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A School Based Survey of Oral Health of Children

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Abstract:
INTRODUCTION: Public health problems associated with various oral diseases are a major burden on countries all over the world. It is therefore important to take stock of them during childhood itself. MATERIAL AND METHODS: This was a school based study conducted as part of the annual medical and dental check-up of the students of the age group of 4-10 years. WHO technique of 'Self-assessment of oral health through use of questionnaires' was used for this study. RESULTS: Out of a total of 204 children, 98 were males while 106 were females. All the students used only toothbrush and toothpaste to clean their teeth. While all children did brush their teeth at least once a day, only some did so twice a day. A variable amount of time was spent by the children for brushing their teeth. Most children thought that the consequences of not cleaning the teeth everyday resulted in decay, followed by bad breath and gum disease.
DISCUSSION: In the present study, it was observed that all the students cleaned their teeth by using toothbrush and toothpaste, at least once a day, and that most of them were aware of the fact that too much of sweets and fizzy drinks are bad for their oral health. CONCLUSION: From this study we can conclude that regular dental surveys are essential not only to assess the oral health of the children but also to help initiate awareness campaigns targeted at a specific cohort of people.

Keywords: *Children, dental, health, oral, school*

1. Introduction

The public health problems associated with various oral diseases are a huge burden on most countries of the world[1]. The basic oral health surveys usually did provide a sound basis for the assessment of the current status of oral health of a population, as well as its future needs regarding oral health care. The World Health Organization (WHO) has an established epidemiological survey methodology. Guidelines have been elaborated for the practical sample designs that are suitable for studying the prevalence of oral diseases, while at the same time, are and economical. These are required for planning of the oral health programmes. WHO also lays down clear principles for summarizing the data and analyzing theresults[1].Regular oral health surveys in many countries have revealed important trends in this matter, particularly among children. In in several high-income countries, oral health of the children has improved after introduction of oral disease prevention programmes. on the contrary, increasing levels of oral disease, have been observed in many low- and middle-income countries. This is largely due to the changes in living conditions as well as the adoption of unhealthy lifestyles. Besides social determinants, a number of behavioural risk factors have been found to influence oral health. These include consumption of sugar-rich diet, use of tobacco, an excessive consumption of alcohol and weak traditions for oral hygiene. It has also been observed that limited availability as well as accessibility of the oral health services, coupled with the lack of health promotion and prevention programme shave a strong association with poor oral health[1]. Over the period of time, WHO has developed new tools for the implementation of oral health surveys. In addition to the guidelines given for clinical examination of the oral health status, certain instruments have been developed for the surveillance of self-reported oral health as well as related risk factors[1]. There are index age groups recommended by the WHO for population surveys[2]. These are 5,12,15, 35–44 years(mean = 40 years)and 65–74 years (mean = 70 years).

2. Material and Methods

This was a school based study. It was conducted as part of the annual medical and dental check up of the students from class KG to IIIrd standard, which comprised of children of the age group of 4-10 years. There were a total of 204 children in who was interviewed for data collection. Out of these, 98 were males while 106 were female children. The WHO technique of 'Self-assessment of oral

health through use of questionnaires' was used for this study. According to the STEPS approach, Step 1 represents the collection of health data by means of questionnaires. The WHO Oral Health Questionnaire for children was used as a template and was duly modified for the target subjects, so as to keep the questions simple and the language easily understandable[1-3]. A pilot study was conducted so as to assess the validity and acceptability of questions. Since the subjects were very young in age, the questionnaires so prepared were completed via an interview that was conducted by the respective class teacher, after a brief training in this exercise by the principal investigator. To highlight the importance of this study, the school authorities were informed beforehand. Also, the purpose and main objectives of the survey were explained. Informed consent was taken and administrative support was sought. Data was recorded after conducting a pilot study. There was a set of ten questions with multiple choice answers. The questions ranged from knowledge about cleaning of teeth, frequency of cleaning, use of toothpaste, to effects of sweets and fizzy drinks. During this phase of the study, dental conditions that required immediate attention were referred to the authorized dental attendant for needful treatment. As recommended by the WHO, courtesy reporting was done to the school authorities and the respective parents, once the survey findings were compiled.

3. Results

This study was conducted on school children of age group 4 to 10yrs. There were a total of 204 children who were interviewed for data collection. Out of these, 98 were males while 106 were female children (table-1; figure-1).

