Original article

An appraisal of the School Health Programme in primary schools in a rural community in Nigeria

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Abstract

Background: In a developing country with a large population and a high childhood mortality rate, it is important to have a good and properly organized School Health Programme to cater for the health needs of school children.
Objectives: This study aimed at assessing the quality and efficacy of the School Health Programme in public primary schools in a rural community in Nigeria.
Methods: A cross-sectional study was carried out in all the five public primary schools in Ilishan-Remo, Ogun State. An observational checklist was used, adapted from a similar study by Kuponiyi *et al.* A scoring system was used to grade the schools as good, fair or poor. Descriptive statistics were generated using SPSS version 21.
Results: The public primary schools had good healthful school environments and school feeding services, but poor skill-based health education and school health services.
Conclusions: From the assessment of the School Health Programme in these schools, it was seen that overall, the schools had a fair School Health Programme in place, although they were deficient in some vital facilities. It is necessary for all stakeholders in these schools to provide the materials and human resources needed to achieve an effective School Health Programme. *Ethiop .J. Health Dev.* 2019; 33(3):153-159
Key words: School Health Programme; public primary school; rural community; Nigeria

Introduction

A School Health Programme (SHP) is an essential component of the overall health care delivery system of any country. It involves activities in the school environment that promote the health and development of the school community. The history of formal education in Nigeria dates back as far as the colonial era, with the introduction of a Western type of education by missionaries and later by the government. The SHP was designed to ensure the optimal health of school children, in order to maximize the benefits from education in a safe and conducive learning environment, by offering both preventive and curative services. The SHP comprises five major components: healthful school environment, school feeding services, skills-based health education, school health services, and school, home and community relationships. Pre-entry medical screening, routine health screening/examination, school health records, sick bay, first aid and referral services are some of the services that the SHP engenders (1).

In a developing country such as Nigeria, where infant and early childhood mortality is high, the importance of an SHP cannot be overemphasized (2). Next to the family, the school is the primary institution responsible for the development of young people worldwide. The SHP in Nigeria remains deficient. Studies among head teachers in the southwest region of Nigeria have revealed the level of underdevelopment of the SHP in primary schools, more so in public primary schools and in rural areas (3–5). Routine medical checks, adequate water supply, toilet and hand washing facilities, sick bay, routine screening of food vendors, for instance, were generally deficient in most of the schools sampled (3). The school health services are so inadequate as to have only 1% of 91 schools in a particular region benefiting from services of a school doctor, and less than a third having a sick bay (6). Many teachers are unaware of the National School Health Policy (7). Some have reported poor refuse and sewage disposal practices in the schools considered, especially in public schools, with potential hazards to the school children and environment (8).

This study will help ascertain the current state of the SHP in a rural community, determine how the SHP is being implemented in Nigerian public primary schools, and identify specific components that are being implemented properly and the areas that require further intervention. It will also contribute to the body of data emanating from Nigeria, especially from the rural areas, from which policy makers can obtain inspiration for the development of interventions to improve the current state of the SHP in Nigeria.

Objectives

The general objective of this study was to assess the services and facilities provided for the SHP in public primary schools in a rural community in southwest Nigeria. The specific objectives were to assess the healthful school environment, the school feeding services, the skill-based health education facilities, and the school health services in public primary schools in Ilishan-Remo.

Methods

The study was conducted in Ilishan-Remo, Ikenne local government area, Ogun State, Nigeria. There were five public (government-run) primary schools in Ilishan-Remo at the time of the study. A descriptive cross-sectional survey was carried in February 2017 over a two-day period, involving the heads of the primary schools. All the public primary schools in Ilishan town were assessed. Only head teachers (the administrative heads) of the schools were included; the students and other members of staff were excluded.

The study instrument was a validated observational checklist adapted from the work of Kuponiyi *et al.* (9), based on the SHP evaluation scale by the Federal

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Ministry of Education's sanitary inspection form (10). The checklist was interviewer administered and consisted of the following sections: demographics, questions to assess healthful school environment (72.5 points), school feeding services (11 points), skill-based health education (17.5 points) and school health services (26 points). The total score obtainable was 127 points. Upon completion, the scores for each school were summed up and the percentages computed. A score of 0-49% was poor, 50-59% fair and 60-100% good.

