



**ORIGINAL RESEARCH PAPER**

**Pedodontics**

**PARENTAL ATTITUDE TOWARDS THEIR CHILD'S DENTAL TREATMENT DURING COVID-19 PANDEMIC -A QUESTIONNAIRE STUDY.**

**KEY WORDS:** Covid-19, Innate Immunity, Parents

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| <b>M. Kiranmayi</b>      | Reader, Dept. of Pedodontics, Kamineni Institute of Dental Sciences, Narketpally, Nalgonda                              |
| <b>S. Srikanth Raju*</b> | Sr. Lecturer, Dept. of Pedodontics, Kamineni Institute of Dental Sciences, Narketpally, Nalgonda. *Corresponding Author |
| <b>E. Rajendra Reddy</b> | Professor & HOD, Dept of Pedodontics, Kamineni Institute of Dental Sciences, Narketpally, Nalgonda.                     |
| <b>Srujana M P</b>       | Reader, Dept. of Pedodontics, Kamineni Institute of Dental Sciences, Narketpally, Nalgonda.                             |
| <b>P. Snehitha</b>       | Post Graduate, Dept. of Pedodontics, Kamineni Institute of Dental Sciences, Narketpally, Nalgonda                       |
| <b>S. Sai Divya</b>      | MDS, Pediatric Dentist  |

**ABSTRACT**

**Background:** Dental practice has considerably changed in this COVID-19 era. Since the outbreak of COVID-19, worldwide healthcare systems & dental professionals have been severely challenged furthermore; paediatric dentists are at higher level as children act as carriers due to their innate immunity. The purpose of the study was to assess the Parental attitude towards their child's dental treatment during COVID-19 pandemic. **Methods:** A cross-sectional questionnaire-based survey which consisted of 16 self-prepared questions was conducted. A total of 100 parents of patients who visited hospital for various treatments have participated in this study. **Results:** Ninety percent of patients have heard about COVID-19 and they have chosen dental treatment is recommended in this scenario. About 83% of the patients were aware that television is the main source of information about COVID-19. Most of the patients (85%) were aware of the infection control measures to be followed by dentist and by themselves at their home. Regardless of gender and generation most of the people are aware about the present pandemic. **Conclusion:** Most of the parents of patients were aware about COVID-19 and infection control measures to be followed by paediatric dentists in the dental set-up, and also precautions to be taken by them at the home environment. Through this study it can be concluded that most of the parents were not apprehensive about undergoing dental treatment in this pandemic.

**INTRODUCTION**

The new corona virus disease (COVID-19) or Severe acute respiratory syndrome corona virus 2 (SARS COV-2) became a significant global public health concern since January 2020. Due to the transmission via particulate or droplet, the diagnosis and treatment of oral diseases carry a straight forward risk of infection in the clinical settings and dental institutes.<sup>1</sup>The most common symptoms of patients who suffered from novel corona virus were fever, dry cough and tiredness. Less common symptoms include aches and pains, sore throat, diarrhoea, headache, and loss of taste or smell. Serious symptoms include shortness of breath, chest pain, loss of speech or movement.<sup>2</sup>

The primary route of spread of COVID-19 is via respiratory droplet, which makes it more vulnerable to dental professionals.<sup>3</sup> Dental setups invariably carry the risk of COVID-19 infection due to the specificity of its procedures (aerosol production), proximity to the oropharyngeal region, and frequent exposure to saliva. These viral particles get aerosolized during dental treatment or even by a cough or sneeze by the patient.<sup>4</sup>If adequate precautions were not taken, the dental office can potentially expose patients to cross contamination.

In the children, the risk appears to be more that they could accidentally spread the virus, without having any symptoms. This is due to their innate immunity they can act as carriers or superspreaders.<sup>5</sup> It rests on parents or caretakers to prevent the transmission of disease through their child and for that reason parents or caretakers must be aware about the preventive measures that they can follow at their home environment to prevent the spreading of virus.<sup>6</sup>Changes in

the parental attitude and strict usage of protective measures in children are mandatory in this post COVID-19 era of dentistry. This questionnaire study was undertaken to assess the knowledge, attitude and practice of parents regarding dental treatment of their children during COVID-19 and changed treatment protocols in this era among the parents visiting Kamineni institute of dental sciences, Narketpally, Nalgonda.

