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Original Article

Prevalence of Dental Caries and its Relation with Socio- Economic Status in School Children

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ABSTRACT

Introduction- Dental caries is the most prevalent chronic disease affecting major population. It is considered as the most important global oral health burden. The present study was conducted to assess the prevalence of dental caries among students and its relation with socio- economic status. **Materials & Methods-** 120 students aged 13, 14, 15 years were enrolled in the study. Caries detection was performed by a dentist. **Results-** Students of 13 years of age had 12 boys and 11 girls, 14 years had 23 boys and 22 girls, 15 years had 25 boys and 27 girls. The difference was non- significant (P>0.05). Hindu included 20 boys and 25 girls, muslim had 18 boys and 20 girls, sikh had 15 boys and 13 girls and Christian consisted of 7 boys and 2 girls. The difference was non- significant (P>0.05). Upper class had 10 boys and 12 girls. Middle class had 20 boys and 18 girls and lower class had 30 boys and 27 girls. The difference was non- significant (P< 0.05). 45/60 boys and 38/60 girls had dental caries. The prevalence rate was 69.1%. Maximum caries were seen in age 13 years (Boys- 28, girls- 16) followed by 14 years (Boys- 10, girls- 12) and 15 years (Boys- 7, girls- 10). The difference was non- significant (P< 0.05). **Conclusion-** The rate of dental caries in increasing among school children. It is more in boys as compared to girls and prevalence is more in lower class as compared to upper and middle class.

Key words- Children, Dental caries**,** Oral health

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INTRODUCTION

Dental caries is the most prevalent chronic disease affecting major population. It is considered as the most important global oral health burden, since 90% of school children and most of the adults have been affected by it. Dental health is often neglected by a vast majority of population. 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]

Dental caries is the most prevalent oral disease. It's very high morbidity potential has brought this disease into the main focus of the dental health profession. There is practically no geographic area in the world whose inhabitant does not exhibit some evidence of dental caries. It not only causes pain and discomfort, but also in addition, places a financial burden on the parent. 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]

World Health Organization (1997), 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 conducted to assess the prevalence of dental caries among students.

MATERIALS & METHODS

This study was conducted in the department of public health dentistry in year 2016. It included students of 13 to 15 years of age of both genders. All parents of students were informed regarding the study and written consent was obtained.

Caries detection was done by trained dentist with the help of probe, mirror and twizzer. 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 shows that students of 13 years of age had 12 boys and 11 girls, 14 years had 23 boys and 22 girls, 15 years had 25 boys and 27 girls. The difference was non- significant (P>0.05). Table II shows that hindu included 20 boys and 25 girls, muslim had 18 boys and 20 girls, sikh had 15 boys and 13 girls and Christian consisted of 7 boys and 2 girls. The difference was non- significant (P>0.05).

Graph I shows that upper class had 10 boys and 12 girls. Middle class had 20 boys and 18 girls and lower class had 30 boys and 27 girls. The difference was significant (P< 0.05). Graph II shows that 45/60 boys and 38/60 girls had dental caries. The prevalence rate was 69.1%.

Graph III shows that maximum caries were seen in age 13 years (Boys- 28, girls- 16) followed by 14 years (Boys- 10, girls- 12) and 15 years (Boys- 7, girls- 10). The difference was non- significant (P< 0.05).

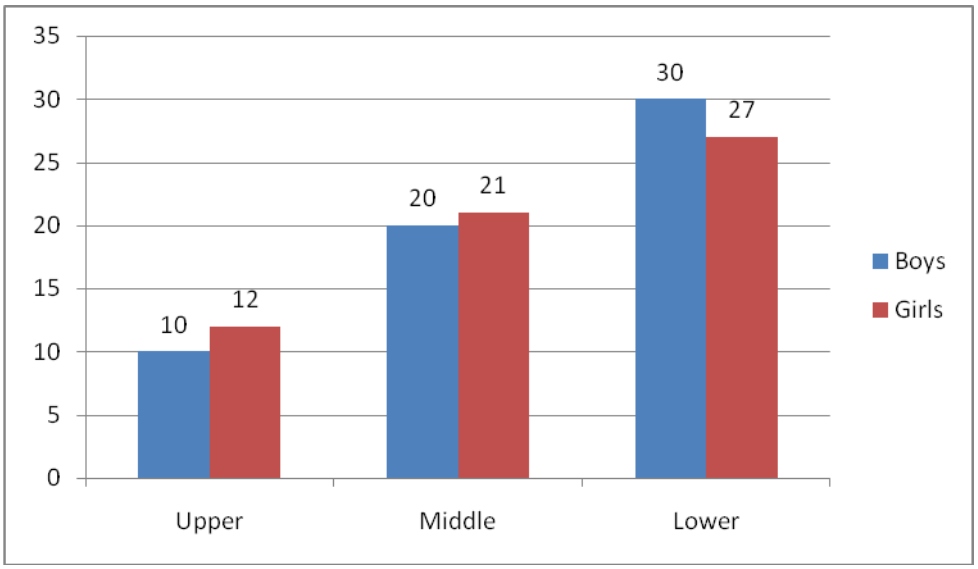
Table I: Age and gender wise distribution of students

