistically significant with p value of 0.001.

Conclusions: There was no significant difference between the knowledge of school health services among teachers of public and private schools. School health services were better practiced in private schools when compared to public schools. Advocacy for strategies that promote a more comprehensive practice of school health services is especially recommended in public schools.

Key words: School Health Services, Public, Private Primary School

1. INTRODUCTION

When children start daycare, nursery, and primary school, they start receiving instruction outside the family which is their primary agent of socialization. For some, the instructions received from the schools may be their first The instructions and the experiences from the school prepare them for their role in the future as responsible adults. Children spend a lot of time in school, in some cases even more than the time they spend at home with family.[1] A well-organized school health service will be a cost-effective strategy for preventing health and social problems. Good health will lead to the child's optimal growth and development and create a good learning environment for the child. The impact of the school health program will lead to a healthy and productive adult that can give back to the nation.[2]

The population of our school age children in Nigeria is about 23%.[2] School health services not only protect and improve the health status of the 23% of the population that comprises students, but also benefit the teaching and non-teaching staff of the school, as well as the surrounding

community, when implemented effectively.[2] For these children to get full benefit from their education, they need to be in good health which is the purpose of school health services2. Therefore, school health service is an important component of our health delivery system.[3]

School health service deals with health appraisals, control of communicable diseases, record keeping and supervision of the health of school children and personnel.[4,5] It is the aspect that concerns itself with evaluating the health of an individual without prejudice. Health appraisals afford the school authorities the opportunity to detect signs and symptoms of conventional diseases as well as signs of emotional disturbances that could affect the learning activities of children.[5] It includes pre-entry medical screening, routine medical screening/examination, school health records, sick bay, first aid and referral services. Other services rendered include fitness observation (which involves physical inspection of the physiology and behaviours of children), physical examinations (screening tests and medical diagnosis) and health records (keeping of records of the medical histories of children).[5,6] School health service are both preventive and curative services and it helps in providing information to parents and school personnel on the health status of school children.[6] It furthermore provides advisory and counselling services for the school community and parents.

School Health Services are necessary in order to keep the children in optimal health throughout their course of study, detect any departure from normal health and restore health as quickly as possible through immediate treatment in the school or appropriate referral.[7] School health services provide data for monitoring, evaluating, and improving child survival. This is even more important in developing countries like Nigeria where the school aged child is the survivor of high childhood mortality.[8]

A well-structured and appropriately executed school health programme can be used to create safe surroundings in favour of school children.[9] School health services can develop into one of the strategies for promoting primary health care services.[10] This has significance in the primary health care of the school children and reduction in incidence of preventable diseases, early diagnosis, and treatment of ailments.

There is a deficiency of school health clinics in Nigeria and where they exist, the services are not comprehensive, sufficient enough or otherwise, not structured to address the needs of the pupils6. Studies have revealed that primary school children in Nigeria were not provided with basic health examination services and pre-entrance medical examinations therefore baseline health information regarding them was absent. There is also a lack of routine medical examination which would have detected deviations from the standard which makes the children vulnerable to preventable diseases.[11,12] School health programme or services? has been described as the neglected part of Primary Health Care in Africa[10]. Since almost all small community in Nigeria has a primary school, communities lacking health centres, it should be feasible to benefit from the primary school as a centre for primary health care delivery not only meant for the pupils but also for the community.[8]

All efforts at addressing the school health programme in Nigeria have remained largely at policy level with negligible implementation.[1,10] With so many benefits attached to school health services and much value placed on education in the state, there is dearth of study on school health services and especially in the private schools. Hence this study among public and private primary schools in Ekiti State.

2. METHODS

2.1 Study Location and Design.

The study was conducted in Ado-Ekiti. Ado-Ekiti is the capital city of Ekiti state, in the South-western part of Nigeria. Ado-Ekiti Local Government is a one town local Government that doubles as Local Government and State capital. There are 69 public primary schools, 97 private nursery and primary schools, 14 public junior and senior secondary schools, 27 private secondary schools in Ado local government. There are six (6) post-secondary institutions in the local government. Ado has four tertiary institutions, two tertiary health institutions and four radio stations. Ado Local Government is divided into 13 political wards in the ward creation by the Federal Government.

The study design was a comparative cross-sectional study between public and private primary schools in Ado-Ekiti. Teachers in selected registered public and private primary schools in Ado Ekiti who had been teaching for not less than two years were eligible for participation in the study. Teachers on leave or absent at the time of questionnaire administration were excluded from the study.

2.2 Sample Size Determination.

The minimum required sample therefore was obtained from the formula for comparative study proportions between two groups[13]. According to a study by Ofovwe et al the prevalence School Health Programme in Private and Public Schools were 40.4% and 31.0% respectively[14]. A total of 425 teachers participated from public and private primary schools.

2.3 Sampling Technique

A multi-stage sampling technique was employed.

Selection of Wards; There are 13 wards in Ado-Ekiti local government, 6 of these wards were selected using simple random sampling by balloting method.

2.3.1 Selection of Schools

Across the six wards, 80 schools were chosen from the entire school list obtained from the ministry of education (40 public schools and 40 private schools).

