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STATUS OF PROVISION OF SUPPORTIVE HEALTHY SCHOOL ENVIRONMENT FOR ORAL HEALTH PROMOTION FOR PRIMARY SCHOOL PUPILS IN ENUGU STATE, NIGERIA

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ABSTRACT

The study was a cross- sectional survey research, aimed at ascertaining the primary school teachers' perceived status of provision of supportive healthy school environment for oral health promotion for primary school pupils in Enugu State. Three research questions and one hypothesis guided the study. The area of the study was Enugu State while the population for the study was 12,783 teachers in 1,208 government owned primary schools. A total of 639 primary school teachers, representing 5 per cent of the population was sampled using multi stage sampling procedure. A 12-item, 4-point scale questionnaire developed by the researcher was used to collect data from the respondents. The instrument was validated by three experts and Cronbach Alpha was used to ascertain the internal consistency of the instrument which yielded a co-efficient index value of .82. Mean was used to analyze the data collected to answer the research questions while hypothesis was tested using z-test at P<.05. The findings are that there was low status of provision of supportive healthy school environment for oral health promotion; and that difference existed between urban and rural primary schools on the provision of supportive healthy school environment for oral health promotion. Based on the findings, a number of recommendations aimed at improving the provision of supportive healthy school environment for oral health promotion in the area of study were made.

Keywords: Oral health promotion, status, pupils, supportive environment

INTRODUCTION

Health has continued to be one of man's greatest needs, because, it is only with good health that man can function to full capacity. Oral health is recognized as equally important in relation to general health especially for children. Oral health according to Ejike, Nnabueze & Pufaa (2009) is the state of complete, physical, social and physiology condition of the mouth, not merely the absence of disease or infirmity of the mouth. In addition, Nwobodo (2007) defined oral health as the ability of an individual to keep the oral cavity clean and healthy, as well as carry out essential functions, not merely the absence of disease or infirmity of the mouth. Following from these definitions, WHO (2003) explained that oral health is a fundamental aspect of general health which enables an individual to speak, eat and socialize without disease or discomfort of the mouth. This is because without healthy mouth, one may not attain an optimal health hence, Koop (2001), observed that oral health is critical to the overall health especially that of the children because health, well being and self confidence are all boosted by a healthy mouth that is well cared for. This also facilitates communication and good human relationship. Hay (2004) opines that oral health contributes to general wellness, quality of life and can affect physical health, appearance, speech and interpersonal relationship. Further, he posited that oral health cannot be considered separate from the other aspects of health and well being. Invariably, if one does not have good, oral health, such a

person is not healthy. Furthermore, Ejike, Nnabueze and Pufaa (2009) agreed that developing countries faced immense health problems resulting in disability and death. These countries usually, do not have the money, health professionals and materials to handle many health problems. Consequently, some diseases thought to be of minor effect to health like the disease of the oral cavity have been on the increase especially among the school aged children (Aderinokun, 2000; Arowojolu, 2001). However, Aderinokun (2000) cautioned that delay on prevention, diagnosis and treatment of these oral diseases might result to severe pain, tissue damage and death. The above source further observed that school children were left with their oral health problems to the level that oral diseases expose these children to terrible pains giving rise to serious discomfort, sleeplessness, school absenteeism and facial disfigurement which could give rise to other health problems since health runs in a continuum at the physical, mental and social level. In addition, WHO (2005) noted that the consequences of diseased mouth in school children are pain, infection, lower level of concentration at school, reduced ability to chew food, poor academic performance, poor appearance, loss of teeth, absence from school ,a condition that affects the appearance, quality of life, nutritional intake and consequently, the growth, development of children and even death. In short, the burden of oral disease is very diverse. However, in order to have sound education, one needs to be healthy in all ramifications.

Dakum (2005) noted that low health status has been associated with low educational level, achievements and productivity. Consequently, poor oral health of a school child may prevent the child from benefiting from various educational activities that takes place in the school. This is because, among other problems, low oral health status may result to low school attendance and low self esteem, leading to poor school performance. It can be deduced that unhealthy mouth can lead to poor nutrition, poor digestive process leading to malnutrition of the school child, speech problem as well as distraction from attendance to school and interference with in the learning process of the school child. Similarly, World Health Organization (WHO) (2003a) indicated that poor oral health could have a detrimental effect on children's performance in school and their success in later life. Consequently, children who suffer from oral health related diseases are more likely to have more restricted daily activity including missing school than those who do not (United State General Accounting Office's, 2000). Hence oral diseases remain a major public and perhaps school health problem worldwide. However, this problem may be salvaged through provision of an oral health supportive school environment.

