

Impact of school closure during COVID-19 pandemic on school-going children in a rural population of Haryana: A qualitative study

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ABSTRACT

Background: The Government of India undertook several measures for COVID-19 pandemic, of which school closure was one. This led to sudden shift of teaching methods from classroom-based to online mode. This study aimed to understand the effects of school closure on children during lockdown period. **Methods:** This was a community-based qualitative study conducted in Faridabad District, Haryana, India, from January 2022 to February 2022. Two focus group discussions (FGDs) with school students of 8th standard and above and two FGDs with parents of school students below 8th standard were conducted. In-depth interviews were conducted with two school headmasters, two teachers, a Senior Medical Officer (SMO), District Education Officer (DEO), and District Elementary Education Officer (DEEO). Responses were recorded, transcribed, and reviewed to identify themes, and thematic analysis was done. Four major themes were framed—academic, physical, behavioral, and psychosocial. **Results:** Decreased academic performance, teacher-student interaction, and distraction from the study were found in academic domain. There was reluctance to go back to school reopening. Low physical exercise, irregular sleep cycles meal skipping, and increased screen time were noticed. Limited mid-day meal nutrition was available. Increased fear, anxiety, and loneliness were faced along with an increase in household quarrels and violence. An increase in the number of child marriages was also reported. Few students had positive impacts like improvement in hygiene practices, learning new hobbies, and skills. **Conclusion:** School closure had impact on the physical, mental, socio-behavioral, and academic aspects of school-going children. In case of similar events in the future, these impacts must be kept in mind by policymakers to achieve a balance between effective pandemic control and fruitful childhoods.

Keywords: COVID-19, impact, qualitative, school closure, students

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Introduction

Schools play essential role in overall learning, cognitive function, physical health, and socio-emotional development.^[1] It also plays

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an important role in nutrition especially in India, under mid-day meal scheme in government-funded school, while private schools serve lunch and snacks to their students paid by themselves.^[2]

With the onset of COVID-19 pandemic, several measures were taken by the Government of India to prevent spread of virus, one of which was the closure of schools. The schools were initially closed in March 2020 after which it was opened in December 2020, followed by shutdown in March 2021. They were re-opened in a phased manner in July 2021 starting with classes 6–12 and classes 4–5 in September 2021. Schools were closed again in January 2022 and reopened for all classes by February 10th, 2022.^[3,4] In district Faridabad of Haryana state, there were a total of 370 schools out of which 201 provided mid-day meals as school lunch program.^[5] When schools were closed down, teaching shifted to online mode and children lost access to mid-day meal scheme as well though there was attempt to send raw materials to home later.

During the closure period, many children lost opportunities for growth, development, and social contact, especially in lower socio-economic class.^[6–8] In COVID-19 lockdown, increased mental health problems like fear, anxiety, boredom, and loneliness manifesting in the form of somatic symptoms among children were reported.^[9,10] Erratic sleep behavior especially bedtime among school-going children incurring physiological and psychological consequences were also evident.^[11] The impact of the COVID-19 crisis was noted not only by children and young people themselves but also by caregivers, local authorities, and the staff involved with the agencies serving children.^[5,12]

There was a need to have better understanding of these issues. Therefore, we aimed to explore the impact of closing schools on school-going children in different domains including psychosocial, physical, nutritional, behavioral, economic, and academic aspects.

Materials and Methods

Study design and setting

This community-based qualitative study was conducted in rural area of district Faridabad, Haryana. Details of the study area are published elsewhere.^[13] There were nine senior secondary high schools; six high schools; three middle schools; 26 primary schools in public sector and in private sector, eight senior secondary; 11 high schools; ten middle schools; and 14 primary schools.^[14] The study was conducted from January 2022 to February 2022.

Participants

Study participants included students from classes 8th to 12th standards, parents of students below 8th standards, teachers, and school heads from selected two public schools and two private schools: the DEO, the DEEO, and SMO. Informed

written consent was taken from after explaining in local language, and identities of participants were kept confidential.

