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Implementing Healthful School Environment as a Component of School Health Programme (SHP) In Selected Secondary Schools in Calabar Municipality, Cross River State, Nigeria

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Original Research Article

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Abstract: This study was conducted to determine the level of implementation of healthful school environment in selected secondary schools in Calabar Municipality. Two hypotheses were formulated to guide the study. The study employed the descriptive survey design. The multi-stage sampling technique was adopted to select a total of 314 SS2 students, 100 teachers and 20 principals from 20 schools (10 public and 10 private) and 2 policy makers to make up the sample size of 436. A 25 item validated questionnaire, key informant interview guides and observation checklist were used to collect both qualitative and quantitative data from respondents. Population and independent t-test were used to test the two hypotheses formulated. The results of data analysis were presented in tables and figures. The result of the study revealed that a significant difference exist between the SHP implementation guidelines and healthful school living/environment in schools and that school ownership significantly influenced the implementation of healthful school living/environment (P = 0.000). Private schools were observed to have more of the facilities than the public schools (recreational facilities were found in 40% public and 80% private schools, functional taps in 30% public and 80% private schools, total fencing of school found in 30% public and 70% private schools, adequate desk and chairs for students was observed in 40% public and 100% private schools). Based on the findings, recommendations made included: that copies of the SHP policy and implementation guidelines be made a compulsory document for all schools to guide programme implementation and that the Government should see it as a priority to ensure healthful living in schools by supporting schools to provide the needed facilities.
Keywords: School health programme, Healthful school living/ environment, implementation.

INTRODUCTION

According to Wargo [1], the physical school environment has a strong influence on the health of children; a contaminated environment can cause or exacerbate health problems (e.g. respiratory disease or asthma) with subsequent reduction in school attendance and learning ability whereas the reverse is the case with a healthy school environment. The A "healthful school environment" is "one that protects students and staff against immediate injury or disease and promotes prevention activities and attitudes against known risk factors that might lead to future disease or disability." It includes the physical and aesthetic surroundings and the psychosocial climate and culture of the school. Factors that influence the physical environment include the school buildings and the area surrounding them, biological or chemical agents, and physical conditions such as temperature, noise and lighting. The psychological environment includes the physical, emotional and social conditions that affect the well-being of students and staff [2].

According to the Federal Ministry of Education [3] in the SHP implementation guidelines and as corroborated by Ejifugha [4] and Moronkola [5], the conditions required to meet the standard of a safe and healthful physical environment are varied. First, the schools must be located away from potential sources of environmental hazards (factories, markets, airports, major highways and public motor parks). The school should be protected from biological, physical and other chemical threats such as cold or dampness, extreme heat, radiation, injuries, violence and crime, air and water pollution, etc. Ejifugha [4] specifically pointed out that excessive cold and heat can be controlled by ensuring that school buildings are appropriately roofed

and ceiled and that the plan should make provision for surface drainage. The building plan for the school should meet architectural standards, which the Ministry of Education [6] indicated that the plan for a maximum of 500 learners should accommodate at least one hectare of land and that the location should be safe for learning. There must be good illumination and ventilation. The school should have suitable facilities for the physically challenged. The furniture for learners and staff should be appropriate and adequate in quantity. There should be adequate number of gender sensitive toilets facilities for both staff and students (at least one toilet compartment – one water closet for 30 learners). Every school must ensure the provision of basic necessities like safe water. Each water point should serve a maximum of 250 people. The location of the water should be at least 30 meters from any soak away or toilet. Cleanliness among the pupils should be enhanced by placing wash-hand basins with soap at strategic positions within the school compound. To maintain good sanitation, there should be proper drainage and waste disposal facilities. They should also make provision for adequate supply of rust-resistant, water-proof and rodent-proof containers for collection of refuse and arrangement made for these containers to be frequently emptied and burnt or carried by the Municipal arrangement. To ensure safe recreation and sports, the Federal Ministry of Education [6] indicated that each school should have a large playground safe for play and a room for indoor play activities like Ludo, Scrabble, etc. Schools must be adequately secured by fencing the premises.

The opinion of Berry [7] was that a healthy environment demands that classrooms should not be overcrowded (at least 20 students per class) to enhance teacher and students interaction. Building roofs that leak or will not stop water are detrimental, stagnant water in the classrooms breeds all forms of bacteria and can form mold with resultant allergies. The author therefore indicated that the school environment should be free from these.

Ejifugha [4] opined that the organization of a healthful school day can be achieved if the school's regimen is planned in such a way that academic and social pressures do not distract individual pupils from optimal health. According to the author, the recommendation of 4 hours in the school for Nursery school pupils and 6 hours for primary and secondary school pupils has been made because several factors have been considered. These factors include: the different academic/health needs of pupils, the fatigue levels of the different age groups, the staff teaching load and the stress and time involved in their movement to and from school.

The school should have policies that will guide both staff and students to consciously maintain good interpersonal relationship between staff and staff, staff and students and students and students [4]. Studies have confirmed that there is a strong relationship between positive school environment, socio-emotional abilities and avoidance of risk behaviours. Therefore, healthy interpersonal relationship invariably means absence of or very minimal risky behaviours in the school environment [8]. A healthy school environment according to Parrett and Budge [9] incorporates a school policy that ensures freedom from physical harm, intimidation, harassment and bullying. The explained that the school administrator/staff must be vigilant enough to identify early warning signs of harassment and bullying and act swiftly to intervene.