Age (Years)	Boys	Girls	P value
13	12	11	0.1
14	23	22	0.1
15	25	27	0.2
Total	60	60	

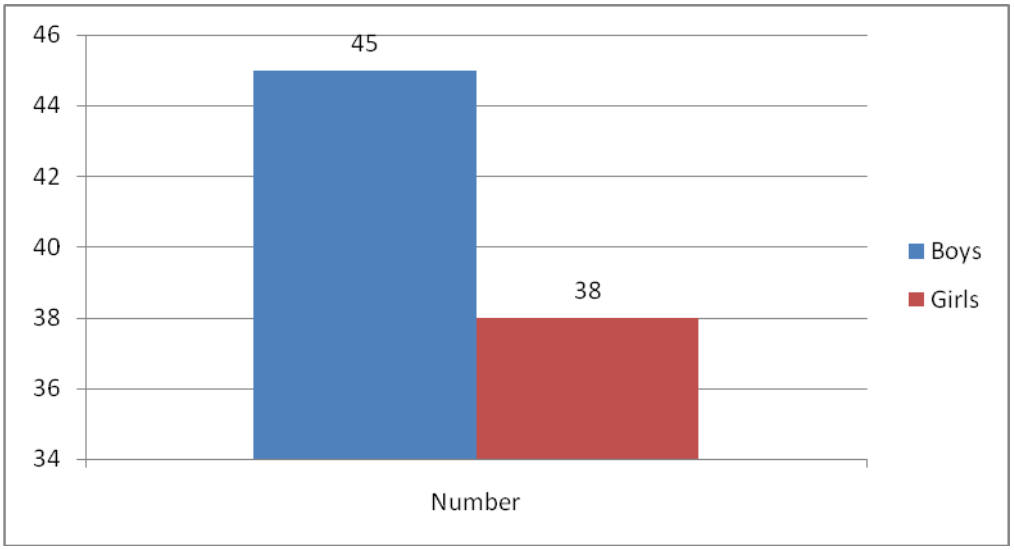
Table II Religion of students

Religion	Boys	Girls
Hindu	20	25
Muslim	18	20
Sikh	15	13
Christian	7	2

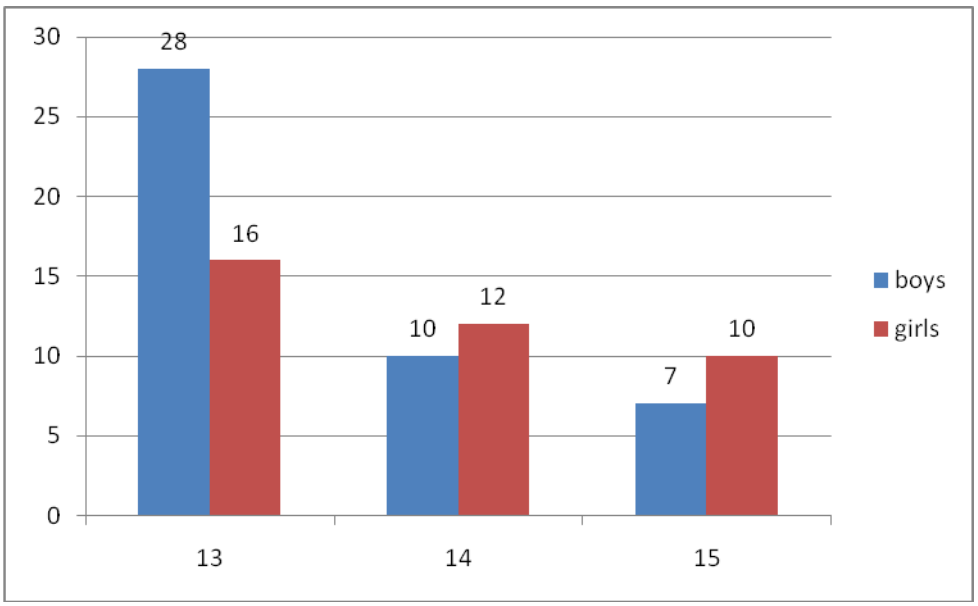
Graph I Socio- economic status of students



