

DENTAL HYGIENE PRACTICES AMONG SECONDARY SCHOOL STUDENTS OF BOKKOS LOCAL GOVERNMENT AREA OF PLATEAU STATE

BY

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ABSTRACT

This paper determined the dental hygiene practices among secondary school students of Bokkos Local Government Area of Plateau State. A questionnaire developed was administered on a sample consisted of 329 secondary school students. The reliability of the study was determined through test retest, which yielded reliability coefficient of 82. Findings of the study revealed that rinsing the mouth with water after meal, taking fruits to improve the strength of teeth and inspecting the teeth regularly were the promotive dental hygiene practices among secondary school students in Bokkos LGA. On the other hand, removing hard deposits, using dental floss, avoiding breaking hard bones or opening minerals with teeth, avoiding taking sugary foods and using chewing sticks in-between meals were the preventive dental hygiene practices. The common dental disorders among the students were mottled teeth, dental canes and dental plague. Location has significant influence in the frequency of preventive dental hygiene practices. The paper finally offered suggestions that can improve dental health practices in secondary schools

INTRODUCTION

Good oral hygiene is essential for the well-being of the individual. This justifies why, Nwajei (2003) asserted that a charming smile which displays a perfect set of natural well-aligned and regular teeth, supported by healthy looking gums, is not only an asset to the individual's personal appearance but may be a determinant factor for success in business and in the society. On the other hand, a neglected mouth displaying a stained, grubby set of teeth, according to Hobdel (1997), may be badly aligned and embedded in spongy, bleeding and unhealthy gums. Such a condition is not

only unimpressive but: is one of the causes of ill health, such as arthritis, Sub-acute bacterial endocarditis and speech defects, such as lispng.

WHO (1911) observed that departure from dental health is more common than any other disease or defect throughout the world. Dental disease is a significant health problem for secondary school students (Peterson, 1987). It is estimated that nearly 12 million school children in the United States suffer from periodontal disease. (United States Department of Health and Human Services) (USDHS) 1980. The incidence of

periodontal disease, as reported in the USA, is a global reflection of the problem all over the world, including Nigeria. Upon entering school, as Seffrin (1979) observed, the average child has three decayed teeth. In addition, decayed teeth attacks an average of one permanent tooth per year for each youth in the 12 to 17 year age group. By age 17 as reported by National Institute of Dental Research (NIDR) (1971), school children have, on the average 11 decayed, missing, or filled tooth surface. This ugly situation is a constant reminder of the need for the effective dental health education that aims at prevention. This was one of the reasons why WHO (1978) included dental health as one of the vital components of Primary Health Care (PHC) programme.

Negative attitudes and practices seem to be factors responsible for the dental problems among the secondary school students. Poor oral hygiene, which allows food debris to remain in the mouth and support the formation of plaque, is a contributory factor in the causation of dental caries (Nwajei, 2003). This may be one of the common practices among students. Dental caries causes other social and psychological problems, such as foul breath, speech defects, and reluctance to communicate or smile.

Studies conducted by La Place (1987) and Nwajei (1993) have shown positive correlation between the amount of sugar ingested and dental caries. The studies revealed that the type of sugar ingested is important, and that sticky confectionaries and sweet, which slowly dissolve and adhere to the teeth, are dentally more disastrous than liquid sweets.

Dental caries is a global phenomenon. WHO (1981) estimated that virtually 100 percent of adults (secondary school students inclusive) in the developed countries suffer varying degrees of dental caries. WHO further reported that epidemiological measurements of dental caries in many technologically advanced countries show an increasing trend of decayed, missing or filled teeth index in the population. In the countries where national or local preventive measures have been actively pursued, there has been a marked decreasing trend.

Studies carried out in Ethiopia, Kenya, Syria and Nigeria as reported by

David (1981), showed that within the past 30 years, the prevalence of dental caries has continued to show an upward trend. In Switzerland, Australia, Germany, and the USA, where preventive measures have been implemented, the incidence of dental caries is reported to have been reduced to one-third of its previous high level.

Discussing on dental hygiene, World Health Editorial (WHE) (1994) noted that its progress in most developed countries is as a result of knowledge of preventive programmes that stress the optimum use of fluoride, dental hygiene practices and adoption of good health habits. However, they were quick to point out that positive dental behaviour was beginning to worsen in many developing countries where oral diseases were on the increase and treatment cost was expensive. This was a pointer that secondary school students in Bokkos of Plateau State may not be an exception to these dental problems emanating from negative dental practices.

Stressing on dental hygiene, Kajang (2000) posited that the term means different things to individuals. For instance, some people see it as being able to eat without pains or being able to smile confidently and interact with others without being self-conscious about one's appearance. Sometimes, health workers see it as having no decay in their teeth or gum, which do not bleed when brushing.