The Federal Ministry of Education [3] in the implementation guidelines clearly stated that it is mandatory to maintain cleanliness of the school environment including the toilets, kitchen, food stores and classrooms for the achievement of a healthful environment. The MOE of Pakistan in their SHP policy noted that to provide a conducive environment for children in schools, there should be adequate water supply both for drinking and washing. The policy also stressed the need for the construction of gender sensitive toilet facilities and spacious classrooms and the provision of safe playground/facilities and facilities to enhance comfortable sitting arrangements. Also recommended is a suitable plan for the physically challenged. In the absence of these, they observed that the health status and level of concentration of the students will be affected negatively with many students dropping out of school as a result of the uncomfortable and unattractive nature of the school environment [10].

Moronkola [5] linked the dimensions of students' behavioral problems in schools in Nigeria to the unfavorable school environment. According to him, in a study carried out by him and Onuoha in 1997, they observed that drug misuse and abuse, smoking and sexual malpractices were identified as precursors of students' behavioural problems. He also linked the problem of cultism in Nigerian schools to the fact that the students' live in overcrowded halls/hostels, learn in overcrowded classrooms where recreational facilities are either inadequate or poorly maintained, libraries are with poor stock of current books and journals which do not promote reading culture or there are poor basic social amenities like electricity supply, water supply, toilets and recreational facilities. All these make learning environment uncomfortable for both learners and school staff. After a study carried out in selected secondary schools in America, Wright [11] concluded that uncomfortable school environment fosters unhealthy relationship among the staff and students. He observed that most of the 160, 000 students sampled go home before close of school due to uncomfortable emotional environment manifested as bullying and violence. Another 50% of the respondents admitted that they bullied fellow students in the previous year and almost half of them said they were bullied, taunted or

teased. Those who were repeatedly bullied had poorer grades and participated less in class discussions.

Marx and Wooly [12] in their account about schools in New York stated that a school environment that is well maintained with safe and clean facilities will naturally attract students more; it will promote their health and glue them to their studies which in turn will boost academic achievement. Resnick [13] corroborating this, reported the observation made in US after implementing a child development project in some schools. The project which aimed at improving the physical and psychological environments of schools was observed to strengthen students' sense of connectedness to schools, fostered academic motivation and engagement and impacted positively on grade points of students for up to 14% higher than those of students not benefiting from such programmes.

The result of the rapid assessment carried out in schools in Nigeria by the Ministry of Health and Education with the assistance of WHO in 2003, revealed that most of the schools sampled (71%) suffer noise and air pollution because they are located at a distance of less than 5km to main markets and 68% of the schools were located less than 1km to busy main roads. However, they observed that 94% of the schools had good ventilation; two-thirds of these schools had adequate lighting. Three-quarters of the schools were found with adequate recreational facilities, 25% of them had ventilated pit toilets, 46% had water taps or bore hole and 97% were seen with clean environment [3]. A more recent study by Buba [14] revealed lapses in the implementation of SHP in Taraba State. According to him only 50% of the schools had toilets facilities and only 52% had good source of drinking water. Chukwuocha, Ashiegbu, Dozie and Aguwa [15] whose study was done in Owerri (Imo State), observed ineffective implementation of SHP; their study revealed that the schools' environment was hygienically poor with unattended garbage, and students were kept in congested and stuffy dormitories. With these findings, it is no wonder then that the study revealed a high incidence of malaria and diarrhea amongst the students. Unfortunately, they also observed that students patronize patent medicine dealers close to their schools where it was observed that students most often buy under-dose of the medications.

In another development, Nwachukwu [16] observed in Imo state that students study in overcrowded classrooms as indicated by 78% of his subjects and 70% also indicated that toilets, water and recreational facilities and equipment are insufficient in their schools. Considering the importance the World Health Organization attaches to good and adequate water supply and toilet facilities in the control of communicable diseases, Nwachukwu opined that students in secondary schools today have indeed suffered a lot of deprivations that place them at risk of contracting many infections. He also noted that the present day school administrators have a poor approach to the implementation of the environmental components of the SHP.

Ofovwe and Ofili [17] who in their study sampled 133 (one hundred and thirty-three) private and public schools in Edo State reported that most of the schools sampled observed regular clean-up exercise which contributed in enhancing cleanliness of the schools' environment. They reported that 47.1% of the 104 private schools used their students to clean the school compound while 52.9% employed cleaners, but in 96.6% of the 29 public schools, students were observed to be responsible for the cleaning and they used the plastic bins provided to collect the dirt. Their study also revealed that 77.9% of the private schools sampled and none of the public schools had adequate water supply and that most of the schools do not have toilet and hand washing facilities. Their study also revealed that 90% of private and 86.4% of public schools engaged their students in physical education and recreational activities. In contrast, Nwachukwu [16] whose study revealed that most secondary schools had insufficient recreational facilities, specifically stated that the problem observed was more in private schools than in public schools. He explained that most privately owned schools operated without even volleyball court, let alone football pitch. This is because they seem to be maximizing the use of space for more money; so they manage a small space for both primary and secondary schools. In Cross River State, Ogbiji and Ekpo [18] observed that a significant difference exist between public and private schools in terms of their participation in games and sports but observed a non-significant difference on the function of health promotion clubs.