**MATERIALS AND METHODOLOGY**

The study protocol was submitted to the institutional review board of Kamineni institute of dental sciences Narketpally, Nalgonda and ethical clearance was obtained. This questionnaire-based survey was conducted on 100 parents of walk-in patients from 25<sup>th</sup> May 2020 to 9<sup>th</sup> October 2020 at the Department of Pedodontics and Preventive Dentistry, Kamineni institute of dental sciences.

**Questionnaire Design:**

The questionnaire consisted of 16 self-prepared questions and had two parts. The first part gathered personal information about age and sex of the parent. Based on age, patients were categorized into two groups, Group I with age group of 25-35 years and Group II with age group of 35-45 years. Based on sex, patients were categorized as two groups consisting of males and females respectively. The second part had sixteen closed ended questions which were used to assess the parent awareness about COVID-19 pandemic and their attitude towards dental treatment of their children during this scenario.

**Statistical analysis**

The results obtained were analysed using Statistical software

SPSS 21.0 version. Chi-square analysis was used to analyze statistical significance difference in the response between different groups. Statistical significance was set at p-value <0.05.

**RESULTS**

A total of 100 parents of walk-in patients participated in the study. Out of the 100 questionnaires delivered, 100 were obtained (response rate was 100%). Based on results calculated 90% of the parents of walk-in patients were aware of corona virus outbreak. There is no statistically significant difference was observed in between the males and females and in these two age groups. Despite of the gender and generation most of the people were aware about the present pandemic. About 83% of parents were aware that television is the main source of information about corona virus. On asked about spread of virus out of 100, 90 % chosen it is contagious. About 85% of the parents were aware that the novel corona virus transmits from person to person through saliva, coughing, and sneezing, contaminated hands and through direct personal contact with infected people. About 81% chosen most common symptoms of COVID-19 were fever, dry cough, and shortness of breath and remaining others choose only fever or dry cough or shortness of breath. About 90% of the parents were aware of the preventive measures which were followed during COVID-19. About 85% of the parents were sanitizing their child's hands more than 5 times per day and remaining 15% they were sanitizing once or thrice. About 82% of the parents wash their child's hands for 60 secs and remaining others scrub for less than 60 secs. About 80% of parents were bringing their child for dental treatment in emergency conditions only and remaining 20% in non-emergency conditions. About 90% of the parents think that dental treatment is recommended in this COVID scenario and remaining 10% think that there is no necessary of dental treatment. About 85% of the parents were aware of the PPE kits and remaining 15% are unaware of it. About 84% of children complained that he/she was being scared of dentist's attire and remaining 16% of the children didn't have any complaint regarding dentist's attire. About 100% of the parents were satisfied with the precautionary measures, change in treatment protocol, sanitization and preventive measures being followed in the Kamineni institute of dental sciences while examining and during the treatment of their child.

**DISCUSSION**

According to our results, parents have proper knowledge of the ongoing corona outbreak and 85% of the parents have positive attitude regarding dental treatment of their children and maximum parents are bringing their children to dental clinic or institute in emergency conditions only. About 100% of the patients were satisfied with the precautionary measures, change in treatment protocol, sanitization and preventive measures being followed in the Kamineni institute of dental sciences while examining and during the treatment of their child.

As television is the best source of entertainment and recreation it provides instant and real time information from all around the globe. It keeps us connected with the rest of the world by providing news etc. In our study most of the parents got awareness about COVID-19 through television that COVID-19 is a communicable disease and how it transmits from person to person and what are the most common symptoms of it.

Social media plays a crucial role and is important because it allows you to reach, nurture and engage with your target audience no matter what their location regionally, nationally, and internationally. So, through this social media platform parents got consciousness about what are the preventive measures to be followed during this pandemic.