2.3.2 Selection of Teachers

Minimum of five teachers were selected in the public primary schools and minimum of five in each private primary school who fall within the recruitment criteria were chosen by convenient sampling for questionnaire administration because some teachers were teaching so as not to disturb their classes. This decision was taken since the number of private schools were more and the population of teachers in public schools also were more than those in private.

2.4 Data collection and analysis

Study data was collected using self-administered questionnaires. Semi-structured questionnaires were administered by the research assistants. The research assistants were final year medical students who were trained on the objectives, the extent, risk, benefits of the research and research ethics. Their proficiency was

checked by role play. The questionnaire collected information on the informants' socio-demographic characteristics, knowledge of school health service in the various schools. Observation checklist was used to get the practice of school health service and each school was evaluated based on this. A non-contiguous ward, far from the selected ones was used for the pre-test.

Data collected were checked for errors, entered, cleaned, and analysed using the Statistical Product for Service Solutions version 25. Data were presented using tables and graphs and data summarisation using means, measures of association between dependent and independent variables were done using chi square test and p value set at <0.05.

2.5 Study Variables.

The independent variables include the respondents' socio-demographic factors (age at last birthday, sex, ethnicity, religion, level of education and year of working in the school). The dependent variables include the knowledge of teachers on school health service and practice of school health service by each of the schools.

2.6 Measurement of Knowledge Scores

There were 10 questions on knowledge of respondents on school health services with a maximum score of 10 marks. All questions were awarded one (1) mark for correct responses and zero (0) for incorrect responses or 'I don't know' responses. The mean score was obtained, and respondents with marks below the calculated mean were categorised as 'poor knowledge' and those with the mean mark and above were stratified as 'good knowledge'.

2.7 Measurement of Practice Scores

A total of 19 items were assigned marks to assess the practice of school health services in the schools through the teachers. There was a maximum score of 23 marks obtainable. The mean score was obtained, and marks below the calculated mean were classified as 'poor practice' and those with the mean mark and above were classified as 'good practice'.

2.8 Ethical Approval

Ethical approval to conduct the study was obtained from the Ethics Committee of the Ekiti State University Teaching Hospital. Permission was gotten from Ekiti State Basic Education Board (SUBEB) and the school authorities. Written consent was obtained from the respondents after the study objectives, the extent, the benefits, and risks were properly explained to the respondents. Study participants were also assured of strict confidentiality, and this was indicated on the questionnaire. Participation was voluntary and Participants were offered the choice of pulling out at any point of the study. The participants were also given a consent portion to sign on the questionnaire.

3. RESULT

A total of 469 questionnaires were distributed to teachers who met the inclusion criteria within the selected schools. The total number of returned questionnaires that were properly filled was 425 (response rate is 90.6%).

3.1 Socio-demographic Characteristics

The overall mean age of all the Teachers was 36.4 ± 9.4 years. The mean age of the Teachers in public primary schools was 42.0 ± 7.5 years while that for the Teachers in the private primary schools

Table 1: Socio-demographic characteristics of the respondents.

Characteristics	Public Schools N = 218 (%)	Private Schools N = 207 (%)	Total N = 425 (%)	χ^2	p-value
Age at last birthday					
Less than 30 years	16 (7.3)	122 (59.9)	138 (32.5)		
31 – 40 years	78 (35.8)	67 (32.4)	145 (34.1)		
41 – 50 years	98 (45.0)	14 (6.8)	112 (26.3)		
Above 50 years	26 (11.9)	4 (1.9)	30 (7.1)	161.211	0.001*
Gender					
Male	23 (10.6)	39 (18.8)	62 (14.6)		
Female	195 (89.4)	168 (81.2)	363 (85.4)	5.857	0.016
Marital Status					
Single	10 (4.6)	82 (39.6)	92 (21.7)		
Married	202 (92.8)	125 (60.4)	327 (76.9)		
Separated/Divorced	0.(0.0)	0 (0.0)	0 (0.0)		
Widowed	6 (2.8)	0 (0.0)	6 (1.4)	80.248	0.001**
Religion					
Christianity	212 (97.2)	182 (87.9)	394 (92.7)		
Islam	5 (2.3)	16 (7.7)	21 (4.9)		
Others	1 (0.5)	9 (4.4)	10 (2.4)	14.171	0.001*
Ethnicity					
Hausa	0 (0.0)	2 (1.0)	2 (0.5)		
Igbo	15 (6.9)	24 (11.6)	39 (9.2)		
Yoruba	203 (93.1)	176 (85.0)	379 (89.1)		
Others	0 (0.0)	5 (2.4)	5 (1.2)	10.723	0.013**
Highest Educational Qualification					
Postgraduate	9 ((4.1)	7 (3.4)	16 (3.8)		
Graduate	109 (50.0)	110 (53.1)	219 (51.4)		
National Certificate of Education	87 (39.9)	76 (36.7)	163 (38.4)		
Teachers' training	13 (6.0)	14 (6.8)	27 (6.4)	0.750	0.861
Years of Teaching Experience					
1 – 5 years	29 (13.3)	122 (58.9)	151 (35.5)		
6 – 10 years	40 (18.3)	53 (25.7)	93 (21.9)		
11 – 15 years	85 (39.0)	21 (10.1)	106 (24.9)		
>15 years	64 (29.4)	11 (5.3)	75 (17.7)	134.996	0.001

Level of significant < 0.05 *Yate's continuity correction

Table 2: Respondents' knowledge on School Health Services.