Age group	Male	Female	Total
≤4 to >6	32	34	66
≤6 to >8	34	36	70
≤8 to ≥10	32	36	68
Total	98	106	204

Table 1: Distribution of study population based on age and gender

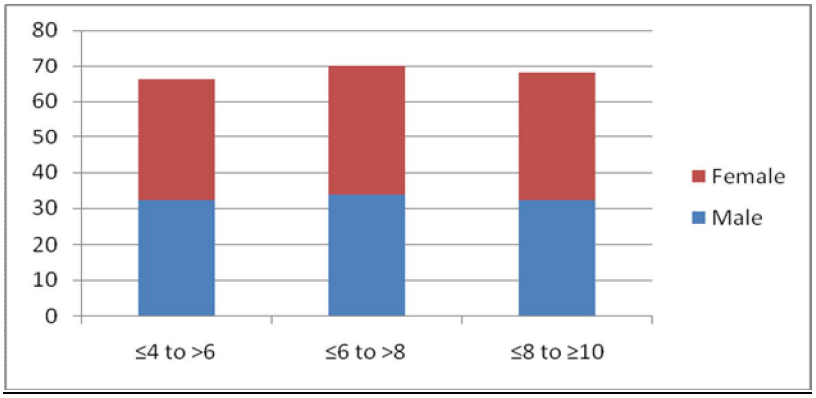

Figure 1: Distribution of study population based on age and gender

Figure-2 shows the distribution of the study population based on the mode of cleaning the teeth. All the students used only toothbrush and toothpaste to clean their teeth. There were none that used any other mode of cleaning of teeth. No one was even aware of dental floss as a mode of tooth cleaning.

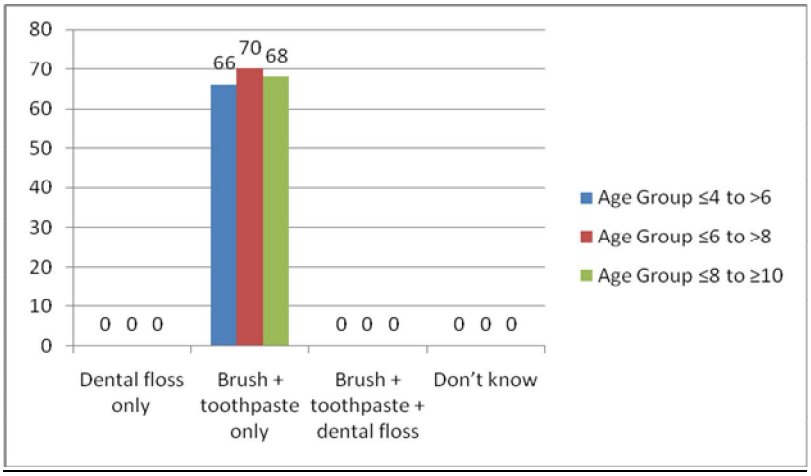

Figure 2: Distribution of study population based on the mode of cleaning their teeth

Distribution of study population based on the frequency of brushing their teeth each day is shown in figure-3. While all children did brush their teeth at least once a day, only some did so twice a day. None brushed their teeth more than twice in day.

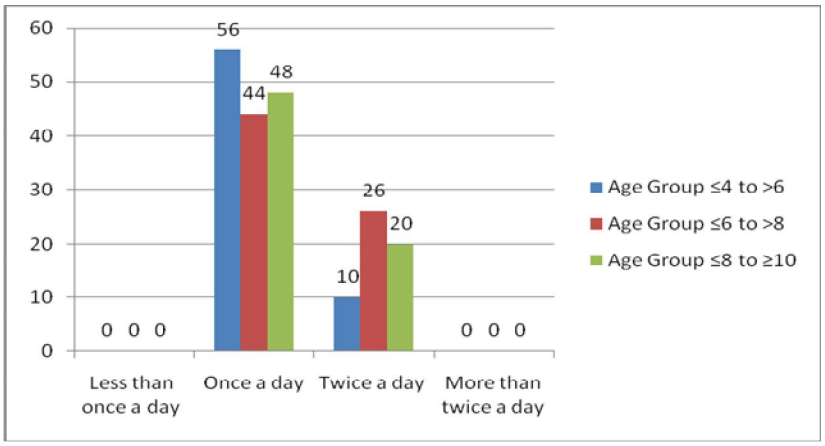

Figure 3: Distribution of study population based on the frequency of brushing their teeth each day

Figure-4 shows the distribution of study population based on the amount of toothpaste used while brushing their teeth. Most used the toothpaste upto full length of the bristles followed by half the length of the bristles.

