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Research Article

Impact of COVID-19 on Accessibility to Elective Dental Care among Older Persons-A Qualitative Study

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ABSTRACT

The COVID-19 pandemic has had a significant devastating effect on the overall health of the communities. Unfortunately, the older individuals were more adversely affected by the COVID-19 pandemic due to the higher mortality rate and comorbidities. This is a qualitative study with a Qualitative Description (QD) approach. In this study we have described and interpreted older adult's perceptions regarding elective dental care. The interview was conducted with older adults who could understand and speak English and had a smartphone. The study comprised 6 older adults with a mean age of 73. It was seen in this study that, those that had personal vehicles, family dentists, and good retirement plans had no issues in locating the dentist and receiving dental treatment. They were not worried about being exposed to COVID-19 and they expressed that they felt safe, comfortable and reassured being treated by their family dentist. None of the study participants were affected by the PPE worn by the dentist. This study was conducted after the second wave of COVID-19 had settled and people were vaccinated, so there may be some kind of recall bias in the responses gathered from the participants.

Keywords: COVID-19; Dental treatment; Elderly; Qualitative study; Qualitative description

INTRODUCTION

Coronavirus disease-19 (COVID-19), caused by the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), has become a global pandemic, resulting in a serious health threat globally. Nearly 120 countries have seen a two wave pattern of reported cases [1-6]. In late December 2019, the Huanan seafood wholesale market, in Wuhan, Hubei, China saw an outbreak of a mysterious pneumonia characterized by fever, dry cough, and fatigue, and occasional gastrointestinal symptoms [7]. COVID-19 (Coronavirus) has affected the standard of living and is posing a great risk for the economy market worldwide. This pandemic has affected majority of population, especially those who have comorbidities like hypertension and diabetes and others [8]. The cases of infection of this particular virus have skyrocketed as the virus has been spreading exponentially. Several countries have announced complete and/or partial lockdowns, banning gatherings of people to avoid the spread and put a break to this exponential curve [9]. There are wide range of symptoms especially of viral infection like fever, cold, cough, joint pain and difficulty in breathing, and ultimately leading to pneumonia. Since there is no direct cure for the disease, the emphasis is on infection control; such as extensive hygiene protocol like hand sanitization, avoidance of face to face interaction, social distancing and wearing of masks [10,11].

Factors which have led to a sharp rise in Reproduction number (R_0) in India are acute shortage of hospital facilities like hospital beds, oxygen supply, medicines, and ventilators across the country for COVID-19 patients. There is no significant increase in death percentage, but due to alarmingly high number of infections, the total death numbers are a reason of concern [12]. It is obvious that the evident and possible outbreak of the disease giving rise to a second wave is because of incautious conduct of the public by not following COVID appropriate behaviors.

The COVID-19 pandemic has had significant devastating effects on the overall health of the communities. Unfortunately it's the

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older individuals that were more adversely affected by the COVID-19 pandemic due to the higher mortality rate and comorbidities [13]. Older individuals with chronic disease and comorbidities are at a greater risk than the younger population, it was reported that more than 80% COVID-19 fatalities are in the age group of 65 years above. Besides the existing comorbidities like diabetes, cardiovascular disease and chronic liver disease, a significant risk factor for SARS-CoV-2 infection is prescribed group of medications such as Angiotensin Converting Enzyme-2 inhibitors (ACE inhibitors) and angiotensin receptor blockers which are usually prescribed for hypertension and CVS. These medications stimulate the ACE-2 receptors located and uniformly distributed in the body, including the heart, lungs and gastrointestinal system. The SARS-CoV-2 virus utilizes the ACE-2 receptors to adhere to the cell surface and enter the cells in the lower respiratory tract. This has put the patients who take these drugs at a higher risk for COVID-19 infection and furthermore a greater life threatening course of disease [13,14]. Consequently, older population is in constant fear to seek medical assistance or receive oral health facilities.

