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# Original Research

## Prevalence of dental caries in school children aged 5 to 16 years.

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***ABSTRACT*:**
**Background:** Oral health is an important component of general health, with dental caries affecting a person's ability to eat, speak or socialize. The present study was conducted to determine pattern of dental caries in school children age ranged 5-16 years. **Materials & Methods:** The present study was conducted on 340 school children age ranged 5- 16 years of both genders. DMFT score was calculated and recorded in all children. **Results:** Age group 5-8 years had 40 boys and 50 girls, 9-11 years had 60 boys and 40 girls, 12-16 years had 80 boys and 70 girls. The mean decayed score in boys was 0.98 and in girls was 0.82, missing score was 0.36 in boys and 0.51 in girls, filled score was 0.07 in boys and 0.06 in girls. DMFT score in boys was 1.2 and in girls was 1.3. The difference was significant in filled teeth (P< 0.05). **Conclusion:** Dental caries is common bacterial disease in school children. In males, mean DMFT score was 1.2 and in females was 1.3.
**Key words:** Children, DMFT, Pattern.

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### INTRODUCTION

Oral health is an important component of general health, with dental caries affecting a person's ability to eat, speak or socialize.[2] Dental caries is an infectious microbial disease of multifactorial origin in which diet, host, and microbial flora interacts over a period of time in such a way so as to encourage demineralization of the tooth enamel with resultant caries formation.[1]

Dental caries are the most common chronic disease of childhood that interferes with normal nutrition intake, speech, self-esteem, and daily routine activities because the caries pain adversely affects the normal food intake. This results in underweight children with abnormal cognitive development. Despite incredible scientific advances and the fact that caries are preventable, the disease continues to be a major public health problem.[2]

The DMFT index has been widely utilized in epidemiological surveys of oral health. WHO recommended assessing and comparing the experience of dental caries in various populations. DMFT expresses the mean number of DMFT in a group of individuals.[4] The fissure sealant programme, which is a core element of the School Dental Service, is the key caries-preventive strategy accounting for the greatest input of staff and resources. Yet, in spite of actively targeting the most vulnerable teeth – particularly the first permanent molar – 54% of all 12-year-olds and 72% of 15-year-olds have experienced decay on pit and fissure surfaces.[3]The present study was conducted to determine pattern of dental caries in school children age ranged 5-16 years.

### MATERIALS & METHODS

The present study was conducted in the department of Pedodontics. It comprised of 340 school children age ranged 5- 16 years of both genders. The school was informed regarding the study and permission was obtained prior to the study.

Data such as name, age, gender etc. was recorded. A through oral examination was done. DMFT score was recorded. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

## RESULTS

**Table I Age wise distribution of children**

| Age group (Years) | Boys | Girls |
|---|---|---|
| 5-8 | 40 | 50 |
| 9-11 | 60 | 40 |
| 12-16 | 80 | 70 |
| Total | 180 | 160 |

Table I, graph I shows that age group 5-8 years had 40 boys and 50 girls, 9-11 years had 60 boys and 40 girls, 12-16 years had 80 boys and 70 girls.

**Graph I: Age wise distribution of children**

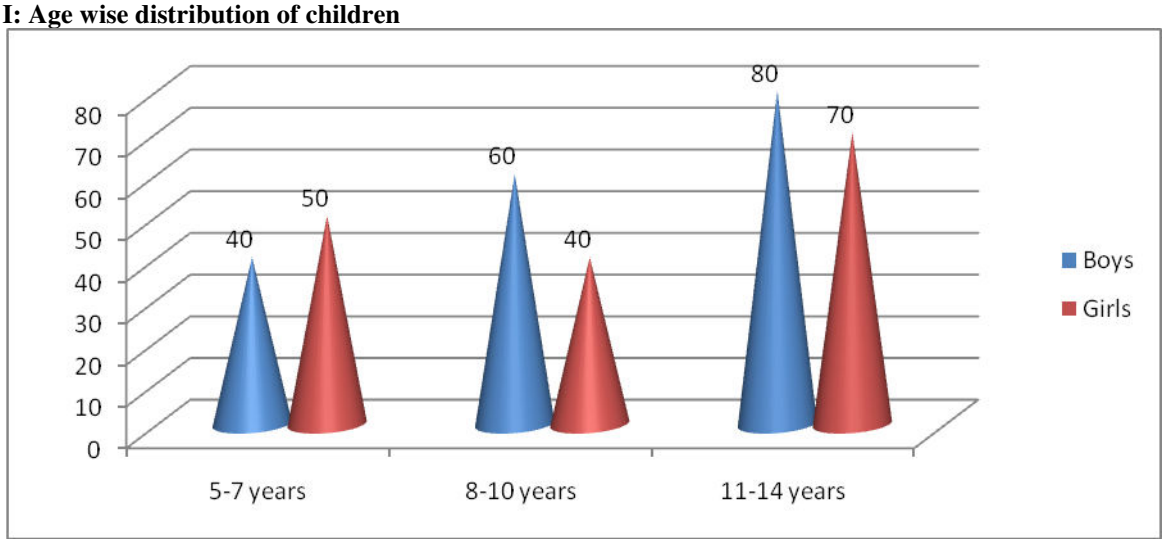
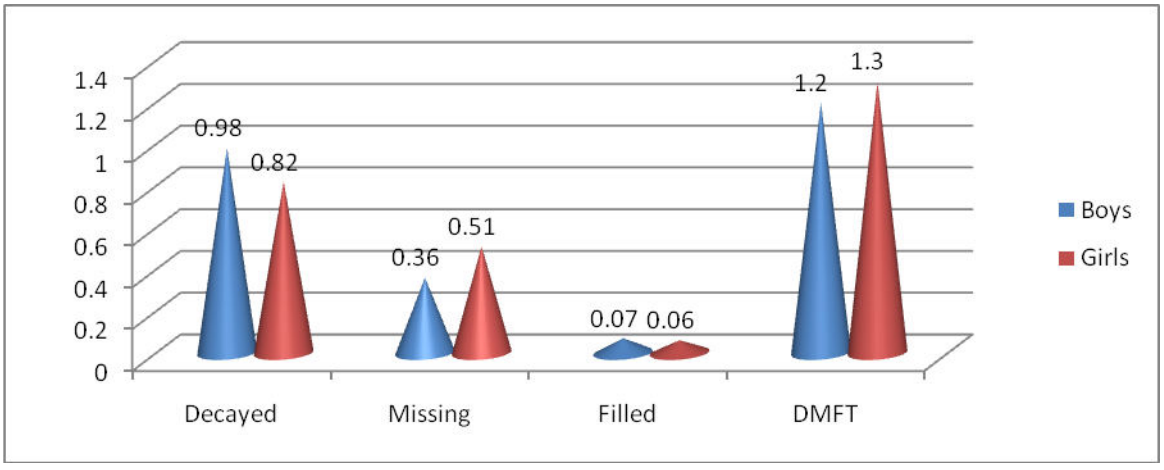



