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Oral health problems and treatment seeking behavior of children during COVID 19 pandemic as perceived by parents- A cross sectional study

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ABSTRACT

Aims & Objectives: This study was designed to investigate the impact of COVID 19 pandemic on the oral health status and oral health care use of children from the perspective of parents. The sociodemographic factors that determined the oral health care use and oral health status of children were also investigated.

Background: The decreased health seeking behavior trends of parents during the pandemic could have had its effects on the present oral health problems of children because most of the oral health problems are cumulative in nature.

Materials and Methods: Designed as a hospital based cross sectional study, 187 parents of children between the age of 4 years and 13 years who reported to the out patient department of Pediatric and Preventive Dentistry were personally interviewed by the principal investigator using the prepared proforma and the data collected entered manually.

Results: The most common dental problems experienced by children was dental caries followed by tooth ache, swelling and irregularly or forwardly placed teeth. Majority of children who experienced dental problems during the pandemic did not seek treatment due to a variety of reasons. Those parents who didn't did not seek treatment during the pandemic reported that their fear of contracting the COVID-19 virus from care centres and other public places, lack of adequate transportation facilities due to lock down, restricted services offered by health care facilities, reluctance to make children undergo COVID screening and financial problems due to job loss or reduced salary prevented them from doing so.

Conclusion: The long term burden of neglected oral health on the social, financial and general well being of people especially children has been underestimated during the pandemic. Hence, better preparedness and intervention of the health care sector and policy makers in providing timely oral health care is warranted in the event of any untoward similar situations in future.

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1. Introduction

COVID 19 pandemic has had enormous impact on all realms of life world wide, since the World Health Organization declared the global spread of coronavirus disease 2019 a pandemic On March 11, 2020.¹ The effects on social, economic and health care domains are still under investigation in various parts of the world.

Social distancing and “stay at home” orders issued by the authorities restricted people to their homes causing remarkable variations in their health seeking behavior. Fear of disease transmission, restrictions imposed by the authorities affecting transportation and accessibility, health care facilities limiting their services to emergency care, mandatory viral screening before operative procedures, financial problems due to job loss or pay cut are some of the reasons that affected the health seeking behavior of people world wide. Poor health care seeking among patients has

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been linked to worse health outcomes.^{1,2} The oral health care of children is largely dependent upon the attitudes and beliefs of parents. It is logical to assume that the decreased health seeking behavior trends of parents during the pandemic could have had its effects on the present oral health problems of children because most of the oral health problems are cumulative in nature.³ However, there is no major published evidence available regarding the impact of COVID-19 pandemic on the oral health status in India.

This study was designed to investigate the impact of COVID 19 pandemic on the oral health status and oral health care use of children from the perspective of parents. The sociodemographic factors that determined the oral health care use and oral health status of children were also investigated.

2. Materials and Methods

Designed as a hospital based cross-sectional study, 187 parents of children between the age of 4 years (who were at least 1 year of age as on March 11th 2020) and 13 years who reported to the out patient department of Pediatric And Preventive Dentistry of a tertiary care centre in Kerala was included in the study. The participants were personally interviewed by the principal investigator using the prepared proforma and the data collected entered manually. The proforma had two parts, the first part to collect socio demographic data and the second part to collect information regarding the oral health status and oral health care use during the pandemic as perceived by the parents. Verbal and written informed consent in prescribed forms were collected prior to the interview. Written patient information sheet explaining in detail about the proposed study was distributed to the participants in the preferred language (English/Malayalam). Those parents with a history of any psychiatric illness was excluded from the study.

3. Results

The mean age of the study participants was 8.28 years. 45.5% were boys and 54.5% were girls. 71.1% of the participants were from rural area. 42.9% of the parents considered that their child's existing oral health condition was average, 33.2% as good and 18.7% as bad. 56.1% participants reported that their children experienced some form of dental problem during COVID-19 pandemic, the most common being dental caries (48.57%), followed by pain (33.33%), swelling (11.4%) and irregularly or forwardly placed teeth (11.4%). 11% of children had more than one dental problem during the time of COVID-19 pandemic. However, only 36.1% of children who experienced some form of oral health problem sought treatment from an oral health care centre during the pandemic. 67.16% did not seek treatment due to problems related to the pandemic. 52.65% of the children who sought

treatment during the pandemic also had to face problems related to COVID-19 in getting the services.

46.1% of parents reported that they had fear of contracting the COVID-19 virus from oral health care centres which prevented them from seeking treatment. 36.9% faced difficulty in getting transportation to the centres due to lockdown and other restrictions. 40% reported that they couldn't get the required treatment because the oral health care centres limited their services to only emergency care during the treatment. 4% parents had reluctance to make their children undergo the mandatory COVID-19 screening test before the dental procedures, 65 had financial problems due to job loss or pay cut during the pandemic. The rest did not seek dental treatment due to other related causes.