However, Brooks and Brooks (1979) viewed dental hygiene as complete normality and functional efficiency of teeth and supporting structures. They observed that departure from dental health is a more common disease or defect. In the same vein, Williams and Williams (1990) expressed that dental hygiene is the art of cleaning the teeth and its supporting structures by means of brushing, flossing, massaging or irrigating. Myburg (1993) described it as having all our teeth set in a beautiful straight arrangement.

In this study, dental hygiene practice is used to mean keeping the mouth and teeth as well as the surrounding structures clean to dental and oral diseases. Incidentally, the dental health problems of secondary school students in Bokkos, Plateau State are yet to be examined to determine the preventive and promotive dental hygiene practices for them. In line

with this, Peterson's study (1987) revealed that nearly 98% of school children experience some form of disease. This result agreed with the earlier finding of a study conducted by him in elementary schools. It is possible that this is the case with the students in the area of the present study.

Explaining further on dental hygiene, Godman and Gutteridge (1979) emphasized that children should avoid eating too cold or hot food and cleaning the teeth after each meal otherwise food particles caught in-between the teeth will quickly cause tooth decay. In the same vein, Olugboji (1998) posited that one could prevent the teeth from decay by putting to practice the eating of right type of food at the right time while avoiding eating in-between meals.

Myburg (1988/89) reported that 12year old children in developing countries were found to have over 6.5 decay, missing or filled teeth. The same study revealed that the percentage of the population who had lost their teeth grew steadily with ages and was highest among coloured people where it was 73% at ages of 60-64 years. Student's dental hygiene practices seem to be poor. This poor dental hygiene is related to dental caries, plaques, gingivitis and in infected gums. These dental problems affect one's personality and bring discomfort to students. This justifies the present study on dental hygiene practices among secondary school students in Bokokos Local Government Area of Plateau State. This purpose was specifically broken into the following research questions:

1. What are the frequencies of promotive dental hygiene practices of students in secondary schools?

2. What are the preventive dental hygiene practices of students in secondary schools?

3. What are the common dental disorders of secondary school students?

The study tested one null hypothesis, which is: 1 There is no significant difference in the frequency of preventive dental hygiene practices between students of semi-urban and rural settings.

METHODS

The study was a research designed x-ray the dental hygiene practices among secondary school students of Bokokos Local Government Area of Plateau State. The population of the study comprised of secondary school students in Bokokos from which a sample for the study was drawn through random sampling technique of balloting without replacement.

The research tool used for data collection was questionnaire with four sections consisting of 30 items, Section A contains questions eliciting information on location and name of School. Section B sought information on promotive dental hygiene practices of students. Section C looked for information on frequency of preventive dental hygiene practices and Section D was on common dental disorders of the students. The reliability of the instrument was determined through test-retest of the instrument, which yielded reliability co-efficient of 82.

A total of 340 copies of the questionnaire were distributed with the aid of teachers in secondary schools to the respondents. Three hundred and twenty nine (329) were returned.

The result of the analysis is presented in four tables:

Table 1: Frequency of promotive Dental Hygiene Practices among Secondary School Students.
n = 329

Items	Response no.	Percentage (%)
I brush the mouth after each meal	226	68.69
I inspect my teeth regularly	231	70.21
I brush my teeth once a day	188	57.14
I rinse my mouth with water after each meal	283	86.01
I always exercise the teeth	217	65.95
I chew tobacco so as to stop teeth itching	114	34.65
I go for periodic dental examination every 3-6 months	166	50.45
Not taking sticky sugary foods	215	65.65
I take fruits to improve the strength of my teeth	265	80.54
Use sterilized tooth picks	204	62.00
I brush teeth away from gums	193	58.66
I use dental floss to remove food particles	218	66.26

The result of this study showed that the students rinse their mouth with water after each meal 283 (86.10%), take fruits to improve the strength of teeth 265 (80.54%), inspect the teeth regularly 321 (70.21 %), brush the teeth after each meal 226 (68.69%), and always exercise the teeth 217 (65.95%). The least promotive dental health practices among the students were chewing tobacco 144 (34.65%) and going for periodic dental examination 166 (50.45%). (See Table 1)

Table 2: Preventive dental hygiene practices among secondary school students
n = 329

Items	Response no.	Percentage (%)
Using dental floss	231	70.21
Brushing with toothpaste after every meal	210	63.22
Using salted warm water	202	61.39
Visiting dentist periodically	190	57.75
Avoiding taking sugary foods	228	69.30
Avoiding breaking hard bones or opening minerals with teeth	229	69.60
Adding fluoride to drinking water	128	39.90
Eating fibrous foods.	209	63.52
Using chewing sticks in between meals	225	68.38
Removing hard deposits	245	74.46

The results indicated that removing hard deposits 245 (74.46%), using dental floss 231 (70.21 %), avoiding taking sugary foods 228 (69.30%), avoiding breaking hard bones or opening minerals with teeth 229 (69.60%), using chewing sticks in-between meals 225 (68.38%), and brushing with tooth paste after meals 210 (68.82%) were the preventive dental hygiene practices among secondary school students. The least preventive dental hygiene practices were adding fluoride to drinking water 128 (38.90%) and visiting dentists periodically 190 (57.75%) (See Table 2).