Knowledge	Public Schools n (%)	Private Schools n (%)	Total n (%)	χ2	p-value
Awareness of School Health Program. (n = 425)					
Yes	200 (91.7)	161 (77.8)	361 (84.9)		
No	18 (8.3)	46 (22.2)	64 (15.1)	16.189	0.001
Definition of School Health Services. (n = 361)					
Correct	77 (38.5)	46 (28.6)	123 (34.1)		
Incorrect	123 (61.5)	115 (71.4)	238 (65.9)	3.914	0.048
Components of School Health Services					
Correct	83 (41.5)	51 (31.7)	134 (37.1)		
Incorrect	117 (58.5)	110 (68.3)	227 (62.9)	3.687	0.055
School Health Services as a component of Primary Health care.					
Correct	152 (76.0)	130 (80.7)	282 (78.1)		
Incorrect	48 (24.0)	31 (19.3)	79 (21.9)	1.175	0.278
Administrative unit responsible for School Health Services.					
Correct	86 (43.0)	64 (39.8)	150 (41.6)		
Incorrect	114 (57.0)	97 (60.2)	211 (58.4)	0.388	0.534
Teacher's role in First Aid Implementation.					
Correct	199 (99.5)	159 (98.8)	358 (99.2)		
Incorrect	1 (0.5)	2 (1.2)	3 (0.8)	0.596	0.440*
Content of First aid box					
Correct	198 (99.0)	156 (96.9)	354 (98.1)		
Incorrect	2 (1.0)	5 (3.1)	7 (1.9)	2.080	0.149*
Medical screening					
Correct	184 (92.0)	155 (96.3)	339 (93.9)		
Incorrect	16 (8.0)	6 (3.7)	22 (6.1)	2.846	0.092
Record Keeping					
Correct	197 (98.5)	159 (98.8)	356 (98.6)		
Incorrect	3 (1.5)	2 (1.2)	5 (1.4)	0.043	0.835*
Inform Parent of the Sick Child					
Correct	195 (97.5)	155 (96.3)	350 (97.0)		
Incorrect	5 (2.5)	6 (3.7)	11 (3.0)	0.454	0.500

Level of significant < 0.05 *Yate's continuity correction

was 30.46 ± 7.2 years. Highest proportion of the Public-School Teachers, 98 (45.0%) fell into the 41-50 years age group, while the highest number of the Private School Teachers, 122 (59.9%) were less than 30 years of age. There was a statistically significant difference in age between the Public and Private School Teachers ($\chi2= 161.211$, p<0.001). This is shown in table 1.

Female Teachers outnumbered their male counterparts in both the Public and Private Schools. The Public Schools had a total of 195 (89.4%) Female Teachers while the Private Schools had 161 (81.2%) Female Teachers. This difference is statistically significant ($\chi2= 5.857$, p= 0.016).

Twenty-nine (13.3%) and 122 (58.9%) of the Public and Private School Teachers respectively had between 1-5 years teaching experience. Whereas 85 (39.0%) of the Public-School Teachers and 21 (10.1%) of the Private-School Teachers had been teaching for 11-15 years and 64 (29.4%) of the Public-School Teachers had more than 15 years working experience as a teacher as against 11 (5.3%) in the Private-Schools. The difference was statistically significant ($\chi2= 134.996$, p<0.001).

3.2. *Knowledge on School Health Services*

Table 2 revealed that only one hundred and twenty-three (34.1%) of the study population were able to correctly define School Health Services. 77 (38.5%) of the Public-School Teacher, as against 46 (28.6%) of the Private-School Teacher provided a correct definition of School Health Services, ($\chi2 = 3.914$, p = 0.048). Again, within both sets of Teachers, only a minority 83 (41.5%) of the Public-School Teachers and 51 (31.7%) of the Private School Teachers were able to correctly list the components of the School Health Services ($\chi2 = 3.752$, p = 0.153). Majority of the teachers in both groups 199 (99.5%) and 159 (98.8%) from the public and private schools respectively, opined that teachers should be trained in first aid and other health issues ($\chi2= 0.596$, p= 0.440).

Majority of the public and private school teachers 198 (99.0%) and 156 (96.9%) respectively felt that items such as plasters, bandages, and essential drugs like paracetamol should be included in the first aid box ($\chi2= 2.080$, p= 0.149). Majority of the teachers in both groups; 184 (92.0%) and 155 (96.3%) of the public and private school teachers respectively, know that pre-entry medical screening in school health program and routine medical screening/ examination should be provided for all pupils and staffs ($\chi2= 2.846$, p= 0.092).

3.3. *Practice of School Health Services*

Table 3 showed that there were no health personnel or a trained first aider in 37 (92.5%) Public Schools and 18 (45.0%) Private Schools. In a similar vein, there were no doctors in any of the public schools, while only 3 (7.5%) of the Private schools had doctors. The findings on the difference in availability and the cadre of health personnel in both public and private schools were statistically significant ($\chi2 = 25.297$, p < 0.001). None of the public schools had sick bay/clinic compared to 13 (32.5%) of the private schools that had, and the difference was statistically significant at ($\chi2 = 15.522$, p < 0.001). Ambulance/School Bus service was present in just one (2.5%) of the public schools as against in 15 (37.5%) of the private schools. This was a statistically significant finding ($\chi2 = 15.313$, p < 0.001).

