

## The Impact of COVID-19 Pandemic on Children Behavior in Pediatric Dental Clinics

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### Abstract

Child psychology is the study of the subconscious and conscious childhood development. Child psychologists world over to observe how the children interact with their parents, their peers, and the environment so as to know about their mental health. The brain of a child is continuously evolving. The child learns most of his/her behaviors from the interaction with the outside world. In the initial years of development, the child learns most of his behaviours at home. But slowly he has to move out of his home and interact with other children, other people in playschool, kindergarten and his behaviour gets shaped likewise. The outside environment has a very important part to play in the development of child psychology and further his behaviour once he grows up. This is how the children used to grow both physically and psychologically. But things changed drastically since the viral outbreak of CoV-2 as a global pandemic. Although the coronavirus (nCoV-2) has not affected the children much virulently the effect it has on the psychology of small children is yet to be ascertained. Here we will look into the psychological impact of the corona pandemic on children and the effect it can have on their dental behaviour.

**Keywords:** COVID-19; Children; pandemic; Psychology.

## Introduction

Child psychology is one of the many branches of psychology and that are studied more extensively. This branch is focussed on the mind and behaviour of children from the prenatal period to adolescent age [1]. Child psychology not only deals with the physical growth of children but also their social, emotional, and mental development as a whole. In earlier times, children were thought of as miniature adults. But slowly it was seen that children have a complex thought process that is completely different from adults. Today, psychologists realize that child psychology is unique and complex but may differ in terms of the unique perspective they take when approaching development. Jean Piaget also suggested that children think differently which was seconded by Albert Einstein [2]. Experts differ in their understandings to some of the bigger scenarios, such as whether initial experiences in childhood matter more than later ones or whether nature or nurture plays a greater role in development. Childhood plays such an important role in the course of the rest of life, it has fascinated those pursuing studies in psychology, sociology, medicine, and education [3]. The experts in this field not only study the psychological development of a normal child but they have a major interest on the influences that various factors have on the psychology of a child. Parents, school, peers, self-esteem matter in the development of the mental health of a normal child. Most people often think that it is internal factors like genetics and personal characters that influence the growth of a child. But, the external influences like the environment where the child lives and social relationships also mold the child's mind [4].

## The contexts of child psychology

### Cultural context

The culture in which the child stays in contributes to his values in life, customs, behaviours shown, and way of living throughout the lifespan. Different cultural values have different influences on child development. Children growing up in varied cultures receive specific inputs from their immediate environment. For that reason, there's a vast array of cultural differences in children's beliefs and behavior. Language in itself has a major influence on the child's thinking. The content and the focus of discussion varies in different cultures. In Germany, the mothers speak to their children as an individual person whereas African mothers focus more on the social context [5]. Because children in different cultures differ in how they think about themselves and relate to others, they also memorize events differently. The parent's influence on a child's thinking and moulding the child's

behaviour can not be ignored. Basically, parents are the ones who prepare the child for a greater role in society later on in their lives. Children's interaction with their parents often acts as the archetype of how to behave around others – learning a variety of socio-cultural rules, expectations and taboos [6].

### Social Context

The child learns a lot from the immediate society he/she lives in. The earlier life has his family as his/her society, later on the peers, relatives, school mould the child's behaviour [7]. The child learns as he grows at each and every stage of his life. The society plays an important role in moulding the mind of a child. A child's social environment influences their mental development and educational attainment. Those children who develop good social relationships are known to perform better in academics than those who do not have good relations with their peers and society [8]. Growing up in a positive social environment makes the child taking less risk in life. Children who are brought up in a positive social environment have higher self-esteem making them less vulnerable to depression and suicidal tendencies. A pro-social behaviour in childhood leads to better mental health in adulthood [9]. The motivational level of children living in a healthy social environment is much higher than those having poor connects with society. Peer support leads the child to achieve better social goals, whereas teacher support always makes the child better in academics and social goals. The impact of good societal relationships shows up in the physical health of the child too. Children engaged in outdoor activities with their friends develop a sense of teamwork apart from getting a good physical and mental workout which is essential for their overall psychological health. The child when socially, physically and mentally active will feel to be a part of his community [10].

### The socio-economic context

Social status also plays a major role on the psychology of the child. The socioeconomic status of a person depends on many factors like, how much they earn, how much education they have, what job he is in, and where they stay [11]. Children coming from higher socioeconomic status get better opportunities in education, healthcare, and nutrition whereas those coming from lower strata have poorer access to all these which in turn has a great impact on their psychology. The children coming from poorer neighborhoods will have a disturbed mental health [12].