Hence, older individuals due to fear are less likely to seek or receive oral health care. Delayed oral health care has a variety of outcomes, whether it is due to dental office closures, reluctance to seek oral care during a pandemic, loss of dental insurance coverage etc [15]. Routine dental check-ups are opportunities to provide preventive oral health care (e.g., fluoride treatment and sealants) and to recognize oral manifestations of systemic disease that might otherwise go unnoticed. Inaccessible routine dental care can also lead to untreated tooth decay or other infections, which force the patient to avail hospital emergency procedures, treating which can be expensive and can disrupt the emergency needs, especially during a pandemic.16 In addition, many emergency departments are understaffed or unequipped to provide definitive dental treatment and instead only provide symptom relieving treatment to the patients [17,18].

Due to the COVID-19 pandemic, new hurdles may prevent the return to routine elective treatment. Several updated recommendations for communications, protocols, and physical measures are to be in place to resume the elective oral health care such as giving reassurance letters to patients, pre appointment screening test through electronic media, triage to rule out patients with COVID-19 symptoms and proper thermal screening, maintaining a lag between patients for proper decontamination of the office, proper staff protection protocols and social distancing in the waiting room [19-24].

Several barriers specifically for the geriatric population in accessing the oral healthcare can be broadly divided into three groups. First the socio economic barriers which include financial constraints, lack of dental insurance, lack of social support and being institutionalized. The second type of barriers are general health related such as, presence of multiple co-morbidities, polypharmacy, cognitive impairments specifically dementia, reduced mobility and impaired manual dexterity. Lastly, oral health issues that make dental care more challenging consist of xerostomia, root caries, heavily restored dentitions and inability to maintain oral hygiene independently. The aim of the present study was to investigate the impact of COVID-19 on accessibility to elective dental care among older persons.

METHODOLOGY

The study was approved by the institutional review committee of the Manipal College of Dental Sciences, Mangalore (MCODS). This is the qualitative study with a Qualitative Description (QD) approach. In this study we have described and interpreted the perception of the older adults concerning elective dental care. The interview was conducted with older adults who could understand and speak english and had a smart phone. The demographic details of the participant like gender, socioeconomic status and the area of their residence was collected. The selection of the study participants was based on purposive sampling and on confirmation of agreement to participate; we have provided the relevant information to the participants over the phone regarding the aim and the context of the study. Rigorous interviews were conducted on the phone using validated interview guide. The audio of both the consent and their answers to the questions were recorded. The purposive sampling method has helped to document the information with flexibility and to capture a wide range of perspectives and enabling to gain more significant insights into the phenomenon we were looking for.

Sample size: There was no sample size calculation. The data collection will be carried out till the content saturation. The categories generated were transportation, family dentist and the cost (Data collection is still in progress).

Interview guide: The interview guide was prepared based on the literature. The cultural appropriateness of the discussion guide has been reviewed by two experienced researchers in clinical care, and also those who are experienced in conducting interviews. The interview guide was pilot tested with two older adults for clarity and comprehension. Their responses were not included in the final result. The meeting was recorded by the interviewer. At the end of the each session, the audio recording was summarized in an excel sheet and the responses of each individual were colour coded for the ease of compilation. The compiled data from the in depth interviews was read and reread by two investigators to gain a complete understanding of the interview's content and context, highlighting the relevant keywords. The data was labeled and coded. The relevant portions of the information given by the participants are mentioned as quotes. Quotes from different participants whose views and context were complementary have been assigned into a 'category'. The detail description is shown in the Table 1.

RESULTS

The study comprised of 6 older adults with the mean age of 73. There were 3 male and 3 female participants in this study. It was seen in this study that, those who had a personal vehicle, family dentist and a good retirement plan had no issues in locating the dentist and receiving the dental treatment. They were not worried about being exposed to COVID-19 and they expressed that they felt safe, comfortable and reassured being treated by their family dentist. None of the study participants were affected

by the PPE worn by the dentist. One participant mentioned that he was uncomfortable because his dentist was not wearing the PPE while treating. They also expressed that, dentists encouraged video or telephonic conversations to resolve the dental issues. All the participants agreed that there was increase in the cost of dental treatment and had no complaints regarding that. Two of them have conveyed that it would be appreciated if they were offered a discount for senior citizens.