Although they got cognizant about the situation, they bought their children to dental clinic in emergency situations and

they believed that dental treatment in emergency conditions is mandatory. It depends on paediatric dentists to further generate awareness of what all precautionary measures have been followed while examination and treatment of their children. Preventive measures should start even before the children enter the paediatric dental clinic/institute. Introductory letters to parents and children on new regular, guidance on pre-appointment screening, in-office registration procedures, reception area preparation, a note on wearing mask and hand hygiene helps to maintain a smooth workflow. A proper triage and sorting, screenings at the reception area should be done.<sup>7</sup>

The fatality rate of COVID-19 was less when compared to the incidence rate. The majority of children act as carriers or contact nuclei posing a massive threat to the disease's containment (Wang et al., 2020).<sup>8</sup> Vertical transmission from mothers to their new-borns is yet to be confirmed. However, postnatal transmission in neonates was described with an incubation period ranging from 2 to 14 days (Bhumireddy et al., 2020; Peng et al., 2020). The rate of asymptomatic carriers is as high as 17.9% (Mizumoto et al., 2020).<sup>9</sup> The rate of contracting the disease from a contagious person to healthy people is 2.6–4.7, higher than SARS or MERS.<sup>10</sup>

Asymptomatic children can also transmit the disease and act as super-spreaders (Adhikari et al., 2020). The role of parents, paediatric dentist and their dental team requires a specific direction to deal with the dental problems in children during and post-pandemic outbreak COVID-19 disease.<sup>11</sup> During the treatment process, children should wear appropriate PPE, including protective eye goggles. Use of rubber dam, high volume suction, extra-oral suction decreases the aerosol load.<sup>12</sup> The generation of aerosols also depends on the type of treatment required.<sup>12</sup> The main aim should be to avoid splash and splatter, limit the aerosols, avoid cough/ gag reflex inducing procedures such as intra-oral radiographs, the topical anaesthetic spray/gel, and impression procedures.<sup>14</sup>

Dental scaling, if required, should be limited to hand scaling, and ultrasonic scaling should be deferred (Krithikadatta et al., 2020).<sup>14</sup> During caries removal, chemo-mechanical caries removal should be preferred, but it may not be possible for enamel caries. The use of minimally invasive treatments may decrease the production of aerosols. Application of topical fluorides, interim therapeutic restoration, atraumatic restorative technique (ART), Hall technique of stainless-steel crown placement, indirect pulp capping, and silver diamine fluoride application minimize the aerosol risk in the paediatric dental operatory (Mallineni et al., 2020).<sup>15</sup>

Especially in paediatric dentistry, children should be made to feel comfortable with the new PPE and protocols in the dental practice setting in order to reduce fear and increase cooperation. A customized approach should be taken by practices to safeguard patients, patients' families, and dental healthcare personnel during and after this pandemic.<sup>16</sup>

**CONCLUSION**

Most of the parents of patients were aware about COVID-19 and infection control measures to be followed by paediatric dentists in the dental set-up, and also precautions to be taken by them at the home environment. Through this study it can be concluded that most of the parents were not apprehensive about undergoing dental treatment in this pandemic.

**TABLE-1**

Table-1 depicts the demographic data of male and female patients

|       |        | Frequency | Percent | Valid Percent | Cumulative Percent | P-Value |
|-------|--------|-----------|---------|---------------|--------------------|---------|
| Valid | Male   | 64        | 64.0    | 64.0          | 64.0               | .600    |
|       | Female | 36        | 36.0    | 36.0          | 100.0              | .405    |
|       | Total  | 100       | 100.0   | 100.0         |                    | .416    |

**Table – 2 depicts the information about age group of parents participated**

|       | Frequency | Percent | Valid Percent | Cumulative Percent | P-Value |
|-------|-----------|---------|---------------|--------------------|---------|
| Valid | 25-35     | 64      | 64.0          | 64.0               | .445    |
|       | 36-45     | 36      | 36.0          | 100.0              | .247    |
|       | Total     | 100     | 100.0         |                    | .269    |

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