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Evaluation of School Health Services in Public Primary Schools in Bonny Local Government Area, Rivers State

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Abstract

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Background: Effective school health services will not only address ill health among school children but will also reduce absenteeism and dropout rates, thereby encouraging completion of schooling.

Objective: To evaluate the school health services available in public primary schools in Bonny Local Government Area, Rivers State.

Design: A cross sectional school-based study carried out in March 2006.

Methods: All the 20 public primary schools in Bonny Local Government Area were inspected and assessed for the availability of the various components of school health services using an evaluation scale. Data were analyzed using proportions and percentages.

Results: No school had health personnel or first aid facilities. Nineteen (95 percent) schools isolated pupils by sending them home with suspected communicable diseases. No school gave free school meals and school farms were found in only eight (40 percent) schools. The only health appraisal carried out by all the schools was routine morning inspection. The scores attained by the schools ranged from 6-9 points. No school attained the minimum acceptable score of 15 points using the evaluation scale.

Conclusion: School health services were lacking in Bonny public primary schools. There is need for the establishment of effective school health services there.

Introduction

THE School Health Programme denotes all aspects of the school programme that contribute to the understanding, maintenance and improvement of the health of the school population consisting of school children and school personnel.[1] It is both a promotive and a preventive health service. Its purpose is to provide a healthy environment that is conducive to maximum benefit from the educational process. School Health Programme consists of four components namely; school health services, school health instruction, healthful school environment and school, home and community relationship.[1] These components are interdependent and mutually interactive. School health services are concerned with the prevention of communicable diseases in the schools, treatment of minor ailments, referral of cases to appropriate agencies for further investigations and management and maintenance of an effective sickbay. It also includes health appraisals/medical examination of pupils and personnel and provision of school meals in primary schools.[1]

Primary school age differs from country to country but in Nigeria, it is within the age range, 6-12 years.[2] The school aged children constitute 23 percent of Nigeria's population.[3] The survival and future prosperity of the nation depend on them. Whereas they are survivors of major childhood killer diseases, they are still prone to unfavorable conditions that put them at risk of poor growth and development.[4] It is therefore imperative to improve their quality of life in order for them to attain their full potential.

School aged children represent a segment of the society whose health problems have received minimal attention in Nigeria. This may be due to the greater emphasis which has been placed on the protection of pre-school children whose mortality rates are as high as 260 per thousand live births in some parts of the country.[4] Kaine[5] observed that special clinics

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were established for the welfare of pre-school children, but regretted that the same could not be said of the health of children of school age; the reasoning being that once a child has reached school age, he or she becomes immune to diseases and death. Agreeably, school age children do not suffer the very high mortality rate of the pre-school children but there is evidence from hospitals, outpatient clinics and other institutions that there is a high morbidity rate among them.[5,6,7] Disabilities in school age children have also been documented in various studies.[4,7,8] The findings in these studies expose the lack of school health services and emphasize the need for screening facilities in our schools to detect disabilities among our children so as to institute appropriate treatment and/or corrective measures that will reduce absenteeism due to ill health which contributes to reduced school performance. Unfortunately, studies have shown that screening facilities are lacking in the schools and health records are not kept."[9]

Millennium Development Goal 2 calls for the achievement of universal primary education by the year 2015. The target is that by 2015, all children will be able to complete a full course of primary education.[2] This goal will be unattainable if the issue of ill health in primary school children is not tackled, because illness has been recognized as the leading cause of absenteeism and dropout from primary schools.[9,] Effective school health services that will address ill health at school and allow children return to classes will reduce absenteeism and dropout rate and encourage completion of schooling.

School health services was introduced in Rivers State in 1975 with the establishment of a school health unit in Diobu Health Centre.[11] It was run by public health nurses with occasional input from the physicians. The activity centred on health talks and occasional school inspection in Port Harcourt Local Government Area, the capital of Rivers State, only. These were however infrequent due to lack of transport facilities.[4] In 1989, a student of Stella Maries College, Port-Harcourt wrote a letter to the then Commissioner for Health pointing out the need and called for a clear proposal on school health services in the State. This then prompted the write up "Proposal for improvement of School Health Services in the State" by the Rivers State Ministry of Health in 1990.[4] Six years later, a school health services evaluation exercise carried out in 28 public primary schools in Obio-Akpor Local Government Area of Rivers State in 1996 by Akani[4] came to the following conclusions: 'School health services did not exist in the schools studied, the schools lacked facilities for the management of emergencies, a good record keeping system and health professionals were not found in any school'. However, there is no documentation of the status of school health services in primary schools in Bonny Local Government Area, and this necessitated the present study whose aim was to evaluate the status of school health services in public primary schools in Bonny Local Government Area of Rivers State.

The specific objectives were to assess the availability of school health services in public primary schools in Bonny Local Government Area of Rivers State, and determine the level of functionality of the various components of school health services, using an evaluation scale.