There was no health record of the pupils in 36 (90%) of the public

Table 3: Practice of School Health Services in Public and Private Schools

Practice	Public Schools N = 40 (%)	Private Schools N = 40 (%)	Total N = 80 (%)	χ2	p-Value
Personnel					
None	37 (92.5)	18 (45.0)	55 (68.8)		
Health Assistant/Trained First-Aider	1 (2.5)	9 (22.5)	10 (12.5)		
Health Educator/Nutritionist	2 (5.0)	2 (5.0)	4 (5.0)		
Nurse/Midwife	0 (0.0)	8 (20.0)	8 (10.0)		
Doctor	0 (0.0)	3 (7.5)	3 (3.7)	25.297	0.001**
Routine Inspection					
Available	1 (2.5)	0 (0.0)	1 (1.2)		
Not Available	39 (97.5)	40 (100.0)	79 (98.8)	1.013	0.314**
Periodic Med. Examination					
Available	33 (82.5)	33 (82.5)	66 (82.5)		
Not Available	7 (17.5)	7 (17.5)	14 (17.5)	0.000	1.000
Referral to Health Centres					
Available	30 (75.0)	24 (60.0)	54 (67.5)		
Not Available	10 (25.0)	16 (40.0)	26 (32.5%)	2.051	0.152
Treatment Facilities					
First Aid Box					
Available	2 (5.0)	0 (0.0)	2 (2.5)	2.051	0.152**
Not Available	38 (95.0)	40 (100.0)	78 (97.5)		
Essential Drug & Material					
Available	21 (52.5)	11 (27.5)	32 (40.0)		
Not Available	19 (47.5)	29 (72.5)	48 (60.0)	5.208	0.022*
Sick Bay/Clinic					
Available	40 (100.0)	27 (67.5)	67 (63.7)		
Not Available	0 (0.0)	13 (32.5)	13 (16.3)	15.522	0.001**
Ambulance/Sch bus					
Available	39 (97.5)	25 (62.5)	64 (80.0)		
Not Available	1 (2.5)	15 (37.5)	16 (20.0)	15.313	0.001*
Telephone Service					
Available	34 (85.0)	33(82.5)	67 (83.7)		
Not Available	6 (15.0)	7 (17.5)	13 (16.3)	0.092	0.762
Health Records					
Not Available	36 (90.0)	23 (57.5)	59 (73.7)		
Available, not cumulative	3 (7.5)	13 (32.5)	16 (20.0)		
Cumulative, not transferrable	1 (2,5)	3 (7.5)	4 (5.0)		
Cumulative and transferrable	0 (0.0)	1 (2.5)	1 (1.3)	11.114	0.011*

Level of significant < 0.05 *Yate's continuity correction, **Fisher's Exact

schools and 23 (57.5%) of the private schools, health records of the pupils were available in 3 (7.5%) of the public schools and 13 (32.5%) of the private schools, however it was not cumulative. The cumulative health record was available in 1 (2.5%) of the public schools and 3 (7.5%) of the private schools, however it was not transferrable. This difference was statistically significant ($\chi2 = 11.114$, P = 0.011). The practice of school health services in Public and Private Schools when compared in this study was independent on the type of school. Although, above average 36 (90.0%) of the public schools had a poor practice while 17 (42.5%) had poor practice among the private school, however, the difference was not statistically significant ($\chi2 = 0.952$, P =0.329). This is shown in table 4.

Table 4 shows that, on average, 118 (59.0%) of public school teachers and 89 (55.3%) of private school teachers had good knowledge of school health services cumulatively. There was no statistically significant difference in the school health services knowledge of the public and private school teachers ($\chi2 = 0.505$, p= 0.477) as shown in table 5.

The association between the sociodemographic characteristics of the teachers and their knowledge shew that only their age and educational qualification were significantly associated. The respondents that were graduate 118 (57.0 %) had good knowledge compared to those with lower levels of qualification e.g NCE 78 (37.7 %) that had good knowledge and the difference was statistically significant (p – value = 0.005)

Table 6 revealed that there was no statistically significance relationship between socio-demographic characteristics and the practice of school health services except in educational qualifications. Respondents with graduate 99 (54.1) and post-graduate qualifications 10 (5.5%) had good practice compared to teachers with only teachers training certificate, a lower level of qualification 5 (2.7) and the difference is statistically significant with p value of 0.033.

4. DISCUSSION

The National School Health Policy (NSHP) adopted in 2006 provides a comprehensive framework for the effective implementation of the School Health Program (SHP)[2]. The adopted five-component model includes School Health Services (SHS). This study aimed to assess the awareness, knowledge, and practice of the components of School Health Services as proposed by the NSHP in both Public and Private Schools in Ado Ekiti.

