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Evaluation of school health instruction in public primary schools in Bonny Local Government Area, Rivers state.

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Abstract *Background:* Effective school health instruction in primary schools is essential in addressing the health risks and needs of school age children and adolescents. This study sought to evaluate the status of school health instruction in public primary schools in Bonny Local Government Area.

Method: This is a cross sectional school based study carried out in 20 public primary schools in Bonny Local Government Area, Rivers State, in March 2006. The availability of the various components of the school health instruction programme was evaluated using an evaluation scale. Components had weighted scores. The minimum acceptable and maximum attainable scores for school health instruction were 31 and 47. Data was analyzed using SPSS version 11.

Results: There were a total of 100 teachers in all the schools. The teacher population per school ranged from 2 to 13 with a mean of 5±2.77SD. The pupil population of the schools ranged between 100-1460 with a mean of 352±336SD. Teacher/pupil ratio per school ranged from 1: 30 to 1: 128. Fourteen (70%) schools had teacher/pupil ratio less than 1:40. There was no professional health instructor in all the schools. Four schools (20%) allotted 3 periods per week to health teaching, while the rest (80%) allotted less than 3 periods per week. HIV/AIDS was not in the health education curriculum being used. The only teaching method used by all the schools was the direct teaching method. No school used teaching aids; no school went on field trips. Teachers did not receive in-service training on health education. No school attained the minimum acceptable score of 31 points using the evaluation scale.

Conclusion: School health instruction was poorly implemented in the primary schools investigated. Teachers were not adequately prepared for health teaching and the classrooms were overcrowded.

Keywords: School; Health instruction, Evaluation

Introduction

School health instruction is that component of the school health programme which deals with classroom instructions that are based on planned, sequential, kindergarten to 12th grade comprehensive health education curriculum, which addresses the physical, mental, emotional and social dimensions of health[1]. The curriculum is designed to motivate and assist students to maintain and improve their health, prevent diseases and reduce health related risky behaviours. It allows students to develop and demonstrate increasingly sophisticated health related knowledge, attitudes, skills and practices[1].

The comprehensive health education curriculum includes a variety of topics such as: personal health, family health, community health, consumer health, environmental health, sexuality education, mental and emotional health, injury prevention and safety, nutrition, prevention and control of diseases and substance use and abuse. The health instructions are tailored to each age level, and they are provided by qualified, trained health education teachers in a formal classroom[2]. The subject areas are repeated at several grade levels to ensure reinforcement of learning and increase in depths of content, progressing from simple to complex concepts as pupils move upward in grades[2].

The overall effectiveness of school health instruction programme depends on the availability of well, trained and qualified health education teachers, instructional materials in form of textbooks, posters and other teaching aids and the time allotted to health teaching[2]. Children who are taught in primary schools to acquire essential health related knowledge and skills are not only less

likely to engage in health compromising behaviours as adolescents, but they are more likely to carry the knowledge and skills into adulthood and lead healthier life styles[3]. This fact was corroborated by Studies done by Dawson[4], Frank[5], and Gold[6] where the effectiveness of school health instruction in reducing high risk behaviours, teenage pregnancies and smoking rates among young people was well demonstrated. Similarly, school health instruction was advocated in the publication" Healthy kids for the year 2000: An action plans for schools" which cited the following benefits: Less school vandalism, improved attendance by students and staff, reduced health care cost, reduced substitute teaching cost, better family communication, even on sensitive issues such as sexuality, stronger self-confidence and self-esteem, noticeably fewer students using tobacco, improved cholesterol levels for students and staff, increased seat belt use and improved physical fitness[2].

Furthermore, globally, there is a growing concern for the health-related risky behaviors of children of school age. This is because behaviours established in childhood and adolescent are a significant indicator of the health and well-being of the adult population of any country[8]. According to the World Health Organization (WHO), nearly two-thirds of premature deaths and one-third of the total disease burden in adults globally, are associated with conditions or behaviours that began in their youth, including tobacco use, a lack of physical activity, unprotected sex and exposure to violence[7].
Consequently, there is a global call for countries to promote the health and wellbeing of school age children by implementing a comprehensive health education programmes in their primary and secondary schools, capable of preventing and controlling these health related risky behaviours. This call is even more pertinent for developing countries like Nigeria, where significant number of parents provide limited information about health to their children due to their own high illiteracy[8].

