

## ASSESSMENT OF ORAL HEALTH STATUS AND TREATMENT NEEDS OF CHILDREN RESIDING IN ORPHANAGE HOME IN CENTRAL INDIA – A CROSS SECTIONAL STUDY.

Dr.Sweta R Gandhi<sup>1</sup>, Dr.Rahul Gandhi<sup>2</sup>.

Sr.Lecturer<sup>1</sup>, Reader<sup>2</sup>.

Dept. of Public Health Dentistry, VSPM Dental College, Nagpur<sup>1</sup>, Dept. of Oral Medicine Diagnosis Radiology, Saraswati Dhanwantari Dental College Hospital & Post Graduate Research Institute, Parbhani<sup>2</sup>, Maharashtra, India.

### Abstract:

**Introduction:** Dental caries and periodontal diseases are widespread and virtually everybody suffers from them. This is particularly among underprivileged groups in both developing and developed countries. Groups of people such as socially handicapped and orphaned children are often denied access to oral health information and knowledge due to a number of reasons. Children from orphanages have shown a high prevalence of dental caries, gingivitis and dental trauma. Hence, the aim of the study was assessment of oral Health Status and Treatment Needs of children residing in orphanage home in central India – a Cross Sectional Study.

**Methodology:** 66 Children aged 5-18 yrs were selected as study population after informed consent. Caries was assessed using DMFT/deft Index, Dental calculus using OHI-S Index, Gingivitis using Gingival Index, Periodontitis using CPITN Index, Malocclusion using Index of Orthodontic Treatment Need (IOTN) Index.

**Results:** Majority of the children suffered from Dental Caries, followed by Dental Calculus, gingivitis, periodontitis and Malocclusion respectively.

**Conclusion:** This community clearly experiences low utilization of preventive or therapeutic oral health services and very poor accessibility and availability of any oral health care. Hence training regarding how to maintain good oral hygiene and educational programs should be conducted for primary care givers and supporting staff of the orphanages so that they can guide the students.

**Key Words:** Orphanage, Treatment needs, Oral Health Status

**Introduction** – Good oral health is an integral component of good general health. Although enjoying good oral health includes more than just having healthy teeth, many children have inadequate oral and general health because of active and uncontrolled caries.<sup>[1]</sup> Dental caries and periodontal diseases are widespread and

virtually everybody suffers from them. This is particularly among underprivileged groups in both developing and developed countries.<sup>[2]</sup> Groups of people such as socially handicapped and orphaned children are often denied access to oral health information and knowledge due to a number of reasons such as parental

inadequacy, environmental deprivation, and emotional disturbances. Parents are primary caretakers and saviors of the child but woefully thousands of children have to lead their life

without parents, the later either being dead or incapable of bringing up their children, such section of society is called as 'Orphans' [3]. Children from orphanages have shown a high prevalence of dental caries, gingivitis [4], and dental trauma [5]. This has been attributed to overcrowding, lack of adequate staff, poor oral hygiene, and improper dietary habits. It is the responsibility of the community to provide support to orphans. Hence, implementation of prevention oriented comprehensive dental health care programs could help in reducing the burden of oral diseases. Hence the Aim of the study was assessment of oral Health Status and Treatment Needs of children residing in orphanage home in central India – a Cross Sectional Study.

#### **METHODOLOGY:**

**Materials and methods-** A cross-sectional study was conducted to assess the oral health status and treatment needs of orphan children and adolescents residing at Shraddhanand Anathalaya, shraddhanand peth, Nagpur India. Caries was assessed using DMFT/deft Index, Dental calculus using OHI-S Index, Gingivitis using Gingival Index, Periodontitis using CPITN Index, Malocclusion using Index of Orthodontic Treatment Need (IOTN) Index.

**Study population-** All the children aged 5-18 yrs who gave informed consent were selected as study population.

**Sampling design-** All the children residing at the orphanage present on that day formed the study population. Official permissions were taken from the Ethical Committee and also from the authorities of the Shraddhanand

Anathalaya.

**Inclusion criteria -** All inmates both boys and girls residing in the orphanage available during the study

#### **Exclusion criteria-**

1. Children who didn't give informed consent
2. Physically and mentally handicapped children

**Sample size-** There were total 130 available subjects out of which 66 fulfilled the criteria, which constituted the final sample size.

#### **Methodology-**

**Calibration-** Before the start of the study, the examiner was trained in the Department of Public health dentistry, VSPM Dental College and Research centre, Nagpur.

The subjects were examined using mouth mirror, probe, Explorer, CPITN Probe and adequate sterilization was maintained. They were demonstrated the proper technique of tooth brushing. They were also given oral health talk which consisted of how to maintain good oral hygiene and preventive measures for caries and periodontal disease.

**Statistical analysis-** Frequency distribution tables were drawn for the related data.

#### **Results-**

**Table -1: Shows total male and female subjects (n) constituting the study population**

Total population (n)	66
Male (n)	23
Female (n)	43

**Table -2: Mean age of the study population**

	Mean $\pm$ SD
Male	12 $\pm$ 3.5
Female	14 $\pm$ 3.9

**Table -3: shows the study population affected by various Dental Diseases:**

Total subjects screened(n)	66
Total subjects referred to college for further treatment(n)	56
subjects with caries(n)	29
subjects with malocclusion(n)	8
subjects with periodontitis(n)	13
subjects with caries and Periodontitis both (n)	23
subjects with Gingivitis (n)	17
subjects with Dental Calculus (n)	28

**Discussion-** The main purpose of this study was to assess oral health status and treatment needs of children living in Orphanage houses toward preventive oral health measures. Socially handicapped children are those who lack parental care and support. They are neglected and lack basic information, motivation, and supervision provided by parents, especially in the initial days of their childhood. Therefore, the knowledge and information regarding oral healthcare maintenance for these children should be provided by the authorities of the orphanage.

