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RESEARCH ARTICLE

PSYCHOLOGICAL IMPACT OF COVID-19 RELATED SCHOOL CLOSURE ON INDIAN CHILDREN

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ABSTRACT

Children were out of school and confined to their home since the prolonged school closure was announced in March 2020. While there is some research on the psychological impact of severe acute respiratory syndrome (SARS) on patients and health-care workers, not much is known about the psychological effects on ordinary people, especially children.19 As the pandemic caused huge financial and personal losses to many families, it is important to support children facing bereavement and issues related to parental unemployment or loss of household income. There is also a need to monitor children's mental health during these stressful times and to study how prolonged school closures, strict social distancing measures, and the reopening of schools after so long has affected the psychological wellbeing of children. In view of the above, the main purpose of this study was to evaluate the psychological effects of prolonged school closure and reopening after so long. The study has shown that there is an increase in behavioural and emotional problems of children due to COVID-19 related prolonged school closure and reopening thereafter.

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INTRODUCTION

There are more than 2.2 billion children in the world who constitute approximately 28% of the world's population (UNICEF 2019). COVID-19 has impacted the lives of people around the world including children in an unprecedented manner. In absence of any definitive therapy, and measures to control infection; like social distancing, containment and proper use of protective personal equipments are still considered the best ways to control this spread of COVID-19. Throughout the world, isolation and social distancing strategies were considered to be the most essential and the only way of prevention from COVID- 19 infection. In line with these precautionary steps, one of the principal measures taken was closure of schools, educational institutes and activity areas. Since 25th March 2020, after nationwide lockdown started, schools all over India were closed and online teaching had been rolled out. As of April 8, 2020, schools were suspended nationwide in 188 countries, according to UNESCO. Over 90% of enrolled learners (1·5 billion young people) worldwide were out of education.

The UNESCO Director-General Audrey Azoulay warned that "the global scale and speed of the current educational disruption is unparalleled.[1]" Although now, the schools have reopened and near normal life restored but still anxiety persists in many families and children in getting infected in schools because with schools running on full strength now, social distancing is not practically feasible option . Further, two years of online education have caused a huge of learning gap both in terms of education as well as in terms of social communication skills of children. These inexorable circumstances which are beyond normal experience, have led to stress, anxiety and a feeling of helplessness in all. The coronavirus disease 2019 (COVID-19) pandemic and the social distancing measures in the form of nationwide lockdown, that many countries implemented in 2020 and 2021, have caused disruptions to daily routines including daily routines of children.. Although, it has been reported that children are less likely to be infected with SARSCoV-2 and even if infected they usually have milder symptoms or even remain asymptomatic. Although, children may be immune to and less affected physically, this in no way suggests that they are psychologically also immune to the effects of

circumstances created by the pandemic. Children as young as 2 years were reported to be aware of the changes around them and get affected by it [2]. It has been concluded by various studies that children were fearful about the infection of self and family members, and didn't like the strict social distancing measures, along with feeling anxious about uncertainties of when the pandemic will end, feel isolated due to prolonged and widespread closure of the schools, parks, theaters and other public places and lack of opportunity to play outdoor games[3-6]. Studies have also reported that parents, who are themselves undergoing heightened stress and anxiety either actively or passively add to worsening of behavioral and psychological problems in children[3]. Previously few studies found that anxiety, depression, irritability, mood swings, inattention and sleep disturbance are fairly common among quarantined children[4-5]. Studies performed in past during epidemics such as those caused by SARS, Ebola virus and Middle-East respiratory syndrome reported high prevalence of adverse psychological consequences in adults as well as children[6]. During this COVID-19 pandemic, also some investigators have completed clinical studies in this regard and have demonstrated that children, remaining in lockdown/under quarantine showed increased anxiety and depression [7-18]. It has been previously reported that children are worried and fearful of being infected the illness, along with being worried about their family members[7-11]. Similarly, students also suffered additional psychological stress due to interrupted academics and uncertain future[10-13].They experienced fears, uncertainties and physical and social isolation and missed school for a prolonged period. A thorough knowledge of emotional and behavioural responses of children is essential to help them overcome these difficulties. A preliminary study conducted online in Shaanxi Province during the second week of February 2020, which was authorized by the local authorities, showed that the most common psychological and behavioral problems among 320 children and adolescents (168 girls and 142 boys) aged 3-18 were clinginess, distraction, irritability, and fear of asking questions about the epidemic.[19]