The purpose of the study was explained to the respondents and their informed consent was obtained. Data were subjected to analysis using the Statistical Package for Social Sciences version 21, and summarized using descriptive statistics.

Ethical approval was obtained from the Babcock University Health Research Ethics Committee (BUHREC). Permission to proceed with the study was obtained from each school. Participation in this study was voluntary and the benefits were explained to the participants. There were no risks involved to participants.

Results

Five head teachers from all five schools participated in the study. The schools were established between 1903 and 1996. The student populations in the schools ranged from 206 to 460, with 12 to 23 teaching staff and two to four non-teaching staff per school.

Healthful school environment: At all five schools, wearing shoes was compulsory for students and staff. The five schools had a plain grass sports field for soccer. The only other sport facility available in three of the schools was a table tennis board.

Only three (60%) of the schools had a wash hand basin available in front of the classrooms, though just one of the schools with this facility had running water within the school. All schools had stored water available; only one (20%) had water running within the school. The rest got their water supply from borehole facilities outside the school. One school had a pipe-borne water facility present but it was not functional.

All schools (100%) had waste bins available, but only two (40%) had a bin for each class and one (20%) had a waste bin shared by two classes. The others (40%) made use of centrally located waste bins. One of the schools had waste bins in the classes made from used cartons. Open dumping was the refuse disposal method practiced by all the schools.

All the schools had a toilet facility present: four (80%) schools made use of pit latrines and one (20%) had a water closet toilet, although it was devoid of running water within the school premises. In 80% of the schools, one toilet was intended to serve more than 90 pupils. None of the schools had toilet paper or soap for hand washing after using the toilet. All schools (100%) had gender-differentiated toilets, as well as separate toilet facilities for both staff and pupils. Most (60%) of the schools kept the toilet area in fairly neat conditions. One of the schools had its toilets (pit latrines) in good and neat condition, while another was in a very poor condition with faeces and urine soiling the toilet areas (see Table 1).

Table 1: **Sewage and toilet facilities**

Variable		Frequency (n=5)	Percentage (%)
Availability of sewage disposal			
Type of toilet facility		5	100
Water closet/septic tank		1	20
Pit/trench		4	80
Gender-differentiated toilets		5	100
State of toilet	Good	1	20
and toilet area	Fair	3	60
	Poor	1	20
Toilet: pupil ratio			
1:61-90		1	20
1:>90		4	80

Only three (60%) of the schools had enough seats for all the students to sit down comfortably. In the other two (40%) schools, the students received lectures sharing seats: three pupils shared seats made for two pupils in one school, and four pupils shared seats made for two pupils in the other school.

All the schools (100%) had a wall around them made of bricks, as well as school gates. None of the schools had a fire extinguisher, fire alarm or safety patrol team.

All the schools (100%) were located away from major roads, thus avoiding noise pollution. There were no open drainages and no signs of flooding in the areas where the schools were located. See Table 2 for details on the infrastructure of the schools.

Table 2: **Infrastructure**

Variable	Frequency (n=5)	Percentage (%)
Building		
Strong walls and roof	4	80
Strong walls with minor cracks	1	20
Fire protection		
All buildings with fire resistant material	5	100
Floor		
Flat, non-glossy	1	20
Worn off, broken and dusty	4	80
Ventilation		
Adequate	5	100
Controllable	5	100
Lighting		
Good lighting	5	100
Insulation (ceiling)		
Properly ceiled	2	40
Partially ceiled	3	60
Sitting comfort		
Pupils seated 100%	3	60
<100% pupils seated	2	40
Teachers seated 100%	3	60
<100% teachers seated	2	40

From the quantitative assessment, the five schools on average had a good healthful school environment, with a score of 64.55% (see Table 4).