Purpose of the study

The study sought to investigate the level of implementation of healthful school living/environment as a component of SHP in selected secondary schools in Calabar Municipality in Cross River State. The study hypotheses were:

- The actual implementation of healthful school environment in secondary schools in Calabar Municipality does not significantly differ from the implementation guidelines.
- The implementation of healthful school environment in secondary schools in the study area is not significantly influenced by school ownership (public/private).

METHODOLOGY

Study setting

The study was conducted in 'Calabar Municipality', one of the 18 Local Government Areas (LGA) in Cross River State, and in fact, the capital city of the state. Records from the secondary school education board and the inspectorate department of Ministry of Education Calabar, revealed that as at June

2015, there were 15 public and 36 private secondary schools in Calabar Municipality, bringing it to a total of 51 secondary schools.

This study concentrated on the implementation of the environmental component of school health programme in the secondary schools (public and private). The study was delimited to SS2 students, teachers of health-related subjects (health and physical education/nutrition/agriculture/biology/integrated science), principals of the secondary schools and policy makers in the Ministry of Health.

Study design

The study adopted a descriptive survey design which involved the systematic collection and presentation of data to explain the current status of SHP in the secondary schools in Calabar Municipality.

Study population

The study population consisted of all students, teachers and principals in private and public secondary schools in Calabar Municipality (14,502 students, 998 teachers and 15 principals – records only available for public schools) and policy makers in the state ministry of health.

Sample size determination

The sample size was determined using the formula for Dichotomous descriptive study as cited in Ejemot-Nwadiaro [19]. The sample size for students was 314 while that of teacher was 101. The principals of all the 20 selected secondary schools were interviewed as well as two policy makers from the State Ministry of Health. That made up the sample size to 437.

Sampling procedure

The multi-stage sampling and the purposive sampling techniques were used for this study. The multi-stage sampling technique was applied for selection of Local government area (LGA), selection of schools (20 schools), selection of students (314 students) and selection of teachers (101 teachers) while purposive sampling technique was used to select principals (20) and policy makers (2).

Instruments for data collection

The instruments for data collection were a well validated questionnaire called the School Health Programme Questionnaire (SHPQ), key-informant interview guide and a guide for observation.

Data collection

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

Data analysis

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

Ethical consideration

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

RESULTS

Respondents' characteristics

Female students (56.3%) were more than males (43.7%); likewise female teachers (65%) were more than males (35%). However, among the 20 principals, 55% were males and 45% were females. The two policy makers were made of a male and a female (Table 1). Students aged between 15 – 17 years constituted majority (62%) of the respondents while those 18years and above were the least (4.3%).

Status of healthful school environment in private and public schools

A good number of the respondents, 94% of teachers and 71.3% students from private schools and 40% of teachers and 51% of students from public schools.

Table-1: Respondents' characteristics

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

Figures in parenthesis are percentage.

Indicated that their school is far from major roads. As much as 44% of the teachers and 45.2% of the students from private schools and 50% of teachers and 50.3% of the students from public schools said their school suffered noise pollution. The problem of air pollution in schools was indicated by 66% of the teachers and 70% of the students in the private schools as well as 58% of teachers and 67.1% of students from public secondary schools. Most of the respondents from the private schools (72% teachers and 73.9% students) said their schools were free from flood and up to 76% teachers and 78.3% students indicated that their schools were fenced round. Whereas, freedom from flood was indicated by 44% of the teachers and 55.9% of the students from public schools, 40% of teachers and 51% of the students said their schools were fenced round. As much as 94% of the teachers from private schools and 54% from public schools said their classrooms were well ventilated, whereas only 36% from private schools and 56% from public schools reported that their classrooms had good lighting. Students who indicated good ventilation were 82.8% from private schools 58.7% from public schools while those who said their school was well lit were 48.4% of private schools students and 46.9% of those in public schools. When asked if desk/chairs were enough for all students, up to 98% of teachers and 86.6% students from private schools and only 22% of teachers and 38.5% students from public schools responded on the positive. Whereas only 10% of the teachers and 21% of students from private schools reported overcrowding, as much as 62% of teachers and 64.3% of students from public schools reported same. The presence of leaking roofs was reported by 18% of teachers and 21% students from private schools and 54% of teachers and 39.2% of students from public schools (Table-2 and 3).

Table-2: Environment and buildings of private schools

Item	Number of students (%)		Number of teachers (%)	
School is far from major road				
Yes	112	(71.3)	47	(94)
No	45	(28.7)	3	(6)
Total	157	(100)	50	(100)
Disturbance by external noise				
Yes	71	(45.2)	22	(44)
No	86	(54.8)	28	(56)
Total	157	(100)	50	(100)
Exposure to frequent air pollution				
Yes	110	(70)	33	(66)
No	47	(30)	17	(34)
Total	157	(100)	50	(100)
Good topography, no flood				
Yes	116	(73.9)	36	(72)
No	41	(26.1)	14	(28)
Total	157	(100)	50	(100)
Total fencing of school				
Yes	123	(78.3)	38	(76)
No	34	(21.7)	12	(24)
Total	157	(100)	50	(100)
Well ventilated classrooms				
Yes	130	(82.8)	47	(94)
No	27	(17.2)	3	(6)
Total	157	(100)	50	(100)
Classrooms are well lit				
Yes	76	(48.4)	18	(36)
No	81	(51.6)	32	(64)
Total	157	(100)	50	(100)
Enough desks/chairs for students				
Yes	136	(86.6)	49	(98)
No	21	(13.4)	1	(2)
Total	157	(100)	50	(100)
Classrooms are overcrowded				
Yes	33	(21)	5	(10)
No	124	(79)	45	(90)
Total	157	(100)	50	(100)
Leaking roofs present				
Yes	33	(21)	8	(16)
No	124	(79)	42	(84)
Total	157	(100)	50	(100)

