International Journal for Multidisciplinary Research (IJFMR)

E-ISSN: 2582–2160, Volume: 4, Issue: 4, July-August 2022

Knowledge of and Attitudes toward COVID-19 among Parents of Child Dental Patients during the Outbreak - A Cross Sectional Study

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Abstract

Introduction: COVID-19 had affected 1,393,797 people worldwide by April 7, 2020, according to the data from the China CDC and other authoritative institutions The aim of this study was to assess COVID-19 knowledge and attitudes among parents of child dental patients in Bareilly during the outbreak in February 2020.

Methodology: Our cross-sectional study was carried out from February-March 2020 to June 2020, and both convenience sampling and snowball sampling (the participating players were asked to forward the questionnaire to their colleagues) were used so that maximal participation could be ensured.

Results: The mean age of the parents was 36.84 ± 0.332, and the mean age of the children was 8.48 ± 0.170. Of the children, 672 (60%) were female, and 538 (44%) were male. Majority of mothers between the age group of 25-35 had the fear of the spread of virus from someone in the clinic. This difference is statistically insignificant.

Conclusion: More effort should be directed toward informing the public that some measures can be taken to avoid contamination in dental offices and that urgent cases can be treated with lower risk.

Keywords: COVID-19, Parents, Child, Dentistry, Dental

Introduction

A new lethal disease known as coronavirus disease 2019 (COVID-19) emerged in China and Southeast Asia in late 2019 and early 2020. COVID-19 was first discovered in Wuhan, Hubei Province, Central China, and subsequently spread throughout China, Southeast Asia, Europe, North America, Oceania, and nearly the entire world, affecting approximately 160 countries or regions[1, 2].

COVID-19 had affected 1,393,797 people worldwide by April 7, 2020, as according data from the China CDC and other authoritative institutions[2, 3]. On January 31, 2020, the World Health Organization (WHO) declared the COVID-19 outbreak a public health emergency of worldwide concern[4], and on March 11, 2020, it was classified as a pandemic. 5 COVID-19's infectious agent has been discovered as a coronavirus known as 2019-nCoV, which is comparable to the SARS-CoV of 2003. The approach validated the presence of 2019-nCoV in saliva, body fluids, faeces, and other materials from COVID-19

patients.

Close contact amongst humans, particularly through respiratory droplets, is how the virus spreads. Furthermore, the virus can be transferred when people touch an object infected with infectious droplets and then touch their lips, nose, or eyes[6]. As a result, China has created a high standard for measures aimed at stopping the virus's spread. The most effective measures included social isolation to prevent virus spread, protection of the elderly and patients with chronic conditions and poor immunity, and the provision of health care to COVID-19 patients with the help of health personnel from all across China.

Because of the nature of dental treatment, aerosols and splatters are frequently produced, which can contain substantial amounts of saliva or blood from patients and so pose a danger of large-scale virus transmission[7]. As a result, numerous health departments have requested that dentistry departments implement stringent policies. Patients are screened, only emergency treatment is given, aerosol operations are limited as much as possible, extensive protection is used, and the area is disinfected. However, some carriers have been reported to exhibit no symptoms, according to researchers[8]. In the dental setting, COVID-19 is difficult to manage. Many patients have been informed about COVID-19 through hospital advertising and education.

People have received a huge amount of information during the COVID-19 epidemic that could cause misunderstanding, such as contamination hazards during dental appointments from declarations from administrative districts and dentist associations. It's critical to identify any misunderstandings so that dental practitioners can help improve hospital policies and patient education. As a result, the current study sought to assess COVID-19 knowledge and attitudes among parents of child dental patients in Bareilly during the outbreak in February 2020.

Methodology

Our cross-sectional study protocol was approved by the Clinical Research Ethics Committee of Institute of Dental Sciences, Bareilly.