Three-quarter of the participants (school teachers) were aware of School Health Program and that School Health Services (SHS) is a component of this. This was no surprise since the teacher training curriculum incorporates a segment dedicated to components of School Health Programs (SHP). Teachers can undergo SHP training either during their academic years or as part of their professional development while on the job [15].

Cumulatively, in-depth knowledge of the School Health Services was demonstrable in only slightly more than half of respondents

Table 4: Overall knowledge of Teachers and practice of School Health Services.

Knowledge	Public Schools N = 200 (%)	Private Schools N = 161 (%)	Total N = 361 (%)	χ2	p-Value
Good	118 (59.0)	89 (55.3)	207 (57.3)	0.505	0.477
Poor	82 (41.0)	72 (44.7)	154 (42.7)		
Practice	**N = 40 (%)**	**N = 40 (%)**	**N = 80 (%)**		
Good	04 (10.0)	23 (57.5)	27 (33.8)	21.743	0.001
Poor	36 (90.0)	17 (42.5)	53 (66.2)		

(57.3%) which depicts the knowledge as generally good among the teachers. The findings, however, revealed a gap between awareness and adequate knowledge of School Health Services, which could be due to lack of information, inadequate and failed implementation strategies [16], a poor primary health care system [9] or perhaps lack of training of professionals to disseminate policies at the grassroots level. Similar findings were reported in a study conducted in Abia state, Nigeria, where the majority of teachers exhibited good knowledge of school health services, albeit slightly higher than the current study [17]. Conversely, a study in Ogun state in 2016 demonstrated poor knowledge of School Health Services among head teachers, despite being in the same geopolitical zone as the current study [1]. These disparities may be attributed to differences in population, result analysis techniques, variations in the questions asked and modalities employed in the data collection in the studies. For example, the Abia state study's data on knowledge assessment was limited blurring some lines of inferences [17] and results of knowledge assessment from the other study showed a broader and smaller set of questions.

Table 5: Association between knowledge and sociodemographic characteristics of Respondents

Characteristics	Good Knowledge N = 207 (%)	Poor Knowledge N = 154 (%)	Total N = 361 (%)	χ2	p-Value
Age at last birthday					
Less than 30 years	56 (27.1)	50 (32.5)	106 (29.4)		
31 – 40 years	86 (41.5)	41 (26.6)	127 (35.2)		
41 – 50 years	54 (26.1)	50 (32.5)	104 (28.8)		
Above 50 years	11 (5.3)	13 (8.4)	24 (6.6)	9.018	0.029
Gender					
Male	30 (14.5)	21 (13.6)	51 (14.1)		
Female	177 (85.5)	133 (86.4)	310 (85.9)	0.053	0.817
Marital Status					
Single	32 (15.4)	36 (23.4)	68 (18.8)		
Married	173 (83.6)	117 (76.0)	290 (80.4)		
Separated/Divorced	0 (0.0)	0 (0.0)	0 (0.0)		
Widowed	2 (1.0)	1 (0.6)	3 (0.8)	3.681	0.159**
Religion					
Christianity	194 (93.7)	142 (92.2)	336 (93.1)		
Islam	11 (5.3)	8 (5.2)	19 (5.3)		
Others	2 (1.0)	4 (2.6)	6 (1.6)	1.438	0.487*
Ethnicity					
Hausa	2 (1.0)	0 (0.0)	2 (0.6)		
Igbo	17 (8.2)	13 (8.4)	30 (8.3)		
Yoruba	188 (90.8)	139 (90.4)	327 (90.5)		
Others	0 (0.0)	2 (1.3)	2 (0.6)	4.185	0.242**
Highest Educational Qualification					
Postgraduate	2 (1.0)	11 (7.1)	13 (3.6)		
Graduate	118 (57.0)	69 (44.8)	187 (51.8)		
NCE	78 (37.7)	64 (41.6)	142 (39.3)		
Teachers' training	9 (4.3)	10 (6.5)	19 (5.3)	13.002	0.005*
Years of Teaching Experience					
1 – 5 years	67 (32.3)	50 (32.5)	117 (32.3)		
6 – 10 years	54 (26.1)	25 (16.2)	79 (21.9)		
11 – 15 years	54 (26.1)	42 (27.3)	26.6)		
>15 years	32 (15.5)	37 (24.0)	69 (19.2)	7.355	0.061

Level of significant < 0.05 *Yate's continuity correction, **Fisher's Exact

The first SHS objective of the NSHP is to have preventive and curative services for the promotion of the health of the staff and students [18] however almost all the schools studied did not have the services of a doctor, only one out of every ten of the schools had a nurse and half of a quarter of the schools had a trained First Aider. Similar findings were noted in previous and more recent studies in Nigeria [1,19,20] indicating the inadequate status quo of school health services in various areas of the country. There are better outcomes in studies conducted in a district in Pakistan [21] and New Zealand [22] which had six in ten schools with at least a First Aider. The New Zealand study however reported there were doctors in a quarter of the schools studied which is most likely due to financial strength of the country as a developed nation. Comparing this to the situation in Nigeria, some authors show a trend of constant deterioration in the School Health Service going from a 1972 study in Ibadan Nigeria [1,23,24] to more recent times studies. Plausible reasons for this trend may include inadequate funding for health services in schools, limited availability of trained medical personnel, and challenges in maintaining essential resources for health care delivery.