Graph II Prevalence of dental caries



Graph III Prevalence of caries according to age



DISCUSSION

Dental caries is one of the leading problems in school going children as well as in adults. The World Health Organization (WHO) has recognized dental caries as a pandemic and reported its prevalence among school children to range from 60-90%. 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. However, the increase in caries prevalence is mostly due to lack of oral health care system, because this systems mostly focus on curative care, but there is no periodical implementation of community health prevention and oral health promotion.[5]

The present study was conducted to assess the prevalence of dental caries among students and its relation with socio-economic status. The prevalence of dental caries was 75% in boys and 63% in girls. It is in accordance to Assaf et al.[6] Maximum number of caries cases were recorded in 13 years (boys- 28, girls- 16), followed by 14 years (boys- 10, girls- 12) and 15 years (boys- 7, girls- 10). This is in accordance to Ismail et al.[7]

We found that maximum number of students belonged to religion Hindu (boys- 20, girls- 25), followed by Muslim (boys- 18, girls- 20), Sikh (boys- 15, girls- 13) and

Christian (boys- 7, girls- 2). Maximum caries were also found in Hindu (42) followed by Muslim (21), Sikh (14) and Christian (6). This is similar to Shingare et al.[8] We observed that maximum caries prevalence was noted in lower class (70%) followed by middle (20%) and upper class (10%). This is in accordance to Sudha P et al[9] who also reported maximum caries in students belonging to lower socio- economic status.

Dental caries is a common dental disease occurring during childhood and it continues to be a major public health problem. The World Health Organization (WHO) has ranked it as number three among all chronic non-communicable diseases that require worldwide attention for prevention and treatment. ICDAS (International Caries Detection and Assessment system) is a universally accepted system to evaluate the prevalence of dental caries, in which estimation of early enamel lesions, helps in planning early treatment and monitoring caries pattern at the population level.[10]

CONCLUSION

Dental caries is a common bacterial disease of muti-factorial etiology among school children. It is more prevalent in lower socio- economic class. It is more in boys as compared to girls.

REFERENCES

1. Moses J, Rangeeth BN, Gurunathan D. Prevalence of Dental Caries, Socio-[14] economic status and treatment needs among 5 to 15 Year old school going children of chidambaram. Journal of Clinical and Diagnostic Research. 2011; 5: 146-51.
2. Prabhu S, John J. Dental caries prevalence among 12-year-old school children from urban and rural areas in Tamil Nadu, India- A comparative study. e-Journal of Dentistry. 2013; 13: 326-30.
3. Alamoudi N, Salako N, Masoud I. Prevalence and distribution of caries in the primary dentition in a cosmopolitan Saudi population. The Saudi Dental Journal. 1995; 7: 23-28.
4. Peterson PE. The global burden of oral diseases and risk to oral health. Bulletin of the World Health Organization. 2005; 83: 661-69.
5. Hashizume LN, Shinada K, Kawaguchi Y. Dental caries prevalence in Brazilian school children resident in Japan. Journal of Oral Science. 2006;48: 51-57.
6. Assaf AV, decastro Meneghim M, Zanin L, Tengan C, Pereira AC. Effect of different diagnostic thresholds on dental caries calibration -a 12 month evaluation. Community Dent Oral Epidemiol. 2006; 34: 213-19.
7. Ismail AI, Sohn W, Tellez M, Amaya A, Sen A, Hasson H, Pitts NB. The International Caries Detection and Assessment System (ICDAS): an integrated system for measuring dental caries. Community Dent Oral Epidemiol. 2007; 35: 170–78.
8. Shingare P, Jogani V, Sevekar S, Patil S, Jha M. Dental caries prevalence among 3-14 year old school children, uran, raigad district, maharastra. Journal of Contemporary Dentistry. 2012; 2: 11-14.
9. Sudha P, Bhasin S, Anegundi RT. Prevalence of dental caries among 5-13 year old children of Mangalore city. J Indian Soc Pedod Prev Dent. 2005; 23: 74-79.
10. Pitts N: 'ICDAS' – an international system for caries detection and assessment [4] being developed to facilitate caries epidemiology, research and appropriate clinical management. Community Dent Health. 2004; 21: 193–98.

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