

Oral self-care practices among university students in Port Harcourt, Rivers State

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ABSTRACT

Background: The maintenance of optimum oral health is dependent on the efficacy of oral self-care. The objective of the present study was to evaluate oral self-care practices and knowledge among non-medical students at the University of Port Harcourt, Rivers State Nigeria. **Materials and Methods:** The cross-sectional survey was conducted among undergraduate students at the University of Port Harcourt Nigeria, in January, 2014. Self-administered questionnaire elicited information on demography, frequency of tooth brushing, type of tooth brush, use of dental floss and previous visit to the dentist. **Results:** A total of 360 young adults, 188 males and 172 females, aged 18-33 years participated in the study. Brushing habits of the study population was at least once a day (90%). Approximately half (52.5 %) of the samples used medium-sized bristles and about 28.8% of the students replaced their toothbrush every 3 months. Regarding oral hygiene aids, few students, 5.8% and 4.2% used dental floss and mouthwash, respectively, as oral cleaning aid. Most of the students (71.6%) had never visited the dentist, 18.1% visited due to dental pain and 8.1% for extraction. Regarding knowledge on oral hygiene practice, approximately 60% of students knew that we have to brush our teeth twice daily, 31% knew we need to visit the dentist twice a year and only 18% knew what was dental floss. **Conclusion:** Oral hygiene practices among the students were poor. Therefore, oral health education and promotion is required to improve oral hygiene practices and health among young adults and the general population.

Key words: Dental floss, dental visits, oral hygiene, oral self-care, tooth brushing

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INTRODUCTION

Oral health is an integral part of general health and well-being to be maintained throughout life time. The oral health status of a population is usually determined by the presence or absence of dental caries and periodontal disease as well as the level of oral hygiene found in the population. This is due to the fact that dental caries and periodontal disease are the commonest oral disease of public health importance identified among the general population.¹ Plaque has been considered as an important factor in the development of dental caries and periodontal diseases and the reduction in its accumulation promotes oral health status. Twice daily tooth brushing with toothpaste containing fluoride and flossing remove plaque from teeth and helps in the

prevention and control of dental caries and periodontal diseases.² In addition to such daily oral care, regular visits to the dentist promote oral health.³

A number of studies have been reported on the oral health practices among dental and medical students and among students in profession allied to medicine.^{4,5,6,7,8,6,10,11} In Nigerian studies, 32% of nursing students,⁴ 25% of medical students⁵ and 80% of dental auxiliaries in training,⁶ utilised dental services. Utilisation of dental services is often motivated by pain and need for emergency care.^{9,12-15} Twice a day tooth brushing and the use of inter-dental cleaning aids are not common features in Africa. Majority of medical students at the University of Lagos, Nigeria- (65%)⁷ and Niger Delta University Bayelsa State, Nigeria- (87%) brushed once daily.⁵ Other studies have reported once a day tooth brushing.^{8,9,16,17,18} Similarly, previous studies have reported the use of inter-dental aids, 19% among medical students in Nigeria,⁷ 13.5% among nursing students in Indian⁹ and 36.7% among medical students in Iran.¹⁰ Oral diseases are detrimental to the quality of life during childhood through old age and can have an impact on self-esteem, eating ability, nutrition, and health. They are associated

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with considerable pain, anxiety and impaired social functioning. The maintenance of optimum oral health is dependent on dental visits and the efficacy of oral self-care, which includes the use of tooth brushes, dental floss and other inter-dental aids. Data on oral self-care practices among undergraduate non-medical students in Africa is limited. The aim of this study therefore, was to evaluate oral self-care practices and knowledge among non-medical students at the University of Port Harcourt, Rivers State Nigeria.

MATERIALS AND METHODS

The cross-sectional survey was conducted among undergraduate students of University of Port Harcourt, Rivers State, Nigeria, in January, 2014. The study population consisted of 360 young adults, 188 males and 172 females, aged 18-33 years. The students were recruited at the ceremonial pavilion at the Abuja campus of the University of Port Harcourt. Students from various departments of the University often congregate at the pavilion to receive lectures. Those who had dental caries, fractured teeth, fractured restorations and gingival inflammation were excluded from the survey. Those who declined to participate in the study were also excluded. The objective of the study was explained to the participants, and informed consent was obtained before the interview. The tool for data collection was interviewer-administered questionnaire that elicited information on demography, frequency of tooth brushing and replacement of tooth brush, type of tooth brush, use of dental floss and previous visit to the dentist. Data were entered into SPSS (IBM New York, USA) version 20.0 for analysis and entered data were subjected to descriptive statistics in the form of frequency, percentages, cross tabulation. Test of significance was done with Chi — square statistics. $P < 0.05$ was considered as significant.

RESULTS

A total of 360 young adults, 188 males and 172 females, aged 18-33 years participated in the study. Brushing habits of the study population were at least once a day (90%), 8.1% twice a day and 1.9% more than twice a day. Approximately half (52.5 %) of the samples used medium-sized bristles, 30 % hard bristles and 17.5 % soft bristles tooth brush. About 28.8% of the students replaced their toothbrush every 3 months, 45% replaced their toothbrush after 6 months and 26.2% replaced at more than 12 months [Table 1]. Regarding oral hygiene aids, all the students used toothbrush and paste for cleaning their teeth. Few students, 5.8% and 4.2% used dental floss and mouthwash, respectively, as oral cleaning aid [Table 2].