One of the consequences as seen in a qualitative study in Southwest Nigeria reported that untrained personnel mostly administered First Aid when needed [25] which could further worsen the situation or put the person in danger. School staff should ideally be professionally trained on administration of first aid and worse

case scenario, a minimum of three first aiders should be available per time in the school environment.[1] Availability of the first aid box, irrespective of the untrained personnel, in almost all schools in this study is similar to other studies[1,25]. Though commendable, is not satisfactory because the school has the responsibility for giving immediate care in case of accidents or sudden illnesses. Having the boxes however makes the desired outcome of the training more achievable with performative learning.

The availability of other treatment facilities; essential drugs and sick bays/clinics in schools is a critical aspect of ensuring the health and well-being of students. This study found that essential drugs were available in over half of the schools, with a 30% higher availability in private schools compared to public schools. Sickbays were way lower, present in only one of six private schools and none in public schools. This is also worse than shown in other studies in and outside environs [1, 20, 22] and may be due to newer inception of the state and inferably newer schools than in places used for other studies. Unavailability of sickbays/clinics, functional first aid boxes and trained first aiders negate the objective of adequate health care for children while on school premises.

Transport and referral facilities to include ambulances/school buses, telephone services and health records, were also inadequate with fewer than a quarter of the schools equipped with these resources. The presence of such systems in schools is imperative for managing health emergencies and ensuring prompt access to medical assistance, particularly considering existing shortcomings in on-site treatment facilities. This scenario compounds the previously identified challenges, constituting a dual problem.

The commonest method of health appraisal in this study was routine inspection seen in 79 of 80 schools. The practice of other appraisal methods in this study were lower. Comparable findings were reported in other studies across the country [1,19,26]. This requires minimal to no training perhaps, the reason for its high rate in these studies. The findings here are higher than the 'about 4 in 10 schools' reported in the Rawalpindi District of Pakistan [21] and also higher than in the United States that have evolved from routine medical inspection, popular in the 1960s, [27] to focusing on first aid kits and personnels, essential drug administration and screening now [28]. Several variables influencing these differences could be community resources, available funding, and the perspectives on health services held by school administrators and other pivotal decision-makers within educational systems.

Routine inspections are ritualistic activities that alone, may not be effective in achieving the primary objective of promptly identifying children requiring special attention. Such needs might be diagnosed early through periodic medical examinations and health referrals and as exemplified in Sokoto [29] can enhance the overall SHS quality. Nonetheless, these inspections can allow for the inculcation of personal hygiene practices and facilitate the early detection of illnesses, such as skin diseases. They also contribute to the prevention and control of both communicable and non-communicable diseases among school children [19].

Upon further analysis, a statistically significant inverse relationship was observed between teachers' age and their knowledge of school health services. From age 50 and above, the knowledge among teachers decreased in both public and private schools, potentially due to reduced practice and declining memory associated with aging.[30] However, considering the 2019 Universal Basic Education Commission (UBEC) report stating the mean age of

Table 6: Association between School Health Service practice and sociodemographic characteristics of respondents

Characteristics	Good Practice N = 178 (%)	Poor Practice N = 183 (%)	Total N = 361 (%)	χ^2	p-Value
Age at last birthday					
Less than 30 years	58 (31.7)	48 (27.0)	106 (29.4)		
31 – 40 years	62 (33.9)	65 (36.5)	127 (35.2)		
41 – 50 years	55 (30.1)	49 (27.5)	104 (28.8)		
Above 50 years	8 (4.3)	16 (9.0)	24 (6.6)	3.959	0.266
Gender					
Male	24 (13.1)	27 (15.2)	51 (14.1)		
Female	159 (86.9)	151 (84.8)	310 (85.9)	0.314	0.575
Marital Status					
Single	36 (19.7)	32 (18.0)	68 (18.9)		
Married	147 (80.3)	143 (80.3)	290 (80.3)		
Separated/Divorced	0 (0.0)	0 (0.0)	0 (0.0)		
Widowed	0 (0.0)	3 (1.7)	3 (0.8)	3.222	0.200**
Religion					
Christianity	170 (92.9)	166 (93.3)	336 (93.1)		
Islam	9 (4.9)	10 (5.6)	19 (5.2)		
Others	4 (2.2)	2 (1.1)	6 (1.7)	0.698	0.705*
Ethnicity					
Hausa	1 (0.5)	1 (0.6)	2 (0.6)		
Igbo	12 (6.6)	18 (10.1)	30 (8.3)		
Yoruba	169 (92.4)	158 (88.7)	327 (90.5)		
Others	1 (0.5)	1 (0.6)	2 (0.60)	1.501	0.682*
Highest Educational Qualification					
Postgraduate	10 (5.5)	3 (1.7)	13 (3.6)		
Graduate	99 (54.1)	88 (49.4)	187 (51.8)		
NCE	69 (37.7)	73 (41.0)	142 (39,3)		
Teachers' training	5 (2.7)	14 (7.9)	19 (5.3)	8.725	0.033*
Years of Teaching Experience					
1 – 5 years	66 (36.1)	51 (28.7)	117 (32.3)		
6 – 10 years	38 (20.8)	41 (23.0)	79 (21.9)		
11 – 15 years	46 (25.1)	50 (28.1)	96 (26.6)		
>15 years	33 (18.0)	36 (20.2)	69 (19.2)	2.265	0.519

Level of significant < 0.05 *Yate's continuity correction, **Fisher's Exact

Nigerian teachers as 37, it appears that those under 30 might primarily consist of untrained teachers or university graduates in other specializations within the large unemployment pool.

