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RESEARCH ARTICLE

AN INSIGHT INTO PARENTAL PERCEPTIONS AND TRAVAILS IN THE MANAGEMENT OF ORAL HEALTH CARE IN CHILDREN DURING COVID-19 PANDEMIC: A QUESTIONNAIRE STUDY

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Abstract

Background: The World Health Organization characterized the Coronavirus Disease 2019 (COVID-19) as a pandemic. Since it is highly contagious, the Government had taken measures to restrict people's transit, which led people to stay at home doors. Due to fear of contracting infection and restriction of dental services at many places children were not able to visit dentist to receive dental treatment. Therefore, educating parents and implementation of preventive measures for maintenance of oral hygiene was considered as the only boon during these times

Aim & Objective: To understand the oral health behaviour of school children and difficulties encountered by their parents in availing dental care during pandemic. **Methodology:** The present study was conducted with a sample of 365 parents through structured online questionnaire survey of the selected schools on their phone numbers given at the school. The questionnaire had 25 mandatory questions pertaining to various parental difficulties faced to access oral health, their attitude towards their child's oral health, the various preventive measures taken by parents and their satisfaction with dental treatment provided during COVID 19 pandemic.

Results: Out of 365 parents a total of 12.3% reported the need of their child's dental treatment during lockdown but only 9 % parents visited the pediatric dentist. The overall attitude and practice to maintain the oral health care of their child was not very satisfactory. Most of parents missed their dental appointments due to transportation problem

Conclusion & Clinical Significance: The pandemic has highlighted significant importance among parents in maintaining the oral health of their child.

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Introduction:-

The emergence of the SARS-CoV-2 virus has changed the world, from individual lives to global functioning.¹ Care for one's own health and life and the lives of loved ones, fear of pandemic consequences, and daily disturbing images coming from around the globe have had an impact on mental health.²

It is believed that dental office and dentistry is a high-risk profession, and are hotspots for the transmission of contagious diseases. It is not possible to completely exclude the risk of getting infected in a dental office.³ Direct contact with a patient is required (60 cm and less), and most interventions include the use of rotating instruments

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with the production of aerosol, which not only potentially endangers those present, but could contaminate surrounding surfaces.^{3,4} The highly contagious nature of SARS-CoV-2 presents a risk for dental office employees and patients, especially because asymptomatic carriers can also transmit the virus.⁵

Due to concerns about infection and the official absence of dental services in many regions, pediatric dental patients in need of care were also prohibited from visiting a pediatric dentist. Most parents had to skip their regular dental appointments.⁶

Understanding children's oral health status, conduct, and caregiver's attitude both now and in the future is crucial in such situations. It is clear that better the parents' attitude, better their children's oral health will be.⁷ Therefore, the sole benefit at the time for pediatric patients was parental education and the execution of preventive measures for maintaining oral hygiene. The goal of the current study was to understand how parents managed their children's oral health during the COVID-19 pandemic.

Methodology:-

The implied agreement from the participants was obtained and, a total sample of 325 parent participants from Shri Vyasa Maharshi Vidya Peeta and Vidyadayini school were added to the study population using simple random sampling. The sample size could be increased to 400 if rejection rates of 15% and data incorporation loss rates of 10% are taken into account. Parents of children up to the age of 14 who were willing to engage in the study were included, while those who need special medical care were not included.

For Validation of questionnaire

The Questionnaire was designed in English and Kannada language. A Pilot study was done on 20 participants.

Procedure:-

Once the validation was done a brief explanation of the survey's goals, a structured questionnaire was distributed to the children's parents using Google Forms. The portion of the questionnaire that assessed parents' attitudes and practices regarding maintaining their children's oral hygiene throughout the COVID-19 lockdown period included 25 questions. Each question had a number of possible answers, and participants were asked to check the one they thought was most appropriate.

Statistical analysis

The data were exported and statistically analysed by SPSS 11.0 version (IBM corporation, Java, Chicago, USA). The differences in the variables were compared by Chi-square test and Student's t-test. $P < 0.05$ was considered statistically significant.

Results:-

Out of 400 google forms circulated 365 parents responded. 91.25 % responses were collected from the parents with 8.75% of non-responses. The percentages was not added up to 100% because of non-responses.

