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## Assessment of tele dentistry usage in pediatric patients .

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### Abstract:

**Introduction:** Tele medicine is a form of tele-health that involves synergy between telecommunication and dentistry which involves exchange of clinical details and of appropriate pictures for counseling of the patient and treatment plan accordingly.

**Methodology:** This cross-sectional descriptive study was conducted from February 2022 to March 2022 at pediatric patients of Jamshoro and Hyderabad districts coming to pediatric OPD and were having oral health problems too. 200 pediatric patients were selected, questionnaire was made in English, Urdu and Sindhi languages. Parents of pediatric patients were asked various questions regarding usage of tele-dentistry. Data was analyzed using SPSS version 22.

**Results:** 60% of the patients were with tele-dentistry while 40% were not aware about tele-dentistry. according to benefits of using tele-dentistry 40% patients said that it reduces travel time, while 30% said that it reduces time spend or save time while 30% also said that it is convenient.

**Conclusion:** Study showed good patient acceptance towards the use of tele dentistry.

**Key words:** Covid-19, tele dentistry, oral health

### Introduction:

Dentistry is considered to be the most vulnerable profession after Covid-19 epidemic as it includes careful examination, diagnosis, therapeutic interventions around nasopharyngeal regions.<sup>1</sup> This highly aggressive new corona virus, SARS- Cov-2 with its epicenter in China's Hubei province was declared a global concern by WHO on Jan,30,2020. Even after 2 years of emergence of covid-19, the cessation of dental practices, except for urgent needs observed throughout the world.<sup>2-4</sup> During second wave of pandemic, children affected with high frequency and relatively higher severity of COVID-19 infection with significant risk of transmission.<sup>5,6</sup> For the same reason it neces-

sary for the pediatric-dentist to be more conscious while managing pediatric patients.

During this pandemic, opting a tele-health model is the best possible option employed around the globe to manage and treat the patients with health problems during this lock-down phase and on routine basis too. The higher health authorities also focus on management of the most of the COVID-19 affected patients indoors under the supervision of an attending physician and dentist through telehealth.<sup>7</sup> In dental field this tele-dentistry option has been proven to be more successful as it fulfills the criteria of general isolation and also prevent to stop the transmission of the various viruses and its spread. Cook defined "

tele dentistry as the practice of using video conferencing technologies in diagnostics and remote treatment advice".<sup>8,9</sup> Tele medicine is a form of telehealth that involves synergy between telecommunication and dental field which involves of clinical details and of right pictures for counseling of the patient and treatment plan accordingly. The idea has proven that continuous delivery of health services in difficult pandemic situation is very necessary.<sup>10</sup>

#### Objective:

The aim of the study is to assess usage of tele dentistry in pediatric patients.

#### Methodology:

This cross-sectional descriptive study was conducted in pediatric patients of Jamshoro and Hyderabad districts coming to pediatric OPDs and were having oral health problems too. 200 pediatric patients were selected; questionnaire was made in English, Urdu and Sindhi languages. Parents of pediatric patients were asked various questions regarding usage of tele-dentistry. Study was conducted from February 2022 to March 2022. Data was analyzed using SPSS version 22.

#### Results:

**Table No :1 Knowledge of tele-dentistry**

Do you know about tele-dentistry	Yes	No
	120(60%)	80 (40%)

**Table: 2 Usage of tele dentistry in Pandemic**

Did you use tele dentistry in pandemic	Yes	No
	135 (67.5%)	65 (35%)

**Table No 3: When tele dentistry used, it is used for**

If	In Pain	Swelling	Bleeding	Ulcer	Any other
Yes	90 (45%)	30 (15%)	20 (10%)	30 (15%)	30 (15%)

**Table: 3 Overall patient's satisfaction**

Satisfied with tele dentistry	Yes	No
	120 (60%)	80 (40%)

When asked about the reasons for un-satisfaction with tele dentistry, problems faced mentioned by patients are shown in table no 4.

**Table: 4 Problem**

Problems faced while using tele-dentistry	Usage of Gadgets	Expensive	Internet Issues
	60 (30%)	60 (30%)	80 (40%)

**Table: 5 Benefits**

Benefits using tele dentistry	Reduce Travel	Minimize time spend	Convenient
	80 (40%)	60 (30%)	60 (30%)

#### Discussion:

The American Academy of Pediatric dentistry (AAPD) recognizes "Covid-19 pandemic as an ongoing community and global problem with an increased number of cases among children". Thus, adding a Covid-19 pandemic resource page to the latest reference guide, AAPD 2020-2021, Reemergence a report on pediatric dentistry reentry into practice during this lock down phase of pandemic,<sup>11</sup> that also contains a statement for parents –FAQ.<sup>12</sup> It also spotlight the application of public health care initiatives like tooth brushing techniques, dental fluoridation programs and the impact on oral healthcare delivery during the deferral of dental practice. The present cross sectional study has revealed a topic that has aroused considerable interest among Pakistani dentists in Pakistan regarding the dynamic advancement in dentistry, (Tele dentistry) during Covid-19. Telemedicine is not a new concept for mankind and has been evolving since 1994, but over the years there have been significant new advances in the field of dentistry.

According to results of current study, 60% patient's parents revealed that they have knowledge regarding tele dentistry. While 67.5% revealed that they used tele dentistry in pandemic. Study conducted by Naomi Rehman et al. in 2020 showed that majority of the patients were satisfied using tele dentistry. While our study shows similar results 60% of the patients were satisfied using tele dentistry at the time of pandemic.<sup>13</sup> It could be due to the fact that patients are expressive and they convey their complaint to the consultant easily and dentist understands. As shown by our results benefits using tele dentistry by the parents of patient's; majority of them showed that it reduces travel time, and expense, decrease infection chances. Another study conducted by S. Ghai showed that adoption of virtual clinics, telephonic-consultation will eventually decrease number of unnecessary or irrelevant urgent dental care visits to the dentist, overcrowded rooms, decreases chances of infective diseases and that will ultimately avoid to drain our health care system.<sup>14</sup> Several studies have obtained nice responses to pain in consultation with tele dentistry as well as for monitoring purpose and follow up too. Tele-medicine and tele dentistry are very convenient in different fields such as pedodontics, periodontics, orthodontics, maxillofacial surgery.<sup>15-17</sup>

#### Conclusion:

Study showed good patient acceptance towards the use of tele dentistry. Therefore, during this critical time of Covid-19 pandemic, health care providers, medical doctors and

dental surgeons should adopt tele-health as a consultation option to reduce the prevalence Covid-19.

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