Figures in parenthesis are percentage

Table-3: Environment and buildings of public schools

Item	Number of students (%)		Number of teachers (%)	
School is far from major road				
Yes	73	(51)	20	(40)
No	70	(49)	30	(60)
Total	143	(100)	50	(100)
Disturbance by external noise				
Yes	72	(50.3)	25	(50)
No	71	(49.7)	25	(50)
Total	143	(100)	50	(100)
Exposure to frequent air pollution				
Yes	96	(67.1)	29	(58)
No	47	(32.9)	21	(42)
Total	143	(100)	50	(100)
Good topography, no flood				
Yes	80	(55.9)	22	(44)
No	63	(44.1)	28	(56)
Total	143	(100)	50	(100)
Total fencing of school				
Yes	73	(51)	20	(40)
No	70	(49)	30	(60)
Total	143	(100)	50	(100)
Well ventilated classrooms				
Yes	84	(58.7)	27	(54)
No	59	(41.3)	23	(46)
Total	143	(100)	50	(100)
Classrooms are well lit				
Yes	67	(46.9)	28	(56)
No	76	(53.1)	22	(44)
Total	143	(100)	50	(100)
Enough desks/chairs for students				
Yes	55	(38.5)	11	(22)
No	88	(61.5)	39	(78)
Total	143	(100)	50	(100)
Classrooms are overcrowded				
Yes	92	(64.3)	31	(62)
No	51	(35.7)	19	(38)
Total	143	(100)	50	(100)
Leaking roofs present				
Yes	56	(39.2)	27	(54)
No	87	(60.8)	23	(46)
Total	143	(100)	50	(100)

Figures in parenthesis are percentage.

Results in Tables 4 and 5 shows that availability of a large play ground was reported by 98% of teachers and 82.8% of students from private schools and 50% of teachers and 58.7% of students from public schools. In the same vein, 96% of teachers and 68.8% of students in private schools and 36% of teachers and 53.8% of students from public schools reported safety of their playground. Respondents who reported availability of extra recreational facilities were 84% private and only 16% public school teachers and 62.4% private and 12.6% public school students while accessibility of the facilities was reported by 84% private and 18% public school teachers and 59.2% private and 19.6% public school students. When asked if school used to organize regular sports activities, positive responses were given by as much as 98% of teachers and 78.3% of students from private schools and 56% of teachers and 55.9% of students from public schools.

Functional taps were said to be available in schools by 82% of teachers and 67.5% of students in private schools and by 22% of teachers and 25.9% of students in public schools. Almost all respondents said their schools had functional toilet facilities (98% teachers and 77.7% students from private schools and 82% teachers and 83.2% students from public schools) and plastic waste bins (96% teachers and 77.7%

students from private schools and 78% teachers and 74.1% students from public schools). Those who reported that their toilets are gender sensitive were 66% teachers and 69.4% students from private schools and 56% teachers and 50.3% students from public secondary schools. Whereas 92% of teachers and 68.8% of students from private schools reported that their schools were devoid of surface refuse dumping, 50% of teachers and 62.9% of students from public schools reported same (Figure-1 and 2).

Table-4: Recreational facilities in private schools

Item	Number of students (%)		Number of teachers (%)	
Large playground present				
Yes	130	(82.8)	49	(98)
No	27	(17.2)	1	(2)
Total	157	(100)	50	(100)
Safety of playground				
Yes	108	(68.8)	48	(84)
No	49	(31.2)	2	(16)
Total	157	(100)	50	(100)
Availability of extra recreational facilities				
Yes	98	(62.4)	42	(84)
No	59	(37.6)	8	(16)
Total	157	(100)	50	(100)
Recreational facilities accessible				
Yes	93	(59.2)	42	(84)
No	64	(40.8)	8	(16)
Total	157	(100)	50	(100)
Organization of regular sport activities				
Yes	123	(78.3)	49	(98)
No	34	(21.7)	1	(2)
Total	157	(100)	50	(100)

Figures in parenthesis are percentage.

Table-5: Recreational facilities in public schools

Item	Number of students (%)		Number of teachers (%)	
Large playground present				
Yes	84	(58.7)	25	(50)
No	59	(41.3)	25	(50)
Total	143	(100)	50	(100)
Safety of playground				
Yes	77	(53.8)	18	(36)
No	66	(46.2)	32	(64)
Total	143	(100)	50	(100)
Availability of extra recreational facilities				
Yes	18	(12.6)	8	(16)
No	125	(87.4)	42	(84)
Total	143	(100)	50	(100)
Recreational facilities accessible				
Yes	28	(19.6)	9	(18)
No	115	(80.4)	41	(82)
Total	143	(100)	50	(100)
Organization of regular sport activities				
Yes	80	(55.9)	28	(56)
No	63	(44.1)	22	(44)
Total	143	(100)	50	(100)

Figures in parenthesis are percentage.

