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# Psychosocial Impact of Lockdown Induced Setback on Education during Pandemic in India

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## Abstract

Educational reforms occur from time to time to keep up the pace of changing trends. The new generations of kids are exposed to modern technology at a very younger age. They are well equipped with the novel usage of digital technology to aid in a better teaching-learning process. Pandemic has invoked a lot of drastic changes in many sectors owing to changing norms and lockdown policies across the globe. In India also these lockdown policies were imposed as a measure to curtail the growing rate of infection. India is a country with a dense population with varied socio-cultural and economic differences. Closure of educational institutes adopted as a strategic measure to face the Pandemic lead to uncertainty among the stakeholders which had a huge impact on the psychosocial domain. The education sector took to the mode of digital learning by offering online classes to cater to the need of the students. Shutting down schools and educational institutes not only paralyzed the social contact a child develops on attending school but also increased the severity of screen time with absolute lack of physical activity among children. This chapter aims to explore the impact of the online mode of education and its psychosocial perspectives during the lockdown.

**Keywords:** Uncertainty, education policy, online teaching, physical health and mental health, child and adolescent behavior

## 1. Introduction

Indian education system catered by the private and public sector has diverse modalities of teaching- learning methodology concerning the child and adolescent education. Urban schools have the access to modern technology in the form of internet connectivity and access to smart board teaching. Schools present in rural areas are devoid of such infrastructure and facility and still rely upon chalk and board method of teaching, which was once the traditional method of delivering the curriculum. Lockdown during the pandemic period enabled the students to stay indoors with extensive measures to switch to the online mode of education. E- learning in India was in infancy which geared up following lockdown induced closure of schools. The prevailing COVID-19 pandemic has paved way for introducing digital learning across all ages [1].

The outcome of such sudden change in the mode of teaching- learning methodology is of utmost concern, due to its impact on psychosocial factors involved in the learning behavior of young children.

## **2. Education: new normal ways of teaching and learning during COVID 19 pandemic**

Pandemic has created profound impact on education. Schools and educational institutes were forced to adapt to new normal policies to face the uncertain situation irrespective of their existing infrastructure. E- learning was emphasized by Ministry of Education in India, which played a vital role in helping the learners during the lockdown period [2, 3].

Adapting to digital media is not an easy call within a short duration of time. It involved a series of sensitization measures to inculcate the delivery of curriculum in the field of education within a short spell. Various online platforms were explored to impart quality education in an emergency by educational organizations and they were compelled to implement even though much unprepared.

A lot of up-gradation processes were required from the teaching institutes in the form of online training workshops to the teachers, procuring AV teaching aids in addition to internet connectivity with good bandwidth. Economically, this was considered a challenge to many schools with the existing infrastructure. Educational institutes in India took a paradigm shift to keep the process of continuing education without break in curricular delivery. Schools and other institutes deployed strategies to overcome hurdles to face the challenge imposed during online teaching. Little minds that were used to the routine of going to school were retained at home to participate in online classes which were quite difficult. Though measures were included to make the sessions interactive with strict surveillance, online learning did have its pitfalls. The pandemic induced lockdown did impose a paradigm shift in the field of education which was initially thought to be for a shorter period. When uncertainty prevailed over for a longer time the impact of online education did have its toll on the mental and physical health of learners across all age groups. We all are aware of the fact that school forms the first point of social contact as the child grows. A child not only is benefitted academically but also attains emotional and behavioral development at school. Online classes for young children interfered with the overall development of a child in this aspect.

### **2.1 Challenges faced by educators**

In India, the teaching methodology is mostly teacher-centric though some of the urban schools have upgraded to the student-centric method of the teaching learning process. The Government of India has been attempting to bring a paradigm shift from the teacher- centered to the learner-centered methodology over the years through many National programs such as (NCF 2005) National Curricular Framework, NCERT (National Council for Educational Research and Training). The traditional method of teacher- centered learning was slowly in the process of shifting to the learner-centric at least in most of the higher educational institutes in most parts of India. The instructors were trained to deliver the curriculum and prepare the student for facing assessments effectively in the traditional method of the teaching process. The teacher can figure out the understanding capacity of various students in the physical mode of teaching where more interaction was possible. Eye contact is a key factor during instruction which matters most as it implies good attention and builds a rapport between the teacher and the student [4]. Online teaching had the disadvantage of terminating this connection as it occurred in passive mode.