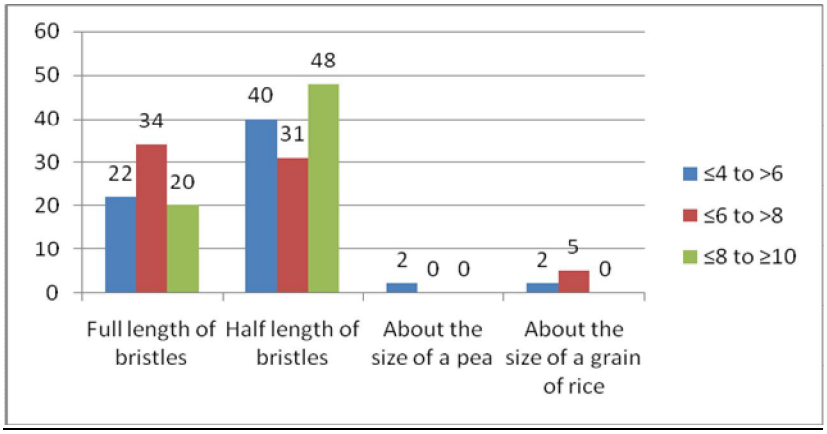

Figure 4: Distribution of study population based on the amount of toothpaste used while brushing their teeth

A variable amount of time was spent by the children for brushing their teeth. Although they did not record the time by the watch as they brushed, as recommended by the WHO, a time limit of 30 seconds, 1 minute, 2 minutes was asked. The responses were as shown in figure-5.

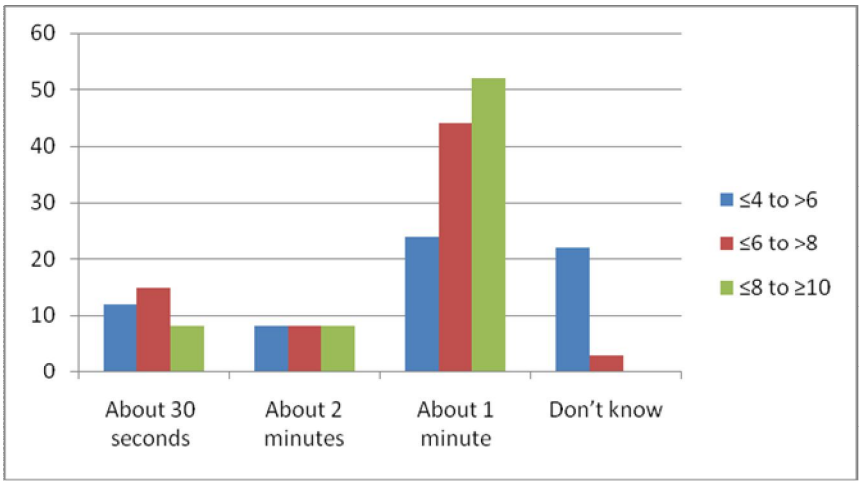

Figure 5: Distribution of study population based on the amount of time spent while brushing their teeth

Figure-6 shows the distribution of study population based on the time of the day when they brushed their teeth. While all of them brushed their teeth in the morning, only about fifty percent of them brushed their teeth before going to bed at night. The proportion of the latter was maximum in the youngest ones, i.e., ≤4 to >6 age group.

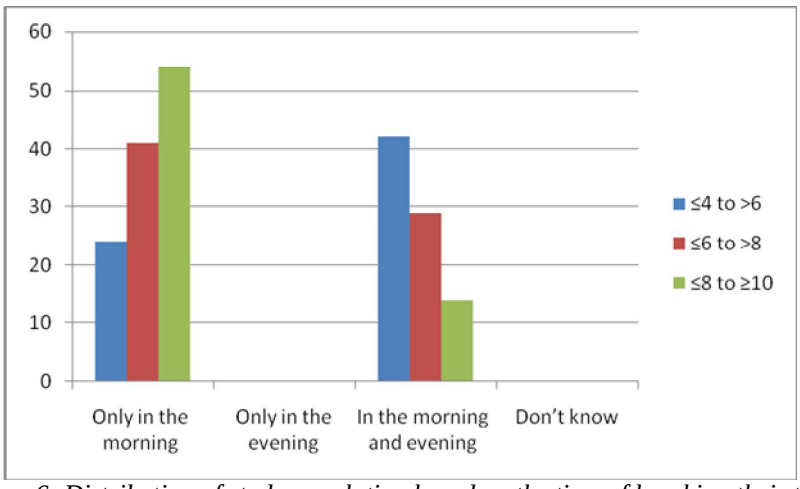

Figure 6: Distribution of study population based on the time of brushing their teeth

Most of the children mentioned one visit to the dentist once a year, which was actually the yearly dental check-up. Only two children visited the dentist twice in a year, while some did not see a dentist at all.