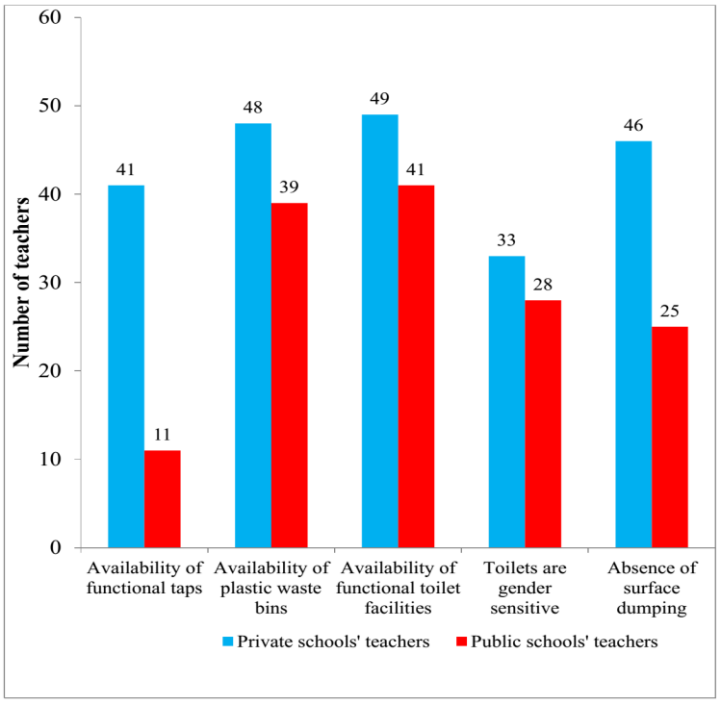

Fig-1: Sanitation/waste management in private and public schools (n = 50)

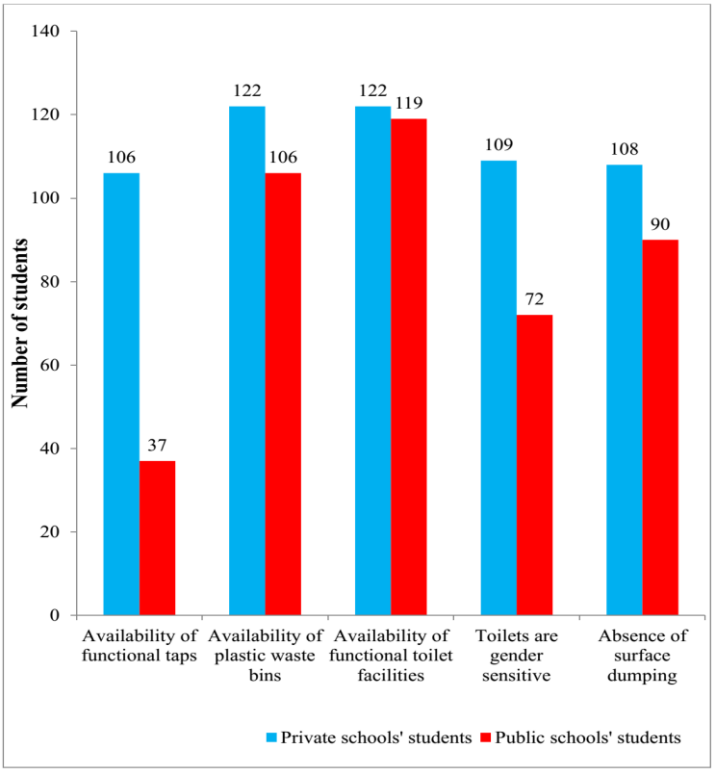

Fig-2: Sanitation/waste management in private and public schools (n = private schools 157, public schools 143)

A reasonable proportion of respondents (90% of teachers and 86.6% of students from private schools and 72% of teachers and 70.6% of students from public schools) reported the availability of functional disciplinary committee, cordial relationship between teachers and students (90% of teachers and 69.4% of students from private schools and 80% of teachers and 85.3% of students from public schools) and good relation among students (96% of teachers and 91.7% of students from private schools and 84% of teachers and 83.9% of students from public schools). When asked about truancy and violence/bullying among students, positive responses came from fewer respondents. While in both private and public schools, 28% teachers

admitted truancy was rampant among their students, only 23.6% private school students and 32.9% public school students responded thus. In the same vein, 32% private school teachers and 35.7% students, and 18% public school teachers and 53.8% reported that their students usually demonstrate violence/bullying (Figure-3 and 4).

