



M.C.E. Society's

# M.A. RANGOONWALA COLLEGE OF DENTAL SCIENCES & RESEARCH CENTRE, PUNE

- i) Recognized by the Government of India
- ii) Affiliated to the Maharashtra University of Health Sciences, Nashik.

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**As per the process of Institutional research clearance and publication (for short research studies)**

**Dr. Vanishree B K (Department of Pedodontics) Project 2020 (Short study)**

**Minutes of meeting research committee  
12/03/2020**

**Approval letter from Research Committee**

**Publication**




  
**PRINCIPAL**  
M. A. RANGOONWALA COLLEGE OF DENTAL  
SCIENCES & RESEARCH CENTRE, PUNE

**M .A. RANGOONWALA COLLEGE OF DENTAL SCIENCES  
AND RESEARCH CENTRE**

**DEPARTMENT:  
Pedodontics and Preventive Dentistry**

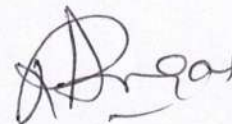
**SYNOPSIS OF SHORT STUDIES**

**TITLE OF STUDY:  
Evaluation of oral hygiene status and dental caries prevalence  
among healthy but post covid-19 diseased special  
care children in Pune city: An observation study**

  
**NAME OF STAFF: Dr Vanishree B K, Associate Professor**

**YEAR OF SUBMISSION: 2020**





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M. A. RANGOONWALA COLLEGE OF DENTAL  
SCIENCES & RESEARCH CENTRE, PUNE**

## **Introduction:**

The special care children are the ones who have lost both their parents and are socially economically depressed.<sup>1</sup> The exact numbers of them in India is unknown, but it can be around 2 million. Being special care children is one of the most important predictors of poor oral health as their child rarely gets an opportunity to seek dental care.<sup>2</sup> High prevalence of dental caries, gingivitis and dental trauma have been observed in special care children. Untreated oral disease could lead to general health problems, pain, interference in eating, loss in school time and also social unacceptability.<sup>3</sup> Oral health is an integral part of general health and quality of life, so its neglect will give rise to negative health consequences and unpleasant social life of the individuals. Many researchers have reported a compromised oral health in children and adolescents suffering from sociopaths.<sup>4</sup> This has been attributed to overcrowding, lack of adequate staff, poor oral hygiene, improper dietary habits, inadequacies in the orphanage system, and inadequacies in the health care system.<sup>5</sup> Studies reporting the oral health status of special care children is very scarce particularly in Western India.<sup>6</sup> Therefore the aim of this study was to assessing the oral health knowledge attitude and practice and to assess the dental caries status and treatment needs among the special care children of orphanage of Pune city, Maharashtra, India

## **AIM AND OBJECTIVES**

**AIM:** To understand the oral hygiene status and dental caries prevalence of special care children in Pune.

**OBJECTIVES:**

1. Assess the oral health knowledge, attitude and practice
2. Assess the dental caries status and treatment needs among the orphan children of orphanage of Pune city,

**NULL HYPOTHESIS :-** There is no oral health knowledge, attitude and practice among the orphan children of orphanage of Pune city,

## ALTERNATE HYPOTHESIS :- not applicable

### REVIEW OF LITERATURE

1. Dra. Guadalupe A. Camacho, Dra. Estela Camacho, Dr. Raúl A. Rodríguez, Dr. Adrián de J. Guillé, Dr. Hugo M. Juárez et al; Caries is a microbial disease in which teeth mineralization and integrity are compromised. The purpose of the study was to determine the prevalence and associated predisposing factors for dental caries in a population living in a government-operated girl orphanage. Methods: Dental examination was performed in eighty-six girls 6 to 11 years of age and a questionnaire was applied to assess oral hygienic habits of the girls. The sum of decayed, missing and filled teeth in the primary (deft) and permanent (DMFT) teeth was also assessed. A total of 90.7 % of the girls had caries in both dentitions. The deft was  $5.65 \pm 3.35$  and the DMFT was  $0.51 \pm 0.82$ . Most of the girls (62.8 %) showed poor oral hygiene, with a toothbrushing frequency of once per day. To the question: "How many times do you eat something sweet between meals?" 44.19 % answered more than 10 times per day. The present study found that defective oral hygiene, toothbrushing once per day and consumption of more than 6 sweets per day are predisposing factors for the presence of dental caries.
2. Shah af, tangade p, ravishankar tl, tirth a, pal s, batram, et. Al. documented that the absence of family support influences the general and oral health of the children. Factors that lead to the development of disease at a given point in time are likely to have their roots in a complex chain of environmental events that may have begun years before. This study was carried out with the aim to assess the dental caries status of institutionalized orphan children from Jammu and Kashmir. A total of 1,664 children that included 1,201 boys and 463 girls from registered orphanages in the state of Jammu and Kashmir were included in the study. Written informed consent was obtained prior to the start of the study; decayed, extracted, filled teeth (deft)/ decayed, extracted, filled surface (defs) and

