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Original Article

Analysis of dmft score in pre- school children- A Clinical Study

Neha Gupta[1], Radhe Aniyo[2], Kavi Kumar V[3]

[1]Reader, [2,3]PG student, Department of Pedodontics, Maharaj Ganga Singh Dental College & Research Centre, Sri Ganganagar, Rajasthan, India

***ABSTRACT*:**
Introduction- Dental caries is commonly seen disease in pre- school children. The prevalence of dental caries in primary teeth is commonly evaluated using the dmft index. **Materials & Methods-** The present study was conducted on 4-5 years old pre- school children visiting the department along with their parents for routine dental examination. Intra oral examination intraorally was carried out using dental mirror and explorer under dental unit's light. The presence of cavitation has been considered to be indicative of carious lesion in accordance with the criteria recommended by the WHO in 1997. **Results-** Out of 1284 patients, 740 (57.6%) were boys and 544 (42.4%) were girls. The difference was non- significant (P- 0.1). Children with dmft 0 were 320 (25%) and with dmft > 0 were 964 (75%). The difference was significant (P- 0.02). 74 children had 1 or more missing teeth while 1210 children had all teeth present. The difference was significant (P-0.01). 64 had 1 or more filled teeth while 1220 had no filled teeth. The difference was significant (P- 0.04). 65% parents had education level upto high school, 25% upto secondary level while 10% had upto college level. The difference was significant (P- 0.01). Parents with education level upto high school had dmft score > 2 while upto college level had just 5%. The difference was significant (P-0.01). **Conclusion-** 75% pre- school children had dmft more than zero score. Parents with little education had their children with more dmft score.
Key words- Dental caries, Filled, Pre- school children.

Corresponding author: Dr. Neha Gupta, Reader, Department of Pedodontics, Maharaj Ganga Singh Dental College & Research Centre, Sri Ganganagar, Rajasthan, India

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INTRODUCTION

Dental caries in primary teeth has been widely studied in many countries worldwide since it is known to be one of the most common oral diseases of childhood. Many countries have developed different strategies to reduce or even eradicate dental caries from preschool children following dental caries surveys. Some have already obtained excellent results using water and salt fluoridation, dental health education, school oral health program, and so forth.[1]

In India the prevalence of dental carries is very high particularly among the children and adolescents. The prevalence is even higher in rural people and among school children. Dental caries is not only a medical problem but many socio-demographic factors are said to be associated with this.[1] The prevalence of dental caries in primary teeth is commonly evaluated using the dmft index. The number of decayed, missing, and filled primary teeth is calculated in each child to obtain a sum that is known to be the mean dmft score in such child.[2]

The prevention of dental caries has long been considered as an important task for the health profession.[2] Scientific research continues to make progress in identifying the best practices for diagnosing, treating, and preventing dental caries. Traditional approaches for treating carious lesions in a surgical manner are being replaced by newer strategies that emphasize disease prevention and conservation of tooth structure.[3]

In 1997, WHO demonstrated the detection of dental caries in surveys at cavitation level because examiners frequently cannot reliably assess the non-cavitated lesions. However, the inclusion of non-cavitated caries lesions is necessary since these can be arrested through certain preventive measures and lowering the cost of restorative treatment.[4]

The present study was aimed at estimating the dmft score of pre- school children.

MATERIALS & METHODS

The present study was conducted on 4-5 years old pre-school children visiting the department along with their parents for routine dental examination. Parents were informed regarding the study and written consent was obtained. Ethical clearance was taken from institutional ethical committee.

Medical and dental histories were taken for each child by the help of one of the parents before starting the clinical examination. Intra oral examination intraorally was carried out using dental mirror and explorer under dental unit's light. The presence of cavitation has been considered to be indicative of carious lesion in accordance with the criteria recommended by the WHO in 1997. The dmft index has been used to measure the prevalence of caries activity. Teeth which were missing due to trauma or congenitally absent teeth were excluded from the study. Missing teeth were counted only when their loss was due to caries. The number of dental restorations has also been registered for each child which contributed to the F component in the dmft score. All results thus obtained were tabulated and subjected to statistical analysis using chi- square test. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total - 1284		
Boys	Girls	P value
740 (57.6%)	544 (42.4%)	0.1