Data collection

Focus group discussions (FGDs) and in-depth interviews (IDIs) were conducted with audio recording. Each FGD consisted of 10–12 participants. Two FGDs were conducted among school-going children of class 8 and above each from public schools and private schools, whereas two FGDs among parents of children below class 8 each from public schools and private schools, respectively. In-depth interviews were conducted with two school heads and two teachers of a public school and private school each: the Senior Medical officer (from Community Health Center, Kurali, Faridabad, Haryana), the District Education Officer (DEO), and the District Elementary Education Officer (DEEO). A structured guide was developed consisting of questions about identified domains and subdomains based on the thematic framework. The recorded audio files of interviews were transcribed into Hindi and then translated into English and cross-checked with audio files

Ethical clearance was obtained from the Institute Ethics Committee of the investigating institute (Letter no. IEC -65/14.01.2022, dated: January 19, 2022).

Grounded theory approach was used for qualitative data analysis. Narrative was reviewed, and free listing was done to identify themes. Common themes were grouped and reported as thematic framework [Figure 1]. The responses were analyzed under various domains by thematic analysis using the six steps prescribed by *Braun and Clarke*.^[15] Through analysis of transcripts, we identified the following subdomains, as listed in Table 1.

Table 1: Subdomains for thematic analysis

Serial Number	Themes
1	Physical
a	Sedentary lifestyle and reduced playtime
b	Increased screen time
c	Inadequate meals due to economic constraints and reduced availability of midday meals
d	Impact on healthcare services
2	Behavior
a	Change in daily routine
a	New skills/hobbies acquired
3	Psychosocial
a	Loneliness and boredom
b	Interpersonal relationships
c	Early marriage during school closure
d	Household violence
e	Mental health issues
4	Academic
a	Reluctance to return to school
b	Decrease in study hours
c	Shift to online learning
d	Effects after school reopening
e	Effects of economic constraints on education



Figure 1: Thematic Framework (Color indicates: green for positive effect, red for negative effect, blue, pink, yellow, turquoise, and purple are to indicate different domains)

Result

Total 24 students from 8th to 12th class were included, 12 each from public and private schools respectively. Among them, 15 students were male. Total 11 parents participated in FGDs. Study findings were described as per preidentified domains.

Domain-physical

Subdomain: Physical activity

Apart from the cessation of academics, lockdown restricted outdoor playing and indirect impact on physical health of children. Seeing daily rising toll of deaths and fear of infection prevented them from stepping out of houses. Lack of physical activity led to weight gain among some children.

"Earlier our kids used to go to school and play, now they keep sitting at home due to which they are gaining weight. They couldn't play any outdoor games or do physical activity as they couldn't go outside and there just wasn't enough space inside the house. Because of the lockdown, they couldn't leave the house or touch anything from outside. There was a sense of terror in the air."

-Parent (30 years old)

In areas with lesser restrictions and houses close to open ground, children got more time to play during school closure period. The decline in children's physical health was perceived more by the parents.

Subdomain: Increased screen time

Children were using mobile phones, laptops, and tablets continuously, even during meal times. This usage among students turned into habit during lockdown leading it as inseparable parts of students' life which continued even after school opening.

"My child used to wake up late in the morning and the first thing he did was check his mobile. He even started missing his meals because of being on the phone all the time."

-38-year-old parent

Increase in screen time had negative impact on the lifestyle and health of children. With lesser social gatherings and outdoor activities, social media was the only place they could interact with their peers.

Subdomain: Impact on nutrition

School closure disrupted mid-day meal program. Many parents could not afford adequate nutritious food as they lost their jobs during lockdown. However, later, schools decided to distribute dry rations to the homes of children of 1st to 8th standards.

"The teachers have been instrumental in our efforts to provide mid-day meals to children while they were at home. Although we could not distribute cooked food due to logistic reasons, we did our best to provide dry ration to as many children from classes 1st-8th as possible" -Headmaster of Government School

But parents were not satisfied with this service. They felt that providing dry ration instead of cooked food was not regular.

Subdomain: Hygiene practices

Good hygiene practices percolated into children's behavior. This included handwashing pre- and post-meals, regularly sanitization, maintaining social distance, and wearing face masks while going out.

Domain-behavioral

Subdomain—changes in daily routine

Due to the irregular schedule of online classes, students no longer had to wake up early every day. The mismatch between routines of the parents and students also led to some friction in the household. Such practices hampered the optimal development of young minds during the prolonged duration of school closure, setting them behind on their timeline.

New hobbies/skills acquired

Some of the students put free time to productive use and learned new hobbies and skills or honed existing ones. Commonly reported hobbies/skills included sewing, cooking, dancing, and painting.