It has been indicated that compared to adults, this pandemic may continue to have increased long term adverse consequences on children and adolescents[20]. School closures have substantially disrupted the lives of students and their families and may have consequences for child mental health. As such, we must consider the potential associations that school closures have with children's wellbeing and what can be done to mitigate them. For children, such closures mean a lack of access to the resources they usually have through schools like meeting their friends, having fun activities, social interactions, school picnics etc. Those children who were actively into sports are not able to do so thereby probably causing a lot of distress. The physical energy they were channelizing in sports is now surplus and could cause effects evident in behavioural changes such as hyperactivity, poor concentration, being fidgety and irritable. Children were out of school and confined to their home since the nationwide lockdown was implemented. Schools were highly adaptive and very quickly resorted to online teaching while also including some fun activities through online modes. Although these measures and efforts were highly commendable and necessary, there are reasons to be concerned because prolonged school closure, home confinement and reopening of schools after such a long time might have negative effects on children's physical and mental health. [21,22] Evidence suggests that when children are out of school (e.g., weekends and summer holidays), they are physically less active, have much longer screen time, irregular sleep patterns, and less favourable diets, resulting in weight gain and a loss of cardio respiratory fitness.[21-23] Such negative effects on health are likely to be much worse when children are confined to their homes without outdoor activities and interaction with same aged friends during the lockdown period. Mental health care is very important for children. Most mental health disorders begin in childhood, making it essential that mental health needs are identified early and treated during this sensitive time in child development. If these mental health problems are not addressed, they can lead to negative health effects and poor social outcomes. The COVID-19 pandemic may worsen existing mental health problems and lead to more cases among children because of the unique combination of the public health crisis, social isolation, and changed parental attitude and parental anxieties. While there is some research on the psychological impact of severe acute respiratory syndrome (SARS) on patients and health-care workers, not much is known about the psychological effects on ordinary people, especially children.[19] As the pandemic caused huge financial and personal losses to many families, it is important to support children facing bereavement and issues related to parental unemployment or loss of household income. There is also a need to monitor young people's mental health during these stressful times and to study how prolonged school closures, strict social distancing measures, and the pandemic itself has affect the psychological wellbeing of children. In view of the above, the main purpose of this survey was to evaluate the psychological effects of prolonged school closure on children during COVID-19 pandemic, and therefore propose concrete basis for tailoring and implementing relevant mental health intervention modules to cope with this challenge efficiently and effectively.

Aims and Objectives: The study aimed to evaluate the psychological effects of COVID-19 related prolonged school closure on children.

Objectives

1. To determine the proportion of children showing behavioural and emotional problems consequent upon COVID 19 related school closure as measured by researcher made interview questionnaire.
2. To study the pattern of behavioural problems in children consequent upon COVID 19 related school closure as measured by researcher made interview questionnaire.

METHODOLOGY

Study Design- The study was cross sectional online survey

Study Participants: Indian parents of children in the group of 4 to 10 years were invited to participate in an online study to assess psychological effects of prolonged school closure on Indian children.

Sample size: Snowball sampling technique was used. A sample size of 400 was calculated for this survey based on the sample size calculation for survey research given by Gill et al.'s formula

$n = \frac{p\,(100-p)z\,2}{E2}$, where

n is the required sample size
P is the percentage occurrence of a state or condition
E is the percentage maximum error required
Z is the value corresponding to level of confidence required

For the purpose of current study, P was taken as 50% [8]. Z was taken as 95%, its value was 1.96.