Providing an oral health supportive school environment determines the effectiveness and sustainability of oral health promotion interventions and programmes (WHO 2003a, Alsoliman, 2010). Supportive school environment enables pupils and staff to develop their physical, mental and social potentials enhancing the relationships between members of the school community, encouraging healthy lifestyle and making healthier choice the easier choice. In a health promoting school, much emphasis is placed on the supportive school environment, both physical and psychosocial school environment which support each other.

According to the above assertions, physical environment includes the location and surrounding of the school, safe school play-grounds, buildings, classrooms, eating facilities and other structural features. The conditions of physical environment of the school and policies regarding its use can have significant impact on oral health of the children directly as well as indirectly through lifestyle and oral health behaviours. For example, Alsoliman (2010) observed that staying in a smoke-free environment and the availability of healthy foods can help reduce the risk of oral diseases thereby, promoting general health and promotion of sustainable healthy lifestyle. Examples of oral health-related aspects of a

healthy physical environment include: safe water and sanitation, healthy dietary practices, healthy supportive environment and outside vendors (WHO, 2003a).

The provision of clean and safe water is essential to good health and well-being. These facilities are also fundamental to good oral health because they are essential to oral health promotion activities such as tooth brushing drills at lunchtime. In some developing countries and locations, many households may not have safe and clean water supply and sanitation; the school may be the only places where children can have access to clean water for the cleaning of their teeth, mouth and it peripherals. Safe water and sanitation facilities are essential to tooth brushing drills and for controlling cross-infection.

A healthy environment supports the adoption of healthy lifestyles. Children can be empowered to develop healthy dietary habits from an early age through school oral health programme. This is because; eating behaviours adopted during childhood are likely to be maintained into adulthood which underscores the importance of encouraging healthy eating as early as possible (Sheiham & Watt, 2000). Promoting good dietary behaviours in children also reinforces other health messages in school.

According to Mclellan, Rissel, Donnelly and Bauman (1999), a pleasant school environment with spacious and comfortable surroundings enhances physical, mental and social health and promotes healthy behaviours. Safe school interior structures, buildings and playgrounds reduce the risk of dental trauma. With appropriate dental first aid and trauma policies in school, vital actions can be taken to avoid permanent tooth loss. Having discussed the examples of oral health related aspects of a healthy physical environment, there is therefore urgent need to ascertain its status in primary schools in Enugu State in order to enhance the holistic development of the primary school child.

On the same direction, the psychosocial environment refers to the social and psychological conditions that underpin health and education potential of the school children. The school culture and organizational structure influence the psychosocial environment (WHO, 2003b). Stress can inflate interpersonal conflicts, violent behaviours like fighting, bulling etc, and can lead to the use of comfort foods that are high in sugar, factors that increase the risk of oral diseases (Alsoliman, 2010). A supportive psycho social and cultural environment helps to ameliorate the stress experienced by school children and staff, which may in turn, improve their oral health. According to Nwobodo (2012), school programmes that help children to develop self-esteem and confidence are very important to equip children and school staff with the skills that help them prevent and deal with interpersonal conflicts, stress, peer pressure and other social forces, which may affect health generally and oral health in particular.

World Health Organization (2003a) noted that in a health promoting school, the psychosocial environment includes school support such as teachers as role models and peer reinforcement. The assertion further stated that the psychosocial environment should support health promoting perceptions and behaviours of members of the school community. The support of children, school staff and community members to each other helps build confidence and develop coping strategies in maintaining good oral health behaviour in the school children. For example, teachers as role models and mentors have the responsibility to set good examples by encouraging children to adopt a sustainable healthy lifestyle for good oral health. This may prompt teachers to make extra efforts to maintain good oral health, with a nice smile. In addition, according to Konu and Rimpela (2002) peer reinforcement when applied appropriately can be beneficial for oral health development among children in primary schools. It can provide positive reinforcement among children that healthy teeth are more socially desirable.

