PREVALENCE OF DENTAL CARIES AMONG CHILDREN OF SOS CHILDREN'S VILLAGE

Saxena V.,* Saxena S.**

Dental caries has been classified among the deficiency diseases. Studies have shown the higher prevalence of dental caries among the orphan children. Aim: **To assess the dental caries prevalence and treatment needs among children of SOS Children's village of Bhopal, India.** Materials and Methods: **Study was conducted among the children of SOS Children's village of Bhopal, India. Modified WHO oral health assessment form (1997) was used for data collection.** Results: **Among males 56.90% and among females 53.26% had caries. Highest DMFT score (2.09) was found among 11-15 years old.** Conclusion: **Prevalence of dental caries and treatment need is low among children of SOS children's village compare to other orphan children.**

Keywords: **Dental Caries, Orphans, SOS children's village, India.**

Probably the commonest of diseases which affect civilized man is dental caries; and its ravages are more wide spread in each succeeding generation. Statistics shows that today probably 95% of children suffer in varying degrees from tooth decay[1]. Moreover dental caries while a disease in itself is also very often a symptom of potentially serious squeal. The continual increase in its prevalence constitutes a menace that grows more threatening, almost year to year.

The ultimate aim in the study of dental caries is of course to discover a means for its prevention as well as for its control. Dental caries has led to class it among the deficiency disease. Hence, we planned to secure a group of children which is neglected and vulnerable[2]. Deciding upon our elective project, was a simple humanitarian unique opportunity further for our epidemiological experience and confidence whilst bringing dental care to a group who would not have access to treatment otherwise. Behaviour and attitude of children are formed and developed from social, cultural, economic and ethnic factors through life. This process is also influenced by their knowledge of health and prevention of disease[3]. Absence of family support might also influence oral health and oral health related behaviour. Considering all these, we opted SOS Children's village for the assessment of dental caries as oral health of orphan children is relatively poor.

SOS is a non profit, non government, voluntary organization committed to the children in need and to strengthening families and communities.

A small beginning was made in 1990 in the wake of the Bhopal Gas Tragedy, when a new children's village was started, to take care of the children orphaned. Numerous children had lost their parents in this disaster[4]. These homes are admirably organized for our purposes. They are conducted on the cottage plan, with children in each cottage, in charge of a cottage mother and assistant also reside.

Aim

To assess the dental caries prevalence and treatment needs among children of SOS Children's village of Bhopal, M.P., India.

Objectives

1. To assess the dental caries prevalence and treatment needs among children of SOS Children's village of Bhopal, M.P., India.
2. To encourage oral health administration in SOS children's village to make standard measurement of oral diseases and condition.
3. To collect baseline data for further studies.

*Associate Professor
**Senior lecturer, Department of Preventive & Community Dentistry, People's College of Dental Sciences and Research centre, Bhopal, Madhya Pradesh, India.

Materials and Methods

Target population: We planned to secure several groups of children who are orphaned, living in homes. SOS homes are well organized for our purpose as they are conducted on the cottage plan with 10-15 children in each cottage, in charge of a cottage mother and assistant. Meals are prepared in the kitchens of the cottages uniformly. So under this system diet is possibly a static factor as similar type of food is consumed. Children are instructed by mother to brush their teeth once daily in the morning and to gurgle mouth after last meal in night. So, maintenance of oral hygiene also becomes a static factor in the present study. Prior permission for study was obtained from the authorities for the dental examination and preventive care. Study protocol was approved by ethical committee of People's College of Dental Sciences and Research centre.

Pretested proforma: Modified WHO oral health assessment form (1997) was used to record the demographic details as well as dental caries status.

Time and duration: Data collection was done on every Saturday from 1st November 2009 to 31st January 2010. Other week days were avoided to prevent interruption in routine of school going children.

Exclusion criteria: Adolescents above 19 years of age were excluded as they leave to pursue further training and education in social, vocational or professional streams according to their calibre.

Calibration of examiners: Examination for dental caries was done by four calibrated examiners. Consistency of examiners was checked before and during the study by re-examination of 5% cases.

Treatment provided: Oral prophylaxis of all the children above five years was done. Children who need further treatment were referred to People's College of Dental Sciences, Bhopal.

Data Analysis: Percentage & mean was calculated using SPSS v. 16.

Results

Out of 210 subjects, 150 who fulfilled the inclusion criteria were examined. Minimum age was $2^1/_2$ years and maximum age was 19 years. Maximum number of children belonged to age group 6-10 years (38.67%) with female predominance (38.67% males and 61.33% females) {table 1 and table 2}. Among males 56.90% and among females 53.26% had caries. Highest DMFT score (2.09) was found among 11-15 years old {table 3, table 4 & Figure 1}.