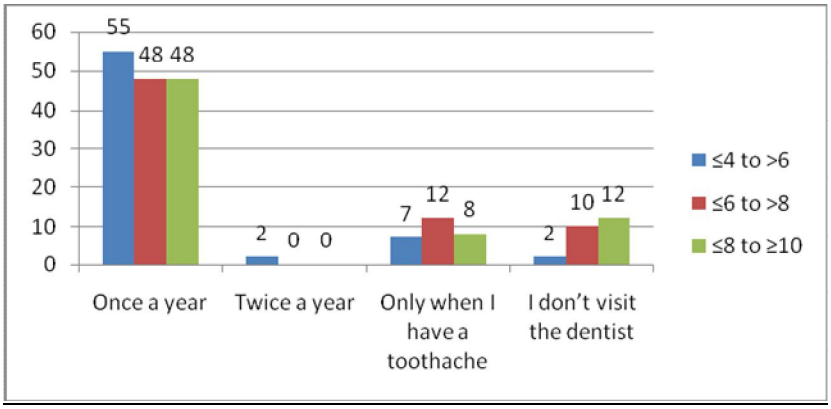

Figure 7: Distribution of study population based on the frequency of visit to the dentist

The children were asked what they thought were the consequences of not cleaning the teeth everyday. Majority of them answered decay, followed by bad breath and gum disease. Some were aware that it may lead to all of these effects.

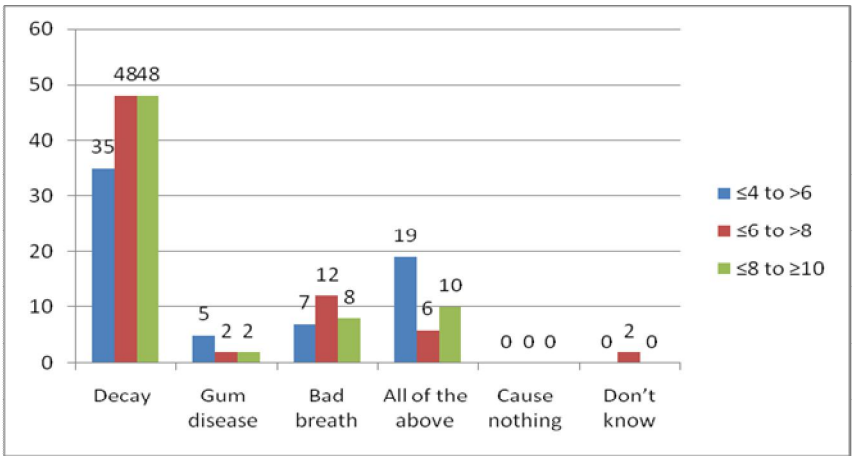

Figure 8: Distribution of study population based on the knowledge about consequences of not cleaning the teeth everyday

Figures-9 and 10 show the Distribution of study population based on the knowledge about consequences of eating lots of sweets and drinking a lot of fizzy drinks. The responses were similar for both the questions.

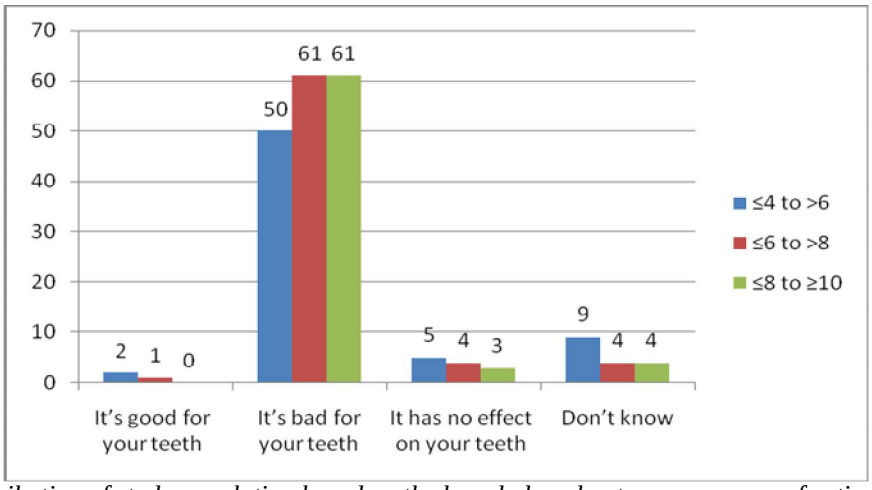

Figure 9: Distribution of study population based on the knowledge about consequences of eating lots of sweets