Our study population consisted of 1,200 parents from different parts of country. When the participants selected the ‘next' button to answer the questionnaire, they inferred their agreement to participate in the study (inclusion criterion), and they had total freedom to decline or answer the questionnaire. The data was only accessible to the lead investigator, and no personal information (email address, phone number, name, etc.) was necessary. Only when the ‘submit' button was hit at the end of the questionnaire was a submission evaluated (inclusion criteria). A athlete was removed from the analysis if he or she failed to answer one question out of the total number of entries (exclusion criteria).

The study duration was from February-March 2020 to June 2020, and both convenience sampling (researchers themselves contacted players to participate in the study) and snowball sampling (the participating players were asked to forward the questionnaire to their colleagues) were used so that maximal participation could be ensured. The questionnaire was distributed personally via a Quick Response (QR) code as well as posted on social media platform like WhatsApp.

The first section includes questions regarding age, gender, what city and state do you live and relationship to the child. The second section included questions about knowledge and fear of the pandemic, followed by section comprises of questions related to concern regarding the child's dental treatment during the pandemic.

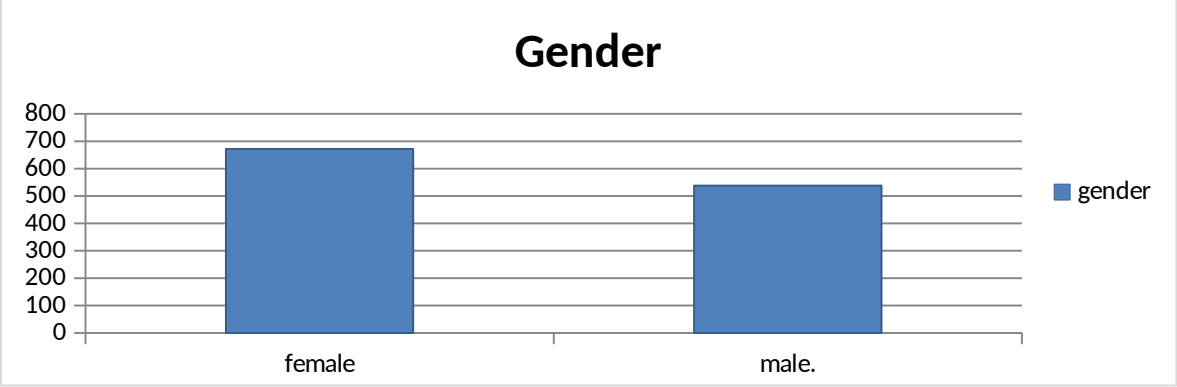
Results

Table 1: Socio-demographic Characteristics and Socioeconomic Status of the Families (N = 1200)

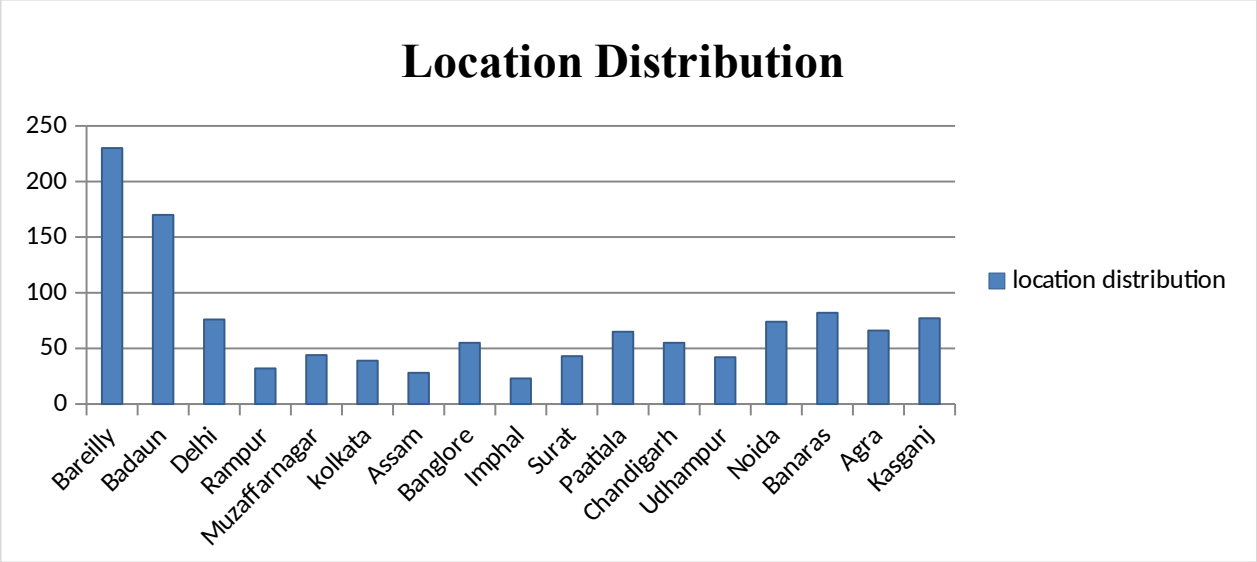
Questions
1. Gender
2. Age
3. What city and state do you live in?
4. Relationship to the child