Domain-psychosocial

Subdomain: Interpersonal relationships

Deterioration of interpersonal relationships with parents was reported by few students whereas some felt improvement. Relationships between siblings became weary and having to stay with them all day long led to an increased frequency of quarrels among them. These changes in interpersonal dynamics were noted not only in parent-child relationships but also among other family members.

"My family members had developed a quarrelsome behavior. There was always a toxic and tense up atmosphere even when they were not fighting. I had to go outside and get my mind off it" – 15 years old boy student

Contrary to this, some parents who had permanent jobs were able to spend more quality time with their children. Earlier, they could never find time, but being together with their children during the lockdown strengthened their bond. Shift to online learning led to a lack of communication between teachers and children. The respect and attention given by a student to teacher during online classes were much less than that seen in offline classes.

There was a sense that they had become bad-tempered and touchier. Behavioral changes were less prominent in students with a rural background because social interaction among children was not affected to that extent in rural areas.

Loneliness and boredom

Feeling of loneliness and boredom was another effect among the children. This led them to use social media, online gaming,

and television for escape. Children could not meet their friends leading to a strain on their friendships.

Early marriage during school closure

There was an increase frequency of childhood marriages. It was perceived that marriage during lockdown posed less financial burden on the family. This perception was attributed to COVID-19 guidelines of social distancing leading to lesser participation in marriage reception and a relatively lesser dowry amount. Some students had dropped school as they were forced to get married. Many students also expressed their frustration and rage against the early marriage of their friends. In some instances, parents used this threat of early marriage as leverage for the students to be productive in their studies.

"I've heard there have been a lot of marriages during lockdown. 14, and 15-year-old girls have been married off, and for what? People saw an opportunity that the marriage functions could be conducted at a very low-cost during lockdown, and many of them went ahead and married off their children."

– 15 years old girl student

Household violence

There was no choice but to interact heavily with the family resulting in marked instances of altercations between siblings and parents. Many parents felt that physical punishment was the only way to control them.

"The children used to quarrel so much that we felt that the only way to control them was through physical punishment. Before lockdown, the children would seldom get the chance to sit and spend time with their father, since he used to come home late. Now that he was with them all day, there were many instances where he hit them!"

– 39 years old parent

Mental health

Many children were stressed out since they could not meet their friends. Uncertainty about exams and excessive worrying about the health of their family members added to the problem. Restricted in their homes, away from the familiar comfort of their friends and habits, children were suddenly thrown into the deep end, amid escalating feelings of loneliness, anxiety, fear, and interpersonal conflict.

Domain-academic

The following subdomains were identified from our analysis -

Subdomain: Decrease in study hours

One drawback of online learning using digital gadgets had a wide array of distractions for student. The students often got habituated to online gaming and entertainment media instead of focusing on online classes. The cyclical imposition and lifting of lockdowns served to add uncertainty to academics of the

students. Moreover, the State Board examination for classes 10 and 12 was delayed. The parents observed their children getting careless and out of pace with school curriculum, which induced anxiety about the children's future.

"I did not take my academics seriously even during my 10th grade, because I felt that the corona holidays would come back and the papers would be canceled. Anything I study will be of no use." – 13 years old girl student

Subdomain: Effects after school reopening

The relaxed nature of home environment made children negligent towards their studies along with disrupting daily routines. This resulted in piling up of school work and increased burden on teachers and students after school reopening. Teachers had to work more to be able to complete the syllabus on time leading to a fall in quality. There was uncertainty regarding dates and syllabus of exams and concern if exams would even be held or not. Many students used to neglect or skip online classes. The studious children relatively had fewer issues compared to others during online classes.

Reluctance to return to schools

Being home for so long, children eventually settled into "their new normal" and were reluctant to return to pre-pandemic routine. Repeated delays and cancellations of exams during pandemic had made children complacent and a lot of them had started expecting more cancellations and stopped studying completely. Also, catching up on lost syllabi after reopening was very difficult as they had an increased backlog due to lockdown.

Subdomain: Effects of economic constraints on education

Due to the economic constraints of some families during lockdown period, there was difficulty in arranging electronic devices and internet connections for many students. This led to reduced accessibility to online classes and widening in the hitherto gap between students of different socio-economic strata.