decayed, missing, and filled teeth (DMFT)/decayed, missing, and filled surface (DMFS) indices were used to assess the caries status of primary and permanent dentition. Multiple choice, close-ended questionnaires were administered to assess the oral hygiene habits, knowledge, and dietary behavior of orphan children prior to examination. The study subjects were divided into three groups according to the age of  $\leq 6$ , 7 to 11, and  $\geq 12$  years. Results showed that caries prevalence in primary dentition was higher in subjects'  $\leq 6$  years of age where the prevalence was 50.9%; in subjects 7 to 11 years of age, the prevalence was 25.2%. Caries prevalence in permanent dentition within the age group 7 to 11 was 69.1%, while in subjects'  $\geq 12$  years, the prevalence was 66.2%. Use of toothbrush was the most prevalent method of cleaning the teeth in both the genders, while toothpaste was reported to be the most prevalent material to be used for tooth cleaning followed by tooth-powder. Highest caries prevalence was seen in the subjects using datun sticks as a method to clean their teeth (80.5%).

3. Shanbhog r, godhi bs, nandlal b, kumar ss, raju v, rashmi s, et.al To determine the prevalence and severity of oral condition related to untreated dental caries with PUFA index and to relate period of institutional stay, oral hygiene practice and diet of orphan children to caries experience ratio. A cross sectional survey conducted among 488 children of 12-14 years living in 5 different orphanages of Mysore district, India. Data regarding oral hygiene practices and oral health status (PUFA, DMFT, OH I-S and GI) were collected through structured questionnaire and by type III clinical oral examinations. The collected data were processed statistically. The PUFA ratio indicates 21% of decayed component had progressed to pulp involvement and abscess formation. The overall prevalence of PUFA was 37.7%. 31.1% children showed one or more pulpal involved tooth in their oral cavity. Correlation between periods for being the child in the institute to DMFT showed negative value indicting decrease in DMFT as the duration of stay in orphanage increases. The result show oral health condition in orphan children was neglected. Children from this disadvantaged background have shown a high prevalence of dental caries with low dental care utilization. PUFA index is an effective index in evaluating clinical consequences of un-treated caries

## **MATERIALS AND METHOD**

**STUDY DESIGN** :- **An observation study**

**PLACE OF STUDY** :- **Orphanage of Pune city, Maharashtra, India.**

**STUDY PERIOD** :- **12 months**

**SAMPLE SIZE** :- **400 children**

### **Inclusion and exclusion criteria's**

#### **Inclusion criteria's**

1. Age group below 6 years, 6-13 years, and above 13 years.
2. People willing to participate.

#### **Exclusion criteria's**

1. Mentally challenged people not willing to participate.
2. Physically challenged people not willing to participate.

## **Method AND STATISTICS**

A questionnaire study was conducted among the special care children the Western Maharashtra region. The study was aimed to understand the oral hygiene status and dental caries prevalence of special care children in Pune. The input parameters for sample size calculation were as follows: 80% power of the study, alpha error 0.05, effect size 0.5, and degree of freedom as 5. The calculated sample size was 388 using G\*Power software version 3.1.9.2 (Heinrich Heine University, Düsseldorf). The final considered sample size was around 400. The SOC- related data was obtained using the convenient sampling technique. A questionnaire was pretested and validated among 20 subjects to check reliability and validity and these subjects were not included in final analysis. Then dental checkup and treatment camp was organized among special care children. Demographic and observational data collected which consisted of DMFT, DMFS, OHI-S and oral lesions of special care children. Informed consent was taken from all the participants and a brief introduction was given about the study. Data collected were entered in a spreadsheet (Microsoft Excel 2018). Statistical analysis was done using descriptive statistics using Statistical Package for the Social Science (SPSS) 23.0 version software (IBM Chicago, Illinois, United States). The p-value was set at 5%.



## REFERENCES

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Ref. No. : MARDC / Admin / BORS / 2020

Date : 12/03/2020

### Minutes of meeting

Due to COVID-19 epidemic the Meeting of the Research Committee will be held online through zoom meeting, Dr Ramandeep Dugal Chairman of Research Committee will chair the meeting.

