

## Oral Health Condition among Selected School Children in Dhaka City

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### Abstract

*This was a cross-sectional study on oral health conditions among selected school children in Dhaka city, this study was conducted at Ideal kinder garten and high school situated at kamarpara, Dhaka. The study was carried out among 200 children aged between 6-15 years from the month of September to December 2012. The main objective of the study was to assess the oral health conditions of school children through decayed, missing and filled teeth (DMFT) status of their teeth. Data were collected with a pretested structured questionnaire and a checklist. On analysis of data it was found that among the 200 children 101 (51%) were male and 99(49%) were female, tooth brushing twice daily 140(70%) was in comparison to once daily 60(30%). Tooth brushing before breakfast was 100(50%), after breakfast 20(10%), after dinner 80(40%). Tooth paste was used by most of the respondents 152(76%), than tooth powder 48(24%). Tooth brush was used by all of the respondents 200(100%). Among 200 respondents 69(35%) having no plaque, 112(56%) had mild accumulation and 19(9%) had moderate plaque accumulation. Among 200 children 18(9%) did not have any decayed tooth, 30(15%) had only 1 tooth decay, 78(39%) had 2 teeth decay, 20(10%) had 3 teeth decay, 44(22%) had 4 teeth decay, while 10(5%) had more than 4 teeth decayed. Among 200 children 34(17%) did not have any missing tooth, 46(23%) had only 1 tooth missing, 85(43%) had 2 teeth missing, 20(10%) had 3 teeth missing, 15(7%) had 4 teeth missing, while none had more than 4 teeth missing. Among 200 children 32(16%) did not have any filled tooth, 66(33%) had only 1 tooth filled, 60(30%) had 2 teeth filled, 24(12%) had 3 teeth filled, 18(9%) had 4 teeth filled, while none had more than 4 teeth filled. Among 200 respondents 118(59%) had normal gingival condition while 82(41%) had red swollen gingiva. On the basis of the finding it was concluded that dental caries in children is a major health concern and creating awareness among the public about their own and their children's oral health through appropriate plan and policy can reduce the burden of dental diseases. Moreover mass media and general education of the people can play vital role in this regard.*

**Key Words:** Medical wastes, hepatitis, HIV/AIDS.

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### Introduction

Humans are blessed to have two different sets of dentition at two different stages of life. The first set, which start to erupt at about six months of age, are known as milk teeth or primary teeth or deciduous teeth. Milk teeth are twenty in number and are slowly replaced by a second set comprising of thirty-two teeth called permanent teeth.<sup>1</sup>

Apart from some developmental and structural defects, human teeth may suffer from decay and are lost eventually if proper care and precautionary measures are not employed in due time<sup>2</sup>. Dental decay, most commonly known as dental caries, is a common cause of tooth loss among children and adults all over the world, Early childhood caries can start to develop as soon as teeth erupt and cavities may be visible as early as 10 months of age<sup>3</sup>.

Findings of numerous studies have indicated that the incidence of caries in both adult and children increase by consumption of sweetened food and drink and neglected mouth <sup>4</sup>.

Oral Health status of both children and adults can be assessed by presence or absence of dental caries by dmft/deft (in primary teeth, d= decayed, m=missing or e= extracted, f=filled teeth) or DMFT (in permanent teeth, D=Decayed, M=Missing, F=Filled teeth) index by WHO <sup>6</sup>. Dental caries is widely recognized as an infectious disease induced by diet. The main players in the etiology of the disease are; a) cariogenic bacteria, b) fermentable carbohydrates, c) a susceptible tooth and host and d) time <sup>7,8</sup>.

Regular cleaning of the mouth and teeth can ensure the prevention of dental caries and early tooth loss. These tasks are essentially an individual action and responsibility, but in case of children it would not be possible to do the task alone as they would need support from their parents and elders. In a developing country like Bangladesh, there is no institution based dental service and comprehensive health education system from where the school and college students as well as the parents of small children can achieve knowledge to practice correct process of tooth cleaning and learn about healthy eating habits. The high prevalence of dental disease among school going children and young adults has been found by a number of studies is probably due to inadequate knowledge and ignorance about practice of dental hygiene, etiology, prevention and complication of the disease <sup>5,6</sup>.

## Materials and Methods

This descriptive type of cross sectional study was carried out at the Ideal kinder garten and high school, Kamar para, Dhaka. Total allocated study period was 4 months commencing from September to December 2012. A total of 200 children aged 6-15 years of Ideal kinder garten and high school were selected for the study. Sample was selected by purposive sampling technique. Data were collected through direct interview of the school children & clinical examination was done after taking verbal consent of the respondents. Data analysis was done using statistical software statistical package for social science (SPSS) for windows version <sup>16</sup>.