Table 1 presents the socio-demographic characteristics and socioeconomic status of the families of 1,200 parents included in our study. The mean age of the parents was 36.84 ± 0.332, and the mean age of the children was 8.48 ± 0.170. Of the children, 672 (60%) were female, and 538 (44%) were male.

Graph 1: Showing Gender Distribution of the Study Population



Graph 2: Showing Location Distribution of the Study Population



Graph 3: Showing Highest Level of Education Completed

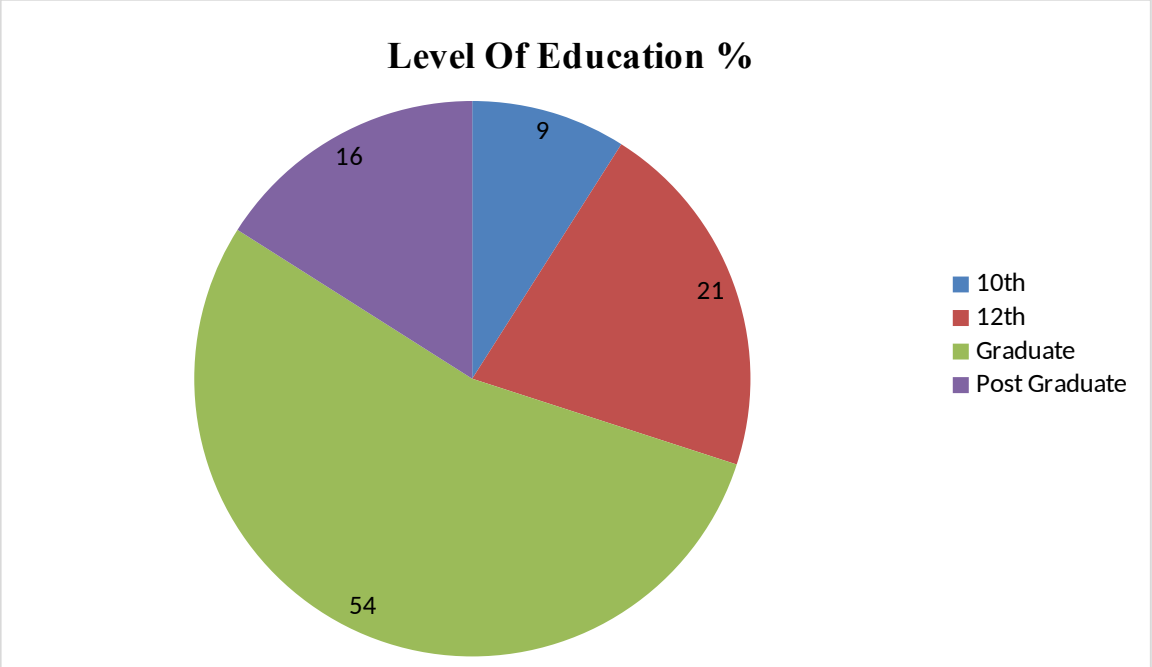


Table 2: Knowledge and Fear of the Pandemic (N = 1200)