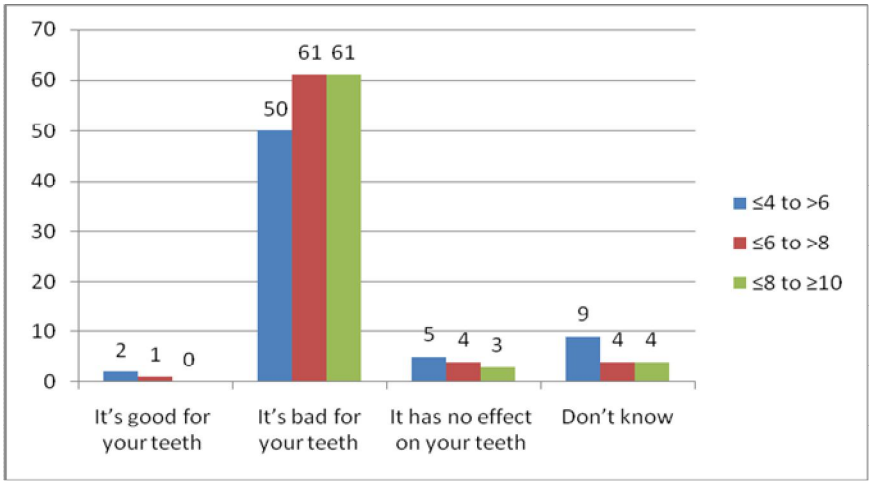

Figure 10: Distribution of study population based on the knowledge about consequences of drinking a lot of fizzy drinks

4. Discussion

In the present study, it was observed that all the students cleaned their teeth by using toothbrush and toothpaste, at least once a day, and that most of them were aware of the fact that too much of sweets and fizzy drinks are bad for their oral health. The knowledge, attitude and practices (KAP) of smaller school going children are affected, to a great deal by the KAP of their parents, as well as to some extent, that of their teachers too. In a study conducted in Africa, knowledge of oral health was found to be rudimentary[4]. In another survey conducted to study the oral health status of children, examinations were done according to World Health Organization (WHO) guidelines during home visits. The prevalence of caries was found to be high among 5-year-olds, reflecting on poor oral health. Rural subjects had more severe dental problems than their urban counterparts[5].Another study conducted to investigate the correlations between the oral clinical indices and KAP on oral health, has similar results. It showed that the mean number of decayed teeth (DT) was much higher in rural areas than in urban areas. Also, the mean number of filled teeth (FT) was relatively lower in rural areas compared to that in urban areas. Urban subjects had a higher mean knowledge and attitude scores for the correct answers as compare to the rural subjects[6].Similar results were found in another cross-sectional survey that was undertaken to assess the dental caries status, knowledge as well as attitude and practice concerning oral health among primary school children who were participating in the Oral Health Preventive School Program (OHPSP) that was conducted in Phnom Penh City, Cambodia. Majority of the school authorities (97.1%) was of the view that the OHPS program can reduce the prevalence of dental caries among school children, as well as that oral health examinations were necessary for school children[7].

5. Conclusion

From this study, we can conclude that regular dental surveys are essential not only to assess the oral health of the children, but also to help initiate awareness campaigns targeted at a specific cohort of people. WHO suggests that for effective surveillance, clinical oral

health surveys should be conducted regularly, i.e., every five to six years in the same community or setting [1].Community-based oral disease prevention programs are needed for the promotion of oral health in all age groups. The results of the present study also suggest a need for monitoring as well as strengthening of the activities as well as the cooperation of the preventive program of oral health of school children[5-8]. Poor oral health and untreated oral conditions have been found to have a significant impact on the quality of life. This, in fact, affects the basic human needs that include eating and drinking, swallowing, maintaining proper nutrition, smiling and communication. In India, disparities in oral health have been observed, with lower income groups having a high disease rate and limited or no access to oro-dental care. This has led to the formulation of National Oral Health Programme which wasstarted assess the needs, monitor outcomes and decrease disparities, so as to improve access to oral healthcare. This programme crystallizes Indian Dental Association's aim for optimal oral health by 2020. This programme addresses the 'silent epidemic' of oral diseases, which aims at prevention of oral diseases in school children. Also, it aims at timely interception as well as treatment of oral diseases in rural population and their appropriate oral health care[9].

6. References

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