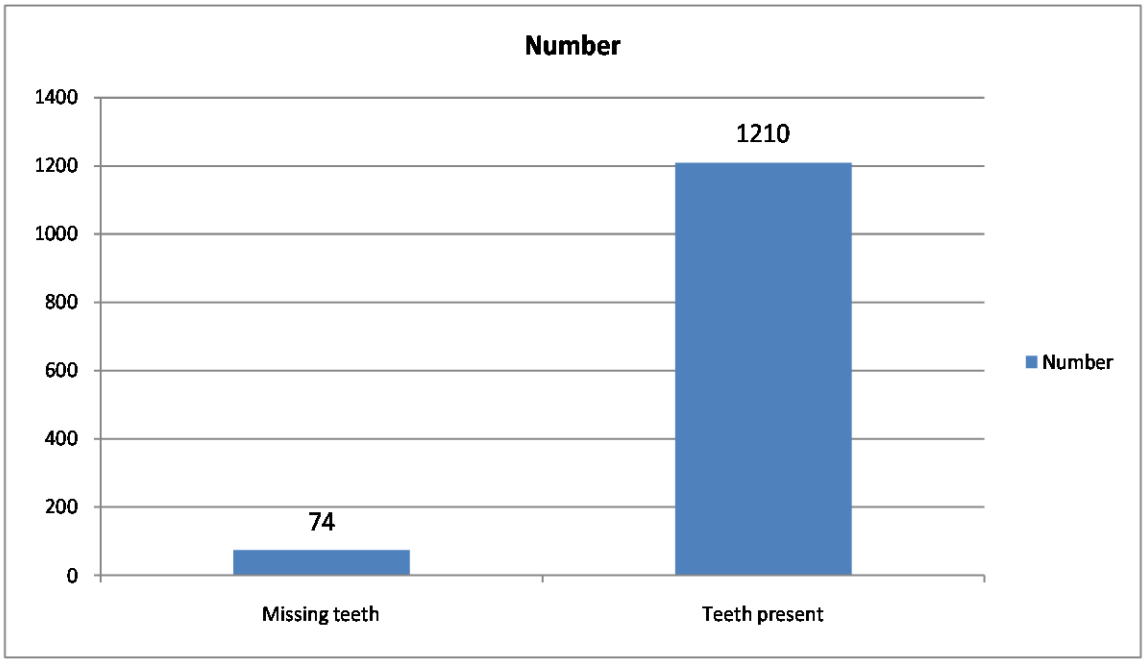
Table I shows that out of 1284 patients, 740 (57.6%) were boys and 544 (42.4%) were girls. The difference was non-significant (P-0.1).

Table II Prevalence of dental caries in children

dmft	Number	P value
Children (dmft-0)	320 (25%)	0.02
Dmft >0	964 (75%)	

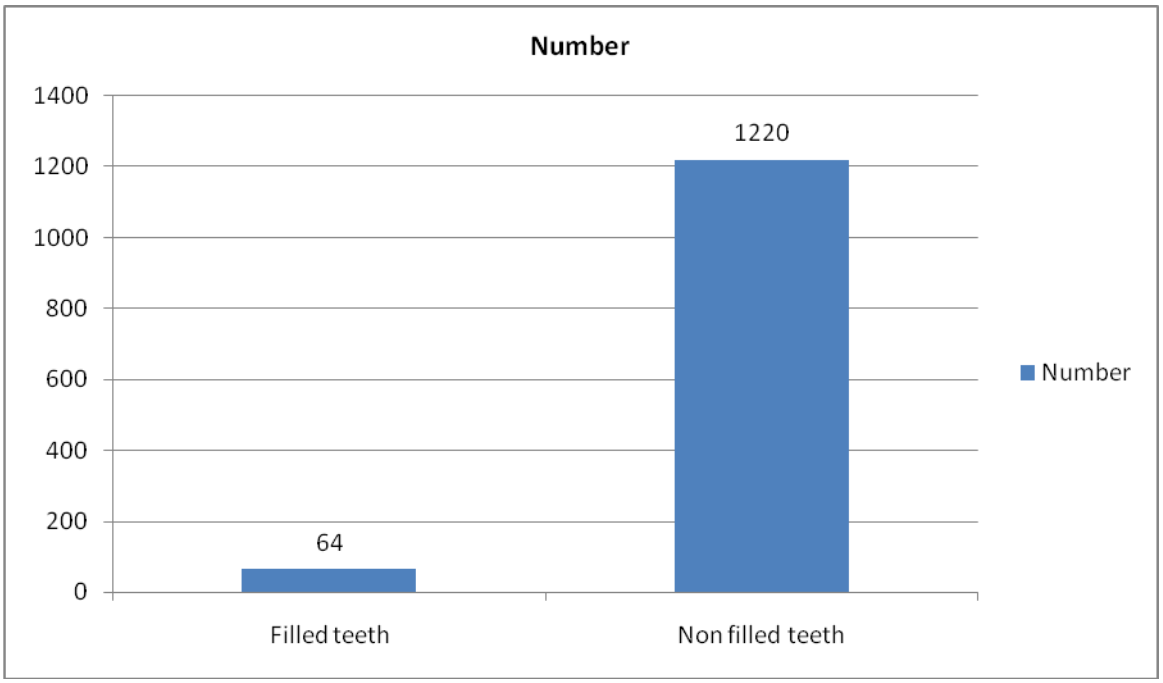
Table II shows that children with dmft 0 were 320 (25%) and with dmft > 0 were 964 (75%). The difference was significant (P-0.02).