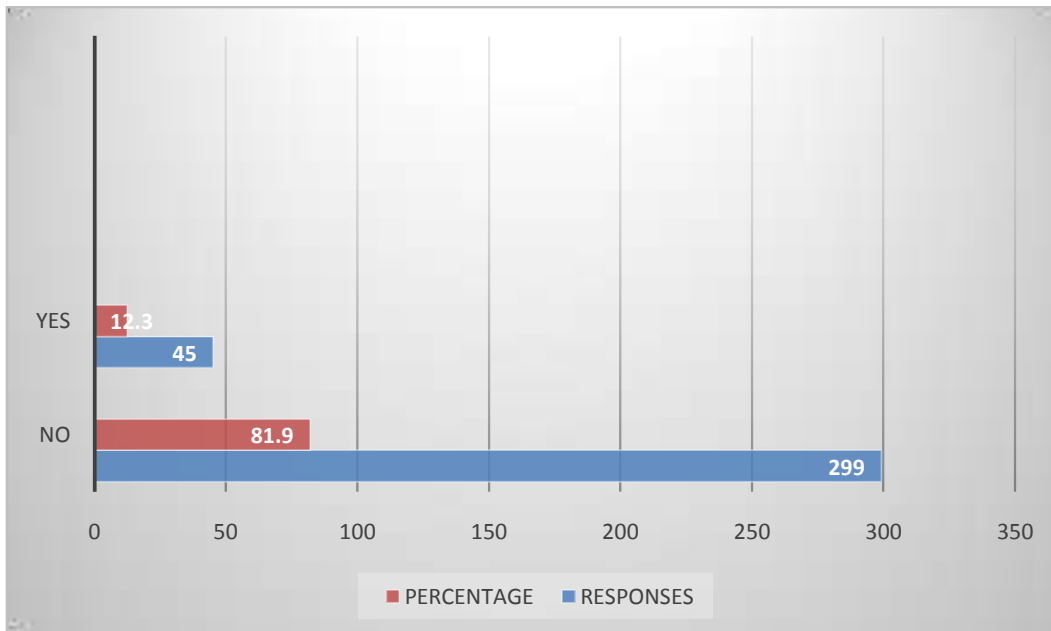
A total of 12.3% parents reported the need of their child's dental treatment during lockdown but only 9 % parents visited the dentist. Parents communicated the dentist during the COVID-19 pandemic, majority of which (41%) reported due to dental caries as shown in Graph 1 & 2. The mode of contacting the dentist for dental emergency during lockdown period was also assessed and was found that 19% of parents would visited nearby dental clinic as shown in Graph 3.

Regarding the impact of COVID-19 pandemic on their child's dental treatment, 4% parents agreed that it was difficult to get an appointment and they missed their routine dental check up due to transportation problem. Parental attitude in maintaining their child's oral hygiene was recorded. Parents realized the need to be more attentive towards their child's oral health while 16.8% parents did not realize the need.

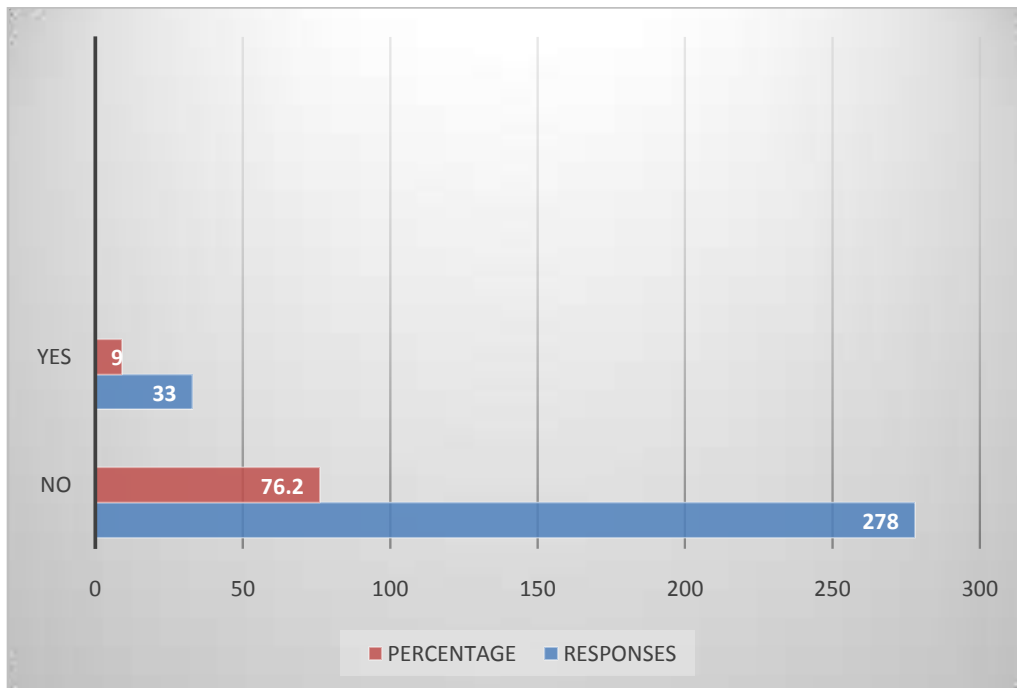
The practice of parents for maintaining their child's oral hygiene was evaluated. A significant number of respondents reported that 59% there was no much changes in the frequency of brushing, only 2.2 % parents said that there was increase in their child's brushing during COVID-19 pandemic as shown in Graph 4.