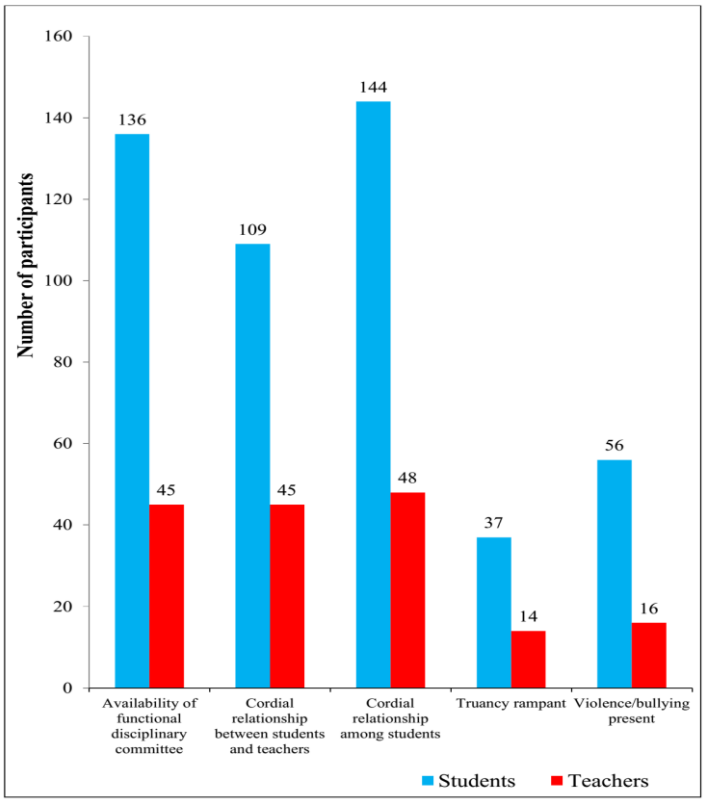

Fig-3: Social/emotional factors of SHP in private schools (n = students 157, teacher 50)

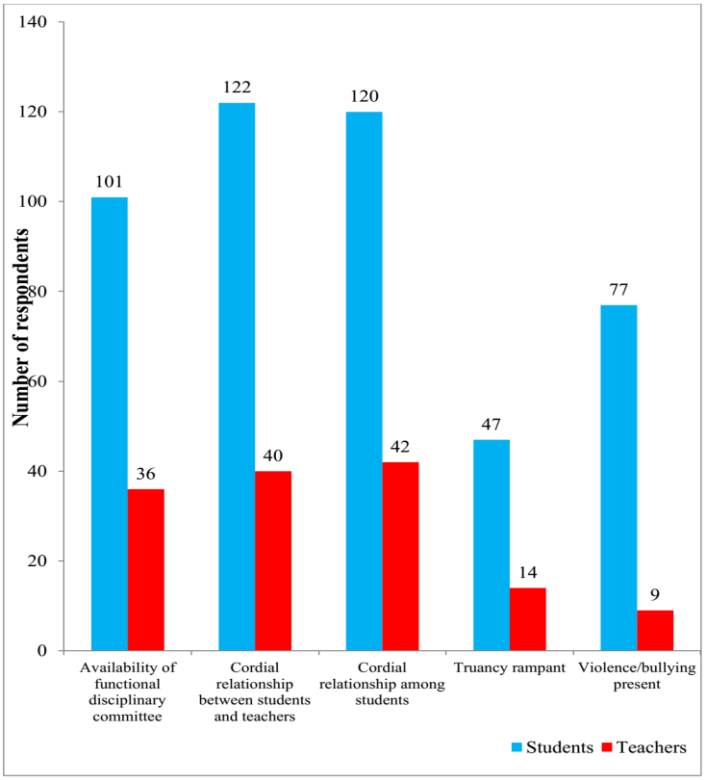

Fig-4: Social/emotional factors of SHP in public schools (n = students 143, teacher 50)

The result of t-test analysis for the responses of teachers and students for hypothesis one which states that, the actual implementation of healthful school environment in secondary schools in Calabar Municipality does not significantly differ from the implementation guidelines revealed a calculated t value of 9.666 for teachers' responses and 18.051 for students' responses. These values were higher than 1.960 which is the critical t value at 0.05 level of significance, thus the null hypothesis was rejected. Implying that, there is a significant difference between the actual implementation of healthful school environment in secondary schools in Calabar Municipality and the National implementation guidelines (Table-6).

Analysis of data for hypothesis two which states that, the implementation of healthful school environment in secondary schools in the study area is not significantly influenced by school ownership (public/private) revealed calculated t values (for both teachers' and students' responses) of 8.959 and 10.469 which are both higher than the critical value of 1.960 at 0.05 level of significance with df of 98 and 298. With this result, the null hypothesis was rejected, which implies that the implementation of healthful school environment is significantly influenced by school ownership (P = 0.000) (Table-7).

Table-6: Difference between the SHP implementation guidelines and healthful school environment in schools

Variable	N Df	X	μ	SD	t	P-value
Teachers' responses:						
SHP in secondary schools	100 99	15.630	11.780	3.983	9.666	0.000
Students' responses:						
SHP in secondary schools	300 299	14.745	10.855	3.732	18.051	0.000

P < at 0.05, Critical t = 1.960

Table-7: Influence of school ownership on the healthful school living component of SHP in secondary schools.

Variable	N	Df	Mean	SD	t	P-value
Healthful school living:						
Teachers:						
Private schools	50	98	19.20	4.071	8.959	0.000
Public schools	50		12.06	3.894		
Students:						
Private schools	157	298	17.0	3.873	10.469	0.000
Public schools	143		12.490	3.590		

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

Observation results on healthful school living/environment

Data from observation carried out regarding the implementation of the environmental component of SHP in relation to school ownership showed that only 30% of public schools (3 schools) were observed to be properly fenced round, but up to 70% (7 schools) of private schools were fenced round. Though only 4 public schools (40%) were observed to have desks/chairs for all their students, all the 10 private schools (100%) sampled had enough desks/chairs. Four of the public schools sampled (40%) had leaking roofs, but only one private school had leaking roof. Functional water taps were seen in only 3 public schools (30%) and 8 private schools (80%). Waste bins were seen in almost all schools (9 public schools and 10 private) and toilet facilities in all schools (100%). Whereas surface dumping was observed to be present in 7 (70%) public schools, truancy common in 9 (90%) public schools and bullying in 5 (50%) public schools, only one private school (10%) was observed to have surface dumping, 3 (30%) of them had truancy common and only 2 (20%) had bullying and violence common (Table-8).