Questions	Responses	N%
1. Do you explain COVID-19 to your child/children?	a) Often	81.2%
	b) Occasionally	16.4%
	c) Never	2.4%
4. On scale of 0-5, where 0 is no fear and terror, indicate	a) 1	13.7%
	b) 2	7.6%

the option the best describes your fear of pandemic?	c) 3	25.3%
	d) 4	24.5%
	e) 5	28.9%
9. There has been any change in eating habits at your home during the pandemic?	a) Consuming more processed food with sugar such as soft drinks, sweets and cookies	3.6%
	b) Consuming more Pasta and Carbohydrates	5.3%
	c) Consuming more snacks and/or frozen food	2.8%
	d) Consuming more healthy food such as fruits and vegetables.	73.7%
	e) Nothing has changed	14.6%
14. Which activities you used to do and have not done during the pandemic due to fear of getting COVID-19?	a) Go to health offices/clinics (Doctors, Dentists or Psychologists etc.)	15.8%
	b) Go to grocery stores	6.1%
	c) Go out for leisure	15.8%
	d) Visits relatives and friends	16.6%
	e) Go to work	8.5%
	f) I am not doing any of the listed activities	22.3%
	g) I am doing all the activities I used to do	8.5%
	h) Go to school/college	6.5%
22. How is your family's daily routine during pandemic?	a) We are not leaving house for any thing	14.5%
	b) Leaving house for basic needs. (Pharmacy, Supermarket etc.)	57.4%
	c) Leaving just to work	27.3%
	d) Leaving house as usual	0.8%
26. Have your child/children been able to brush their teeth during pandemic?	a) Yes	92%
	b) No	6%
	c) Sometimes	2%

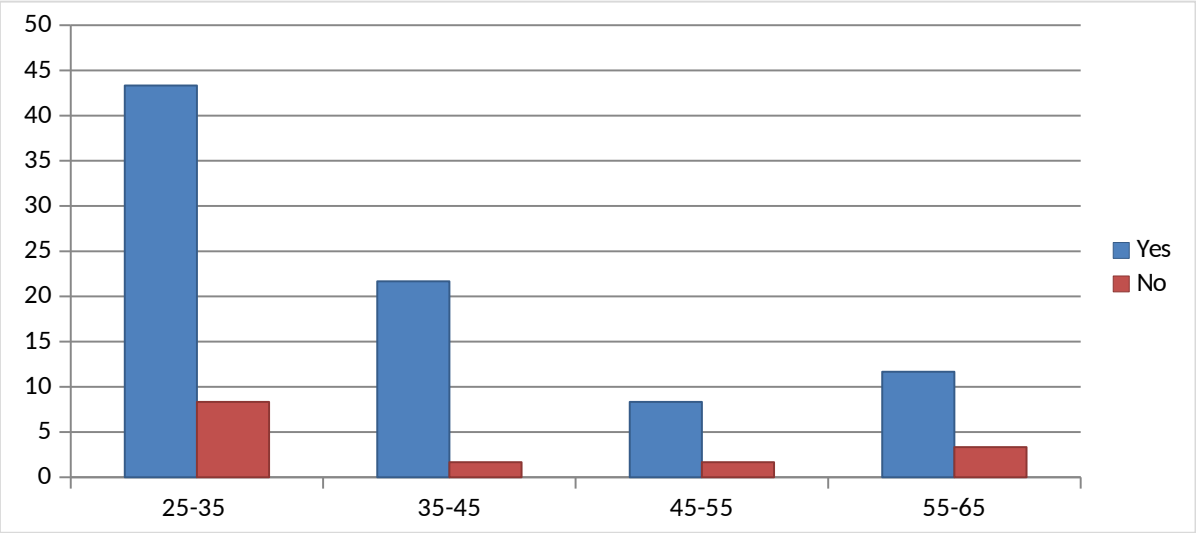
Table 3: Concern Regarding the Child's Dental Treatment during the Pandemic (N = 1200)