**Table II DMFT score in children**

| DMFT | Boys | Girls | P value |
|---|---|---|---|
| Decayed | 0.98 | 0.82 | 0.72 |
| Missing | 0.36 | 0.51 | 0.81 |
| Filled | 0.07 | 0.06 | 0.05 |
| DMFT | 1.2 | 1.3 | 1 |

Table II, graph II shows that mean decayed score in boys was 0.98 and in girls was 0.82, missing score was 0.36 in boys and 0.51 in girls, filled score was 0.07 in boys and 0.06 in girls. DMFT score in boys was 1.2 and in girls was 1.3. The difference was significant in filled teeth (P< 0.05).

**Graph I: DMFT score in children**



## DISCUSSION

Early childhood caries (ECC) has been on the increase in many countries and has become a significant health problem especially in socially disadvantaged populations. It has several unique characteristics in clinical appearance such as rapid development of caries, which affects a number of teeth soon after they emerge in oral cavity. These lesions involve tooth surfaces that are less prone to caries development.[4] Several terminologies were used to describe the condition such as, nursing bottle caries, nursing caries, rampant caries, baby bottle caries, baby bottle tooth decay, milk bottle syndrome, and prolonged nursing habit caries. Caries is a multifactorial disease that results from the interaction of factors that include cariogenic microorganisms, exposure to fermentable carbohydrates through inappropriate feeding practices, and a range of social variables.[5]

Dental caries, the product of man's progress toward civilization, has a very high morbidity potential and thus, is coming into focus of the mankind. The caries experience varies greatly among countries and even within small regions of countries. It varies with age, and sex, socioeconomic conditions, ethnicity, diet, medical conditions of the patient, oral hygiene practices, etc.[6]The present study was conducted to determine pattern of dental caries in school children age ranged 5-16 years.

In present study, age group 5-8 years had 40 boys and 50 girls, 9-11 years had 60 boys and 40 girls, 12-16 years had 80 boys and 70 girls. Ingle[7] in their cross‑sectional study carried out on total 1400 school children, of which 700 school children were from government schools and 700 were from private schools. Simple random sampling methodology was used to select the sample.

We found that mean decayed score in boys was 0.98 and in girls was 0.82, missing score was 0.36 in boys and 0.51 in girls, filled score was 0.07 in boys and 0.06 in girls. DMFT score in boys was 1.2 and in girls was 1.3. Singh et al[8] found that maximum number of school children belonged to the age group of 15 years, that is, 850 (55.3%).

Non-cariogenic sweeteners are increasingly used to replace sugar in foods, drinks and medicines.

They can be divided into two categories: intense sweeteners, such as saccharin, acesulfame-K and aspartame; and bulk sweeteners, such as xylitol and sorbitol. They cannot be fermented by microorganisms to any great extent and so are considered non-cariogenic.[9]It has been suggested that xylitol may have an anti-cariogenic effect by reducing the levels of mutans streptococci in the mouth. However, the existence of an anti-cariogenic effect for xylitol remains controversial.

Fluoride toothpaste is the most widely used form of topical fluoride throughout the world. It has been suggested that toothbrushing with fluoride toothpaste is close to an ideal public health method in that its use is convenient, inexpensive, culturally approved and wide spread. However, as with all self-administered interventions, it requires compliance to achieve optimum results.

Oral health education can operate at a community level or as part of individual patient care. The focus of oral health education is primarily to encourage a reduction in the consumption of sugars

(fermentable carbohydrate) and to promote the effective use of fluoride toothpaste. Several systematic reviews have concluded that oral health education (OHE) is effective at increasing knowledge levels. However increases in knowledge are short lived and likely to fade over time.[10]

## CONCLUSION

Dental caries is common bacterial disease in school children. In males, mean DMFT score was 1.2 and in females was 1.3.

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