Oral hygiene practice among the school children in selected schools at Dhaka city

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Abstract:

A cross-sectional study was carried out among 600 students of class IV-VIII (aged 10-14 years) in selected schools of Dhaka city to observe their oral hygiene practice through a pre-tested semi-structured questionnaire. Results showed that 92.5% respondents understood the importance of taking care of their oral cavity. The 76.7% respondents agreed that regular brushing would prevent tooth decay. Out of all, 69.2% respondents brushed their teeth regularly where, 69.2% brushed once daily, 27.5% brushed twice and only 3.3% brushed more than twice a day. Among all, 92.5% respondents used toothbrush and 83.3% used tooth paste for brushing teeth. Significant association ($p<0.05$) was observed between mothers occupation and knowledge of regular brushing prevents tooth decay. In conclusion, students would be the appropriate target group to receive the organized intervention towards improving the oral health status and thus reducing the prevalence of oral diseases. School based Dental Health Education Program may be one of the most important applicable ways to enhance the success of better oral health for our children.

Key words: *Oral hygiene, parents' occupation, prevention, self-care practices.*

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Introduction:

Oral health has been defined as "the standard of health of the oral and related tissues which enables an individual to eat, speak and socialize without active disease, discomfort and embarrassment and which contributes to general well-being". Oral health has strong biological, psychological and social projections, because it affects our aesthetics and communication, and the quality of life is affiliated with oral health status[1]. Most oral diseases, like most chronic pathologies in general, are directly related to lifestyle. Oral disease can be considered a public health problem due to its high prevalence and significant social impact. Chronic oral disease typically leads to tooth loss, and in some cases has physical, emotional and economic impacts. These impacts lead in turn to reduced welfare and quality of life. To minimize these negative impacts of chronic oral disease, there is a clear need to reduce harmful oral health habits. Such a reduction can be achieved through appropriate health education programs[2].

In modern dentistry, "prevention" receives special attention and precedes treatment. Through simple prevention techniques such as hygiene training, fluoride therapy, tooth brushing and supplementary instruments, caries prevalence and periodontal diseases have been reduced significantly. As a result, the needs of treatments, that are mostly expensive and time consuming, have been decreased[3]. The change from an unhealthy attitude to a healthy attitude will occur given adequate information, adequate motivation and adequate practice of the measures to be adopted by the subject. The educational program targeted at the individual, aiming to change an unhealthy conduct, will be a complete failure if they do not consider the different aspects of the subject's life, both socioeconomic and environmental, that influences their behavior and are responsible for diverse health problems[4]. Oral health is linked to happiness and good general health and there is evidence that aesthetically acceptable and functionally adequate dentitions affect self-esteem, confidence and socialization[5].

Materials and Methods:

This cross sectional study was carried out among 600 school children in selected schools of Dhaka city from January 2015 to April 2015 to observe their oral hygiene practice through a pre-tested semi-structured questionnaire. Students of class IV-VIII (aged 10-14 years)

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from different schools of Dhaka city on the basis of selecting criteria were included in the study. Data was checked and edited after collection. Statistical analyses of the results obtained by Statistical Packages for Social Sciences (SPSS-21) software (SPSS Inc, Chicago, IL, USA). Results were presented in tables and figures. Statistical terms included in the study were mean, standard deviation, frequency and percentage. The relationships between different variables were analyzed using the Pearson's Chi-square test. Statistical significance was set at $p<0.05$ and confidence interval at 95% level.

Results:

Table-1 showed that mean age of the respondents was 12.0±2.5 years. Seventy five percent (75%) respondents were males and the rest (25%) were females. Out of all, 85% were muslim and the rest (15%) were hindu. Among the fathers of the respondents, 61.7% were service holder, 35.8% business and 2.5% engaged in other jobs. Among the mothers of the respondents, 34.2% were service holder, 3.3% business and 62.5% engaged in household activities.

Table-II summarized the oral hygiene related variables of the respondents. Out of all, 69.2% respondents brushed their teeth regularly and 30.8% did not. Among them, 69.2% brushed teeth once, 27.5% brushed twice and 3.3% brushed their teeth more than two times in a day. The 92.5% respondents used toothbrush, 5.8% finger and 1.7% used other device for tooth brushing. Off all, 83.3% used tooth paste, 15.8%, tooth powder and 0.8% used other materials for brushed their tooth. About the knowledge on oral hygiene care, 76.7% thought yes, 20.0% thought no and 3.3% had not any idea about regular brushing prevent tooth decay. Again, 92.5% respondents thought yes, 6.7% thought no and 0.8% had not any idea about the importance of taking care of oral cavity.