Child psychology is influenced by many factors and it cannot be pointed to a singular factor, but the interplay and balance of all the factors together lead to a psychologically healthy child who then grows to be both physically and mentally healthy. The factors to be taken into account are [13].

#### Cognitive development

- 1) Environmental influences
- 2) Gender Roles Genetics
- 3) Language
- 4) Personality development
- 5) Prenatal development
- 6) Social Growth
- 7) Sexual Development

### **Child Psychology in corona pandemic and the outcomes**

We cannot deny the role of society in the physical and mental well being of a person, more so for smaller children. The recent times have been tough for children. In earlier times around this part of the year, children would be busy in their schools, studying, playing, and making the most of their time in school. But this year both the schools and childhood are in suspension, for how long that also they don't know. All of us are worried, parents, teachers, experts about the curtailed life of children. The lifestyle of each and every individual around the world has seen a sea change including children because of the pandemic caused by nCOV-2. The nCoV-2 was first detected in December in Wuhan, China, and declared a pandemic in march by WHO. Since then it has affected 12 million people worldwide and caused 5.5 lakhs death with the worst affected countries being the USA, Brazil, India, Russia [14]. COVID-19 is thought to spread by close contact from person-to-person. The virus can spread from a person who is asymptomatic to a healthy person via droplets, contact, inhalation. The best way to protect oneself from the virus, till the vaccine is developed, is to maintain social distance, washing hands frequently, cleaning frequently touched surfaces and use of face and nose mask [15]. nCoV-2 usually affects the respiratory systems of mammals including human beings. Coronavirus usually causes common cold but can have more severe illness too including difficulty breathing, cough, fever, fatigue, headache, muscle pain, the new loss of taste or smell, diarrhea. To date, there is no vaccine yet for this disease. The CDC has noted that although there have been complications in children too they are very rare.COVID-19 produces mild symptoms in children [16].

There have been many studies that suggest that COVID-19 spares the children lightly [17]. They are either as-

ymptomatic carriers or show mild symptoms. But this focus on infection and death rates tends to hide an enormous fact check on the psychological impact on children due to lockdowns and other curbs on children due to the corona pandemic. It's very easy to think that children arent much affected by the pandemic. The fact is that life for them has changed too. We may say that the change might be positive-parents spending more time with them-its still a change that can be quite unsettling for most of them. Younger children do not understand much of the nuances going around and mostly the world is all about themselves but they have a sense of knowing when emotions of their caregivers change. In Spain, where the lockdown was so strict that children were not allowed to step out of houses for six weeks, 90% of parents observed emotional and behavioral changes [18]. However, in Italy, where children were allowed to take little walks outside the psychological impact was less. Surveys have found that the children who were quarantined seemed to be four times more stressed than those who were not [19].

The children after remaining under lockdowns are now themselves worried to go out of their homes and contract the disease and fall sick, even dying. They are missing going outdoors and their routines. Going out plays an important role in subduing negative emotions. People who are going out regularly will have lower activity in the part of the brain that produces negative thoughts. The daily routines also tend to reduce stress but with no rules yet on school reopening the children are feeling the stress more. The children have been exposed to too much about the pandemic and that is what is making them scared and depressed. They are not able to comprehend what this is about but they can feel the stress through the parents/caregivers. Those parents who are more stressed, emotionally, financially, physically have reported that their children too are more stressed. All the health effects of this pandemic have been discussed, how it affects, how we can protect ourselves, possible cures but the only thing which is not discussed much in every government worldwide is the psychological impact on children. The Lancet says that few children are blaming themselves for this pandemic [20]. The age group of 4-7 years is where the children have "magical thinking". They believe that it is their thoughts that control the whole world around them. This is also the age when the conscience develops. The children might not understand how this disease spreads but they may have guilt if someone in their homes gets sick of this virus as they might think that it is because of their previous bad behaviors. One more effect seen in adolescent is because of the lack of social interaction because of lockdowns. Social interactions are proposed to be a basic human need, analogous to other fundamental needs such as food consumption or sleep.

Indeed, feeling insufficiently connected to others is associated with profound and lasting negative consequences on physical and mental health, even leading to increased mortality. Current efforts to contain the spread of COVID-19 have required sudden and commonly mandated physical distancing, removing many regular sources of social connection from people's lives. Such measures are likely to have a substantial effect, not only on the economy and society but also on individuals' mental health and wellbeing through factors such as reduced contact with other people. Adolescents tend to interact more with their peers and learn. The deprivation of social interaction because of physical distancing can affect heavily on the psyche of children and adolescents [21].