Materials and Methods

This is a cross sectional school-based study carried out in Bonny Local Government Area (LGA) of Rivers State in March 2006. The LGA is one of the 23 Local Government Areas of Rivers State. Its boundaries are Okrika LGA in the North, Degema LGA in the East, Andoni LGA in the West and the Atlantic Ocean in the South. The Local Government Area which is named after its headquarters, Bonny is made up of Bonny City and 19 satellite villages. There are also several fishing settlements attached to these villages. It has a population of 215, 358.[5] Bonny LGA has 20 public primary schools made up of seven schools in Bonny city, 10 in the villages and three in the fishing settlements. There is one functional comprehensive health centre in Bonny City, a general hospital, five private clinics, pharmacy shops and private laboratories. There are however no functional health facilities in the villages and fishing settlements.

All the 20 public primary schools were inspected by one of the authors. A validated school health services evaluation scale[10] adapted from *"School Health Practice"* by Anderson and Croswell[12] was used to assess the availability of the various components of the school health services namely, the presence of health personnel, health appraisal, treatment facilities within the schools, care of emergency illness in school, control of communicable diseases, school nutrition programme, follow up services and availability of health records of the pupils. Items were scored according to their importance or relevance. For instance, the scores for availability of health personnel in the school were graded from 2-4 points. Four points were awarded for the presence of a medical doctor in the school, while 2 point was awarded for the absence of health personnel.[10] A *'face to face'* interview method was used to obtain additional relevant information. The minimum acceptable and maximum attainable scores for school health services using the evaluation scale were 15

and 46, respectively. Data were analyzed, using proportions and percentages.

Results

Twenty schools, all of which were established between 15 and 139 years ago, were inspected. The pupil population of the schools ranged from 100 to 1460 with a mean of 352±336 SD. The schools in the villages and fishing settlements had pupil population less than 300 as shown in Table I. The teacher population per school ranged from 2-13 with a mean of 5± 2.77SD. The teacher-pupil ratio per school ranged from 1:30 to 1:128. Five (71 percent) schools in Bonny city and eight (80 percent) schools in the villages had teacher-pupil ratio below the 1:40 recommended by the implementation committee of the National Policy on Education[11] as shown in Table II.

Health personnel: No school had health personnel during the evaluation and none had a person trained in First Aid.

Health appraisal: The only health appraisal done by the teachers in the 20 schools was routine morning inspection which involved inspection of the pupils' hair, teeth, finger nails, skin and uniforms.

Treatment facilities: No First Aid facility or ambulance services were found in any school.

Care of emergencies: Eighteen (80 percent) schools did not administer First Aid to ill or injured pupils, two (10 percent) schools which administered First Aid treatment to pupils used drugs and materials bought from the chemist. Records of treatment given were not kept. However, seven (35 percent) schools transported injured pupils to health facilities for treatment as shown in Table III.

Table I

Population of Schools in Bonny LGA

Pupil Population No	*Location of Schools*			
	Bonny City No (%)	*Villages No (%)*	*Fishing Settlements No (%)*	*Total No (%)*
100-299	2 (10)	10 (50)	3 (15)	15 (75)
300-499	0 (0)	0 (0)	0 (0)	0 (0)
500 & above	5 (25)	0 (0)	0 (0)	5 (25)
Total (%)	7 (35)	10 (50)	3 (15)	20 (100)

Table II

Teacher-Pupil Ratios in Primary Schools in Bonny LGA

Teacher-Pupil Ratio	*Location of Schools*			
	Bonny City No (%)	*Villages No (%)*	*Fishing Settlements No (%)*	*Total No (%)*
≥1:40	2 (10)	2 (10)	2 (10)	6 (30)
1:41-1:80	1 (5)	6 (30)	1 (5)	8 (40)
>1:80	4 (20)	2 (10)	0 (0)	6 (30)
Total (%)	7 (35)	10(50)	3 (15)	20 (100)

Table III

Treatment Facilities and Care of Emergencies in the Schools

School Health Services	*Number of Schools (%)*
Treatment Facilities	
First Aid Box with essential drugs and materials	0 (0)
Care of Emergencies	
Give first Aid	2 (10)
Treatment given recorded	0 (0)
Notification of parents	6 (30)
Transport to nearest health post	7 (35)
Convey child home after treatment	7 (35)

Table IV

Communicable Disease Control, Follow-up and Nutrition Programme in 20 Schools

School Health Services	*Number of schools (%)*
Communicable Disease Control	
Isolation of cases	19 (95)
Follow-up Services	
Home visit	16 (80)
Guidance and counselling	0 (0)
School Nutrition Programme	
School farm	8 (40)
School meals	0 (0)

Table V

School Health Services Score

Schools	*Location*	*Score*
Central School	Bonny City	9
Boyle Memorial	Bonny City	9
Bonny Government School	Bonny City	8
St Michael School	Bonny City	8
Model Primary School	Bonny City	8
CPS Finima	Bonny City	8
CPS Abalamabie	Bonny City	8
CPS Kalabiama	Village	8
CPS Banigo	Village	7
CPS Dema Abbey	Village	7
CPS Oloma	Village	7
CPS Agbalama	Village	7
CPS Greens Iwoma	Village	7
CPS Peterside	Village	6
St Baths School	Village	6
CPS Dan Jumbo	Village	6
CPS Kuruma	Village	6
CPS Agaja	Fishing Settlement	7
CPS River Seven	Fishing Settlement	6
CPS Iwokiri	Fishing Settlement	5

CPS=Community Primary School

Communicable diseases control: Majority (95 percent) of the schools reported isolating suspicious cases of communicable diseases by sending the ill pupils home (Table IV).