It was found that parents took extra efforts to maintain their child’s oral hygiene out of which, 58.2% parents increased their child’s mouth rinsing frequency, 7.8% added mouthwash, and 2.8% added flossing, for better protection of their child’s oral hygiene during the lockdown period in COVID-19 pandemic as shown in Graph5.

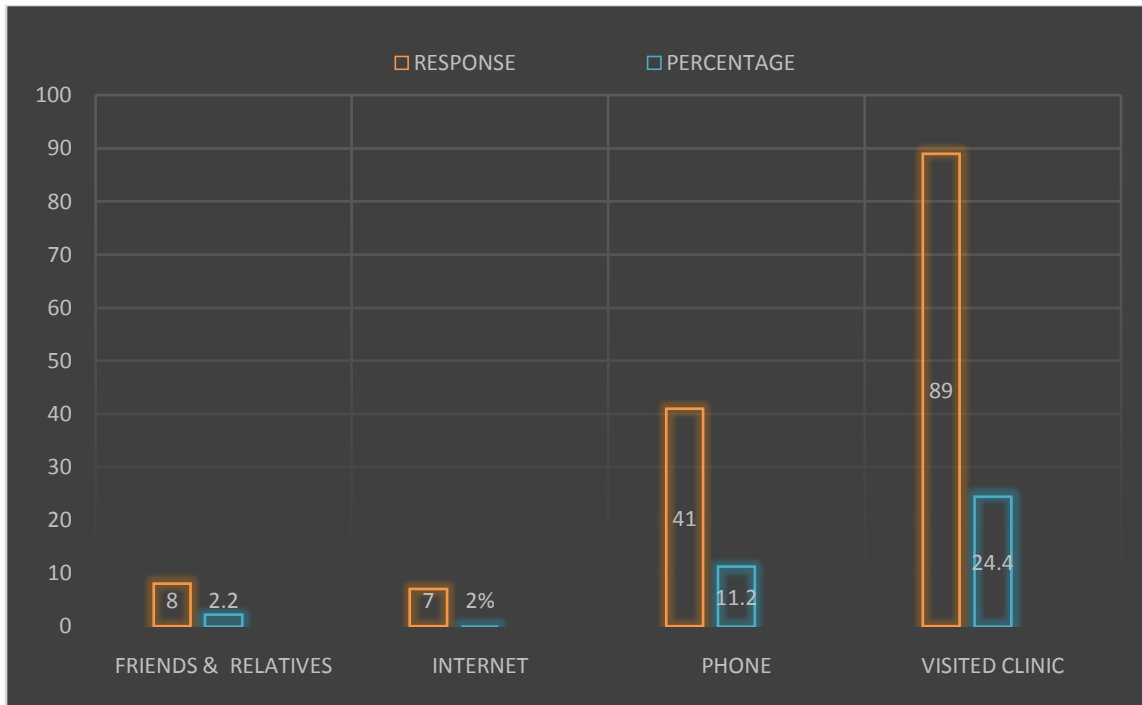
The overall rating of child’s oral hygiene by their parents was done , 2.2% parents rated as excellent,12% very good and 44 % good during COVID-19 pandemic. 35% parents also reported that they were satisfied with the dental services during pandemic and 4% unsatisfied regarding the dental services provided during COVID-19 pandemic.55% parents said that pandemic has made them realize to be more aware about their child’s oral health.



