

## Evaluation of Oral Health Status of School Going Children in Ghaziabad City

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### ABSTRACT

**Introduction:** Oral health is an integral part of the general health and well-being of an individual and is now recognized as an equally important criterion. Knowledge of dental health and treatment needs of school children is important for developing appropriate preventive school health programs, anticipating utilization patterns, and planning effectively for organization and financing of dental resources.

Therefore, the following study was taken up with the aim to evaluate the oral health status in the School going children of the Ghaziabad, Uttar Pradesh.

**Material and Methodology:** A total of 1685 students between the ages 2-16 were clinically examined from 15 different schools and were screened for Dental caries and periodontal status, according to WHO Criteria.

**Results:** About 44% of the children presented with dental caries & the number of carious teeth ranged from 1-5. 7-11 years age group showed maximum prevalence. Females were found to have more periodontal problems as compared to males, as well as individuals belonging to 7-11 years age group showed more periodontal problems as compared to other age groups.

**Conclusion:** This study substantiated the need to develop preventive school health programs along with the improvement of dental health services for school children.

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### INTRODUCTION

Oral health is an integral part of the general health and well-being of an individual and is now recognized as an equally important criterion. Among the common oral diseases, dental caries and periodontal diseases are the two foremost conditions that remain widely prevalent and affect all populations throughout their life span.<sup>1</sup> Oral diseases continue to have high prevalence despite the decline in dental caries in developed countries. The caries experience varies greatly among countries and even within small regions of countries. It varies with age, sex, socioeconomic conditions, ethnicity, diet, medical conditions of the patient etc., and even within oral cavity, all the teeth and surfaces are not equally susceptible to caries. It not only causes pain and discomfort, but also in addition, leads to a financial burden. The prevention of dental caries has long been considered as an important target for the health professionals. Scientists are continuing their research in identifying the best practices for diagnosis, treatment, and prevention of dental caries.<sup>2</sup> Knowledge of dental health and treatment needs of school children is important for developing appropriate preventive approaches, anticipating utilization patterns, and planning effectively for organization and financing of dental resources.<sup>3</sup>

Very few epidemiological studies have been conducted in Ghaziabad city. Therefore, the following study was taken up with the aim to evaluate the oral health status and treatment needs in the School going children of Ghaziabad, Uttar Pradesh.

### MATERIAL AND METHODS

A cross-sectional study was carried out to assess the oral health status among school children in

Ghaziabad city, Uttar Pradesh, India. The children between the ages 2-16 years were chosen for this study. The present study sample consisted of school children from both public and private schools in order to have representation of children from all the social, economic, and cultural communities. A total of 1685 students were clinically examined from 15 different schools and were screened for Dental caries and Periodontal status, according to WHO Criteria.<sup>4</sup> Written consent for the participation of the children in the study was obtained from the Principals of the concerned schools. Ethical clearance was taken from the research committee of the institution.

The oral examination was done under natural day light using a plain mouth mirror and explorer after seating the child on a chair. Visits to the schools were made on pre decided dates and all the students present on that day were examined.

### RESULTS

A total of 1685 children, comprising 957 males & 728 females were included in the study. Maximum children were from 7-11 years age group, followed by 2-6 years of age group & minimum were from 12-16 years age group.

**Table 1: Distribution of Study Subjects**

Characteristics		Frequency	
		Number	%
<b>Gender</b>	Male	957	57%
	Female	728	43%
	Total	1635	100%
<b>Age (in years)</b>	02 – 06	635	38%
	07 – 11	830	49%
	12 – 16	220	13%
	Total	1635	100%

About 44% of the children presented with dental caries which is a very high incidence. The number of carious teeth ranged from 1-5. 7-11 years age group had maximum prevalence of dental caries & males were found to be more prone to caries.

**Table 2: Distribution of Caries**

Characteristic		Frequency	
		Number	%
<b>Gender</b>	Male	446	47%
	Female	302	41%
	Total	748	44%
<b>Age (in years)</b>	02 – 06	225	40%
	07 – 11	416	50%
	12 – 16	77	35%
	Total	748	44%

Regarding the Periodontal status 47% were affected which is again a very high score. But in contrast to dental caries status, females were found to have poorer oral hygiene as compared to males. Individuals belonging to 7-11 years age group showed poorer periodontal status as compared to other age groups.

**Table 3: Distribution of Periodontal diseases**

Characteristic		Frequency	
		Number	%
<b>Gender</b>	Male	431	45%
	Female	358	49%
	Total	789	47%
<b>Age (in years)</b>	02 – 06	165	26%
	07 – 11	526	63%
	12 – 16	98	45%
	Total	789	47%

## DISCUSSION

India, a developing country, faces a number of challenges in rendering oral health treatment needs. Dental Caries is the most prevalent dental disease of childhood. Despite many credible scientific advances and the fact that dental caries is very much preventable, the disease continues to be a huge public health problem. In developing countries changes in the life-styles and dietary patterns have markedly increased the caries incidence<sup>5</sup>.

This study assessed the prevalence of dental caries and periodontal status of children in schools of Ghaziabad. Schools were chosen to conduct this study as they provide a readymade sample for conducting such studies.

Evaluation of the oral health status of these children revealed, dental caries to be a highly prevalent disease affecting both permanent and primary dentitions.

About 44% of the participants presented with dental caries & the number of carious teeth ranged from 1-5 with the mean of 3.2. 7-11 years age group had maximum prevalence of dental caries & as compared to females, males were found to be more prone to caries. 44% indicates a high caries prevalence rate which can be attributed to the lack of school health programs in these schools earlier in addition to other factors stated above and indicates a need to conduct preventive and oral health awareness programs in these areas to create awareness and motivation.

High caries incidence observed in 7 – 11 years age group can be attributed to mixed dentition in this age group, which makes maintenance of oral hygiene difficult. This is obvious from the results where 7-11 years age group show more periodontal problems in comparison to other age groups.

As for the Periodontal status, 47% were affected, which is again a very high score indicating a strong need for oral health awareness and education programs. Females were found to be having more periodontal issues as compared to the males. Similar findings were seen in a study conducted by Saha and Sarkar 1996<sup>7</sup>.

## CONCLUSION

A study on oral health assessment of children at an early age helps in improving preventive dental behavior and attitudes, which is beneficial for a lifetime. This can be achieved by educating the parents and teachers about oral health through school dental health programs. For the benefit of a community, preventive oral health programs should be conducted repeatedly in order to reach the goals of WHO. Parents should be made aware of the correct brushing techniques and benefits of pit and fissure sealants and importance of other preventive measures for their children. The purpose of school oral health program is to improve and motivate the parents and children regarding their oral health and treatment needs<sup>6</sup>.

This study has very much substantiated the need to develop preventive programs along with the improvement of dental health services for school children.

## CONFLICT OF INTEREST: Nil

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