Educational institutes during the lockdown period had a massive challenge of training the teachers for online mode of teaching in India. Several training sessions within a short period took place to prevent a break in curricular delivery. Government policies to ascertain continuous teaching programs were inculcated to

keep the process going. Certain state Governments insisted on opening of Television channels to cater to the needy that did not have internet access. Scheduled telecasts of faculty participation in the form of presentations were made a mandate for easy access [5]. Amidst all challenges, the teaching fraternity was exposed to various platforms for online teaching with initial struggle. Capacity building for faculty in terms of technical training to go online was indeed a mammoth task for teachers who were not tech-savvy. In course of time, it was made possible by active participation by the enthusiastic teachers. Burnout is a phenomenon usually encountered by students, patients, and people working in the IT sector due to heightened occupational stress. But for the pandemic, which led to the exhaustion related to teaching exclusively online, it was less heard among teachers [6]. Technostress refers to a condition where the individual fails to adapt to new technology and changes in usage of technology which can predispose to psychological and physical stress. Technostress can largely impact the outcome owing to the dedication of extra time in preparing learning resources, errors in utilizing ICT, low reliability on technology, and inadequate training facility [7]. It can affect the physical and mental health of teachers which include negative symptoms like headache, fatigue, sadness, or anxiety [8]. The fear of job satisfaction and high demand by the employers in the educational sector with pay cuts were commonly encountered in many educational institutes in India. Teachers are novice for online teaching in many states of India, which can add up to the stress already experienced due to the global health crisis.

Teachers had the task of adopting measures to mitigate the absence of physical presence by inculcating interactive sessions digitally to make all students participate in an effectively [9]. This kind of digital initiative worked better for primary children when compared to senior students. E-learning updates, online assessments, remote learning, screen to screen interface are some of the technological adaptations undergone by the teachers that may be amalgamated into the regular stream of teaching in the future. Later, when the pandemic ends, blended learning will be propagated to reap the benefit of technology in teaching to young learners.

## **2.2 Challenges faced by students**

The unprecedented situation during lockdown affected the student population by suddenly shifting to the online mode of learning which was very challenging. This type of learning experience was considered novel as it varied entirely from the traditional physical mode of the teaching-learning process. The anxiety of adaptation to newer technology is not the same across all age groups. Online mode of education is not the same across all ages as different age groups required specific methods of learning [10]. Some of the educational institutes in India have already introduced online teaching as a supplement to regular teaching before the pandemic. Students who were already sensitized found it very easy as opposed to students who were introduced to online teaching for the first time. Access, equity, and quality are regarded as the three pillars of the education system in the present. Educational policies governing the sudden change of mode of teaching should benefit every learner across all ages and different states. The emerging problem of the digital divide, where the needy students were deprived of e-learning access because of poor socio-economic status was observed in India. Families which could not afford a proper meal for children during lockdown did not bother to continue the education for their children via online mode as it incurred additional expenditure. Sharing of devices between siblings also was a major problem encountered as many families had access to only a single smartphone for their needs. Learners from poor socioeconomic status were deprived and were unhappy owing to limited access to gadgets and internet connectivity. The digital divide is a major barrier in imparting

equal education across all strata. As per survey analysis, it is found that only 11% of rural and 40% of urban population was able to use the internet and operate the computer in India [11]. Augmentation in internet usage and increased bandwidth connectivity soar to high limits with incurring expenditure was faced by many middle and low-income families following the closure of educational institutes.

As the students were stay put at home, it was not considered as a conducive environment for the learning by many students. This type of transition created anxiety among learners which had a profound impact on learning process. The transition is expected to occur early from traditional teaching to online mode for the betterment of the system and nation. Students reported that the closure of institutes made them feel lonely as they were unable to share their feeling with their peers hindering the social and emotional learning process.

Primary class children depended on their parents for accessing the online mode and participation in sessions as well. Stipulated screen time during sessions and beyond increased the vulnerability to the ill health of children. If unmonitored, young children took to internet addiction, gaming, and cyberbullying which would otherwise not be present before lockdown [12]. In an Indian study conducted on students pursuing Agricultural studies, lack of internet connectivity was the leading cause of constraint towards online learning, followed by other limiting factors like limited data pack and speed, little or no face to face interaction, intense requirement of self-discipline, lack of proper device, poor learning environment and technophobia [13].

