Outcome of health inspection of school children in selected public primary schools in the Ethiope LGAs of Delta State, Nigeria

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Abstract

Health inspection involves the physical observation of the general appearance, mouth and teeth, nose and throat, skin, ears, eyes, scalp and hair; and behaviour of children at play. The objective of this study was therefore to assess the physical state of school children related to their basic personal hygiene in selected public primary schools in the Ethiope LGAs of Delta State, Nigeria. This was a school based descriptive cross-sectional study conducted between September 2009 and June 2012 among 1196 school children selected by multistage sampling technique from fourteen public primary schools in two semi-urban towns. The study instrument was a pro-forma which elicited information on the socio-demographic characteristics of the children and their physical state related to their basic personal hygiene. Over half of the children studied were in the age group 9-11 years (54.9 %), were males (51.3 %), had fathers who were unskilled workers (55.1 %) and had mothers who were unskilled workers (75.3 %). Over a third of the children's fathers (46.2 %) and mothers (49.2 %) had no formal education. The outcome of health inspection of the children revealed that over half (65.1 % and 64.7 %) of them had dirty nails and uniform respectively, while 38.6 %, 24.2 %, 18.5 %, 17.4 %and 3.0 % of them had dental caries, dirty hair, superficial wound, skin infections and ear discharge respectively. The association between the sex and age group of the children and occurrence of dirty nails, dirty uniform, dirty hair, superficial wound and skin infections were statistically significant ($P<0.05$) respectively. The poor state of affairs of school children related to their basic personal hygiene in this study further brings to the fore, the general neglect of school health inspection in public primary schools.

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Key words: Health inspection, outcomes, primary school children

Introduction

It is universally recognised that the health of school children deserves special attention. School children spend a considerable part of their lives in school exposed to a variety of environmental, physical, emotional and social influences. [1,2] Therefore, to benefit maximally from the educational system children need to be healthy physically, mentally and emotionally while exposure during school hours to various hazards such as physical injury, infections and emotional problems should be minimal if not totally prevented. A health promoting school is one that is constantly strengthening its capacity as a healthy setting for living, learning and working. [3] School children in general are found to suffer mainly from malnutrition, infectious diseases, intestinal parasites, dental caries and diseases of the skin, eye and ear. In many

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developing countries where literacy rate is low and childhood mortality is high; for the universal basic education program to succeed, the need for good school health program is particularly critical.[2]It is the opinion of health professionals, educators and social workers that the provision of school health program is a cost effective way of meeting the health needs of Children.[4] School health program is targeted at promoting and maintaining the health of schoolchildren so as to give them a good start in life. In addition, the school health program seeks to enable children benefit optimally from their school learning experiences.[5,6] Health appraisal is a major component of school health program. It is that aspect of school health program which concerns itself with evaluating the health of school children objectively. Health appraisal dovetails into three specific activities, each of which is related to the others. The activities are health inspection (which involves physical observation of the general appearance, mouth and teeth, nose and throat, skin, ears, eyes, scalp and hair, behavior of children at play), health examination (which involves screening tests or medical diagnoses), and health records (which involves the keeping of records of the health histories of the children).[5,6] However, school health programs have remained poorly implemented in Nigeria. Previous studies have indicated the poor state of school health program in Nigeria.[2,5,7,8] Strengthening school health program by government as enunciated in its policy document would be a welcome development.[9]

This study was therefore conducted to assess the physical state of school children related to their basic personal hygiene in selected public primary schools in the Ethiope LGAs of Delta State, Nigeria.

Subjects and methods

The study was conducted in Abraka and Oghara, two semi-urban towns in Ethiope East and West Local Government Areas (LGA)of Delta State respectively between September 2009and June 2012.These towns are situated in the Delta Central Senatorial zone of Delta State. While Abraka is home to the Delta State University, Oghara is home to the Delta State University Teaching Hospital, Delta State Polytechnic and Western Delta University. The official language of the people in these towns is Urhobo and their major occupation is farming. The study population were 1196 school children whose physical states as regards their basic personal hygiene were inspected. They were selected by a multi-stage sampling technique from fourteen (14)public primary schools. The study instrument was a structured pro-forma which elicited information on the socio-demographic characteristics of the children and the status of their hair, nails, skin, mouth and teeth, ears, uniform and general appearance.

Data collected following the health inspection of the selected school children was entered into the computer using the SPSS (version 15.0) software. A simple descriptive analysis was carried out to give a general overview of the study population. This was followed by bivariate analysis using chi-square test. The level of significance was set at $P<0.05$.