Graph I Prevalence of Missing teeth



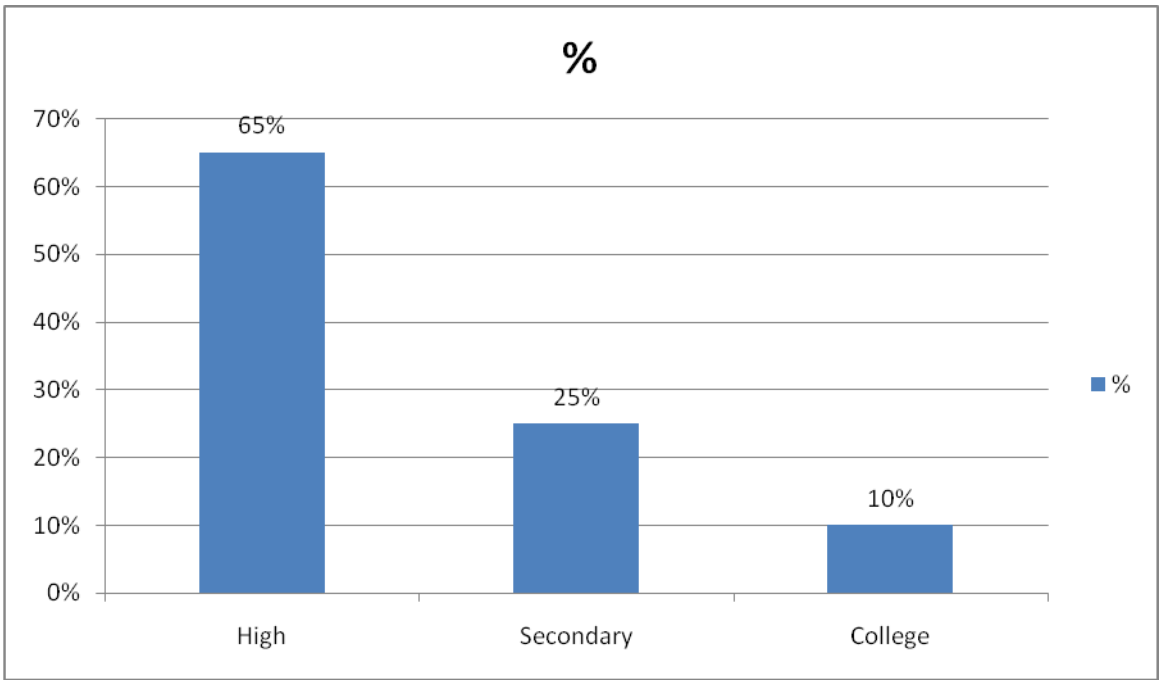
Graph I shows that 74 children had 1 or more missing teeth while 1210 children had all teeth present. The difference was significant (P-0.01).

Graph II Prevalence of filled teeth



Graph II shows that 64 had 1 or more filled teeth while 1220 had no filled teeth. The difference was significant (P-0.04).

Graph III Parents level of education



Graph III shows that 65% parents had education level upto high school, 25% upto secondary level while 10% had upto college level. The difference was significant (P-0.01).

Table III Relationship between parent education and dmft score

Education level	Dmft >0	Dmft> 1	Dmft>2
High	10%	15%	75%
Secondary	60%	30%	10%
College	80%	15%	5%

Table III shows that parents with education level upto high school had dmft score > 2 while upto college level had just 5%. The difference was significant (P-0.01).

DISCUSSION

Dental caries is one of the leading problems in pre- school children. As per World Health Organization (WHO) report, it has been now considered to be a pandemic disease. There has been an increase in the prevalence of caries along with emerging economies. Whereas prevalence is decreasing in developed countries due to improved oral hygiene practice and implementation of community level prevention programs.[5] The present study was aimed at estimating the dmft score of pre- school children.

In our study, out of 1284 patients, 57.6% were boys and 42.4% were girls. We examined all children for the presence of decayed, missing and filled teeth. We found that 75% had dmft >0 while 25% had 0 dmft score. This is in accordance to Wyne.[6]

We observed that 74 children had 1 or more missing teeth while 1210 children had all teeth present. This is similar to results by Paul.[7] While assessing the filled teeth we found that 5% (64) had 1 or more filled teeth while 95% (1220) had no filled teeth. This is similar to study by Malik et al[8] who estimated prevalence and patterns of caries, rampant caries, and oral health in two- to five-year-old children in Saudi Arabia and resulted in 14% had dmft score >0.

We found that 65% parents had education level upto high school, 25% upto secondary level while 10% had upto college level. Parents with education level upto high school had dmft score > 2 while upto college level had just 5%. This is in agreement with Nadeef et al.[9]

Parents should be encouraged to take their children to the public dental clinics directed by the ministry of health or to their private dentist before the age of 1 year. They would be able to have an idea about dental health education programs and topical fluoride application campaigns. Preventive measures campaigns including topical fluoride application, fissure sealants, and healthy diet promotion would be a lot of help to improve the situation of the oral and dental health.[10]

CONCLUSION

Author concluded that 75% pre- school children had dmft more than zero score. Parents with little education had their children with more dmft score.

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