Table 1: Details on participant's quotes and categories based on these quotes.

Category	Quotes
Transport	Participant 1-"Okay...Since my doctor stays at a distance of So much, during the COVID time it was definitely difficult to reach him because of the restrictions in the city and ours and availability of public transport."
	Participant 4-"No no. it's in Mangalore only and I come back by walk. It takes 20-25 minutes. We generally walk in Mangalore so it's convenient"
	Participant 6 - "No no. We have our doctor so he can help us on video call or telephonic conversations. There is no problem."
Teledentistry	Participant 8-"Doctors, usually say keep in home because the age factor plus the health factor also. So epidemic disease they ask us to take more care then more precautions and they will give advice over the phone itself. What to take? How to restore it for a few days and to postpone the extraction or the bridge that is what the doctor are saying."
Family dentist	Majority of the participants had family dentist. This made their visit easier and convenient. They felt safer with the family dentist.
	Participant 4-"During COVID-19 the fear is there going to a dentist but knowing the dentist, we have faith in the dentist that he does a... he's careful and use the safety measure to be taken."
	Participant 5 - "I just informed him in the morning and I went in the afternoon and came back in the evening back home."
	Participant 7 - "Yes but he had COVID so that's why he couldn't treat me and after he recovered then their clinic was closed because his attended also had COVID virus. So that's why it took me 2-3 months because he had to sanitize his clinic and all. His parents were also with them so after they treat the parents because they also had COVID."
	Participant 8-"We usually go to a family doctor. Family doctor usually knows the background or the history of the problem. That is their patients, so naturally they will advise over the phone itself because instead of dragging the patient to the exposure they avoid the exposure of that. That is the basic thing they have done. That's good also."
Cost	Participant 6-"not that much but it has increased. Naturally they charge more because of the cost. The equipment and other things and their time. Everything has become expensive from time to time than earlier. They have to maintain to reorganize. Things they have to buy."
	Participant 7-"That I don't know. But they are saying that they are sanitization and all the equipment has to be sanitized, before also they used to sanitize after COVID they also have lots of problem and the material he's saying that the material cost is also becoming high. the raw material of the dental material and all the medicines and all the raw material"
	Participant 8-"Probably there is less practice for them. At the same time they are not attending much patient also and they have to take care of

	their own health precaution. That's why they maybe and even the dress code also at that time and instruments should not be used it should be destroyed or cleaned.. That's why they might be charging more."
Concession in treatment	Participant 7-"Because these days the dental treatment is quite expensive so they must give little bit of concession for seniors"

DISCUSSION

This qualitative study was conducted among older adults to explore and understand the challenges they faced in order to receive elective dental treatment. We observed that participants had not much to complain concerning the availability of the treatment. They also mentioned that they were comfortable with video or telephonic conversation with the dentists if they had dental problems.

CONCLUSION

The participants who had family dentist were confident on infection control protocols and no complains on dentists wearing PPE during the treatment. One of the participant also mentioned that there was no issue on receiving emergency treatment during this pandemic. They understood the cost of the treatment was high and they understand that it was reasonable. Few participants were wondering if they could get any financial concession or senior citizen discount for the dental treatment.

LIMITATIONS

While interpreting the results of the present study, the following factors should be considered. Firstly, the present study was conducted using purposive sampling and thus does not represent all the older adults. Secondly, the study was conducted after the second wave of COVID-19 had settled and people were getting vaccinated, so there may be some kind of recall bias. We took care of this by assuring the participants and encouraging them to express themselves and take inputs from them during the time of distress the whole world was facing.

CONFLICT OF INTEREST

The authors state no conflict of interest

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