Table-8: Observation results on healthful school living/environment in schools

Item	Observation		
	Public schools Number of yes (%)	Private schools Number of yes (%)	Total Number of yes (%)
a. School location	n = 10	n = 10	n = 20
School is distant enough from a major road.	6(60)	8(80)	14(70)
School is free from external noise.	6(60)	7(70)	13(65)
School is free from air pollution.	5(50)	2(20)	7(35)
The terrain is free from erosion.	4(40)	6(60)	10(50)
School is properly fenced round.	3(30)	7(70)	10(50)
b. School building			
Classrooms are well ventilated	9(90)	8(80)	17(85)
Classrooms are well lit	9(90)	9(90)	18(90)
Desk/chairs enough for students.	4(40)	10(100)	14(70)
Classrooms devoid of overcrowding.	5(50)	10(100)	15(75)
Presence of leaking roofs	4(40)	1(10)	5(25)
c. Recreational facilities			
Presence of a sizeable playground	7(70)	9(90)	16(80)
Playground is safe	7(70)	9(90)	16(80)
Availability of other recreational facilities	4(40)	8(80)	12(60)
Recreational facilities accessible to the students	2(20)	8(80)	10(50)
School organizes regular sports activities (at least per term)	10(100)	10(100)	20(100)
d. Sanitation/waste management			
Presence of functional taps.	3(30)	8(80)	11(55)
Availability of waste bins at strategic locations.	9(90)	10(100)	19(95)
Availability of toilets	10(100)	10(100)	20(100)
Toilets differentiated by gender	8(80)	10(100)	18(90)
Presence of surface dumping.	7(70)	1(10)	8(40)
e. Social/emotional factors			
Availability of functional disciplinary committee.	8(80)	8(80)	16(80)
Students-teachers relationship cordial.	10(100)	10(100)	20(100)
Students-students relationship cordial.	10(100)	10(100)	20(100)
Truancy common.	9(90)	3(30)	12(60)
Bullying/violence common.	5(50)	2(20)	7(35)

Figures and parenthesis are percentage.

DISCUSSION

The result of t-test analysis on implementation of healthful school environment and implementation guidelines showed that healthful school environment in secondary schools in Calabar Municipality is significantly different from what is recommended in the implementation guidelines (P > at 0.05, critical t 1.960). This result is confirmed by the observation results which revealed that among all the projects/facilities/services assessed; only one of them (toilet facilities) was present in 100% (20) of the schools sampled. This is a problem that requires high level persuasive communication and continuous education for all stakeholders in order to address the issue [20]. Only 50% of the schools were observed to be fenced round, and 60% had recreational facilities. When asked about the school fence/security status, a school principal responded thus: "very bad, the whole place is porous", another principal's response was:

> You can see for yourself that there is no fence. The school is open to hoodlums who come in here to do what they like. That large hall there (pointing towards a building) used to be our examination hall, if you go closer you can perceive the stench from there because of faeces, you can't go in there. Our neighbors have no toilets in their houses, so the school has been converted to their bathrooms and toilets. We cannot keep any valuables here because they will carry them. Our chairs are chained to the tables for safety...

It was quite a nasty sight when the researcher went closer to observe the hall, worse still is the fact that this school was among the 40% of schools observed to have unattended garbage. It is no wonder then, that Chukwuocha *et al*., [15] observed a high incidence of

malaria and diarrhea amongst students in Owerri. This result further agrees with that of Chukwuocha *et al*., as it revealed that most of the schools sampled had unhygienic environment with unattended garbage. By contrast Nwachukwu [16] found out that only 28% of schools sampled had toilet facilities, Buba [14] observed toilet facilities in only 50% of schools sampled in Taraba state and Ofovwe and Ofili [17] reported that only 27.7% of schools in Egor Local government in Edo State had toilet facilities.

Despite the degree of importance the world health organization (WHO) attaches to good water and toilet facilities in the control of communicable diseases [21], students in our secondary schools have indeed suffered a lot of deprivation because even though all the sampled schools had toilets, none of them met the standard of one toilet compartment to 30 learners [6]. On the average, the entire school population shared 4 toilets. In one of the schools (public school) with a population of more than 2000 students, they had just one toilet compartment for both students and staff. As if that was not enough, only 55% of schools had functional taps, amongst which none had more than two water points. This grossly deviate from the recommendation in the implementation guideline which states that a water point should serve a maximum of 250 people [6]. This result is consistent with the findings made by Buba [14] in Taraba state who observed that only 52% of schools had good source of drinking water and Nwachukwu [16] whose findings revealed that 72% of the schools sampled had inadequate toilet facilities and no source of drinking water. At variance with this study is the report made by MOE and UNESCO [10] of the status of SHP in Pakistan, Philippines and other nations. The report has it that most of the countries have implemented SHP and thus have adequate drinking water and toilet facilities for the school population. Specifically, it was stated that Singapore launched the CHERISH Award in the year 2000 which gave recognition to comprehensive health promotion programmes in schools using the WHO standard. Since then facilities like water, toilets, soap and basins for hand washing, waste bins, clinics etc were put in place. This implies they had gone ahead of Nigeria, with a strong perception of susceptibility to negative health conditions with the non-implementation and also perceived benefits of implementing the programme. So they took the action of planning and implementing the programme to enjoy the benefits. As the problems were identified, they were able to design interventions to solve the problems.