Table 2: Preventive dental hygiene practices among secondary school students
n = 329

Items	Response no.	Percentage (%)
Dental caries (tooth decay)	206	62.61
Periodontal disease (gum disease)	179	54.40
Dental plaque (a layer that sticks on the teeth)	202	61.39
Gingivitis (mild inflammation of gums)	172	52.27
Tooth sensitivity (tooth ache)	201	61.09
Malocclusion (improper alignment of tooth)	178	54.10
Mottled teeth (coloured teeth)	227	68.99

This study revealed that mottled or coloured teeth 227 (68.99%), dental caries 206 (62.61%), dental plaque 202 (61.39%) and tooth-ache 201 (61.09%) were the common dental

disorders among the secondary school students in Bokkos Local Government Area of Plateau State. On the other hand, the least dental disorders among the students were gingivitis 172 (52.27%) and perio-ontal disease 179 (54.40%). (See Table 3)

Table 4: Chi-square Difference in Frequency of Preventive Dental Hygiene Practices Between Semi-Urban and Rural Students.

Variable	No	Calx ²	Df	Decision
Location				
Rural	145	7.35	2	Ho Rejected
Semi-Urban	184			

Chi Square (2) = 5.99 < .05

The results of the study showed significant influence of location on the frequency of preventive dental hygiene practices among secondary school students. (Chi Square = 7.35 = 0.5). Therefore, these results failed to support the much hypothesis of insignificant difference between semi-urban and urban secondary school students within frequency of dental hygiene practices (Table 4).

DISCUSSION OF FINDINGS

The results in table 1 show that students in secondary school rinse their mouths with water after each meal as the highest response 283 (86.01 %) and also show that chewing tobacco when he teeth are itching held the lowest response of 114 (34.65%). The results were partly expected because rinsing the mouth with water after each meal helps in removing food particles from the teeth. This has been the practice since time immemorial as a way of removing food left over in between the teeth and at the surface of the gums. The finding is in line with the perception of Nebo (1979) who posited that cleaning the teeth with chewing slick or toothbrush after eating is a very essential dental hygiene practice. She emphasized that the most important time for cleaning the teeth is immediately after each meal in order to remove left - over food from in-between the teeth as a way of promoting effective dental hygiene.

The result that tobacco chewing has the lowest response of 114 (34.65%) was partly not expected because it is a known fact that air sacs of the lungs are gradually being destroyed leading to tearing; blocking and ballooning out of the air sacs with trapped air. Again, the use of tobacco can lead to diseases like lung cancer and heart diseases.

The result in Table 2 indicated that removing hard deposits from the teeth had the highest response of 245 (74.46%). This was surprising because it is not a practice commonly seen among adolescents or

youths. The finding agrees with the submission made by Williams and Williams (1990) who explained that removing of hard deposit in-between the teeth and its supporting structures could be effective by means of brushing, flossing, irrigating and massaging which goes a long way in reducing dental problems. This finding further lends credence to the findings of Peterson (1987) who found that students in the selected Schools had high levels of preventive dental behaviours. He found that 98 per cent brushed their teeth on daily basis, 71.5 percent used dental floss daily and 88 per cent visited dentist once or more each year. On the negative side, 1.5 per cent had never brushed, 20.5 per cent had never flossed and 11.9 per cent had never been to the dentist.

The results in Table 3 indicated that mottled teeth (coloured teeth) and dental caries had the highest responses of 227 (68.99%) and 206 (62.61%) respectively. This was surprising and therefore not expected because the people in the area of the study are not known with problem of mottled or coloured teeth. This finding corroborates the study of NIDR (1981), which found that by age 17 students have, on the average 11 decayed, missing or filled tooth surface.

However when the difference in the frequency of preventive dental hygiene practices between semi-urban and rural students in Bokkos Local Government was sought it was discovered that there was indeed a difference. The difference

observed might not be unconnected with the low level of information and poor dental health practices of the students in the rural areas.

CONCLUSIONS AND RECOMMENDATIONS

Good dental hygiene prevents dental caries, dental plaque, gingivitis, periodontal disease and mottled teeth thereby promoting the quality of health. On the other hand, poor dental hygiene practices negatively affect one's personality and general health. In view of the foregoing, the investigators make the following recommendations:

1. Health authorities and non-governmental organizations should mount programmes to educate students especially those in the rural areas on the dangers of poor dental hygiene practices and encourage the use of teachers to disseminate these vital health information.
2. There is need for the inclusion of a comprehensive oral health education programme in the curriculum of secondary schools. This will help the students to acquire knowledge that will empower them to promote oral health.
3. Secondary schools should re-introduce the practice of morning inspection of student's teeth, mouth, finger nails, eyes and so on so as to promote oral health and the general well-being of the students.

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