When asked, maximum number of children believed that brushing is the only and best method to findings were noted in previous studies done by Russel *et al.*,<sup>[6]</sup> Al-Sadhan,<sup>[7]</sup> and Al- Ansari *et al.*,<sup>[8]</sup> Children did not know about other aids (like floss, mouth rinse, regular dental visit, and fluoride supplements) and their efficacy in preventing caries and maintaining oral health. This clearly shows that knowledge regarding oral health and its maintenance is poor in children and appropriate action is required. All the children of orphanages were school going. The school population of today is the adults of tomorrow; so they should be educated in such a way that, a sense of responsibility may develop in them about oral health. Studies on oral health status and dental education of children at an early age, helps in improving preventive dental behavior and attitudes, which is beneficial lifelong. The schools may serve as the best platform for promotion of oral healthcare among children. The oral health education programs should be taken frequently to promote oral healthcare as a lifelong practice. In a study on orphans in Romania,<sup>[5]</sup> majority of the children (97%) under the age of six years and 86% of the children over six years were caries free with a mean DMFT/dmft of zero, though there was high prevalence of gingivitis and dental Calculus. In this study subjects were more prone to caries may be due to snacking habits. The diet of children in orphanages in India tends to be non-cariogenic where the food provided covers the three basic meals in a day. Studies from India have shown that in orphanages majority of the children are malnourished.<sup>[9]</sup> Early childhood malnutrition has shown to be associated with caries in primary dentition,<sup>[9]</sup> <sup>[10]</sup> though its association with permanent dentition has not been substantiated.

Further studies evaluating the clinical consequences of untreated caries and quality of life of children residing in orphanages should be done to understand and plan for preventive and treatment programs at large. Inadequate sample can be considered as a limitation of this study. However, since the study group comprised of disadvantaged children, it was not considered ethical to further create a group who would not receive oral health care.

**Conclusion-** Death or abandonment of one or both parents makes children suffer from various psychological stigma. And thus, orphaned children are especially vulnerable and are potentially at an increased risk of poor health. The unmet needs for decayed teeth were also found to be high indicating a very poor accessibility and availability of any oral health care. Clearly it can be concluded that this community has experienced a low utilization of preventive or therapeutic oral health services. The point is to begin to identify the factors generating and maintaining inequalities and their implications in terms of policy and service deliveries. In short, information on oral health and its maintenance plays a vital role in maintaining disease-free oral cavity. Along with knowledge, positive attitude, and supervised practice, can bring drastic improvement in oral health. In the present study, although children had a positive attitude, they lacked knowledge and practical application. To correct this, we recommend the following:

#### **Recommendations-**

- Training regarding how to maintain good oral hygiene and educational programs should be conducted for primary care givers

and supporting staff of the orphanages.

- Oral health education and screening camps should be conducted on regular basis for these children by dental health professionals.
- The students should be encouraged to take responsibility for their own oral health and not to be completely dependent on oral health personnel.
- Oral health education activities should be incorporated into a school's curriculum in the form of educational materials and health promotion activities.

#### **References-**

1. McDonalds, Avery, Dean. Dentistry for the child and adolescent. 8<sup>th</sup> ed. Elsevier: Mosby; 2004. p. 205.
2. Petersen PE. The World Oral Health Report 2003: Continuous improvement of oral health in the 21st century – the approach of the
3. WHO Global Oral Health Program. Community Dent Oral Epidemiol. 2003; 31(Suppl 1):3–23.
4. Orphanage [Internet]. Wikipedia, the free encyclopedia.mht. Available at: <http://www.en.wikipedia.org/wiki/wikipedia>
5. Dixit S, Chaudhary M, Singh A. Molluscum contagiosum and dental caries: A pertinent combination. J Indian Soc

Pedod Prev Dent 2009; 27:197-201.

6. Sullivan EA, Stephens AJ. The oral and dental status of children residing in a Romanian orphanage. *Int J Paediatr Dent* 1997; 7:41-2.
7. Russel BA, Horowitz AM, Frazier PJ. School-based preventive regiments and oral health knowledge and practices of sixth graders. *J Public Health Dent*. 1989; 49:192– 200.
8. Al-Sadhan SA. Oral health practices and dietary habits of intermediate school children in Riyadh, Saudi Arabia. *Saudi Dent J*. 2003; 15:81–7.
9. Al-Ansari JM, Al-Jairan LY, Gillespie GM. Dietary habits of the primary to secondary school population and implications for oral health. *J Allied Health*. 2006; 35:75–80.
10. Chabbra P, Garg S, Sharma N, Bansal RD. Health and Nutritional status of boys aged 6-12 years in a children observation home. *Indian J Public Health* 1996; 40:126-9.
11. Psoter WJ, Reid BC, Katz RV. Malnutrition and dental caries: A review of literature. *Caries Res* 2005; 39:441-7.

**Corresponding Author Details:**

Dr.Sweta R Gandhi, Sr. Lecturer,  
Department of Public Health  
Dentistry VSPM Dental College,  
Nagpur, Maharashtra, India.