The reasons for dental visits are presented in Table 3. Most of the students had never visited the dentist (71.6%).

Rest of the study population visited dentist as a result of dental pain (18.1%), extraction (8.1%) and hole in the tooth (2.2%).

Regarding knowledge on oral hygiene practice, approximately 60% of students knew that we have to brush our teeth twice daily, 31% knew we need to visit the dentist twice a year and only 18% knew what was dental floss [Table 4].

Table 1: Use of tooth brush among the students

Variables	No. of students	Percentage
Brushing frequency		
Once daily	324	90.0
Twice daily	29	8.1
More than twice daily	7	1.9
Type of toothbrush		
Soft bristles	63	17.5
Medium bristles	189	52.5
Hard bristles	108	30.0
Replacement of tooth brush		
3 months	104	28.8
6 months	162	45.0
12 months or more	94	26.2

Table 2: Number and percentage distribution of oral cleaning aids used by the students

Oral hygiene aids	Yes		No	
	N	%	N	%
Toothbrush/paste	360	100	—	—
Dental floss	21	5.8	339	94.2
Mouth wash	15	4.2	345	95.8

Table 3: Reasons for dental visit among the students

Reasons for visit	No. of students	Percentage
Dental pain	65	18.1
Need extraction	29	8.1
Hole in the tooth	8	2.2
Never visited	258	71.6

Table 4: Knowledge of oral self-care among the students

Knowledge statement	No. of students	Percentage
How many times do we visit dentist in a year?		
Once	217	60.3
Twice	112	31.1
do not know	31	8.6
How many times do we brush daily?		
Once	136	37.7
Twice	209	58.1
More than twice	15	4.2
Do you know what dental floss is?		
Yes	65	18
No	295	82

DISCUSSION

This study assessed oral self-care practices among undergraduate non-medical students at the University of Port Harcourt, Nigeria. The major limitation of this study was convenient sampling method used. Although regarded to be non-representative of the total population, it gives a reflection of the true picture of the general population and there is no reason to doubt that the sample taken was similar to the rest of the population. Bias might have been introduced from the self-reported responses of participants, as some students might report what they thought was ideal rather than what they practice.

Few people cleaned their teeth so well at one time that all the plaque is removed; therefore, brushing the teeth twice a day with toothpaste and cleaning the proximal surfaces of the teeth with dental floss and mouth rinses have been recommended. While twice a day tooth brushing seems to be an established practice in several industrialised countries,² this practice is far from being realised in several other countries.¹⁹ In this study, 90% of the students brush their teeth once a day. Furthermore, though about 60% of the students knew it was recommended to brush the teeth twice a day; only 8% brush their teeth twice daily. This was comparable to the study of Kumar in Chennai India,²⁰ who reported 90% of the students being aware of brushing twice a day, with only 14.6% brushing twice daily. This may be due to the fact that the students could not afford toothpaste regularly; therefore, in an attempt to make the toothpaste last longer, they economised by brushing once daily. Poor attitude towards oral health might also play a role.

This study showed that approximately half (52.5 %) of the samples used medium-sized bristles, 30 % hard bristles and 17.5 % soft bristles toothbrush. Rimondini² reported that 58.4% of Italian students used medium stiffness toothbrush and 33.2% used hard toothbrush. This is higher than the results obtained in this study. Toothbrushes do not need to be replaced every 3 months.^{21,22} However, in Italian² and Turkish²³ study, 81.6% and 49% of participants, respectively, replaced their toothbrushes every 3 months. In this study, approximately 30% of the students replaced their toothbrush every 3 months. This could be due to the recommendations of dentists, toothbrush manufacturers and marketers.

Inter-dental area is the most common site of plaque retention and the most inaccessible to toothbrush, as a result toothbrush is not enough to remove dental plaque from inter-dental areas; this could be complemented by the use of dental floss daily. In the present study, approximately 6% used dental floss; this was comparable to 7% and 3% reported in Sweden²⁴ and Turkey,²³ respectively. However, this was low when compared to 19% reported among medical students in Lagos Nigeria,⁷ 13.5% among nursing

students in Indian⁹ and 36.7% among medical students in Iran.¹⁰ Exposure of medical and nursing students to health information may be responsible for this difference. This is supported by the finding of this study, where over 80% of the students did not know what dental floss was.

The present study showed that more than two-third (71.6%) of the students had not visited a dentist and among those who visited the dentist, the major reason for visit was dental pain. The findings of this study are in agreement with other researchers, who reported that dental visits are often motivated by pain and need for emergency care.^{9,12-15}

CONCLUSION

Oral hygiene practices among the students were poor. Though all the participants used toothbrush and toothpaste for oral cleaning, nearly all the participants brush their teeth once daily against the recommended twice daily. The use of dental floss and mouthwash was uncommon among the students and over two-third of the participants had never visited dentist. This study indicates lack of appropriate oral health education among University students. Therefore, oral health education and promotion through dentist, electronic and print media and public health outreach programme is required to improve oral hygiene practices and health among young adults and the general population.

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