School feeding services: All the schools provided lunch for the children, although these meals were purchased from food vendors approved and sent by the local government authority. Before commencement of work, all food vendors were screened, and their level of training or certification was assessed at the local government level.

The general hygiene of the food area in all the schools was fair. The food area consisted of a table and chair where the food vendor sat and sold the food in coolers. None of the schools gave the students nutritional supplements. The schools had a good feeding service in place, obtaining a score of nine (81.81%) each from a maximum of 11.

Skill-based health education: None of the schools had any of the national policy materials (national policy on SHP and implementation guidelines) present. Only one (20%) of the schools had health-based information, education and communication (IEC) materials available for the students in the form of posters and textbooks.

School health services: Three (60%) of the schools had health personnel present in the form of a school health officer, although none of these officers were formerly trained in first aid or health. They were regular school teachers who ensured sanitation of the children and school environment. They carried out no first aid work (see Table 3).

Table 3: **Healthcare system of the school**

Variable	Frequency (n=5)	Percentage (%)
Personnel		
Available	3	60
Not available	2	40
Type of personnel		
Health assistant/trained first-aider	3	60
Health appraisals		
Routine inspection (teacher observation)	5	100
Treatment facilities		
Available	4	80
Not available	1	20
Type of facility		
First aid box	4	80
Sick bay/clinic	1	20

Four (80%) of the schools had a first aid box, but none of the boxes were equipped with first aid materials or any essential drugs. Only one (20%) of the schools had a sick bay, which was an old classroom refurbished to serve as a resting area for ill pupils. None of the schools had any ambulance or school bus present.

None of the schools did any routine screening tests or periodic medical examinations for their staff and pupils, neither did they have health records for their pupils.

When a child was sick, all the schools (100%) had a protocol to notify the parents, but none of the schools gave any initial first aid treatment to the child. Only three (60%) had a protocol to take the sick child to the nearest health post. The other two (40%) would wait for the pupil's parent to arrive to take them to the hospital. Four (80%) of the schools had a disease control protocol in place. On average, all the public primary schools had poor (22.30%) school health service systems in place.

All the schools had no official counselling service in place. None of the schools had any school health club in place.

Overall, the five schools had a fair (50.4%) SHP in place, with three of the schools having fair SHPs and two with poor SHPs (see Table 4).

Table 4: **Quantitative assessment of the School Health Programme**

Component	Maximum score obtainable	Scores obtained					Mean
		School 1	School 2	School 3	School 4	School 5	
Healthful school environment	72.5	49	49	42	47	47	46.8
School feeding services	11	9	9	9	9	9	9
Skill-based health education	17.5	1	3	3	0	5.5	2.5
School health services	26	9	6	6	6	2	5.8
Total Score	127	68	67	60	62	63.5	64.1
Percentage	100	53.5	52.7	47.2	48.8	50	50.4

Discussion

A good and functional SHP is an essential element of healthcare in the overall development of children. Previous studies done over the last 20 years in Nigeria have indicated a poor status of the SHP (1,10,11). A healthful school environment is an important component of the SHP, as the state of the environment in the school can have both direct and indirect consequences on the health of pupils. This is especially the case in developing countries, where unsafe water, poor hygiene and sanitation, air pollution, climate change and other factors favour the development of diarrheal diseases, respiratory infections, asthma, vector-borne diseases (e.g. malaria) and injuries. The World Health Organization (WHO) affirms that addressing environmental hazards is crucial to the prevention of many childhood injuries and illnesses (12). All the schools examined in our study had water available for the myriad activities of the students. Although only one school had running water, others

made use of reservoirs to store the water. This lack of running water seems to be the rule, rather than the exception, in rural Nigerian schools, as other researchers have made similar observations in other parts of the country (13).

All the schools practiced open dumping/burning as their method of refuse disposal, akin to studies done in other parts of the country (14,15). It is preferable for waste generated in the school environment to be properly disposed of so as to minimize human contact with potentially hazardous materials, discourage pests and other vectors, and avoid the spread of communicable diseases (12). The toilet facilities, though gender-differentiated, were grossly inadequate, with most of the schools having one toilet to more than 90 pupils. This finding has been corroborated by other researchers (15). A poor ratio of pupils to toilet facilities increases the risk of acquiring faeco-oral infections, such as helminthiasis.