### **How the psychology of the child will affect pediatric dentistry now**

Pediatric dentistry is defined as an age-defined specialty that provides both primary and comprehensive, preventive, and therapeutic oral health care for infants and children through adolescence, including those with special health care needs [22]. This branch of dentistry takes care of the child in total in a holistic way till adolescence. The corona pandemic (COVID-19) has changed the way dentistry, especially pediatric dentistry takes care of patients. The initial days of the COVID-19 disease made life uneasy because of strict lockdowns in many countries. Till the time any vaccine is developed much emphasis has been put on, staying inside the home unless needed much to go outside, social distancing, and wearing masks when outside. The two age groups vulnerable to disease are the older age group and children as seen in many countries although children are found to be asymptomatic mostly. The CDC along with AAPD made guidelines for taking care of pediatric dental patients in these difficult times of corona pandemic [23].

- 1) Prioritize the most critical dental services and provide care in a way that minimizes harm to patients from delaying care and harm to personnel from potential exposure to COVID-19.
- 2) Proactively communicate with both personnel and patients the need for them to stay at home if sick.
- 3) Request that the patient limit the number of visitors accompanying the patient to the dental appointment to only those people who are necessary
- 4) Take steps to ensure patients and staff adhere to respiratory hygiene and cough etiquette, as well as hand hygiene, and all patients follow triage procedures throughout the duration of the

visit.

- 5) Remove toys, magazines, and other frequently touched objects that cannot be regularly cleaned or disinfected from waiting areas.
- 6) If aerosol-generating procedures are necessary for dental care, use four-handed dentistry, high evacuation suction, and dental dams to minimize droplet spatter and aerosols.
- 7) Ideally, dental treatment should be provided in individual patient rooms whenever possible.
- 8) DHCP should wear a surgical mask, eye protection (goggles, protective eyewear with solid side shields, or a full-face shield), a gown or protective clothing, and gloves during procedures likely to generate splashing or spattering of blood or other body fluids.

These are some of the points taken from the full guidelines of the CDC which is going to affect the pediatric dental patient in this COVID-19 situation. The current situation demands that the children should mostly remain indoors. This will have an impact on the psychology of young minds. The level of anxiety, stress, and uncertainty is felt by all age groups of children during this COVID-19 disease. These children have not been able to connect with their friends and other people face to face since march and to come to visit a dentist during these times will surely test their nerves.

### **What the pediatric dentist can do [24]**

- 1) Be calm and proactive-The pedodontist should be calm and proactive in listening to the children in their clinics. They should always be gentle while dealing with children in these times. They should help alleviate the stress in children due to the corona pandemic.
- 2) Interact and involve the child-The pediatric dentists should involve the children in all the treatments they are going to do on them. This makes them feel wanted and important. As they are not going out and meeting other people, here they can be allowed to take decisions.
- 3) Let the child feel the emotions-Due to the school closures during the COVID-19 pandemic the children are not able to participate in school plays, matches, activities which makes them highly disappointed. These are very important to them than to us as we are measuring it against our lifetime and experience. Support, expect, and normalize that they are feeling sad. Show some amount of empathy and support for the treatments

to run smoothly.

4) Check with them what they are hearing-There is a lot of misinformation going around about the coronavirus disease. Try to find out, what the child knows as they might nurture false news and act accordingly. It is very important for pediatric dentists to see to it that they get accurate information on this COVID-19 disease.

5) Create welcome distractions-The distractions that were usual for children earlier during the pre-COVID times might not be effective now as the children spend more time on smart-phones,laptops, and other media. The toys, drawing books, and other playthings have to be removed as per CDC guidelines. So pediatric dentists have to use other distractions to keep the child engaged.

6) Monitor your own behaviour-The pediatric dentists have to monitor their own behaviors too. As in these testing times, they too can get anxious. That should not be sensed by the children. Children should feel safe and secure in the dental clinic.

## Conclusions

The current pandemic situation has made the children vulnerable both physically and mentally. The severe lockdowns in some countries have taken a toll on the minds of young children. They have been inside homes since the coronavirus outbreak occurred. These children have to be attended to with tender, loving care when in the pediatric dental clinic for their dental treatments.

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