Positive peer support promotes understanding and good interpersonal relationships, preventing conflicts and violent behaviours that lead to craniofacial injuries. Whether supportive healthy school environment for oral health is provided and the extent to which it is provided for children in primary schools in Enugu State, has not yet been empirically ascertained, hence, the question is: what is the status of provision of supportive healthy school environment for oral health promotion for primary school pupils in Enugu State?

PURPOSE OF THE STUDY

The main purpose of the study was to ascertain the primary school teachers' perceived status of provision of supportive healthy school environment for oral health promotion for primary school pupils in Enugu State.

In the bid to accomplish this task, three research questions were posed thus;

1. What is the status of provision of psychosocial supportive healthy school environment for oral health promotion?
2. What is the status of provision of supportive healthy physical environment for oral health promotion?
2. What is the status of supportive oral health promotion practices provided for primary school pupils in Enugu State?

HYPOTHESIS

The following null hypothesis was tested at .05 level of significance;

Ho: Significant difference does not exist in the mean response of urban and rural primary school teachers on the status of supportive healthy school environment for oral health promotion for primary school pupils in Enugu Sate.

METHODS

In carrying out this study, the cross-sectional survey design was adopted. The cross sectional survey design explains and interprets issues and conditions in their current setting (Owie, 2006). The area of the study was the 17 LGAs that make up Enugu State. Enugu State is made up of urban and rural LGAs while the population for the study comprised all the 12,783 teachers in all the 1,208 government owned primary schools in the 17 local government areas of Enugu State (Enugu State Universal Basic Education Board (ESUBEB), 2012)

The sample comprised of 639 primary school teachers. This represents five per cent of the population. Nwana (1990) asserted that five per cent of the population serves as a good sample, if the population runs in thousands. The population for this study was in thousands, hence the use of five per cent of the entire population. The sample size was selected through multistage sampling procedure. The first stage involved purposive sampling of five LGAs that had urban and rural areas, namely; Enugu North, Enugu South, Enugu East, Nsukka and Oji-River LGAs with a total number of 4267 (1845 rural and 2422 urban)teachers. The essence of this was to enhance comparison of results on urban – rural bases.

Using proportionate random sampling technique, 15 per cent of the teachers were proportionately drawn from urban and rural schools; this gave a total of 363 urban teachers and 276 rural teachers. The final stage of the sampling process involved the use of systematic random sampling technique to draw the teachers from their various schools until the required number was obtained.

Instrument for data collection was the twelve - item questionnaire known as Supportive Healthy School Environment for Oral Health Promotion Questionnaire (SHSEOHPQ) which

was developed by the researcher. The items were arranged according to the research questions they sort data for. The items were arranged in 4 point scale of Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).The respondents were requested to tick the options that match their opinion on each item. The researcher attached an introductory letter to the instrument to establish rapport with the respondents and acquaint them with the rationale for the study. The face validity of the questionnaire was established through the judgment of three experts in Health Education teaching in the universities in Nigeria.

The reliability of the instrument was established using test – re-test method, copies of the questionnaire were administered on 30 primary school teachers that did not form part of the study sample .In order to determine the internal consistency of the instrument; Cronbach Alpha formula was utilized to compute the reliability co-efficient. Uzoagulu (2011) adjudged this procedure suitable for computing the correlation of the two sets of scores obtained from each half to determine the reliability of the test. The result yielded a co-efficient index value of .82, which showed a high correlation of the instrument.

The instrument was administered directly to the sampled 639 primary school teachers with the aid of 10 research assistants. The respondents were requested to complete the copies of the questionnaire on the spot and return same. Copies of the retrieved questionnaire were screened to select the properly completed ones for data analyses. Out of the 639 copies of questionnaire distributed and collected, 16 copies were not properly completed leaving 623 copies viable for use, this signified 97.5 per cent return rate.

The three research questions were answered using mean. The response options of SA, A, D, and SD were weighted 4, 3, 2 and 1 respectively. The weighted scores were used to derive the mean scores item by item. In order to determine the status of supportive healthy school environment for oral health promotion, the limit of scores was adopted and interpreted thus: Very High Status = 3.50 and Above, High Status = 2.50- 3.49, Low Status = 1.50 - 2.49 and Very Low Status = 1.00 -1.49.

The z-test statistic was employed to test the null hypotheses of the study at .05 level of significance. The decision rule for the hypothesis, was to reject Ho at .05 level of significance if z-calculated was greater than or equal to the z-critical (z-cal > z-cri), do not reject Ho, if z-calculated was less than z-critical (z-cal < z-cri) at appropriate degree of freedom. Data were analyzed using Statistical Package for Social Science (SPSS) version 17.0.