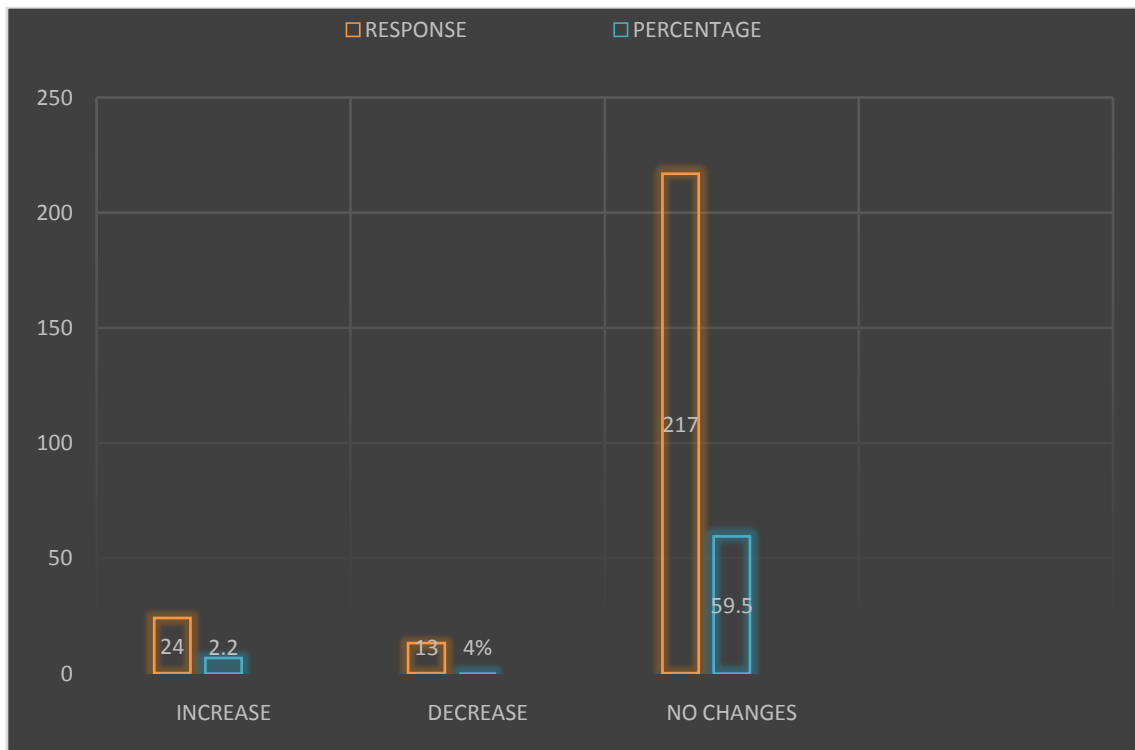
Graph1:- Dentalvisits during pandemic



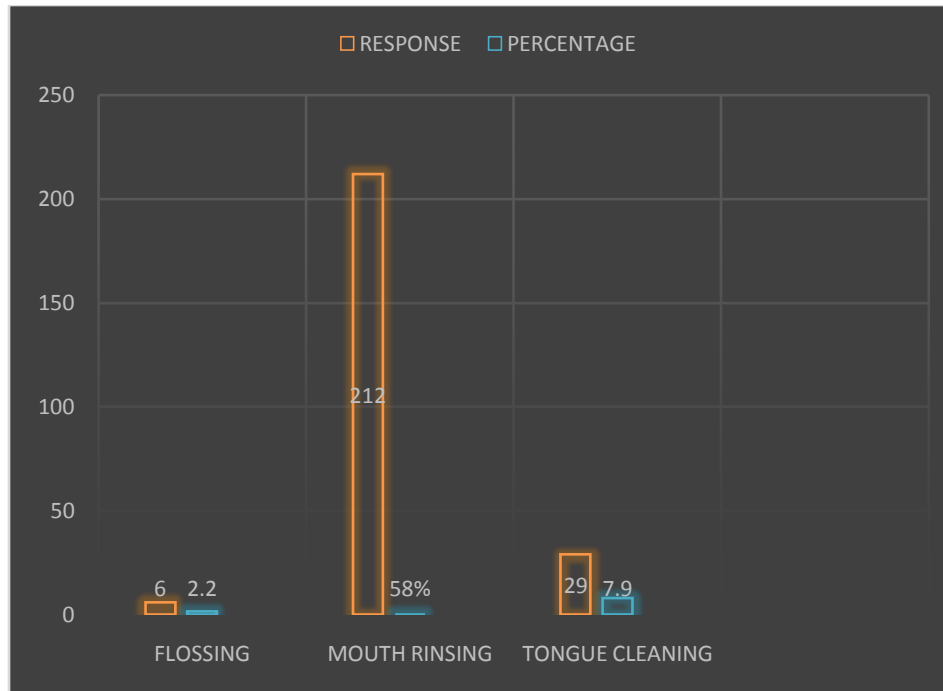
Graph2:- Reason for visiting dentist



Graph 3:- Mode of contact



Graph 4:- Frequency of brushing during pandemic



Graph 5:- Additional method of oral hygiene maintenance

Discussion:-

The impact of COVID-19 has affected billions of people affecting nearly all domains of their life including finances, education, lifestyle and most importantly the health care needs of the patients. Due to lack of medical and dental services during lockdown period along with the fear of contracting infection, health care needs of patients has severely affected⁹.

This survey provided insight into the impact of COVID19 on oral health status, attitudes and behaviours. In this study the parents visit to the dentist during COVID-19 pandemic was due to toothache. This showed that dentists need to pay more attention to the treatment of toothache in children when the epidemic would be thoroughly controlled in the future⁹. In the present study, 12% parents reported the need of pediatric dental treatment during the lockdown period in the COVID-19 pandemic but only 9% contacted dentist for their child's dental treatment,

The lack of reporting for consultation was also reported in a study conducted by Karacin et al¹⁰ in which people avoided medical treatments due to fear of contracting COVID-19 which may increase the risk of serious health issues in the near future..In our study the reason for not contacting was fear was similar in other studies

In the present study the parental need to visit pediatric dentist was evaluated and it was reported that 5.2% pediatric patients visited dental clinic due to toothache, 0.8% due to gum swelling and extra oral swelling, and 4.4% due to dental caries. Similar results were reported by Goswami et al in 2021, 73.81% pediatric patients visited dental clinic due to toothache, 9.84% due to gum swelling, and 4.9% due to extra oral swelling²

In the present study the availability of health care system possessed major challenge during lockdown, the availability of emergency dental services 21.6% parents reported the availability of emergency dental service in their area, and 39.7% were not aware of emergency services available in their area during the lockdown period in COVID-19 pandemic. The study conducted by Goswami et al also had similar results.¹²