Another disclosure from the result is that, though 80% (16) of the schools were observed to have functional disciplinary committee, violence and truancy was still observed to be rampant in 35% and 60% of schools respectively. In fact, one of the principals when asked if truancy was present in her school responded: "plenty", and another said: "ah that one is a common thing here though we try our best to control it". This is to be expected because adolescents with their adventurous and creative nature are kept in 50% of schools without fence. A proof of this is the fact that students were observed by the researchers, sneaking out of school as early as between 10am and 12 noon. This according to Parrett and Budge [9] is a deviation from normal because schools staff ought to be vigilant enough to arrest any warning signs of harassment and bulling.

The result of t-test analysis shows that implementation of healthful school environment is significantly influenced by school ownership ($P >$ at 0.05, critical t 1.960). The result showed that private schools are more positively disposed to the implementation of healthful school environment. This is a surprising result given that availability of finance provides the drive for putting most of the structures/facilities in place and that the government should ordinarily possess more financial power than any single individual. However, it goes to confirm the observation made by Akani, Nkanginieme and Oruamabo [22] that the commitment of the Nigerian government towards SHP has remained largely at policy level with minimal emphasis on implementation. The result of this study indicates that whereas only 30% of public schools were fenced round, up to 70% of private schools were observed to be fenced round. Classrooms observed to be well ventilated in 90% of public schools and 80% of private schools. Desk and chairs were enough for students in 40% of public schools and 100% of private schools. Sad to recall is the observation of Moronkola [5] of the strong relationship that exist between overcrowding in schools and cultism, drug use, misuse and abuse, smoking and sexual malpractice as well as the conclusion made by Wright [11] after his study that uncomfortable school environment nurtures unhealthy relationship between staff and students and negatively affects academic performance. This is because the study reveals that up to 50% of public schools and none among the private were overcrowded and up to 40% of the public schools and 10% of private schools had leaking roofs which exposes the students to cold especially during the rainy season and thus, poor ability to concentrate in their studies. The researchers actually observed students being taught in 20% of water-logged public schools, one of which had no ceiling at all and some blown-off roofs.

The study also revealed the presence of sizeable playground in 70% of public schools and 90% of private schools, availability of recreational facilities in 40% of public schools and 80% of private schools and accessibility of the recreational facilities to students in 20% of public schools and 80% of private schools. Functional taps were observed in 30% of public schools and 80% of private schools. Functional toilets facilities were seen in the entire schools sampled (100% public and 100% private). Though waste bins were seen in 90% of public schools and 100% of private schools,

unattended garbage (surface dumping) was noticed in up to 70% of public schools and 10% of private schools.

With the aforementioned scenario of the environmental status of the public and private schools, it is therefore not a surprise that truancy was observed in up to 90% of public schools and only 30% of private schools and bullying/violence among students in 50% of public schools and 20% of private schools. The picture portrayed by the result of this study also agrees with the opinion of Marx and Wooly [12] and Resnick [13]. Marx and Wooly in their account about schools in New York opined that a safe, clean and well maintained school environment fosters students' connectedness to the school. Resnick on the other hand, after a child development project in some schools in US reported that a healthy physical and psychological environment strengthens students' sense of connectedness to school.

The figures observed in this study closely corroborates that of Ofovwe and Ofili [17] who observed that 100% private schools and 97% public schools had waste bins, 78% private and none of public schools had adequate water supply and that 90% of private and 86% of public schools engage their students in recreational activities. However, their finding regarding toilet facilities, that most of the schools (both private and public) had no toilet facilities contravenes the position of this study. Also contradicting the result of this study is the observation made by Nwachukwu [16] in Imo state that more private schools than public schools had insufficient recreational facilities.

CONCLUSION

In line with the findings of this study it can be concluded without mincing words that there is an obvious short fall of the healthful school environment in secondary schools in Calabar Municipality from what is recommended in the National SHP implementation guidelines and that the level of implementation is significantly influenced by school ownership.

RECOMMENDATIONS

- A copy of the national policy on SHP and the implementation guidelines should be made compulsory documents for all schools to guide programme implementation.
- All schools should form school health committees whose duty will be to look into the modalities for the effective implementation of SHP.
- The government at different levels should enforce their roles aimed at meeting the health needs of the school population with regards to implementing the SHP as indicated in the National SHP implementation guidelines [3].
- The government should ensure that no one gets approval to operate a school without ensuring the availability of essential facilities for SHP.
- To avoid overcrowding in schools and ensure comfortable learning environment for students, the Ministry of Education should adhere strictly to the recommended number of students per class and enforce same for all schools.
- There should be suitable plan by the government, Ministry of Education and the school administrators for the provision of appropriate and adequate desk/chairs in each classroom for students.
- Government should see it as a priority to ensure healthful living in schools by supporting schools to provide the needed facilities.

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