

**Knowledge, attitude and practice of parents towards children's home oral care during covid 19 pandemic- A cross sectional study.**<sup>1</sup>Dr. Saranya P Thankachan, Post Graduate Student, Dept. Of Pediatric and Preventive Dentistry Annoor Dental College.<sup>2</sup>Dr. Joby Peter, Professor, Guide Head of the Dept. Of Paediatric and Preventive Dentistry Annoor Dental College.<sup>3</sup>Dr. Tharian B Emmatty, Professor, Dept. Of Pediatric and Preventive Dentistry Annoor Dental College.<sup>4</sup>Dr. Bijimol Jose, Professor, Guide, Dept. Of Pediatric and Preventive Dentistry Annoor Dental College.<sup>5</sup>Dr. Kumar Kavita Krishna, Professor, Dept. Of Pediatric and Preventive Dentistry Annoor dental college.<sup>6</sup>Dr. John Joseph Methippara, Reader, Dept. Of Pediatric and Preventive Dentistry Annoor Dental College.<sup>7</sup>Dr. Ronin Sebastian, Reader, Dept. Of Pediatric and Preventive Dentistry Annoor Dental College.**Corresponding Author:** Dr. Saranya P Thankachan, Post Graduate Student, Dept. Of Pediatric and Preventive Dentistry Annoor Dental College.**Citation of this Article:** Dr. Saranya P Thankachan, Dr. Joby Peter, Dr. Tharian B Emmatty, Dr. Bijimol Jose, Dr. Kumar Kavita Krishna, Dr. John Joseph Methippara, Dr. Ronin Sebastian, "Knowledge, attitude and practice of parents towards children's home oral care during covid 19 pandemic- A cross sectional study", IJDSIR- August - 2022, Vol. – 5, Issue - 4, P. No. 172 – 178.**Copyright:** © 2022, Dr. Saranya P Thankachan, et al. This is an open access journal and article distributed under the terms of the creative commons attribution non-commercial License. Which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.**Type of Publication:** Original Research Article**Conflicts of Interest:** Nil**Abstract****Aim:** To assess the Knowledge, attitude and practices of parents toward their children's oral health care during COVID-19 pandemic.**Methodology:** A total 50 parents were randomly chosen for the sample of the current cross-sectional study from among those who visited the outpatient department after providing their informed consent. A structured 20 item questionnaire was used to assess the knowledge, attitude and practice of parents toward their child's oral care during COVID-19 pandemic. The collected data were analyzed using Pearson Chi-square test using SPSS version 26.**Results:** A total of 50 parents participated in the study. During Covid 19 pandemic period, only 16% of parents had taken their children to dental clinics. 44% of the parents reported that their child's last dental visit was within less than 6 months. Statistically significant difference was observed among the response to the question regarding diet during covid 19 frequency. Out of the 50 respondents, 60% reported there is no change in child's oral hygiene during the lockdown and 30% respondents reported an improvement in child's oral hygiene and only 10% had an opinion that the child oral hygiene got worsened. there was no association between

Child oral hygiene during lockdown and taking extra steps to improve oral hygiene, (P value<0.05)

There are 29 children are complained about toothache during the lockdown Most of the parents used some home remedies to reduce the child toothache and around 41% of the parents used self-medication form pharmacy. Only 6.9% parents consulted dentist through telephone. There was an association between knowledge about fluoride content in toothpaste and knowledge of importance of fluoridated toothpaste.

**Conclusion:** A significant number of parents were still unaware regarding knowledge and attitude toward the oral health, their child's dental need, availability of emergency services and importance of maintaining oral health during lockdown period in COVID-19 pandemic as well as importance of regular dental check-up for their children. Frequency of dental visit was reduced during lockdown period in COVID-19 pandemic.