## Result

Among the 200 children 75 (38%) were in 06-10 years age group and 125(62%) were 11-15 years age group. Among the 200 children 101 (51%) were male and 99(49%) were female. Tooth brushing once daily 60(30%), twice daily 140(70%), thrice daily 00(0%) was practiced by the respondent. (Table-1)

**Table 01: Distribution of respondents according to the frequency of tooth brushing**

Frequency of tooth brushing	Frequency	Percentage
Once daily	60	30
Twice daily	140	70
Thrice daily	00	0
Total	200	100

Table 01: Showing distribution of the respondents according to the frequency of tooth brushing. Tooth brushing once daily 60(30%), twice daily 140(70%), thrice daily 00(0%) was practiced by the respondents.

**Table 02: Distribution of respondents according to the timing of tooth brushing**

Timing of tooth brushing	Frequency	Percentage
Before breakfast	100	50
After breakfast	20	10
After dinner	80	40
Total	200	100

Table 02: Showing distribution of the respondents according to the timing of tooth brushing. Tooth brushing before breakfast 100(50%), after breakfast 20(10%), after dinner 80(40%) was practiced by the respondents.

**Table 03: Distribution of respondents according to the plaque accumulation**

Plaque accumulation	Frequency	Percentage
Absent	69	35
Mild	112	56
Moderate	19	9
Severe	00	0
Total	200	100

Table 03: Showing distribution of respondents according to the plaque accumulation. 69(35%) had no plaque, 112(56%) had mild accumulation and 19(9%) had moderate plaque accumulation.

**Table 04: Distribution of respondents by decayed tooth**

Number of decayed tooth	Frequency	Percentage
None	18	9
1	30	15
2	78	39
3	20	10
4	44	22
>4	10	5
Total	200	100

Table 04: - Shows that among 200 children 18(9%) did not have any decayed tooth, 30(15%) had only 1 tooth decay, 78(39%) had 2 teeth decay, 20(10%) had 3 teeth decay, 44(22%) had 4 teeth decay, while 10(5%) had more than 4 teeth decayed.

**Table 05: Distribution of respondents by missing tooth**

Number of missing tooth	Frequency	Percentage
None	34	17
1	46	23
2	85	43
3	20	10
4	15	7
>4	00	0
Total	200	100

Table 05: - Shows that among 200 children 34(17%) did not have any missing tooth, 46(23%) had only 1 tooth missing, 85(43%) had 2 teeth missing, 20(10%) had 3 teeth missing, 15(7%) had 4 teeth missing, while none had more than 4 teeth missing.

**Table 06: Distribution of respondents by filled tooth**

Number of filled tooth	Frequency	Percentage
None	32	16
1	66	33
2	60	30
3	24	12
4	18	9
>4	00	0
Total	200	100

Table 06: - Shows that among 200 children 32(16%) did not have any filled tooth, 66(33%) had only 1 tooth filled, 60(30%) had 2 teeth filled, 24(12%) had 3 teeth filled, 18(9%) had 4 teeth filled, while none had more than 4 teeth filled.

## Discussion

The dmft status is the summation of decayed, missing and filled teeth in the primary dentition. The dmft status 0 was assessed as healthy primary dentition and dmft 1 or higher was assessed as presence of decayed, missing and filled teeth.

In the present study 91% of the 200 children had carious teeth present in their mouth, ranging from 1 to more than 4 carious teeth. This finding about the prevalence of dental caries in children is quite similar to the findings by Sayegh *et al.* who reported 67% Jordanian children of the same age suffering from dental caries. Necmi *et al.* reported a similar high (74.1%) caries prevalence among Turkish children of 3-6 years of age. Mhejabeen *et al.* had also found very high prevalence (61% at age 5) of dental caries in Indian city of Dharwad. All these findings represent developing countries where as in a developed country like USA, according to the study by Brown only 20% of 4 year old children suffered from dental caries and up to 60% did not have dental caries in primary teeth at 10 years of age. The present study found that 83% of the children having one or more teeth missing due to extraction. Filling was present in only 84% of the children. Henkezena *et al.* had reported 31% of Latvian children having filled teeth and 9.5% of them having missing teeth.

## Conclusion

There is no country in the world that does not have the problem of dental caries among its population. On the basis of findings of this study the prevalence of dental caries is alarmingly high among children irrespective of social class or educational status of the parents. The overall oral health condition of the school children was not possible to ascertain because of some limitations, but the high prevalence of dental caries definitely portrays poor oral health among those children. It is not to be forgotten that oral health is a component of general health and oral health status may be considered to represent the level of health care of a nation. So initiative should be taken to improve the children's oral health through appropriate measures.

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