Inclusion criteria

- Children ages between 4 to 10 years
- Children enrolled in regular school
- Parents should be able to read and understand basic English

Exclusion Criteria

- Children with disabilities

Procedure: This was an online survey study conducted with parents of children between the ages 4 to 10 years and was done by using a semi structured interview after taking approval from Institute Ethics Committee, the survey form was shared through various online modes like E mails, Whats app and other social media. The participants were encouraged to roll out the survey to as many contacts as possible. Thus, the link was sent and forwarded to people. On receiving and clicking the link the participants will be auto directed to the participant information sheet, followed by informed consent sheet. If the participants gave consent, only then the google survey led them to the next question. In case the participant did not give consent, the google form was submitted and the participant was not asked any survey questions. After they gave informed consent, participants filled up the demographic details. Then a set of several questions regarding their child appeared sequentially, which the participants had to answer. After answering all the questions, the participants clicked on submit link and the google form got submitted to the investigators and co-investigators Google drive.

The online google form created by investigators includes the following-

- **Socio demographic details**-This would include the demographic details of the child like age, education, current grade/ college year, type of family, parents' occupation, parental income, place of residence.
- **Online Interview Questions-** Questions pertaining to the activities and schedule of the child before and during lockdown, ways of communication, child's anxieties and fears regarding COVID-19 would be included in this. Along with this, several questions pertaining to behvioural excesses and deficits ocuuring during school closure were asked.

Statistical Analysis: Descriptive statistics was used to present variables as numbers and percentages.

RESULTS AND DISCUSSION

The Mean age of parents was 45.3 years and mean number of siblings- was 2. the sample comprised of 50.3% females and 49.7% males. In our sample, 41.4% children lived in joint 7.2% in extended nuclear while 51.3 % were from nuclear families. Parents of 67.1 % children were in non essential services/ while parents of 32.9% were in essential services. The current study evaluated the psychological and behavioral impact of the COVID-19 related prolonged school closure on children. Since by now, the pandemic has almost reached endemic stage and schools have reopened with life resuming to near normal, child psychiatrists/psychologists need to intervene at this point to minimize long term consequences. The present study found that there has been an increase in behavioural problems in children. Initially, in 2020 when the lockdown was announced, children reported being very happy. However, once the school closure was extended, many children started showing emotional and behavioural problems. The study indicates that due to school closure, children faced a heightened levels of anxiety , stress, sadness, boredom, depressive symptoms (31.5% and 29% after school closure and reopening respectively), sleep disturbance and fear for the situation. It was found that children are having increased attention problems(47% after school closure while 26% more after school reopening) with an increase in aggressive behaviour (45|%). The problems were more pronounced in children of parents in essential service which could largely be attributable to absence of parents and comparison with those children whose parents were doing work from home and could spend time with their children. There was an increase in number of days being absent from school and school refusal (19% children reportedly had these after reopening of school). There has been a considerable increase in clinging to gadgets post school reopening along with poor social interaction (39% parents reported these problems). Studies have reported that at least 70–90% of children were found to have worsened in at least some aspects of their behavior, which is worrisome for the clinicians.[26]

Thus, it seems, the COVID-19 pandemic as such has a definite adverse impact on the psychological profile of children, which is further aggravated by quarantine measures. One interesting aspect is that smart phones and social media use which was previously discouraged by most parents, became the only media for entertainment, information and education for children during school closure. Although many authors supported the use of gadgets in mitigating the stress and depression of children, it is also important that parents must ensure judicious and reasonable use of electronic media along with keeping a regular check on the content that their children are viewing [27,28]. After the reopening of schools, many children are finding it difficult to cut down on their mobile usage and screen time which is a major cause of concern. Now that schools have reopened many children are finding it difficult to adjust and cope with the demands of schooling like being regular to school, following a daily routine, doing homework, giving offline exams and maintaining discipline.

Online classes , online extracurricular activities have made parents and children majorly dependent on technology based learning. However, this has a drawback that even after resumption of normalcy, children are reluctant to go for outdoor activities and prefer staying indoors at the comfort of their home. Young children were found to be having poor social skills and to avoid playing with others as their preference is screen time.

CONCLUSION

Prolonged school closure and reopening of schools thereafter has caused a lot of behavioural and emotional problems in children. The present study has found anxiety, increased irritability, boredom, inattention, aggression, increase screen time, poor social skills to be predominantly new-onset psychological problems in children due to prolonged school closure due to COVID-19 pandemic and reopening thereafter . Children with pre-existing behavioural had worsening of their behavioural symptoms. To mitigate these significant negative impact on the psychological wellbeing of children, multifaceted age and age appropriate strategies are required to be developed.

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