#### The following members have attended the meeting (Online)

1. Dr. Dr Ramandeep Dugal (Chairman) *ADugal*
2. Dr. Vivek Hegde (Vice-Chairman) *VHegde*
3. Mr. Ajit V. Koshy (Member) *AJKoshy*
4. Dr. Salika Sheikh (Member) *SSheikh*
5. Dr. Salil Nene (Member) *SNene*
6. Dr. Yusuf Chunawala (Member) *YChunawala*
7. Dr Amisha Shah (Member) *AShah*
8. Dr. Rashmi Hegde (Member) *RHegde*
9. Dr. Nikhil Deewan (Member) *NDeewan*
10. Dr. Farha Rizwan (Member & Ethics Secretary) *FRizwan*

#### Agenda No. 1: To approve short studies of researchers (UG, PG & Faculties of MARDC)

- A total of 13 researchers (UG, PG & Faculty) who have done a short study have presented their topics in front of research committee members. Each research committee member critically analyzed the research proposals and relevant comments and corrections were given for the same.
- Unanimously the members have approved both research proposals, presented by a Researcher of M.A.R.D.C



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Ref. No. : MARDC /BORS/SS/06/Approval/2020

Date :

### Approval letter for Research (Short study)

Dear Dr. Vanishree B K,

Department of Pedodontics & Preventive Dentistry.

The research committee is pleased to inform you that your research proposal titled "*Evaluation of oral hygiene and dental caries prevalence among healthy but post COVID-19 diseased special care children in Pune city*" has been approved by the Research Committee (RC) MARDC, Pune.

Member  
Research Committee



Principal  
MARDC, PUNE

M. A. RANGOONWALA COLLEGE OF DENTAL  
SCIENCES & RESEARCH CENTRE, PUNE

**Evaluation of oral hygiene status and dental caries prevalence among healthy but post covid-19 diseased special care children in Pune city: An observation study**

<sup>1</sup>Dr Vanishree BK, Associate Professor, Department of Pedodontics, M. A. Rangoonwala college of Dental Sciences and Research Centre, Pune, Maharashtra, India

<sup>2</sup>Dr. Renuka Nagrale, Professor and Head, Department of Public Health Dentistry, M.A. Rangoonwala College of Dental Sciences and Research Centre, Pune, Maharashtra, India.

<sup>3</sup>Dr. Yusuf Chunawala, Professor and Head, Department of Pedodontics, M.A. Rangoonwala College of Dental Sciences and Research Centre, Pune, Maharashtra, India.

<sup>4</sup>Dr.Mandar Todkar, Associate Professor, Department of Public Health Dentistry, M.A. Rangoonwala College of Dental Sciences and Research Centre, Pune, Maharashtra, India.

<sup>5</sup>Harun Mulani, Undergraduate Student, M.A. Rangoonwala College of Dental Sciences and Research Centre, Pune, Maharashtra, India.

<sup>6</sup>Sana Kausar Shaikh, Undergraduate Student, M.A. Rangoonwala College of Dental Sciences and Research Centre, Pune, Maharashtra, India.

**Corresponding Author:** Dr Vanishree BK, Associate Professor, Department of Pedodontics, M. A. Rangoonwala college of Dental Sciences and Research Centre, Pune, Maharashtra, India

**Citation this Article:** Dr Vanishree BK, Dr. Renuka Nagrale, Dr. Yusuf Chunawala, Dr. Mandar Todkar, Harun Mulani, Sana Kausar Shaikh, "Evaluation of oral hygiene status and dental caries prevalence among healthy but post covid-19 diseased special care children in Pune city: An observation study", IJMSIR- August - 2023, Vol - 8, Issue - 4, P. No. 122 - 126.

**Type of Publication:** Original Research Article

**Conflicts of Interest:** Nil

**Abstract**

**Introduction:** This study had twin objective of assessing the oral health knowledge, attitude and practice and to assess the dental caries status and treatment needs among the orphan children of orphanage of Pune city, Maharashtra, India

**Materials and methods:** this cross- sectional study was carried out on 400 children to assess the oral health knowledge, attitude and practices of children and adolescents of special care children's in Pune city, Maharashtra, India. The data was collected on a pre-

tested questionnaire which included 10-15 closed ended multiple-choice questions on perceived oral health status, knowledge of oral health and attitude, oral health practices, dietary habits and behavior towards dental treatment. The reliability and validity of the questionnaire were calculated.

**Results:** out of 400 study population oral hygiene index was fairly good for 340 special care children and whereas 60 students oral hygiene status was poor. The dental caries prevalence is seen more in smaller age groups than