Statistically significant association (p value 0.05) was found between the educational qualification of parents and treatment seeking behavior during the pandemic. 55.1% of the participants believe that if there had been no COVID 19 pandemic they would have had better access to dental care and their child's oral health status would have been better than it is at present.

Data was entered in microsoft excel and analysed using SPSS (Statistical product and service solutions) trial version 25. Quantitative variables were expressed in terms of mean and standard deviation and Qualitative variables in terms of frequency and percentage. The association of qualitative sociodemographic characteristics (were analysed using Chi square test. The association of age with different items in the questionnaire was analysed using Mann Whitney U test.

3.1. Association of oral health care seeking behaviour with different socio demographic conditions

4. Discussion

COVID-19 (coronavirus disease 2019), a disease caused by SARS-CoV-2 most often causes respiratory symptoms that can feel much like a cold, the flu, or pneumonia. The virus is primarily transmitted by direct or indirect personal contact through airborne respiratory droplets from an infected person.⁴ Globally, the impact of COVID-19 has been significant with more than 6.5 million deaths reported to the WHO till date.⁵ In India from 3 January 2020 to 27 September 2023, there have been 44,998,525 confirmed cases of COVID-19 with 532,031 deaths, reported to WHO.⁶

The World Health Organization declared the global spread of coronavirus disease (COVID-19) a pandemic on March 11th, 2020.⁷ Precautionary measures intended to contain the virus included mask-wearing, restricted travelling, social distancing, vaccinations and various forms of lockdowns. These restrictions naturally resulted in low utilization of preventive and treatment services for many non communicable diseases like oral diseases.⁸ Dramatic

Table 1:

	Did not need oral health care	Sought oral health care facility	Did not seek oral health care facility	Total	p value
Place of Residence					
Rural	30(22.6)	78(58.6)	25(18.8)	133	0.206
Urban	17(31.5)	24(44.4)	13(24.1)	54	
Monthly Income					
BPL	16(27.6)	32(55.2)	10(17.2)	58	0.751
APL	30(23.6)	70(55.1)	27(21.3)	127	
Highest educational qualification					
Till Plus two	32(29.9)	59(55.1)	16(15)	107	0.05*
Degree and above	15(18.8)	43(53.8)	22(27.5)	80	

reduction in provision of dental care in the initial lockdown period and even after resumption of services, particularly among deprived children and older adults have been reported from the United Kingdom.⁹ Widespread decline in oral health status and access to oral health care in the initial days of COVID-19 pandemic have also been reported among children in the United States.¹⁰

From the results of this study, it was inferred that majority of parents do not consider their child's present oral health as good. Moreover, they feel that their child's oral health would have been better if there had been no restrictive factors associated with COVID-19 pandemic. The most common dental problems experienced by children was dental caries followed by tooth ache, swelling and irregularly or forwardly placed teeth. Majority of children who experienced dental problems during the pandemic did not seek treatment due to a variety of reasons. This becomes relevant with the existing fact that most of the dental problems including dental caries and malalignment in mixed dentition are controllable if intervened and treated in the initial stages. Those parents who didn't did not seek treatment during the pandemic reported that their fear of contracting the COVID-19 virus from care centres and other public places, lack of adequate transportation facilities due to lock down, restricted services offered by health care facilities, reluctance to make children undergo COVID screening and financial problems due to job loss or reduced salary prevented them from doing so.

The statistically significant association between the educational status of parents and health seeking behavior of children (Table 1) observed in this study correlates with the findings of many previous studies.^{2,11}

WHO has stated that, dental caries does not receive adequate priority in health planning due to an under appreciation of the true burden and impact of the disease.¹² This disparity in attention and priority for dental health problems in comparison with general health increased during the COVID-19 pandemic. During the time of the pandemic, dedication of resources and diversion of attention has happened towards more life-threatening conditions, thereby asymptomatic oral conditions getting

the least priority.

5. Conclusion

The impact of the changed global scenario during the pandemic on various walks of life are actively being investigated by researchers world-wide. After the initial days of crisis all other major sectors like information technology, business, education and others resurged and devised newer options and techniques for survival and continued their services. However, the health care sector, especially in the developing countries still carry the bruises of an unprecedented demand in terms of manpower, money, infrastructure and policy making that had a heavy impacted on their financial budgeting and human resource management. The social, economic and health effects of neglected dental care did not receive due importance and the long-term burden of neglected oral health on the social, financial and general well-being of people especially children has been underestimated and during the pandemic. Hence, better preparedness and intervention of the health care sector and policy makers in providing timely oral health care is warranted in the event of any untoward similar situations in future.

6. Source of Funding

None.

7. Conflict of Interest

None.


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