**Keywords:** Covid 19, Dentist, Dental visit, Oral hygiene, Paediatric dentist.

## Introduction

The ideal that a pediatric dentist should strive to achieve is the prevention of dental diseases in children. When there is a health emergency, like the one we are currently experiencing, this becomes even more important.<sup>[1]</sup>

The WHO designated the COVID-19 epidemic as a Public Health Emergency of International Concern.<sup>[2]</sup>

Since no effective therapy has been developed to stop the transmission of disease among large populations, some nations targeted the prevention of spread by announcing a state of lockdown. Due to the heightened risk of disease transmission associated with the dentistry profession, elective dental services have been severely limited, which has had an impact on the general population's need for dental care. Children are bound to home for a prolonged period of time because of numerous regulatory

restrictions that the government has imposed. Children's eating habits may have changed as a result of this. Children now have a tendency to eat more frequently, and the presence of refined carbs in those snacks is concerning. Due to concerns about infection and the official lack of dental services in many regions, Patients in need of pediatric dental care were also forbidden from seeing a pediatric dentist. Due to COVID regulations, the majority of parents missed their regular dental check-ups. Dental professionals are provided with precise protocols for both emergency and non-emergency dental care.<sup>[3]</sup>

This questionnaire study was hence planned to assess the improvement in home oral care measures by parents towards dental care in their children who are mostly restricted to home these days.

## Methodology

### Study design and sample size

According to the "Strengthening the Reporting of Observational Studies in Epidemiology" recommendations, the current cross-sectional study was carried out (STROBE statement). 50 parents in total were chosen for the sample from the outpatient Pedodontics and Preventive Dentistry Department.,

Annoor dental college and hospital, Muvattupuzha after obtaining informed consent from the participants. The study was conducted for a duration of 6 months from September 2021 to February 2021. With a 95% confidence level and a 5% margin of error, the sample size was estimated. The sample included parents of paediatric patients reported for dental treatment. Parents of children aged up to 12 years and willing to participate in the study were included and those Parents who were not able to read questions by their own were excluded.

### Validation of questionnaire

In both English and Malayalam, a self- instructing questionnaire was created. The questionnaire was

pretested on 20 people as a pilot study before being validated using the Kappa test.

### Procedure

Following validation and a brief description of the survey's goals, participants were given a structured questionnaire.

A structured questionnaire containing 20 questions in English or Malayalam will be filled by the Parents individually. Among these ,3 questions were based on knowledge to assess the importance of regular dental check-up ,12 questions were based on Attitude and rest of the questions were based on practice of parents in maintaining oral hygiene of their children during COVID-19 lockdown period. All the assessments will be made by one examiner. Each question had a number of possible answers, and participants were asked to check the one they thought was most appropriate.

### Statistical analysis

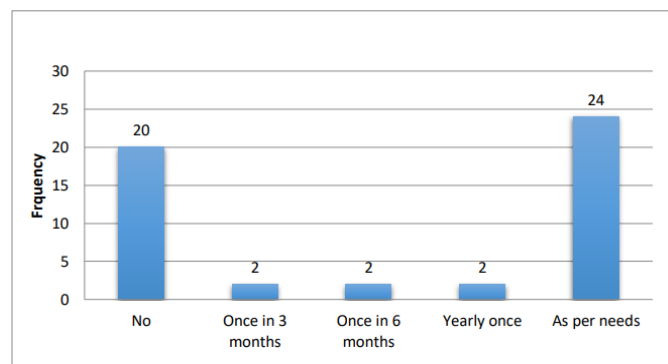
SPSS version 26 was used to statistically analyze the data (IBM Corp, Armonk, NY, USA). To examine whether there were statistically significant differences between the variables, the chi-square test was utilized.  $P < 0.05$  was chosen as the statistical significance threshold.

### Results

50 parents participated in the study, and their ages ranged from 30 and up, with a mean age of 35.4 5.2 years. In the present study prior to covid 19 pandemic 44% visited dental clinic for regular dental check-up for their children, while 56% doesn't have regular dental visit.

Regarding the frequency of regular dental check-up among all the patients 39.2% doesn't have any regular dental check-up,3.9% have regular dental visit once in 3 months, once in 6 month and yearly once respectively.48 % visits dental clinics when their child demands as shown in the graph 1.

Graph 1: Frequency of regular dental check-up before and after COVID -19 pandemic



During Covid 19 pandemic period, only 16% of parents had taken their children to dental clinics. 44% of the parents reported that their child's last dental visit was within less than 6 months and 56% of the parents had their child visited a dentist more than 6 months. Regarding the diet during Covid 19, there was an increase in the eating habit in 68% of the children while in 10% frequency of eating was decreased and in 22% there was no much changes noticed.