Nigeria responded to this call by developing the National School Health Policy with a well-defined section on skills-based health education[9]. The objectives of this health education included: To provide information on key health issues affecting the school community, develop skills-based health education curriculum for the training of teachers and learners, provide participatory learning experiences for the development of knowledge, attitudes and skills and desirable habits in relation to personal and community health and evaluate learners progress towards healthy development. The extent to which this section of the policy is being implemented in our primary schools is uncertain since published articles on evaluation of school health instruction in primary schools in Nigeria are sparse. This study therefore aimed to evaluate the status of school health instruction in public primary schools in Bonny Local Government Area, Rivers State using an evaluation scale.

Methodology

This is a cross sectional school based study carried out in public primary schools in Bonny Local Government Area, Rivers State in March 2006. The Local Government Area (LGA) is one of the 23 LGAs in Rivers State, located in the southern part of Nigeria. The Local government consists of Bonny City- its headquarter, 19 satellite villages and several fishing settlements attached to them. The LGA had a total of 20 public primary schools, 7 of which are located in Bonny City, 3 in the fishing settlements and 10 in the villages. Each of these schools was inspected for the availability of the various components of the school health instruction using a validated school health instruction evaluation scale adapted from" Introduction To The School Health Programme" by Akani and Nkanginieme.[10]Components evaluated included: Presence of professional health education staff, time allotted for health teaching, general plan for progressive health instruction for all grades, scope/contents of health education curriculum, teaching methods and preparation of teachers for health teaching. Items were scored according to their relevance. For example the presence or absence of a professional health education staff was graded between 0-5 points, 0 point for no health educator and 5 points for 4 health educators in the school. A face to face interview method was used to obtain additional relevant information from the head teachers. The minimum acceptable and maximum attainable scores for school health instruction using the evaluation scale were 31 and 55 respectively. Data was analyzed using SPSS version 11 and results were presented using descriptive statistics. Analysis of variance was used to compare mean scores between the three study locations. Only p-value less than 0.05 was regarded as statistically significant.

Ethical clearance

The Ethics Committee of University of Port Harcourt Teaching Hospital, Rivers State Universal Basic Education Board and Bonny Local Government Area gave ethical approval for the study.

Results

Characteristics of the Schools in Bonny LGA-According to Location

A total of 20 public primary schools were inspected. The pupil population of the schools range 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(Table 1).There were a total of 100 teachers in all the schools. The teacher population per school ranged from 2 to 13 with a mean of 5 ± 2.77SD. Teacher/pupil ratio per school ranged from 1:30 to 1:128. Fourteen (70%) schools had teacher/pupil ratio less than 1:40 recommended by the implementation committee of the National Policy on Education[11] (Table 2).Out of the 100 teachers in the schools, 31 (31%) had TCII and below

(Table 3). Out of 100 teachers, 50(50%) had 10-19 years teaching experience, no teacher had less than 10 years' experience (Table 4).

Table 1: Population of Schools in Bonny LGA

Pupil population	Number of Schools			Total (%)
	Bonny City	Villages	Fishing Settlements	
100-299	2	10	3	15(75)
300-499	0	0	0	0(0)
500& above	5	0	0	5(25)
Total (%)	7(35)	10 (50)	3(15)	20(100)

Table 2: Teacher-Pupil Ratios of Primary Schools in Bonny LGA

Teacher-Pupil ratio	Number of Schools			Total (%)
	Bonny City	Villages	Fishing Settlements	
≤1:40	2	2	2	6(30)
1:41-1:80	1	6	1	8(40)
>1:80	4	2	0	6(30)
Total (%)	7(35)	10(50)	3(15)	20(100)

