

BRUSHING HABITS & GENERAL DENTAL CONDITIONS OF SCHOOL CHILDREN IN SHEIKHUPURA

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ABSTRACT

Objective of the study was to describe and detect the brushing habits and teeth problems amongst school going children.

An observational cross sectional study was conducted at Faryal Dental College, Sheikhupura in September'17. A total of 1467 school going children formed the study group. Students above 14 years of age and / or who were absent on the days of participation or who were unwilling to participate were excluded from the study. Whereas students less than 14 years of age of both genders and registered in the school were included. SPSS 21 was used to analyze the data.

Out of the total participants a response rate of 97.8% was achieved based on the completeness of the proforma. The mean age of all the students was 7.89±3.14. Out of the total participants, 1005 (68.5%) were boys and 462 (31.5%) were girls. Seven hundred thirty one responses were observed for the question of source of information for toothpaste. 93.3% (682) students had received the information from TV whereas only 6.6% (48) got from other sources such as relatives and 0.13%(1) received the information from newspapers. Five hundred seventy eight students answered the teeth sensitivity question, out of these 242 (42.9%) students had experienced the sensitivity problem where as 336 (58.1%) did not. Gum conditions and cavities were also recorded.

It was concluded from the study that the dental problems like plaque and cavities appeared often in the sampled groups. The probable reason behind that was the improper or irregular brushing habits of the students.

Keywords: *Plaque, periodontal disease (PD), World Health Organization (WHO), Streptococcus mutans, dental hygiene.*

This article may be cited as: Dogar F. Brushing Habits & General Dental Conditions of School Children in Sheikhupura. Pak Oral Dent J 2019; 39(3):270-72.

INTRODUCTION

Oral health is a leading public health issue amongst all the age groups and in all the populations of the world. During childhood poor oral health may be directly linked to the brushing habits. This may also have an overall bad impact on the body systems. For example the early presence of caries in the teeth may lead to worse health issues.¹ Amongst children and adolescents the commonest oral problem is the periodontal disease and caries.² As per World Health Organization (WHO), dental caries is the localized pathology of peripheral derivation that appears or sets once after the tooth has erupted. It affects the hard tissues of teeth and continue to exist until a cavity appears.³ This situation is to be considered incompletely described

unless we know about the role of bacterial agent, the host and importantly the diet. The factors mentioned above, were also known as the decisive factors that contributed to development of the disease.⁴ However, the caries pathogenesis depends upon bacteria, diet, dental anatomy, and the plaque sticking time length.⁴⁻⁸ The bacteria use the diet as substrate specifically the carbohydrates. These bacteria include the genera Lactobacillus and Streptococcus mutants. The variations in pH level emerges once after these bacteria release the acid in the oral cavity as a waste product. At lower pH the rate of demineralization on the surface of teeth increases and a higher pH causes remineralization. The ultimate effect of pH alteration will produce dental cavities by destroying the dental tissues.^{9,10} The Chronic Periodontitis slowly advances with the exacerbation and remission episodes. Chronic periodontitis is highly prevalent inflammation and has got infectious etiology in nature, which is caused by specific bacteria groups or bacteria linked to dental plaque accumulation. The

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Received for Publication: Jan 9, 2019
First Revision: Feb 8, 2019
Second Revision: July 18, 2019
Approved: July 20, 2019

primary aim of the study was to find out the brushing habits and dental problems amongst the school going children.

MATERIALS AND METHODS

An observational crosssectional study design was used for the present study. School children were asked questions regarding their oral hygiene and were then examined intraorally by Final Year BDS students under the able supervision of qualified staff of Community & Preventive Dentistry Department of Faryal Dental College, Sheikhpura. Fifteen hundred school going children were recruited to the study. Thirty three students were rejected, as they did not fill the proforma completely. Children were then screened intraorally. Exclusion criteria included all the students and adolescents above 14 years of age and who were absent on the days of participation or who were unwilling. Whereas students less than 14 years of age of both genders and registered in the school were included in this study. The student selection was random through the lottery method. The study duration was eight months starting from Sep 2017. The demographic information and routine tooth brushing and hygiene habits were collected via face to face interview and through various intraoral examinations. The ethical approval was taken from the Ethical Committee and additionally an informed consent was also taken from all the study participants or their parents.