RESULTS

Table 1. Status of supportive healthy school environment for oral health promotion for primary school pupils in Enugu State

S/N	*Item*	*n=(623)*	
	Psycho-Social Environment	$\overline{X}$	*Dec.*
1	Good teacher-pupils relationship is encouraged in the primary schools	2.56	HS
2.	Good pupil-pupil relationship is encouraged in the primary schools	2.04	LS
3.	The school premises are adequately safe to prevent craniofacial trauma.	2.06	LS
4.	The school encourages community and family participation in oral health promotion by provision of oral health information to parents during PTA meeting, news letter	1.53	LS

(Continued...)

Table 1. Status of supportive healthy school environment for oral health promotion for primary school pupils in Enugu State (...Continued)

S/N	*Item*	*n=(623)*	
	Physical Environment		
5.	Conducive learning environment are provided in the school during health lessons.	2.63	HS
6	There is enough play ground and space for children to play which helps to prevent injury on children.	3.07	HS
	Supportive Practices		
7	School provides safe drinking water for pupils during school hours.	1.59	LS
8	The school encourages and insists that the children brush their teeth, and mouth everyday at home	2.41	LS
9	The school practices mouth brushing at school, which is supervised by the teachers	1.32	VLS
10.	The school allows only low sugar food to be bought and eating at school by pupils.	1.08	VLS
11.	Eating of balanced diets is encouraged in the school.	2.94	HS
12.	Teachers and other school staff receive systematic and ongoing training in oral health and prevention of oral diseases.	1.66	LS
	Grand Mean	*2.07*	*LS*

Table 1 mean score showed high status in the provision of good teacher-pupil relationship (x= 2.56), conducive learning environment in the school (x= 2.63), provision of enough play ground and space to prevent accident in the school (x= 3.07) and encouragement of the eating of balance diet (x= 2.94). On the other hand, there was low status in the provision of adequate and safe environment to prevent craniofacial trauma (x= 2.06), encouragement by the school to parents and community to participate in oral health promotion through provision of newsletters, and special meetings (x= 1.53), provision of safe drinking water for pupils during school hours (x= 1.59), encouragement of pupils to brush their teeth (x= 2.41) and teachers receive systematic training (x = 1.66).

However, there was very low status in the existence of the practice of mouth brushing in the school (x= 1.32) and the school allows only low sugar food to be bought and eat at school (x= 1.08). Consequently, the grand mean of 2.07 showed an indication of low status of provision of supportive healthy school environment for oral health promotion for primary school pupils in Enugu State.

Table 2. Summary of z-test statistics verifying the mean responses of urban and rural teachers on the status of provision of supportive healthy school environment for oral health promotion for primary school pupils in Enugu State

Location	*N*	$\overline{X}$	S^2	*Df*	*Standard Error*	*Z-cal*	*Z-critical*	*Decision*
Urban	354	2.75	.95	621	0.66	2.182	1.960	Reject
Rural	269	1.39	.70					

Result in Table two showed that significant differences existed between urban and rural primary schools regarding the provision of supportive healthy school environment for oral health promotion. The result showed that the calculated z-value was greater than the z- table value (z-cal = 2.182 > 1.96) at .05 level of significance. Consequently, the null hypothesis is rejected. Following from these, the status of provision of supportive healthy school environment for oral health promotion for primary school pupils in Enugu State was dependent on location.

DISCUSSION

The main purpose of the study was to ascertain the primary school teachers' perceived status of provision of healthy school environment for oral health promotion for primary school pupils in Enugu State. Information in the study showed that provision of supportive healthy school environment for oral health promotion includes:

1. provision of psychosocial supportive healthy school environment for oral health promotion
2. provision of supportive healthy physical environment for oral health promotion
3. provision of supportive oral health promotion practices

The findings showed that primary school pupils in the enjoyed a range of supportive healthy school environment for oral health promotion as revealed by its high status in some aspects. However, the status of some aspects was reportedly low. This finding corresponds with the view of WHO (2002) about the importance of promoting healthy dietary behaviour in primary school pupils from an early age. More importantly, schools might be the only places the children who were at the highest risk of dental disease could have access to oral health services; this is particularly true in many African countries (WHO, 1996).