Follow-up services: None of the schools had guidance and counselling sessions. Sixteen (80 percent) schools had home visits of ill or injured pupils.

School nutrition programme: No school served free school meals, while eight (40 percent) schools had school farms as shown in Table IV.

School health services scores

The scores of the schools ranged from 5 to 9 (mean 7.15±0.9SD). The schools in Bonny City had better evaluation scores than the schools in the villages and fishing settlements. All the schools scored below the minimum acceptable score of 15 points as shown in Table V.

Discussion

The poor implementation status of the school health services in Bonny LGA of Rivers State revealed in this study is comparable to what was found a decade ago in Obio-Akpor LGA in the state.[9] This shows a gross neglect of the programme in the state. The fact that none of the schools inspected had up to the minimum acceptable score of 15 points for school health services has serious health implications for pupils in communities in Bonny LGA with limited functional health facilities.

The finding of teacher-pupil ratio below the 1:40 recommended by the National Education Research Council[16] in 70 percent of the schools studied, is comparable to what was reported in a previous study by Akani in Obio-Akpor, Rivers State.[9] This low teacher-pupil ratio will increase the workload of the teacher and will not allow for the teachers' continuous observation of every child. Apart from this, it is likely to result in overcrowding which encourages the spread of communicable diseases.

The lack of health personnel in all the schools studied may be due to a lack of intersectorial collaboration between the Ministries of Health and Education in Rivers State. The absence of health personnel seriously undermines the implementation of the school health services in these schools. This is because they are supposed to be involved in carrying out health appraisals, treating minor ailments and referring serious ailments to health facilities where they could be handled. In their absence, these duties fall on the shoulders of the teachers who do not have sufficient training to handle them. This lack of medical personnel in primary schools in Nigeria has been reported previously by Akani[9] in Rivers State, Odunaiya[7] in Oyo State, Ojugo[17] and Inuogu[18] in Bendel State.

A situation in which no First Aid facilities was found in any of the 20 schools contrasts with what obtained in other parts of Nigeria where First Aid facilities were found in 61 percent, 66 percent and 39.3 percent of schools in Bendel State,[19] Ibarapa in Oyo State,[20] and Obio-Akpor in Rivers State,[10] respectively. The absence of persons trained in First Aid in the schools inspected is consistent with findings in previous studies,[6,20,21] but contrasts with the finding of such trained personnel in 62.2 percent of the urban primary schools in Ibadan.[4] This is probably because the Ibadan study was carried out in the early seventies when school health received priority attention by the government of the then Western Nigeria. The fact that these other studies were carried out more recently shows a gradual deterioration in our school health services. The situation where First Aid is administered by persons with no formal training is dangerous as it could result in serious complications.

Early detection and isolation of children with communicable diseases like measles, chicken pox and mumps are essential for the protection of pupils at schools. In this study majority (95 percent) of the schools practised isolation of suspicious cases by sending the pupils home. This contrasts with the 24 percent and 25 percent reported by Akani[7] and Odior,[22] respectively. While the action of the teachers in this study was intended to prevent the spread of communicable diseases in school, it puts the people at home at risk. Thus it can result in the spread of the diseases within the communities. It is therefore preferable for schools to have sick bays where communicable disease cases could be isolated and treated.

Lack of free school meals in the schools studied is similar to that reported by Akani,[7] Imoge[23] and Ojofeitimi,[24] but it is in sharp contrast to Oduntan's[5] finding of organized and compulsory school meals in the schools studied. This contrast may be due to the fact that Oduntan's study was carried out in the then Western Region with well organized primary school system and good nutrition programme. Lack of school meals undermines the objective of the school nutrition programme which is to improve and maintain the nutritional status and the general health of the school children.

A well integrated School Health Programme is expected to provide meaningful health appraisal and counselling for all pupils. An effective counselling can only take place when observations and problems identified are recorded. Thus, the absence of health appraisals (except routine morning inspection) and health records of pupils in the schools studied undermines any effective counselling sessions. It is therefore not surprising that no school practised guidance and counselling sessions. Previous workers have also reported lack of guidance and counselling sessions, health records and health appraisals in the schools they studied in various parts of Nigeria.[9-11,20]

In conclusion, school health services were lacking in public primary schools in Bonny Local Government Area of Rivers State. There was absence of health professionals, facilities for the management of emergency illness, health records of pupils and free school meals in all the primary schools studied in the Local Government Area. It is therefore recommended that effective school health services be established in all the public primary schools in the LGA to cater for the health needs of pupils in these schools. It is also recommended that the Rivers State Ministry of Health should include primary schools as centres to which community health workers could be posted. In the absence of health professionals, selected primary school teachers could be trained on first aid administration for handling emergencies in schools. Free school meals should be introduced in all public primary schools in the LGA. Intersectorial collaboration between the ministries of education and health should be encouraged for effective implementation of the programme.

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