Statistical analysis

The entire collected information was coded and stored electronically in MS Excel(a computer software). Later this data was entered in SPSS and analyzed by using version 21.0. All the mean and standard deviation values were calculated to describe the data. Frequency distribution and percentages were generated for all qualitative variables. P-value ≤ 0.05 were considered statistically significant in all inferential statistics.

RESULTS

A total of 1467 students answered almost all the questions during the interview. A response rate of 97.8% was achieved in terms of completeness of proforma. The mean age observed for the students was 7.89±3.14. There were a total of 1005 (68.5%) boys and 462 (31.5%) girls. A total of 731 responses were observed for the question of source of information for toothpaste. 93.3% (682) had received the information from TV whereas only 6.6% (48) got from other sources such as relatives and 0.13% (01) received the information from the newspapers. The detailed summary of tooth brushing habits is given in table 1.

Two hundred forty two (42.9%) complained of the teeth sensitivity where as the sensitivity issue was not

TABLE 1: SUMMARY OF TOOTH BRUSHING HABITS AMONG SCHOOL STUDENTS

Attribute	n	%
Total Participants	1467	100%
Operational (brushing) Type	1441	
Brush	1329	92.2%
Miswak(a wooden stick)	4	0.3%
Brush + Miswak	3	0.2%
Nil	105	7.3%
Frequency of brush/miswak(wooden stick) or both per day	1360	
Nil	2	0.1%
Occasionally	117	8.6%
Once	822	60.4%
Twice	372	27.4%
Thrice	47	3.5%
Timing	1285	
Morning	801	62.3%
Evening	11	0.9%
Morning + Evening+ Night	431	33.54%
Other	42	3.3%
Either using tooth paste or Tooth powder)	926	
Tooth paste	921	99.5%
Tooth powder	3	0.3%
Nil	2	0.2%
Tooth Paste Name	1005	
Colgate	817	81.3%
Sensodyne	58	5.8%
Close-up	35	3.5%
Medicam	33	3.3%
Other	37	3.7%
None	25	2.5%

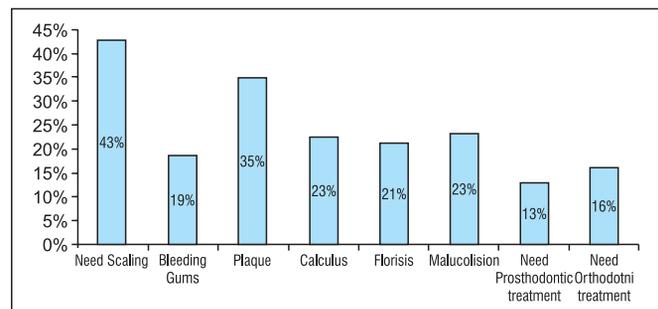


Fig 1: A detailed view of the dental problems seen in study participants

observed in 336 (58.1%) students. 785 (89.5%) needed fillings. Further details can be seen in figure 1.

DISCUSSION

The study was conducted to detect the tooth brushing habits and teeth problems amongst the school going children. It was reported in the study that majority of the students brushed their teeth with a toothbrush once daily. The current study reported that girls brushed their teeth more than once daily. It was also observed that the habit of brushing decreased with an increase in age. This finding is supported by the study findings of Jürgensen and Petersen.¹⁶ Another study conducted in Scotland by Masen et al., had reported that the teeth brushing percentage ranged between 63-68% at least once a day whereas in this study similar percentages were observed.¹⁷ However, findings of the present study were more in comparison to the results published by Varenne et al.¹⁸ That study was conducted to evaluate the dental hygiene attitude of the population in Africa. They also reported that 36% of the population used the proper tooth brushing techniques and almost 10% were associated with gingival bleeding when the teeth were brushed.¹⁸ This result can be attributed to opting the poor tooth brushing technique and presence of certain type of bacteria like sub-gingival bacteria, which cause clinical gingivitis. It was observed in current study that most of the students brushed their teeth in the morning, using a toothpaste. A study conducted in Portugal carried out in children aged between 6-12 years of age reported that children brushed their teeth in a similar manner. Many other published studies support the present study findings.^{19, 20}

CONCLUSION

It was concluded from the study that the dental problems like plaque and cavities appeared often in the sampled groups due to improper brushing habit of school children. Majority of the children did not brush their teeth properly and regularly.

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