Gratifying as the result might be, they were surprising, because the result also revealed that the overall status of supportive health school environment for oral health promotion for primary school pupils in Enugu State was low. The finding was as sad as it was disappointing. In a nutshell, the findings could be said to be unfortunate. Children may not cope with their studies if they were victims of unhealthy, unsafe and unsupportive healthy school environment for oral health promotion through, undetected physical, social and psychological environment which were the major determinants of teaching and learning in schools (Booth and Samdal, 1997, WHO 2003a, 2003b and Alsoliman 2010).

The hypothesis ascertained if there was significant difference in the mean response of urban and rural primary school teachers on the status of provision of supportive healthy school environment for oral health promotion for primary school pupils in Enugu State. The z-test comparison as shown in Table two showed that the computed z-test of 2.182 was greater than the z-critical value of $\pm$ 1.960 at .05 level of significance. With regards to the decision rule, this research hypothesis was rejected. The finding was not at variance with that of Jamieson (2006), who observed that rural and remote areas made people more disadvantaged to access oral health services due to bad road conditions and other disadvantaged factors. Therefore, while people in the urban cities might be enjoying the services of qualified dental personal at their disposals, rural dwellers had limiting factors which hindered the frequent visits of dentists and other oral health professionals. Similarly, Nwagu (2006) noted that location is a major factor that influences any health promotion programme. Karina (2008) also indicated that location affects people's way of accessing health services, hence, the situation might not be different as it relates to oral health services provided for primary school pupils in Enugu State.

These findings were unexpected. One would expect better results especially when they are matters that affect children. Owing to the fact that primary school administrators experienced the same kind of training and were exposed to similar supervision irrespective of their location. Furthermore, through these findings, it could be said that the pupils were not properly empowered against oral health problems. Therefore, the pupils might be powerless over oral health diseases. The finding of this study revealed that there was no equality, even or fair distribution of power and resources to improve oral health for urban and rural primary schools pupils in Enugu State, hence the primary school pupils were not empowered on how to fight oral health problems and diseases since environment conducive for that were not provided for them.

Health Education Implications of the Findings

The findings of the study have far-reaching implication for Health Education. Health education is a process of persuading individuals or groups to accept those behaviours that are beneficial to them and reject those behaviours that are detrimental to their health. Therefore, health education is a strong force which could be utilized by the members of the society for the solution of its social, political, economic, health and educational problems. The process of providing oral health promotion programmes for pupils in the school to help in curbing the prevailing oral health problems as prescribed by Nazik, Tordis, Raouf and Mutaz (2009) was considered in this study as a serious challenge for health educators and other health and education professionals. The indispensable role of educating, mobilizing and motivating pupils, teachers and community members to provide oral health in primary schools cannot be overemphasized. Oral health education is considered by many as part of primary health care and school health services (Nwimo, 2001; WHO, 2003a & Ezedum 2006). This is most true of a developing country such as Nigeria and its rural setting where oral health services are rarely provided especially for children. There is therefore, an urgent need for all to involve themselves in all health education programmes targeted on children.

However, going by the findings of this study, the aim and the need for oral health emergency services in the school might not be achieved (Avon, Health Authority, 2000). Much as the previous studies were silent on oral health emergency services in primary schools, it could be possible that its provision had not been inspiring enough as shown by the present study. It might be necessary at this juncture, to state some of the needs for improved status of these services; it helped to protect the primary school pupils from injuries that could lead to serious dental and oral health problems. Inadequate provision of these services to the children suggested that many of the primary school pupils would have suffered without help from oral health problems

CONCLUSION AND RECOMMENDATIONS

Based on the results and discussion of the study, it is concluded that the status of provision of healthy school environment for oral health promotion was low while significant difference existed between urban and rural primary schools in the provision of healthy school environment for oral health promotion for primary school pupils in Enugu State.

In the light of the findings of the study, the following recommendations are proffered for improvement:

1. Enugu State Universal Basic Education Board (ESUBEB) should organize periodic school health workshops for teachers under their employ. The focus of such workshop should be on equipping the teachers with the skills necessary for oral health promotion in particular and school health services in general.

2. Enugu State Ministry of Health should make urgent arrangements to reactivate the school health units of the ministry. This may help the units meet the challenges of oral health services
3. The teachers themselves should make up their mind to prepare and upgrade themselves in the theory and practice of health issues especially those that may affect oral health.

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