Figure-1 showed that among all respondents, 70.0% had received and 30.0% did not receive information from media

Table-I

Socio-demographic distribution of the respondents (n=600)

Age (years)		Mean±SD		
		12.0±2.5		
Gender	Male (%)		Female (%)	
	450 (75.0)		150 (25.0)	
Religion	Muslim (%)		Hindu (%)	
	510 (85.0)		90 (15.0)	
Parents' Occupation		Service (%)	Business (%)	Other (%)
	Father	370 (61.7)	215 (35.8)	15 (2.5)
	Mother	205 (34.2)	20 (3.3)	375 (62.5)

Table-II

Oral hygiene related variables of the respondents (n=600)

Regular Tooth Brushing	Yes (%)	No (%)	
	415 (69.2)	185 (30.8)	
Frequency of Tooth brushing	Once (%)	Twice (%)	More (%)
	415 (69.2)	165 (27.5)	20 (3.3)
Device used for Tooth brushing	Tooth brush (%)	Finger (%)	Others (%)
	555 (92.5)	35 (5.8)	10 (1.7)
Adjuvant used for Tooth brushing	Tooth paste (%)	Tooth powder (%)	Others (%)
	500 (83.3)	95 (15.8)	5 (0.8)
Knowledge on Regular Tooth brushing	Yes (%)	No (%)	Don't know (%)
	460 (76.7)	120 (20.0)	20 (3.3)
Knowledge on Importance of taking Oral care	Yes (%)	No (%)	Don't know (%)
	555 (92.5)	40 (6.7)	5 (0.8)

about oral care. Nearly thirty seven percent (36.7%) received and 63.3% did not receive information from dentist about oral care; and 59.2% received and 40.8% did not receive information from teacher about oral care. Of all, 65.0% received and 35.0% did not receive information from parents about oral care.

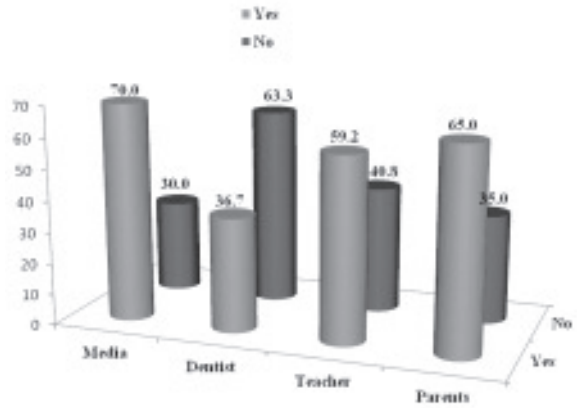

Fig.-1: *Information related oral care of the respondents (n=600)*

Table-III presented the association between mother's occupation and knowledge (regular brushing prevent tooth decay) of the respondents. Out of 205 mother who did service, 120 respondents thought regular brushing prevent tooth decay; out of 20 mothers who did business, 10 respondents thought the same and out of 375 mothers who engaged in household activities, 330 respondents had the same view. Significant association was observed between mother's occupation and respondents thought about regular brushing prevent tooth decay ($p< 0.05$).

Table-III

Association between mother's occupation and knowledge (regular brushing prevent tooth decay) of the respondents (n=600)

Mothers'	Regular Brushing Prevent Tooth Decay				p Value
Occupation	Yes	No	Don't know	Total	
Service	120	70	15	205	0.04
Business	10	10	0	20	
Other	330	40	5	375	
Total	460	120	20	600	

Discussion:

The present study showed that 69.2% respondents regularly brushed their teeth while 30.8% were irregular in brushing. Again 69.2% respondents brushed their teeth at least once in a day, 27.5% brushed twice daily while 3.3% brushed more than twice in a day. 92.5% respondents used toothbrush and 83.3% used tooth paste as tooth cleaning adjuvant. In a study it was observed that approximately 69% subjects brushed their teeth at least twice daily, while 17% reported irregular tooth brushing. Approximately 83% subjects reported using toothbrush and toothpaste to clean their teeth[6]. In another study it was also observed that more than two third (67.9%) of the respondents using tooth brush as tooth cleaning device. Finger was used as tooth cleaning device by 17.8% respondents. Tooth cleaning adjuvants were tooth paste (42.8%) and tooth powder (35.7%). Only 3.6% respondents were found using no adjuvant for their tooth cleaning. Majority of the respondents (67.9%) brushing their teeth only one time and 28.5% respondents brushed twice daily[7].

The present study showed that majority (92.5%) of respondents thought it was important to take care of oral cavity. Rest 6.7% thought that it was not important, while 0.8% did not know about it. However 76.7% respondents thought regular brushing prevents tooth decay while 20% did not think. Significant association was observed between mother's occupation and thinking of respondents that regular brushing prevents tooth decay ($p<0.05$). In a study 83% subjects reported that it was very important to them to look after their teeth and only 1.3% reported that looking after their teeth was unimportant[8]. In another study majority (81%) of the subjects showed awareness of the importance of tooth brushing for caries prevention. Parents' role in daily oral care was reported to be mainly related to giving advice on the importance of brushing (59%)[6].

The present study showed that 65% respondents got information for oral care from parents while 35% did not. The 59.2% respondents said they had advice from teacher and 36.7% respondents from dentist for oral care. Interestingly, 70.0% respondents declared that they got information about oral care from media about taking care of tooth from viewing television. In a study among 12 year-old Chinese, 41.7% of respondents were informed about oral health care, 47.2% declared that they never received any oral health instruction while 11.3% were not aware of it[9].

Conclusion:

The present study revealed that knowledge of risk factors for oral disease is important in oral health campaigns that aim to promote healthy habits. Family is the first school and mother is the first tutor for children. The study suggests that student would be the appropriate target

group to receive the organized intervention leading towards improving the oral health status and reducing prevalence of oral diseases. School based Dental Health Education Program may be one of the most important applicable ways to enhance the success of better oral health for our children.

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