The level of learning persistence is low in online learning which can modify positively the learning performance and achievement [14]. The role of academic emotions in the online learning is quite important as it can mediate and moderate students' interaction and learning persistence [15]. Tech-savvy students had the advantage of connecting better digitally for understanding core concepts than the physical mode of teaching. Uncertainties about the future still prevail among the young learners about their future endeavors in taking up a career-oriented course against the backdrop of pandemic crisis. Completing graduation process, assessments and new norms for competitive exams to pursue higher education in other countries remain a question affecting the moral and self-esteem of young scholars during this imposed lockdown.

### **3. Health impact of screen time**

The physical health of children is often neglected during online sessions from home due to poor ergonomics. Children do not follow the instructions and resort to reclining posture during online classes which can predispose to common posture-related problems like backache, neck pain, and other musculoskeletal ailments. Disciplined monitoring to assume the correct posture during online sessions has been reinforced to avoid posture-related musculoskeletal strain in many schools through proper guidelines by authorities are not conveyed effectively to learners. Poor lifestyle adaptations at home and improper posture have resulted in an increasing number of orthopedic problems among young children. It has been observed that the awareness about ergonomics is very low among parents, children, and teachers in this aspect as per an Indian study [16]. The common problems encountered were Cumulative Trauma Disorders (CTD), Repetitive Strain Injury (RSI), and musculoskeletal disorders due to acquired incorrect postures assumed during online classes using laptops, smartphones, desktops, and other devices. Children who spend about 5–7 hours per day with gadgets often resort to forward head posture. It is aggravated by temporary furniture make-shift arrangement known to affect the cervical and lumbosacral spine [17] resulting in musculoskeletal pain that can impair the function and reduce the outcome from young learners.

The growth of a physically active child is better in terms of physical and mental health for the successive decades of life as per research [18]. Lack of physical activity induces obesity in children during the lockdown. Binge eating adds to a further rise in the incidence of obesity among school-going children. Such sedentary behavior in children predisposes to weight gain, poor sleep hygiene, and developmental delays which can easily be averted by following the recommended guidelines by the American Academy of Pediatrics to limit the screen time to not more than one hour for children under the age of 5 [19, 20].

Loss of muscle mass due to physical inactivity with a proportionate increase in fat can alter the physical fitness of a child, which occurs as a result of staying indoors. This can impair regular sports activity when they resume sports and physical training later on. Children staying indoors for a quite long period with reduced physical activity and sunlight exposure can develop deficiencies of calcium and Vitamin D. Indulging in binge eating and lack of balanced diet makes the matter worse predisposing to ill health which can have a deleterious effect on future health too.

Childhood obesity is considered a metabolic risk factor for cardiovascular disorders later in life. If not recognized early it can have a detrimental effect on the growth and economy of the nation. Indian children are overweight and obese and rank second next to China. The Pandemic lockdown has worsened the scenario increasing the incidence of childhood obesity owing to factors like physical inactivity and binge eating. Such increasing incidence of obesity may likely affect the social and emotional well-being of the child in the future [21].

Many schools in India promote physical well-being by inculcating virtual sessions to improve the overall health of children during this crisis. Family members during this adverse situation often encourage and set an example to promote fitness and health. Such initiatives should continue and be more readily implemented during these COVID-19 pandemic. The prevention and management of childhood obesity should be set as a priority at an individual, community and population-level during this pandemic to counteract the future crisis of obesity and its complications in the future [22].

Computer vision syndrome refers to visual disturbances due to chronic visual strain that occurs due to increase in the screen time. As the students are engaged with digital devices, symptoms like dryness, watering of eyes, redness, increase in refractory power has been the common complaints. Visual fatigue referred to as asthenopia is commonly encountered in young children who report having increased screen time. Focusing on the digital screen with different sizes of fonts, colors and moving screen can result in strain of ocular muscles. Often the students complain of headaches after the sessions are over and parental support to maintain proper posture and micro-breaks between sessions are advocated to overcome these health related problems. Digital Eye Strain (DES) was found to be more prevalent among adolescents using smartphones regularly with increased screen time, more than 2 hours per day [23].

However, the limitation of screen time with health-promoting strategies can widely induce positive health behavior among young students. Lifestyle modifications and reinforcing positive psychology can allay the anxiety of the current health crisis among students as they have to live in a pandemic free world in the years to come.

#### **4. Parents perspectives on e-learning during the pandemic induced lockdown**

Many of the families which had to face the Pandemic-induced lockdown had to resort to practices that helped them to tide over the crisis. Uncertainty prevailed in many sectors leading to loss of jobs, change of profile, loss of business and adapting to work from home culture. Balancing the needs and adapting to minimalist

life though seemed to be the priority, providing uninterrupted education to their children remained a challenge for most of the Indian parents.