The type of school was also identified as a strong determinant in the practice of school health services. This study showed that 7 in every 10 schools in Ado Ekiti had below the minimum attainable score of good school health service practices, which was significantly higher with the public schools. Public schools exhibited significantly lower scores in good school health service practices compared to private schools, consistent with findings from other studies in Nigeria and other developing countries [1,19,20]. Meanwhile, the 2014 study in Sagamu maintains there's no appreciable difference in the SHS quality between school types [20]. Whereas the reverse situation mostly occurs in developed countries like the USA, where public schools offer better health services than private schools [19].

This raises questions about the political commitment to health care in the public sector and the impact of financial resources on the provision of health services within schools. Public schools rely on government funding for almost all activities.[31] Private schools on the other hand have better access to funds owing to their profit-oriented business nature. Some of the available structures that complement school health programme activities are available because of the competition with other private schools for students. They therefore tend to provide some of the services with the aim of attracting pupils for profit purpose rather than a comprehensive understanding of School Health Service requirements [1].

5. CONCLUSION

The findings from this study showed that, although a greater number of the teachers in public schools were aware of school health programme, this awareness did not translate to knowledge because the difference observed in the knowledge of the teachers on school health services in both public and private schools was not significant. In terms of the practice of school health services, the private schools were better especially in the aspect of personnel, treatment facilities, ambulance/school bus and record keeping.

6. RECOMMENDATION

We recommend that teachers in both public and private schools should be trained on school health services annually or once in every two years. Advocacy for increased government political will and the development of strategies to enhance the practice of school health services is recommended, particularly in public schools. The relevant departments in Ministry of Educations should deploy strategies on implementation of policies and enforcement of regulations

LIMITATION

The study being a cross sectional study so causality cannot be ascertained.

CONFLICT OF INTEREST

No conflict of interest whatsoever

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REFERENCE

1. Kuponiyi OT, Amoran OE, Kuponiyi OT. School health services and its practice among public and private primary schools in Western Nigeria. BMC Res Notes. 2016; 9(203): doi 10.1186/s13104-016-2006-6

2. Oluyinka D, Ayodeji MA. School Health Program in Nigeria: A Review of Its Implementation for Policy Improvement. American Journal of Educational Research. 2019; 7 (7): 499-508. doi: 10.12691/education-7-7-10.

3. Kofoworade O, Abduikadir M, Adesiyun O, Ojuawo A, Ojedokun S, Oladibu OT. Assessment of school health programmes implementation in Nigeria primary schools. Int J Community Med Public Health. 2022; 9(5): 2055-2065

4. UNESCO. 1.3 billion learners are still affected by school or university closures, as educational institutions start reopening around the world, says UNESCO. P UNESCO - 2020 - UNESCO. https://bit. ly/3h59BVd

5. Menziwa M. The effectiveness of school health services delivery related to the Care and Support for Teaching and Learning (CSTL) and Integrated School Health Policy (ISHP) in the Western Cape's formerly disadvantaged schools. 2019 [cited 2021 Sep 7]; Available from: http://etd.uwc.ac.za/xmlui/handle/11394/7184

6. Federal Ministry of Health. School Health Program. Abuja 2017. Available from: https://health.lagosstate.gov.ng/2017/04/05/school-health-program/

7. Bisi-Onyemaechi AI, Akani AN, Ikefuna AN, Tagbo BN, Chinawa JM, Chikani UN. School health services in Enugu East, Nigeria: perspectives from a resourcepoor setting. Healthc Low-Resour Settings [Internet]. 2021; 9(1). Available from: https://www.pagepressjournals.org/index.php/hls/article/view/6357

8. Ugochukwu E, Onubogu C, Edokwe E, Okeke K. Nutritional Contents of Lunch Packs of Primary School Children in Nnewi, Nigeria. Ann Med Health Sci Res. 2014;4(Suppl 2):S108–14.

9. Bonell C, Farah J, Harden A, Wells H, Parry W, Fletcher A, et al. Systematic review of the effects of schools and school environment interventions on health: evidence mapping and synthesis. Public Health Res. 2013; 1(1). Available from: http://www.journalslibrary.nihr.ac.uk/phr/volume-1/issue-1

10. Osaiyuwu-Osagiede soken F, Agbonlahor LN. National School Health Programme and the Plight of Exceptional School Age Children in Nigeria. East Afr Sch J Educ Humanit Lit. 2020 Jun;2(6).