Statistically significant difference was observed among the response to the question regarding diet during covid 19 frequency. Out of these 34 children, 50% specifically ate more snacks foods, 38.2% increased their sugar consumption and around 12% of the children consumed more fruits and nutritious foods.

Out of the 50 respondents, 60% reported there is no change in child's oral hygiene during the lockdown and 30% respondents reported an improvement in child's oral hygiene and only 10% had an opinion that the child's oral hygiene got worsened as represented in graph 2.

Table 1 shows the association between Child oral hygiene during lockdown and taking extra steps to improve oral hygiene Out of 50 participants,

There are 31 respondents taking extra steps to improve oral hygiene, from that 38.7% respondents improved oral hygiene during lockdown. There was no statistically significant association between child oral hygiene and

extra steps taken to improve oral hygiene. 74.2% of the 31 respondents promoted their ward to do twice brushing a day, 54.8% of the 31 respondents instructed to rinse well after each meal and 9.7% promoted to use the mouth washes.

Graph 2: opinion about child oral hygiene during lockdown.

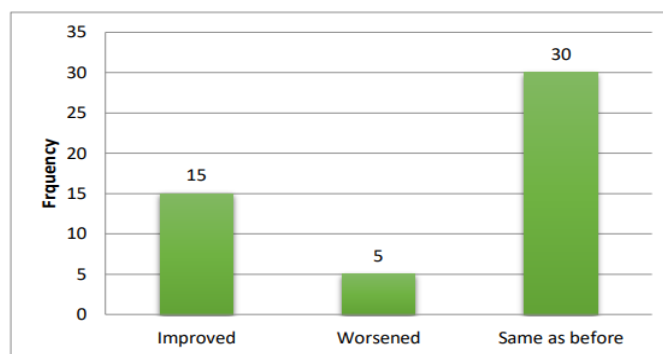


Table 1: association between Child oral hygiene during lockdown and taking extra steps to improve oral hygiene

Taking extra steps to improve oral hygiene	Child oral hygiene during lockdown			Total	Pearson Chi-Square	P value
	Improved	Worsened	Same as before			
Yes	12 (38.7%)	2 (6.5%)	17 (54.8%)	31	3.452	0.178
No	3 (15.8%)	3 (15.8%)	13 (68.4%)	19		
Total	15	5	30	50		

Test applied : Chi square test

\*p-value<0.05statisticallysignificant

There are 29 children are complained about toothache during the lockdown Most of the parents used some home remedies to reduce the child toothache and around 41% of the parents used self-medication form pharmacy. Only 6.9% parents consulted dentist through telephone and 3.4% consulted medical practitioner in hospitals. Table 2 shows the 15 5 30 0 5 10 15 20 25 30 35 Improved

Worsened Same as before Frquency association between taking extra steps to improve oral hygiene and knowledge about fluoride content in toothpaste. There are 31 respondents taking extra steps to improve oral hygiene, from that 67.7% respondents don't have idea about fluoride content in toothpaste.

Table 2: association between taking extra steps to improve oral hygiene and knowledge about fluoride content in toothpaste.

Taking extra steps to improve oral hygiene	Aware of fluoride content in toothpaste		Total	Pearson Chi-Square	P value
	Yes	No			
Yes	10 (32.3%)	21 (67.7%)	31	0.734	0.392
No	4 (21.1%)	15 (78.9%)	19		
Total	14	36	50		

Test applied: Chi square test

\*p-value<0.05statisticallysignificant

Table 3 shows association between knowledge about fluoride content in toothpaste and knowledge of importance of fluoridated toothpaste.