The parental need to be more attentive toward their child's oral hygiene was assessed and 54% parents realized the need to be more attentive. In spite the dental services were interrupted during COVID-19 pandemic, 15% were not aware while 30.8% did not realize the need to be more attentive towards their child's oral hygiene. This finding can be explained as a fact as lack of resources and communication during lockdown period imposed psychological stress to both parents as well as pediatric patients,¹³. Similar finding was reported in a study conducted by Brown et

al¹⁴ among 148 parents of child below 18 years of age, stating that 21%–47% parents reported the negative impact on their child's health and mental status during COVID-19 pandemic.

In this study, the results indicated that epidemics changed people's attitudes towards oral health in children. Therefore, we should develop more oral health education and promotion programs providing instruction in effective prevention and the improvement of oral health¹⁴. When the dental services are unavailable, dental professional can use 'social' digital platforms to instruct positive oral health behavioral. Through the platform, parents and dentist could communicate with each other and exchange information in time.

In addition to the significant contributions of the study, there are also some limitations that should be noted. Because this study was an online survey, people who did not know how to use the Internet could not participate. As with other open Internet surveys, this study also faced the challenges of respondents' identification and information bias. However, the existing data already provided a preliminary reflection of oral healthcare status in pre-schoolers and information about their challenges with dental services.

Conclusion:-

1. The overall attitude and practices of the parents were not very satisfactory toward the oral health of their children during the COVID-19 pandemic.
2. Parents were not aware about various emergency dental services during pandemic.
3. There is a need of increasing awareness among parents regarding the importance of maintaining their child's oral health. So various awareness programmes or workshops should be conducted to create awareness amongst parents.

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