Ethical approval was obtained from the Health Ethics and Research Committee of the Delta State University Teaching Hospital, Oghara. Permission to conduct the study was obtained from the Education departments of the two Local Government Councils, the school authorities and parent-teachers associations of the public primary schools selected for the study. Assent was also obtained from all the children selected for the study.

Results

The socio-demographic characteristics of the children inspected are shown in Table 1. Majority of the children (69.5 %) were in the age group 9-11 years, while 30.5 % and 14.6 % of them were in the age group 12-14 and 6-8 years respectively. Over half of the children were males (51.3 %), while 48.7 % of them were females. Over a third of the children's fathers (46.2 %) and mothers (49.2 %) had no formal education.

The outcome of health inspection of the children is shown in Table 2. Over half (65.1 % and 64.7 %) of them had dirty nails and uniform respectively, while 38.6 %, 24.2 %, 18.5 %, 17.4%and 3.0 % of them had dental

caries, dirty hair, superficial wound, skin infections and ear discharge respectively. Over a tenth (11.1 %) of the children walked on bare feet.

The association between the sex of the selected school children and their physical states is shown in Table 3. While the association between the sex of the children and the occurrence of dirty nails, dirty uniform, dirty hair, superficial wound and skin infections were statistically significant ($P<0.05$), the association between the sex of the children and the occurrence of walking on bare feet, dental caries and ear discharge were not statistically significant ($P>0.05$).

The association between the age group of the selected school children and their physical states is shown in Table 4.The association between the age group of the children and the occurrence of dirty nails, dirty uniform, dirty hair, superficial wound, walking on bare feet, dental caries, ear discharge and skin infections were all statistically significant ($P<0.05$)

Discussion

Good health is a necessary condition for learning. Therefore, the overall health status of school children shouldbe assessed regularly through the provision of adequate health appraisal services. Health appraisal is of benefit to school health programme in a number of ways. Firstly, it affords the school authorities the opportunity to detect signs and symptoms of common diseases as well as signs of emotional disturbances that could impede the learning activities of school children. Besides, health appraisal helps in providing information to parents and school personnel on the health status of school children.[10]

Health inspection is one of the three specific activities of school health appraisal. It involves the physical observation of the general appearance, mouth and teeth, nose and throat, skin, ears, eyes, scalp and hair, and behaviour of school children at play. It is an exercise that involves the teacher's continuous observation and routine morning inspection of school children.[11]Therefore, teachers should as a matter of routine observe the physical state of the children under their care.

This study has revealed a poor state of basic personal hygiene among a sizeable proportion of the school children studied. Over half of the children studied had dirty nails and dirty uniforms respectively, over a third of them had dental caries, less than a third of them had dirty hair, while above a tenth of them had superficial wound, skin infections and walked on bare feet respectively; and less than a tenth of them had ear discharge. Studies by previous researchers in Nigeria had also revealed the poor state of basic personal hygiene among school children.[12-14]What can be inferred from the observation from this present study is that there is a general neglect of health inspection by teachers in public primary schools. This inference further lends credence to the observations by previous researchers who reported the large scale deficiencies in the provision of school health appraisal services in Nigerian schools.[6,7,11,15,16]To neglect the health inspection of children amounts to subjecting them to the scourge of preventable diseases. This does not however speak well of the school authorities in the public primary schools and should be a matter of concern to all stakeholders in primary education. Furthermore, studies by previous researchers have revealed the lack of adequate knowledge as regards the operation of school health program among teachers at the primary school level in Nigeria;[2,5]and perhaps, this may underscore the reason for the general neglect of health inspection of children by teachers. School children are particularly vulnerable to neglect of basic personal hygiene[12-14] and the consequences in terms of morbidity and mortality are also more severe in them compared to adults.[3]The increased burden of infectious diseases, intestinal parasites, dental caries and diseases of the skin, eye and ear among school children due to poor personal hygiene practices and inadequate sanitary conditions remains a concern on the public health agenda in developing countries.[17]Evidence from studies has shown that these diseases are promoted by poor basic personal hygiene.[3]Therefore, the school provides a unique opportunity for health education: a means of establishing a firm foundation for the healthy habits of the future adult

population. The school authorities at the primary school level need to brace up to their responsibility in this wise. Teachers need to view themselves as agents of health promotion.

In conclusion, the poor state of affairs of school children as regards basic personal hygiene in this study further brings to the fore, the general neglect of school health inspection in public primary schools. There is need therefore to address this inadequate state of affairs of school health inspection by teachers. Therefore, it is recommended that the requisite teacher training should be provided or appropriate health care personnel should be hired or employed to ensure regular and adequate health inspection of school children. This is with a view to eliminating the poor state of basic personal hygiene among children in public primary schools.