Table 3: Qualification of Teachers in Bonny LGA

Qualifications	Number of Teachers			Total (%)
	Bonny City	Villages	Fishing Settlements	
Degree	14	7	2	23(23)
NCE	24	15	7	46(46)
TC II	12	10	8	30(30)
CTR	0	0	1	1(1)
Total (%)	50(50)	32(32)	18(18)	100(100)

Degree = University Degree, NCE = National Certificate of Education, TCII = Teachers Grade II Certificate, CTR = Certified Teacher Referred Certificate

Table 4: Number of years of experience of Teachers in Bonny LGA

Experience (Yrs)	Number of Teachers			Total (%)
	Bonny City	Village	Fishing Settlements	
10-19	26	15	9	50(50)
20-29	21	17	7	45(45)
30& above	3	0	2	5(5)
Total (%)	50(50)	32(32)	18(18)	100(100)

School Health Instruction

Staffing: No professional health instructor was found in the schools during the period of evaluation.

Time Allotted to health teaching: Four (20%) schools allotted three periods per week to health teaching. The remaining 16(80%) schools allotted less than three periods per week to health teaching (Table 5).

Scope of Content: The 20(100%) schools used the old health education curriculum[12] which had the following topics: Growth and development, personal health, community health, social and emotional health, safety education and first aid. The curriculum however had nothing on HIV/AIDS.

Teaching Methods: The direct teaching method was the only method used by all the schools. No school reported going on field trips. Teaching aids in form of posters were found in 13(65%) schools but no school reported giving health instruction with these teaching aids. No school reported receiving health education by visiting medical specialists (Table 5).

Preparation for Health Teaching: No school reported that the teachers received in-service training during the period of evaluation (Table 5).

Table 5: Health Instruction Assessment of the Schools

School Health Instruction	No of Schools	%
Professional health instructor	0	0
Time allotted to health teaching		
3periods per week	4	20
2 periods per week	15	75
1 period per week	1	5
Teaching methods		
Direct teaching method	20	100
By visiting medical specialists	0	0
Use of teaching aids	0	0
Preparation for health teaching		
In-service training of teachers	0	0
Policies and recommendations of health department interpreted to teachers	0	0

Scores for School Health Instruction: The scores for school health instruction ranged from 15 to 17 (mean 15.4 ± 0.64 SD). All the schools had below the minimum required score for school health instruction of 31 points (Table 5). A comparison of the mean school health instruction scores by location of the schools showed that there was no significant difference in the mean scores of the schools in Bonny City, villages and fishing settlements (p=0.18) (Table 6).

Table 6: School Health Instruction scores of the schools

Schools	Location	Scores	%
Bonny Govt school	Bonny City	15	27.3
Central school	Bonny City	17	30.9
St Michaels school	Bonny City	17	30.9
Boyle Memorial	Bonny City	17	30.9
Model Primary	Bonny City	15	27.3
CPS Finima	Bonny City	15	27.3
CPS Abalamabia	Bonny City	15	27.3
CPS Banigo	Village	15	27.3
CPS Kuruma	Village	15	27.7
CPS Dema Abbey	Village	15	27.3
CPS Oloma	Village	15	27.3
ST Baths	Village	15	27.3
CPS Agbalama	Village	15	27.3
CPS Peterside	Village	15	27.3
CPS Kalaibiama	Village	17	30.9
CPS Greens Iwoma	Village	15	27.3
CPS Dan Jumbo	Village	15	27.3
CPS River Seven	Fishing settlement	15	27.3
CPS Iwokiri	Fishing settlement	15	27.3
CPS Agaja	Fishing settlement	15	27.3

Table 6: A Comparison of Mean School Health Instruction Scores by School Location

Mean Scores			Variance	P
Bonny City	Villages	Fishing. S		
15.86 ±1.07	15.20 ±0.63	15.00 ±0.00	0.67	0.18

Discussion

This study has revealed the poor implementation status of school health instructions in the public primary schools in Bonny Local Government Area. The fact that none of the schools studied had up to the minimum required score of 31 points in school health instruction using the evaluation scale[10]shows that the programme is being minimally implemented in these primary schools. This poor implementation status cuts across the schools in the three study locations. The implication of this is that the objectives of the comprehensive health education section in the National School Health Policy[9] cannot be achieved.