Questions	**Responses**	**N%**
1. Were any of your children (0-12 years old) undergoing dental treatment before the pandemic?	a) Yes	17.4%
	b) No	82.6%
2. Have you noticed any cavities/caries in your children's teeth during pandemic?	a) No	84.6%
	b) Yes, but I did not seek care	6.1%
	c) Yes, I sought care but my child was not assisted	4.1%
	d) Yes, I sought care and my child was assisted	5.3%
3. Has any of your children experienced dental trauma during pandemic?	a) No	92.7%
	b) Yes, but I did not seek care	1.2%

	c) Yes, I sought care but my child was not assisted	2.4%
	d) Yes, I sought care and my child was assisted	3.6%
4. Has any of your children experienced toothache during pandemic?	a) No	87.9%
	b) Yes, but I did not seek care	3.6%
	c) Yes, I sought care but my child was not assisted	2.8%
	d) Yes, I sought care and my child was assisted	5.7%
5. If your child/children had toothache, would you take him/her/them to the dental department?	a) Yes, if in severe pain	78.1%
	b) Absolutely no	21.9%
6. If no, for what reason?	a) Risk of getting COVID-19	74.5%
	b) Dental treatment is not urgent	17.6%
	c) My child/ I has/have symptoms of COVID-19	7.9%
7. Do you think the environment of dental clinic is more dangerous than that of other public places?	a) Yes	29.7%
	b) Similar	43.4%
	c) No	26.9%
8. Do you think dental treatment could cause your child/children to become infected by COVID-19?	a) Yes	32.8%
	b) Similar to the risk in other places	47.8%
	c) No	19.4%
9. How might your child/children be infected by the virus during dental treatment? (you can select more than one option.)	a) Droplets/	66.5%
	b) Blood	12.6%
	c) Dental apparatus/instruments	49.4%
	d) The dentist themselves	30.1%
10. The dental department has taken various protective measures according to the requirement of health committee, including patient screening, hospital environment disinfection; and the provision of special protective equipment for both patients & dentists. Will these measures give you confidence in dental treatment?	a) Yes	84.8%
	b) No	15.2%

Graph 4: Bar graph represents the association between the of mother and about their fear of spread of virus from someone in the clinic. The X axis represents the different age group of mothers and the Y axis represents the number of participants. Green colour represents the mothers who had the fear of the spread of virus from someone in the clinic. Blue colour represents the mothers who do not have fear of the spread of virus from someone in the clinic. Majority of mothers between the age group of 25-35 had the fear of the spread of virus from someone in the clinic. This difference is statistically insignificant. (Chi square test value: 1.090, p value: 0.779 - insignificant).

Graph 4



Discussion

Parents are a special group. Despite the fact that children are the focus of many medical and educational initiatives, parents' behaviour is virtually as essential. The major implementers or managers of children's everyday oral care are their parents.

Around 80% of answers in a prior poll conducted in Hong Kong during the 2003 SARS pandemic paid attention to SARS by viewing or listening to the news on a routine basis[9].

People can get a lot of knowledge via COVID-19 because current multimedia travels so easily and broadly. This indicates that modern multimedia played a significant influence in the outbreak. All of the respondents in our study gave their children COVID-19 information, showing that they place a high importance on their children's health. Parents aged 30–39 years, on the other hand, spend less time discussing COVID-19 with their children. We can hypothesis that parents in this age group are in a hectic stage of life and job, and hence have less time to spend with their children. This scenario should be improved by parents and medical personnel. Furthermore, parents with undergraduate and postgraduate degrees were less likely to communicate to their children about COVID on a regular basis; we found this to be true.

