

ORIGINAL ARTICLE

Oral and Dental Health Status in Orphan Children of Lucknow

Arpita Mohan¹, Neeta Misra², Deepak Umapathy³, Shiva Kumar⁴, Deepak Srivastav⁵, Uday Mohan⁶

¹MDS Student, ²Professor and Head, ^{3&4}Professor, Department of Oral Medicine and Radiology, BBD College of Dental Sciences, Lucknow, Uttar Pradesh, ⁵Assistant Professor, Department of Orthopaedics Surgery, Hind Institute of Medical Sciences, Barabanki, UP, ⁶Professor and Head, Department of Community Medicine & Public Health, K.G. Medical University, Lucknow, Uttar Pradesh, India

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Corresponding Author

Address for Correspondence: MDS Student, Department of Oral Medicine and Radiology, BBD College of Dental Sciences, Lucknow, Uttar Pradesh, India
E Mail ID: drarpitamohan@yahoo.in

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Abstract

Background: Orphans lack parental support and receive little oral health care. Therefore there is a propensity to develop a variety of oral lesions. Sometimes these lesions are exclusive to oral cavity or may present as an initial manifestation of a more complex underlying problem. **Objective:** This study hereby aims to compare the oral and dental health status of children living in orphanages and children living with their families. **Materials & Methods:** A cross sectional study was conducted in Lucknow city among children of age group 5-14 years living in orphanages and school children living with their parents of Lucknow city. A total of 80 orphan children and 80 school children of age group 5-14 years were taken for the study. To obtain the requisite number of school children, three schools of the similar socio economic strata as of orphanages were selected randomly from nearby area of orphanages. **Results:** About 21.8 percent school children were without any clinical finding whereas only 2.5 percent orphan children had no clinical finding. The hard tissue lesions were found in 83.7 percent while these were in 57.2 percent school children. The soft tissue lesions were found in 70.0 percent orphan children while these were in 31.2 percent school children. **Conclusions:** Majority of orphan children were suffering from oral and dental problem. Most common hard tissue finding was dental caries and soft tissue finding were Aphthous and Coated tongue in orphanages. Overall oral and dental health of orphan children were poorer than school children.

Key Words

Orphan; School Children; Aphthous Ulcer; Dental Caries

Introduction

An orphan is a child who has lost both parents or has been abandoned by them. Such children are deprived of the parental love and care which is received by those living with their parents. The orphans get little health care and oral cavity is the most neglected aspect of children living in orphanage. Oral diseases seriously impair quality of life in a large number of individuals and they may affect various aspects of life, including function, appearance, interpersonal relationships and even career opportunities. [1]

Oral Disease pattern is dependent on various socio-economic characteristics of the children and parents. Thus it can be hypothesized that the pattern of oral disease and quality of life would be different among children living with their parents and orphan children who do not have parents. [2]

Very few studies have been conducted on the oral alteration of orphans who constitute a deprived section of the society.

Aims & Objectives

This study hereby aims to compare the oral and dental health status of children living in orphanages and children living with their families.

Material and Methods

A cross sectional study was conducted in Lucknow city. Among children of age group 5-14 years living in orphanages and school children living with their parents. A list of registered orphanages was obtained. Of the 14 orphanages of Lucknow city out of these 1 is government orphanage, 6 orphanages are run by NGOs, 7 orphanages are private. Three orphanages were selected. First one was government based orphanage, second one was randomly selected from

the list of NGO governed orphanages, third one was selected randomly from list of private orphanages. A total of 80 orphan children of age group 5-14 years were taken for the study.

For the school children, three school of the similar socio economic strata as of orphanages were selected from nearby area of orphanages. An equal number of school children, of same age group and living with their families were taken.

Inclusion criteria were age group 5-14 years, cooperative children and living with their parents in case of school children. Exclusion criteria were children diagnosed as suffering from acute or chronic systemic diseases, behavioral disorders, psychological problems, having congenital anomalies, on medication and mentally disabled children.

The hard and soft tissues were extensively examined. All intraoral examinations were done using diagnostic instruments like mouth mirror, explorer and natural illumination after making the subject to sit comfortably on a chair. The instruments were disinfected using antiseptic solution. Photographs were taken when and where necessary. Clinical diagnostic criteria proposed by World Health Organization [3], Dentition Status and Treatment needs index [4] and Community Periodontal index for treatment needs [5] were followed for diagnosing various oral findings. The findings were later sorted, tabulated and analyzed to obtain the results.

The oral findings were divided into hard and soft tissue lesions. The hard tissue lesions observed in the children were Dental Caries, Dental Fluorosis, Fractures of teeth and others like Bruxism, Malocclusion (Crowding, Spacing, Excessive proclination, overlapping), Rotation, Malposition, Microdontia etc.

The soft tissue lesions included Aphthous Ulcers, Coated Tongue, Fissured Tongue, Bifid tongue, Partial Ankyloglossia and others like prominent circumvallate papillae, Generalized Chronic Gingivitis, Physiologic pigmentation, Linea Alba etc.