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Table 1: Socio-demographic characteristics of the selected school children

Variable	Number examined	Percentage (%)
Age group (years)		
6-8	175	14.6
9-11	657	54.9
12-14	364	30.5
Total	**1196**	**100**
Sex		
Male	613	51.3
Female	583	48.7
Total	**1196**	**100**
Father's occupation		
Unskilled worker	659	55.1
Semi-skilled worker	205	17.1
Skilled worker	232	19.4
Unemployed	100	8.4
Total	**1196**	**100**
Mother's occupation		
Unskilled worker	901	75.3
Semi-skilledworker	61	5.1
Skilled worker	161	13.5
Unemployed	731	6.1
Total	**1196**	**100**
Father's educational status		
Nil formal	553	46.2
Primary	165	13.8
Secondary	337	28.2
Tertiary	141	11.8
Total	**1196**	**100**
Mother's Educational status		
Nil formal	588	49.2
Primary	208	17.4
Secondary	303	25.3
Tertiary	97	8.1
Total	**1196**	**100**

Table 2: Outcome of health inspection of the selected school children

Variable	No Examined	Frequency	Percentage (%)
Dirty hair	1196	290	24.2
Dirty uniform	1196	774	64.7
Dirty nails	1196	778	65.1
Walk on bare foot	1196	133	11.1
Skin infection(Scabies, Furuncles, Tineacapitis, Skin rash)	1196	208	17.4
Dental caries	1196	462	38.6
Ear discharge	1196	36	3.0
Superficial wound	1196	221	18.5

Table 3: Association between the sex of the selected school children and their physical states

Dirty hair	Male	Female	Total
Yes	181	109	290
No	432	474	906
Total	**613**	**583**	**1196**
Chi-square X^2=19.1; df=1; p=0.00001			
Dirty uniform			
Yes	442	332	774
No	171	251	422
Total	**613**	**583**	**1196**
Chi-square X^2=30.1; df=1; p=0.0000001			
Dirty nails			
Yes	432	356	788
No	181	227	408
Total	**613**	**583**	**1196**
Chi-square X^2=11.8; df=1, p=0.0006			
Skin infections			
Yes	122	86	208
No	491	497	988
Total	**613**	**583**	**1196**
Chi-square X^2=5.5; df=1; p=0.019			
Walking on bare feet			
Yes	68	65	133
No	545	518	1063
Total	**613**	**583**	**1196**
Chi-squareX^2=0.001; df=1; p=0.98			
Dental caries			
Yes	248	214	462
No	365	369	734
Total	**613**	**583**	**1196**
Chi-square X^2=1.8; df=1; p=0.183			
Ear discharge			
Yes	21	15	36
No	592	568	1163
Total	**613**	**583**	**1196**
Chi-square X^2=0.74; df=1; p=0.388			
Superficial wound			
Yes	146	75	221
No	467	508	975
Total	**613**	**583**	**1196**
Chi-squareX^2=23.8; df=1; p=0.0000011			

Table 4: Association between the age group of the selected school children and their physical states

Dirty hair	6-8 (years)	9-11 (years)	12-14 (yrs)	Total
Yes	15	149	126	290
No	160	508	238	906
Total	**175**	**657**	**364**	**1196**
Chi-square	X^2=45.6; df=2, p=0.000013			
Dirty uniform				
Yes	64	403	307	774
No	111	254	57	422
Total	**175**	**657**	**364**	**1196**
Chi-square	X^2=125.5;df=2; p=0.000000001			
Dirty nails				
Yes	55	415	318	788
No	120	242	46	406
Total	**175**	**657**	**364**	**1196**
Chi-square	X^2=169.8; df=2; p=0.000000001			
Skin infections				
Yes	52	115	41	208
No	123	542	323	988
Total	**175**	**657**	**364**	**1196**
Chi-square	X^2=28.1; df=2; p=0.0033			
Walking on bare feet				
Yes	8	83	42	133
No	167	574	322	1063
Total	**175**	**657**	**364**	**1196**
Chi-square	X^2=9.3; df=2; p=0.0185			
Dental caries				
Yes	24	247	191	462
No	151	410	173	734
Total	**175**	**657**	**364**	**1196**
Chi-square	X^2=75.6;df=2; p=0.0000019			
Ear discharge				
Yes	13	18	5	36
No	162	639	359	1160
Total	**175**	**657**	**364**	**1196**
Chi-square	X^2=15.1; df=2; p=0.00248			
Superficial wound				
Yes	13	68	52	133
No	162	589	312	1063
Total	**175**	**657**	**364**	**1196**
Chi-square	X^2=6.6; df=2; p=0.0407			