11. Ekeh MC, Venketsamy R. Ensuring Child-Friendly Learning Environments in Nigerian Early Childhood Centers. In: Adeyemo KS. The Education Systems of Africa. Springer

International Publishing; 2021. 677–703. Available from: https://doi.org/10.1007/978-3-030-44217-0_37

12. Kofoworade OO. Comparative assessment of the implementation of school health programme in public and private primary schools in Ilorin, Nigeria. Fac Paediatr 2017;1:1-10. Available from: https://www.dissertation.npmcn.edu.ng/index.php/ fmcpaed/article/view/751. [Last accessed on 2024 Jan 14]

13. Sharma SK, Mudgal SK, Thakur K, Gaur R. How to calculate sample size for observational and experimental nursing research studies? 2020;10(01):8.

14. Ofovwe GE, Ofili A. Knowledge, attitude and practice of school health programme among head teachers of primary schools in Ego Local Government Area of Edo State, Nigeria. Annals of African Medicine. 2007; 6 (3): 99 – 103. DOI:10.4103/1596-3519.55726

15. Adebayo AM, Makinde GI, Omode PK. Teachers' Training and Involvement in School Health Programme in Oyo State, Southwest Nigeria. Arch Basic Appl Med. 2018 Feb;6 (1):9-15. Available from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6002249/

16. Abdulkadir MB, Abdulkadir ZA. The survey of head teachers of private schools regarding knowledge and implementation of the school health program in Ilorin. Journal of Clinical Sciences 14(3):p 126-130, Jul–Sep 2017. | DOI: 10.4103/jcls.jcls_18_16

17. Onyemachi PEN. Assessment of Knowledge, Attitude and Involvement of Public Primary School Teachers on School Health Service in Isi-Ala-Ngwa Local Government Area of Abia State Nigeria. Niger Med J 2022; 63(4): 275-281 Available from nmjarticle/view/115

18. Federal Minsitry of Education, National School Health Policy, November, 2006.

19. Toma BO, Oyebode T, Toma GIO, Agaba E. School Health Services in Primary Schools in Jos, Nigeria.Open Science Journal of Clinical Medicine.Vol. 2, No. 3, 2014, pp. 83-88. Available from https://irepos.unijos.edu.ng/jspui/handle/123456789/946

20. Oyinlade OA, Ogunkunle OO, Olanrewaju DM. An evaluation of the school health services in Sagamu, Nigeria. Niger J Clin Pract. 2014;17:336–42. doi: 10.4103/1119-3077.130236

21. Nasim S, Bilal S, Mehmood F. School Health Services and its Practices in Public and Private Schools of Rawalpindi District. JIMDC.2018; 7(3):217-220. Available from https://jimdc.org.pk/index.php/JIMDC/article/view/229

22. Lucassen MFG, Clark TC, Moselen E, Robinson EM. The Adolescent Health Research Group. Youth'12 The Health and Wellbeing of Secondary School Students in New Zealand: Results for Young People Attracted to the Same Sex or Both Sexes. Auckland: The University of Auckland. 2014. doi:10.13140/2.1.4033.5688.

23. Akani NA, Nkanginieme KEO, Oruamabo RS. The School Health Programme: A Situational Revisit.. Nigerian Journal of Paediatrics. 28. 2001. 10.4314/njp.v28i1.12046. doi http://dx.doi.org/10.4314/njp.v28i1.12046

24. Anderson CL, Creswell WH. School health practice. St. Louis: The CV Mosby Company; 1980. p. 1–185. 1972

25. Ademokun OM, Osungbade KO, Obembe TA. "A Qualitative Study on Status of Implementation of School Health Programme in South-Western Nigeria: Implications for Healthy Living of School Age Children in Developing Countries." American Journal of Educational Research. 2014; 2 (11): 1076-1087. doi: 10.12691/education-2-11-12.

26. Sanni UA, Airede KI, Anigilaje EA, Offiong UM. Assessment of school health services in primary schools in Gwagwalada area council, Federal Capital Territory, Nigeria. Pan Afr Med J. 2022 Mar 28;41:251. doi: 10.11604/pamj.2022.41.251.27372.

27. Allensworth D, Lawson E, Nicholson L, et al., Evolution of School Health Programs. Institute of Medicine (US) Committee on Comprehensive School Health Programs in Grades K-12. Washington (DC): National Academies Press (US); 1997. 2 Available from: https://www.ncbi.nlm.nih.gov/books/NBK232693/

28. Allensworth D, Lawson E, Nicholson L, et al., School Health Services. Institute of Medicine (US) Committee on Comprehensive School Health Programs in Grades K-12. Washington (DC): National Academies Press (US). Available from: https://www.ncbi.nlm.nih.gov/books/NBK232689/

29. Olatunji L.K, Oche O.M, Adamu H, Muhammad A, Abdulsalam L.B, Tahir Y. Visual Impairment and Its Relationship to Academic Performance Among Primary School Children In Sokoto Metropolis, North-Western Nigeria. International Journal of Recent Advances in Multidisciplinary Research. 2018; 5 (4): pp.3770-3774. Available from https://www.researchgate.net/publication/32580586

30. Nyberg L. Functional brain imaging of episodic memory decline in ageing. J Intern Med 2017; 281: 65–74. https://doi.org/10.1111/joim.12533

31. Alafin B, Adesegun O.A, Izang J.A, Alausa K.O. An appraisal of the School Health Programme in primary schools in a rural community in Nigeria. Ethiop. J. Health Dev. 2019; 33 (3): 7