Teacher/pupil ratio is an indicator of education quality [13]. In this study 70% of the schools had very low teacher/pupil ratio, lower than the 1:40 recommended by the implementation committee of the national policy on education[11]. In such crowded classrooms with high number of pupils per teacher, the quality of education suffers. The pupils will have difficulty following the course and the teachers will have less time dedicated to the needs of each individual child. Consequently there will be low academic achievement and increased dropout rate. Other studies done in Afghanistan, Tanzania and Rhwanda[13]also reported a low teacher/pupil ratio.
The National Education Research Council recommended that the minimum qualification for teachers should be NCE (National Certificate of Education)[14]. However, in this study, 31% of the teachers had academic qualifications lower than NCE. Two previous studies[15,16] done in Rivers State had demonstrated that academic qualification has a positive relationship with adequate health knowledge. One therefore wonders whether these teachers with academic qualifications lower than NCE were passing on accurate and quality health information to the children.

The absence of professional health instructors in the schools studied is similar to the report of a previous study[15]. However, Imogie[17] found health educators in 63.3% of the schools he visited, though his study was done in secondary schools. The findings in this study is not surprising because in Nigeria, the primary school teacher is a generalist and is expected to teach all the subjects irrespective of what he/she studied in the Teachers Training Institution.
The two periods per week allotted to health teaching by majority of the schools in this study is consistent with findings in a previous report[15]. It however fell short of the three periods per week recommended by the National Education Research Council[11]. It could be that two periods per week is more convenient, and allows for the accommodation of the other aspect of the child's study in the total school day period.

An important observation during the study was that teachers in the schools studied were still using the old primary school syllabus[12] which had a well-defined health instruction curriculum, but lacked a subject like HIV/AIDS. Since teachers are expected to follow the scheme of work as outlined, it became obvious that the subject of AIDS was not being taught to primary school children in Bonny Local Government Area. The implication of this is that reduction in the transmission of the disease may not be effective if the facts are not adequately presented to the children, especially as young people between the ages of 15 to 24 years accounted for 40% of new infections in 2006.[18]

Like any other subject, health instruction in classroom should be given directly, incidentally and correlated or integrated with other subjects. However, in this study, the only method of instructing reported was the direct teaching method. Even among the educators, direct teaching method alone is recognized as inadequate. Akinyele[19] observed that behavior cannot be changed by telling alone. Pupils must be led into an understanding, appreciation and internalization of those positive effects and attitudes we want them to develop. Hence the lecture method alone should not be used. The enquiry method, role playing and dramatization and field trips are some of the tested methods needed for effective teaching. Unfortunately in this study, no school taught health education beyond the classroom by going on field trips. The lack of use of teaching aids by the teachers is very surprising, because in 13 (65%), schools teaching aids in form of posters were found. Lack of awareness of the importance of the use of teaching aids may be possible contributory factor.

Tanner[20] and Okonkwo[21] had advocated for a regular and well planned in-service training for all teachers to improve their professional competence. Their advocacy was based on the fact that pre-service training alone cannot adequately equip them with all the knowledge, skills and attitude they need to be competent on their job. This is especially true for the teachers in this study where none majored in health education. Regular in-service training on health education would have helped to equip them with adequate health information to pass on to the children. Unfortunately in-service training for teachers was not reported by any school.

Conclusion

In conclusion, school health instruction in public primary schools in Bonny local Government Area was poorly implemented. The classrooms were overcrowded, increasing the workload of the teachers and compromising learning. No health educator was found in any school, majority of the schools dedicated less period per

week for health teaching and the health education curriculum being used omitted a very important topical issue such as HIV/AIDS. Furthermore the in-service training needs of the teachers were neglected by the Ministry of Education.

Conflict of Interest: None
Funding: None

Recommendations

More classroom teachers should be sent to the public primary schools in Bonny Local Government area. Regular in-service training on health education should be organized for the teachers. Teachers should be trained on how to use the new health education curriculum to avoid the omission of currently topical issues. Health education should be made compulsory in teachers training institutions.

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