COVID-19 is caused by a coronavirus that is related to the 2003 SARS virus[10]. When people cough or sneeze, the virus can spread through saliva, body fluids, faeces, and airborne droplets, which is the most common mode of transmission. According to a study by Kampf G. et al. and Chen J., dental treatment can include a lot of saliva or blood splatter from the patient, which can lead to a lot of virus transmission. As a result, the dentistry sector has a higher infection risk than other sectors or locations[11, 12].

As a result, 66.22% of parents believed the dentistry department was riskier than other locations. However, not all parents were familiar with the dentistry department's peculiarities. The proportion of parents with undergraduate and postgraduate degrees was lower among those aged 20–29. We believe the proportion was insufficient. This finding, we assume, is due to a lack of awareness and education on

the part of the relevant health authorities.

We made assumptions over the phone; 82.49% of the parents said that they would take their child/ children to the hospital for treatment during the COVID-19 outbreak if the child/children had a severe toothache, while the rest said that they would not. We believe that this practice of these approximately 20% parents would prolong their child's/children's condition, which may lead to a greater incidence of dental disease. Thus, we then informed them about preventive measures undertaken by municipal health departments, dental associations and dental departments, which include patient screening (COVID- 19 or suspected patients visiting), the strengthening of hospital environment disinfection, and the provision of special protective equipment for both dentists and patients (using gargles, rubber dams, strong suction and other equipment)[15, 16]. Previous studies by Smales F.C. et al. and Wiley L. have confirmed that the preventive measures above are effective against the virus[7, 17, 18].

Approximately 81.08% of the parents expressed confidence after we informed them about preventive measures. Among the parents who absolutely did not want to take their child/children to the hospital for treatment, 50% of them began to feel relieved. This indicates that the parents have high confidence in the prevention and control policies undertaken by the government and hospitals. In a survey conducted in Hong Kong during the 2003 SARS outbreak, over two-thirds of respondents from different age groups (68.7%), different genders (68.6%), and different education levels (68.8%) said they were not worried about contracting SARS in the dental setting and did not want to avoid dental treatment[9]. The present study's findings are similar. This indicates that the medical quality of our city's dental departments is comparable to that of developed regions, which is a good sign.

A good treatment program during specific periods is not a formalized, fully open office or an overly cautious shutdown; rather, it should be conducted based on the actual situation under professional infection control measures. Since the outbreak of COVID-19 in China in January 2020, local health departments have issued documents requiring dental staff to optimize procedures for diagnosis and treatment according to medical regulations. All operations have been performed strictly following these procedures, and thus far, no cases of cross-infection have been reported in the dental setting. Nevertheless, parents need to have a correct understanding of dental procedures and should try to avoid taking their children to hospitals or dental clinics if it is not urgent. In cases of emergency, however, timely medical treatment should be sought, and the appropriate precautions should be observed. In this study, the 148 parents were relatively one sided and did not fully reflect the knowledge and attitudes of all parents. However, this study occurred during the outbreak of COVID-19, coupled with a lack of dental staff and the limitations of treatment projects. At the same time, we should consider the timeliness of parents' thinking, that is, to avoid causing parents fatigue and hassle due to outbreak related delays in treatment. Therefore, this study represents a temporarily small sample, which we think has certain research significance.

Conclusion

Although all parents were concerned about COVID-19, and most of them had talked about it with their children often, a considerable percentage of them would not take their children to the dental department even if their children had severe dental pain and thought that the dental environment could be more

dangerous than other environments. More effort should be directed toward informing the public that some measures can be taken to avoid contamination in dental offices and that urgent cases can be treated with lower risk.

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