**Table 3 shows association between knowledge about fluoride content in toothpaste and knowledge of importance of fluoridated toothpaste.**

<i>Aware of fluoride content in toothpaste</i>	<i>Aware of importance of fluoridated tooth paste</i>		<i>Total</i>	<i>Pearson Chi-Square</i>	<i>P value</i>
	<i>Yes</i>	<i>No</i>			
<i>Yes</i>	10 (71.4%)	4 (28.6%)	14	12.139**	0.000
<i>No</i>	7 (19.4%)	29 (80.6%)	36		
<i>Total</i>	17	33	50		

Test applied : Chi square test

\*p-value<0.05statisticallysignificant

## Discussion

Almost every aspect of a person's life has been impacted by COVID-19, including their income, education, way of life, and—most significantly—their need for medical care. Due to the lack of health care services offered during the lockdown and patients' fear of getting an infection, patients' needs for health care have been significantly impacted. However, during this time, it was observed that parental attitudes and the effectiveness with which the current situation was dealt with varied depending on a number of variables, including awareness level, socio economic class, service accessibility, and understanding of the gravity of any condition. Parents of children who needed dental care during the COVID-19 pandemic lockdown period noted one such problem in the current study In order to develop preventative strategies, it is necessary to evaluate the current levels of parental awareness, attitude, and practice towards the maintenance of oral hygiene for their children. Anxiety with COVID-19 was shared by almost all parents, and this concern persisted. According to a study by Karacin et al., people shunned medical care out of concern that they would get COVID 19, which could raise their risk of developing major health problems in the near future.<sup>[4]</sup>

Similar findings from a study by Collet et al., in which 46% of the study sample reported they were staying at home rather than going to the doctor or the dentist, were also published. This was supported by the fact that the vast majority of patients utilized tele dental care to administer prescriptions throughout the lockdown period, preventing exposure. <sup>[5,6]</sup> The regular use of fluoride toothpastes is the most efficient way to provide fluoride. The current findings, however, imply that parents appear to be unaware of fluoride and its implications for children's oral health. There are 31 individuals who go above and beyond to maintain good oral hygiene, however 67.7% of those respondents are unaware of the fluoride level of toothpaste. Fluoride helps prevent the condition even if it does not cause caries when it is not consumed. This was comparable to the research by Suresh et al. and Moulana et al. <sup>[7, 8]</sup> There were few kids who brushed their teeth twice a day. Only 20% of parents said their kids used toothbrushes twice daily. According to Adair et al., kids who brush their teeth twice a day with fluoridated toothpaste, have active parental supervision, and live in environments with moderate sugar intake are more likely to be caries-free. <sup>[10]</sup>



The importance of present study is highlighted as significant lack of measures taken by parents for maintaining their child's oral hygiene. This could be also be attributed due to lack of awareness, fear of exposure, unavailability of dental services, during lockdown period. Most of them depend upon tele-dentistry for emergency management. However, the present study is not devoid of any limitations. some restrictions in the current study is that the study sample is representative of the general population at a city hospital that is centrally located, and as a result, the results may vary depending on the population's diversity in terms of COVID 19 containment zones, country, and socioeconomic strata. sample size was very less. Hence studies covering wider geographic areas and with larger number of sample sizes are recommended.

### Conclusion

- A sizable portion of parents were still ignorant of the value of routine dental check-ups for their kids as well as their knowledge and attitudes toward oral health, their child's dental needs, and the accessibility of emergency services, and the significance of maintaining oral health during the COVID 19 pandemic lockdown period.
- Dental visits decreased throughout the COVID 19 pandemic's lockdown period.
- It was discovered that toothaches were the main factor in dental visits.
- Tele dentistry became a popular way to reach dental surgeons during dental emergencies during the lockdown, and the majority of them avoided dental hospitals even during the pandemic out of fear of contracting an infection.
- Health care practitioners need to inform parents more about how to care for their children's oral health, particularly the usage of fluoride toothbrushes and the significance of routine dental appointments.

### Relevance of the study

- The current study emphasizes the necessity of raising parental awareness of the understanding and significance of deciduous teeth, as well as the significance of routine dental examinations in society and the necessity of maintaining their kid's oral health by implementing various oral hygiene practices.
- Parents who receive oral health education from dental professionals are more aware of the many dental caries-causing agents and the value of diet counselling, which includes limiting sugar intake and consuming a lot of fibre and fruit.
- There is a pressing need to improve tele dental care as it is helpful for future prevention and precaution in the event of a health crisis like the COVID 19 pandemic.

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