Another finding worthy of mention in our study was the lack of adequate seats for the pupils to sit on while receiving tutelage. This would imply that more students would be occupying a class than the number it was designed for. This lack of comfortable sitting arrangements could serve as a distraction and discomfort during classes and could portend negative impacts on the health and learning of the school child due to overcrowding.

The feeding services of the schools were good and although school meals (prepared outside the school facility by food vendors) were available in all schools, only one (20%) school gave its pupils a free meal. The school that gave free meals only did so for pupils in Primary 1; this is in contrast with the implementation guidelines, which recommend that every pupil should be given at least one free meal in school per day. Similarly, Akani in his study in Edo State found that none of the schools provided school meals for pupils (13).

The skill-based health education of the schools was poor. When asked about the National School Health Policy document, most of the head teachers were unaware of its existence and none of the schools had a copy of it. This lack of awareness of the National School Health Policy seems to be pervasive, as only about a third of teachers from five local governments in a particular state were aware of the policy, and much fewer had ever seen the document (7). The onus rests on the administrative as well as teaching staff of the schools to familiarize themselves with the tenets of the SHP for implementation to be possible. There is need for supervision and constant evaluation and re-evaluation to ensure the success of implementation of the national policy.

The health services in all the schools were deficient, with none of the schools having an equipped first aid box, and only one had a sick bay, which was inadequate. In the 2010 statistical survey on infrastructure in government-owned primary and secondary schools in Ondo State, it was found that less than 1% of the 1,164 public schools had a school clinic (16), a finding similar to the current study. The only form of health appraisal done in this study was routine inspection by teachers. When compared to other studies, it is seen that some reported a general absence of health appraisal services (17), while others show low health appraisal services (6). This could be due to lack of medical personnel in the schools. The dearth of health personnel in schools has been reported in various studies conducted in Nigeria (6,18), and there seems to have been little or no improvement (9). Most of the schools sent their sick pupils home as a disease control measure. Only one school gave additional health talks. In other studies, it was found out that control of communicable disease is usually achieved by sending affected pupils home (6,19).

The SHP in all five schools generally had the same type of facilities and services present. This is likely to be due to the fact that they are all being run by the same local government. This could also go to show how little work is being done by the schools at individual level, in terms of soliciting funds from the community, and that they rely for the most part on the government to provide the services and facilities.

Overall, the public primary schools in the rural community examined had a fair SHP in place. However, based on the individual components of the SHP, they had good healthful school environments and school feeding services, but poor skill-based health education and school health services.

Conclusions

This study has provided baseline information on the SHP of public primary schools in Ilishan-Remo. The services and facilities provided for the SHP by these public primary schools were generally fair, but certain important areas, such as availability of health personnel, were deficient.

It is recommended that all stakeholders in these schools provide the materials, human resources and routine evaluation needed to achieve an effective SHP in the area. Each school should have a school health team in place, consisting of the head teacher, school physical/health educator or school health counsellor, school nurse, school health officer, student (health prefect), parents' representative and community representative, and nutritionist. Medical officers and other health workers should provide health coverage, including medical care and routine medical examination, to individual or groups of schools, if erecting a school clinic or if an adequate sick bay is not feasible. School health instruction should be accorded the topmost priority in the primary school curriculum so that children are provided with basic information about health issues and are thereby influenced to develop desirable health habits.

Limitations of the study

The study findings are limited in terms of overall generalization, because only the public primary schools in Ilishan-Remo managed by the Ikenne local government were assessed, and there may be variation

in the availability of resources and political will in the operation of SHPs in other communities and local government areas in Nigeria.

The *school, home and community relationships,* which is the fifth component of the school health programme, though existing in theory in the schools, could not be objectively assessed due to logistic difficulties, as the groups were not active, and met rarely.

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Conflicts of interest

The authors have no conflicts of interest to disclose.

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