Results

It was observed that majority of children in orphanage were from 10-14 year age group (43.7 % male and 32.5% female) [Table 1]

About 45.0 percent male children living in orphanages were found to be suffering from dental caries while it was 25.0 percent among school children, similarly 25.0 percent male children of orphanages were without clinical finding while among school children it was 61.5 percent. Among female school children 45.0 percent were without clinical finding while it was 7.3 percent in orphans [Table 2]

Most common soft tissue lesions among orphan male children was coated tongue (45.0 %) and among orphan female children it was Aphthous Ulcer (30.0%).

About 67.5 percent male school children were without clinical finding while among female school children it was 88.0 percent. [Table 3]

Children living in Orphanages have significantly higher number of hard tissue lesion in comparison to school children (Odd's Ratio 4.49). Similarly Soft tissue lesions were also significantly higher in Orphan children. (Odd's Ratio 15.40) [Table 4]

Discussion

Studies linking familial conditions in childhood to oral health status are sparse. One such theoretical model has been proposed by Nicolau et al. who developed a model that included socioeconomic, biological, psychological and behavioral indicators in childhood and examined the associations between these factors and dental caries, [6] gingival bleeding [7] and traumatic injuries [8] in adolescents. Familial circumstances included socioeconomic indicators, family structure (nuclear, single parent, reconstituted family), parental support (trust, love, attention, and understanding) and discipline (strictness, punishment). Results showed that family structure was significantly associated with gingival bleeding and family structure and paternal discipline and support were associated with traumatic dental injury. Biological and socioeconomic status were associated with dental caries. [6, 7, 8]

In a study of Udaipur district dental caries in primary teeth was found to be 49.6% and in permanent teeth was 41. [9] The study concluded that this community has experienced a low utilization of preventive or therapeutic oral health services which in accordance with the findings of present study where also the dental caries was found to maximum among orphan children. This can be related to the fact that Orphanage children in India are usually taken care by NGOs or social workers who do not realize that dental care and oral health forms an integral part of children well-being.

Conclusion

Majority of orphan children were suffering from oral and dental problem. Most common hard tissue finding was dental caries and soft tissue finding were Aphthous and Coated tongue in orphanages. Overall oral and dental health of orphan children were poorer than school children.

Authors Contribution

AM: Overall research study viz. concept design, study formulation, data collection, data compilation, manuscript designing & writing etc, NM: Overall concept design & study formulation, DU: Development of diagnostic criteria, SK: Data compilation, UM: Overall study design & statistical analysis, DS: Manuscript editing

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Tables

TABLE NO. 1 AGE AND SEX DISTRIBUTION OF THE STUDY GROUPS

Age (years)	Sex	Orphanage Children		School Children	
		No.	%	No.	%
5-<10	Male	5	6.2	21	26.2
	Female	14	17.5	18	22.5
10-14	Male	35	43.7	19	23.7
	Female	26	32.5	22	27.5
		80	100.0	80	100.0

TABLE NO. 2 DISTRIBUTION OF HARD TISSUE FINDINGS IN ORPHANS AND SCHOOL CHILDREN

Sex	Name of Lesion	Orphanage Children		School children	
		No.	%	No.	%
Male	Dental Caries	18	45.0	10	25.0
	Fluorosis	3	7.5	0	0.0
	Fracture tooth	2	5.0	4	1.0
	Others	7	17.5	5	12.5
	No clinical finding	10	25.0	21	61.5
Female	Dental Caries	17	42.5	11	27.5
	Fluorosis	7	17.7	1	2.5
	Fracture tooth	4	10.0	3	7.5
	Others	9	22.5	7	17.7
	No clinical finding	3	9.2	18	45.0

TABLE NO. 3 DISTRIBUTION OF SOFT TISSUE FINDINGS IN ORPHANS & SCHOOL CHILDREN

Sex	Name of Lesion	Orphanages		School Children	
		No.	%	No.	%
Male	Aphthous Ulcer	4	10.0	0	0.0
	Coated tongue	18	45.0	6	15.0
	Fissured tongue	3	7.5	1	2.5
	Partial Ankyloglossia	0	0.0	0	0.0

Sex	Name of Lesion	Orphanages		School Children	
		No.	%	No.	%
	Bifid tongue	1	2.5	1	2.5
	Others	9	22.5	5	12.5
	No clinical finding	5	12.5	27	67.5
	Aphthous Ulcer	12	30.0	0	0.0
Female	Coated tongue	10	25.0	3	7.5
	Fissured tongue	4	10.0	0	0.0
	Partial Ankyloglossia	1	2.5	0	0.0
	Bifid tongue	0	0.0	1	2.5
	Others	8	20.0	8	2.0
	No clinical finding	5	12.5	28	70.0

TABLE NO. 4 RELATION BETWEEN ORAL / DENTAL PROBLEM WITH PHYSICAL ENVIRONMENT OF STUDY GROUPS

GROUP 1

Type of Lesion		Physical Environment				Odds Ratio	C.I.
		Orphanages		School children			
		No.	%	No.	%		
Hard tissue lesions	Present	67	83.7	41	51.2	4.90	2.34 – 10.25
	Absent	13	16.2	39	48.7		
Soft tissue lesions	Present	70	70.0	25	31.2	15.40	6.82 – 34.75
	Absent	10	10.0	55	68.7		