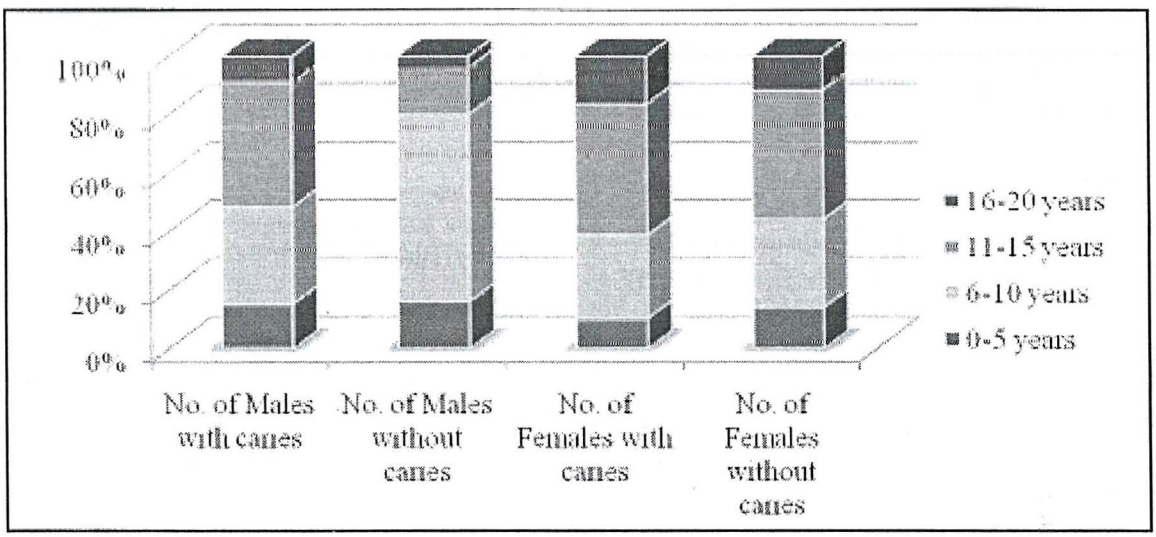


Figure 1: Distribution of caries according to gender in different age groups.

Discussion

Results of the present study show that mean DMFT and treatment need increases as the age advances. Overall mean DMFT for SOS children was 1.03. In the study conducted by McMohan et al mean DMFT value for 0-18 year old Cambodian orphans was 5.6[5]. Similar to that many studies shows obvious co-relation between social deprivation and high values of caries prevalence[2,3,6-11], which doesn't agree with our study at SOS children village. Our study reflects although deprived of parenthood, provided with long term family based care to parentless and homeless children and also to strengthen disadvantaged families and communities as a preventive measure against abandonment and social neglect of children, which might be the reason for the reduced dental caries prevalence among children at SOS.

Result of a study shows that 90.7% of girls in an orphanage of Mexico City had caries either in deciduous or in permanent dentition[10], which is quite high compare to our study. It may be due to the reason that girls at orphanage don't receive appropriate dental service, therefore they visit the dentist when they have pain or some serious dental problem. But SOS children's village of Bhopal is an adapted organization by our esteem institute. We provide them dental care time to time and preventive oral care on yearly basis.

Table 1: Distribution of children according to different age groups.

Age Group	No. of children (%)
0-5 years	20 (13.33%)
6-10 years	58 (38.67%)
11-15 years	56 (37.33%)
16-20 years	16 (10.67%)

Table 2: Distribution of children according to gender.

Gender	No. of children (%)
Male	58 (38.67%)
Female	92 (61.33%)

Table 3: Distribution of Caries according to gender in different age groups.

Age Group	No. of Males with caries	No. of Males without caries	No. of Females with caries	No. of Females without caries
0-5 years	5	4	5	6
6-10 years	11	16	14	13
11-15 years	14	4	22	19
16-20 years	3	1	8	5
Total	33	25	49	43

Table 4: DMFT/dft scores in different age groups.

Age Group	Decayed	Missing	Filled	DMFT	Mean DMFT	dft	Meandft
0-5 years	16	0	0	0	0	16	0.80
6-10 years	36	0	0	10	0.17	26	0.45
11-15 years	113	5	4	117	2.09	5	0.09
16-20 years	22	4	2	28	1.75	0	0
Total	187	9	6	155	1.03	47	0.31

Literature review shows that oral hygiene and dietary practices has an impact on caries activity[12]. Children participating in this survey being brought up in a confined environment by the same people, it is likely that their oral hygiene and dietary practices would be very similar. All children brush their teeth once daily in the morning and to gurgle mouth after last meal in night. This helped us in eliminating much diversity in the results.

Conclusion & Recommendations

Prevalence of dental caries and treatment need is low among children of SOS children's village compare to other orphaned children. But the point which we need to consider here is there are only few programmes focused on combating oral health problems of deprived children. We propose to implement in our preventive program a consciousness raising campaign, focusing oral health as an integral part of general health in optimum.

Acknowledgement

Regardless of fear for dental check up and treatment the children at SOS encountered, they all left us with a smile on their face and a gratuitous bow. We found the gesture extremely uplifting and gave us a sense that our work was meaningful.

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-- Chief Editor