"Many of the homes in villages have three, sometimes even four children but they can only afford one smartphone. Because parents might also require it, the chances of education being neglected for some of these children go up. Many of them couldn't attend their classes on time, and some couldn't even attend at all. There were also a lot of problems with adequate internet strength." – Headmaster of Government school

The Government announced schemes, like giving free tablets and mobile phones to children below poverty line, but the effect on ground was ambiguous. With people losing their livelihoods due to closure of businesses everywhere and COVID-19 increasing financial burden due to exorbitant healthcare costs, they were squeezed from both sides.

"I have observed that post lockdown, many families cannot afford private school education and there has been an exodus of sorts, from private to government schools." – District Education Officer

Discussion

Through our analysis, a thematic framework was prepared outlining the relationships between different subdomains and how each of them was affected during school closure.

There was a significant impact on children across many domains including academic skills, social well-being, mental health, and physical health. A study conducted in the Jammu and Kashmir region by Pandita et al.^[16] based on stimulus-organism-response model highlighted the academic anxiety, mysophobia, and behavioral changes (Panic buying, e-learning) caused among university students due to the pandemic. Forced isolation in an abusive home, increased instances of child abuse had been reported in Jianli County in Hubei Province, China, where lockdown led to tripling of domestic violence rates within one year.^[17] Study done in Malaysia reported reduced skill among the pre-school children affected due to school closure compared to the children of pre-pandemic period.^[18] Evidence from Ebola outbreaks situations suggested rise in number of dropouts, child labor, violence against children, and persisting socio-economic inequality. Widening of pre-existing social disparity had been observed due to differential access to technology and more dependence of marginalized children on school nurses, subsidized meal programs, and vaccination drives.^[19] Peer connection and lack of it have been known to have more far-reaching consequences on brain functioning and social-cognitive development in adolescent age group.^[20] Correlation between worsening economic conditions and deterioration in children's mental health has been reported.^[21] UK's Influenza Pandemic Preparedness society already acknowledged that the impact of school closure on clinical outcomes must be balanced against these vast adverse effects.^[22] There seems to be a need to weigh both sides and take the voices of children, their parents, and other stakeholders into consideration while making policies for school closure in the future. Less stringent methods like small classrooms, mixed online and offline classes, and prioritization of school reopening on fall in the number of cases.

Most of the students in rural areas did not have access to a smartphone and internet connection. This was compounded by the fact that many parents lost their source of livelihood and could not afford said facilities as has been observed by Mukuka et al.^[23] reported in their study that lack of resources and other infrastructure significantly affected remote learning which was the main mode of education during COVID-19 pandemic. This situation led to the learning inequalities among the students of rural area compared to resource-rich area which was also reported in a working paper by Svaleryd and Vlachos.^[24]

Upon reopening, reluctance to go back to school, and problems in re-adjusting to school life due to the persistent disruption were evident which was also been noted by Marchant et al.^[6]

Vlachos et al.^[25] reported no significant increase in the spread of COVID-19 infections in society, resulting from keeping the lower

secondary schools open in Sweden. In a report published from Norway evaluating the impact of infection control measures in schools reached a similar conclusion.^[26]

Many informants reported an increased level of physical activity and got time to develop new hobbies. Since there was no access to junk food, most of them consumed home-cooked food solely. The limitation of the junk food consumption and increase home-cooked food in our study was supported by a cross-sectional study done in Northern India by Thakur and Mathur^[27]

Koumi Dutta et al.^[28] also reported erratic sleep behavior, especially about bedtime in children in a web-based cross-sectional comparative analysis similar to this study.

Initially, some students felt “anxious,” which gradually ebbed away. *Shengyi Liu et al.*^[10] reported similar incidence of anxiety associated with concern about the threat to life and health posed by the virus. One systematic review by Hume S *et al.*^[29] documented anxiety, obesity, and reduced learning during the pandemic period.

We had included students both from public and private schools. The absence of teacher or guardian during the interview gave more robust response of students. The data was collected from all possible stakeholders. We could not include participants from the city area. We assessed the short- and medium-term impacts in our study only.

Conclusion

This study explored diverse impacts of school closure on children’s development during lockdowns, ranging from education and physical health challenges to worsening household relationships, violence, and increased child marriages. Further research is required to understand long-term impacts in similar contexts.

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Conflicts of interest

There are no conflicts of interest.

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