Middle and low socioeconomic families had to bear the brunt of providing quality education to their wards even though their livelihood was at stake during the lockdown period. Work from home (WFH) was not easily implementable by parents owing to the small household area. Families suffered to produce a conducive learning environment and had to support their children with whatever space existed. Multitasking mothers need a special mention as they had to juggle between household chores and attending to the child's classes in addition to attending office from home. Younger children needed assistance from their parents which was quite bothering during official dealings by the parents during work from home.

Although it was challenging, many parents were present during online sessions with the child and they were assisting in the learning process. The bonding and mentoring role was well evident during the crisis and enabled parents to participate rather than just supervise their child during e-learning. In a Chinese study, about 18.4% of parents believed that online learning was beneficial in content, better in learning outcome (11%) and about 12.6% of parents consider it to be more efficient [24].

Parents had mixed views related to online learning. As there was no choice left, this paradigm shift was embraced by most Indian parents with great resistance. Their concern about health as a priority reflected the disadvantageous effect of online learning. Also, shortcomings of online learning such as social isolation and lack of interaction bothered many parents. Digital addiction was quite bothering many parents which are considered as a negative factor of many online sessions [25].

#### **4.1 Economic impact of online education: parents perspectives**

As the online mode of education was the only means to continue with the curriculum, parents had to provide an adequate learning environment to their children. There was a surge in sales of devices and tools for supporting online learning which was a challenge to many low and middle-income groups of families in India. Families with two or more children had a tough time sharing devices while their parents were connected digitally during work from home. Peer pressure of owning the relevant infrastructure for e-learning was also considered an important challenge faced by the parents. Sharing of space within the house was problematic in many of the households in India. During the lockdown period, Indian parents experienced an economic crisis in providing quality online education to students.

Lockdown affected business and pay cuts which were experienced by many families. Schools and educational institutes also invested in infrastructure and enrollment of a new batch of students was also at stake. Overall economical impact due to lockdown affected many sectors in India which have to be revived.

### **5. Psychosocial factors and online learning**

In India, there are about 350 million students, of which only 43.9% have access to a smartphone or other devices to take part in remote learning. The natural environment of learning is lost which can predispose to a variety of psychological issues among young children due to new normal guidelines for E-learning. As the change was abrupt, many students exhibited anxiety-related behavior which could hinder the learning process. Children were denied social contact due to the lockdown; as a result, many children increased the screen time in addition to online learning by engaging themselves in online gaming, excessive social media usage, online gaming, cyberbullying, and internet addiction. Digital education exposes the student to use

the internet for a wide variety of things which can lead to information overload. Because of flexibility of the schedules, students often are addicted to the internet which can result in poor academic performance [26].

Preoccupied behavior, excessive feeling of excitement when online, going online to avoid problems, internet obsession, losing track and the importance of time are some of the negative consequences of addictive internet behavior among students [27]. Research on neurocognition reveals that digital learning can produce structural changes in the cortex affecting the gray and white matter areas. As a consequence, attention, intelligence, memory processing, consolidation of long-term memory and memory retrieval are affected in the young brain [28–30]. Long-term effects of such changes have to be considered as it affects the learning outcome.

Internet connectivity is not equally available to all the children in many rural parts of India. Some children are forced to discontinue education and are employed at a younger age to meet the needs of the family. Domestic violence and child abuse were reported to be on the rise in some parts of India [31], which is a major threat to children during the lockdown. The dropout rates from school are predicted to be high during the lockdown owing to the economic crisis faced by the parents. Education in an affordable environment should be the priority of regulating bodies.

Children often exhibit behavioral problems as they are not allowed to socialize with their peers and are retained in their home instead. Continuous sessions online can induce mental fatigue in young learners and often they need psychological support to overcome this unique situation. The childhood habit of forcefully remaining indoors has paved way for distorted mental well-being during these tough times. The absence of school environment can affect the social and emotional learning which can lead to decreased cognition, empathy, participation in team and cooperation among peers [32].

Ways to mend the maladies of such psychological setbacks include parental guidance and monitoring of online sessions, counseling, promoting a positive outlook and reaping the best of E- learning and limitation of over usage of social media networks.

## **6. Building resilience for effective online learning during the pandemic**

Adaptations are required at all levels to face the crisis laid down by the pandemic situation. Teachers have accepted the new normal ways of teaching even though it was sudden. Studies conducted in Greece reflect the mindset of teachers as it indicated less fear of pandemic-related depression and the emergence of resilience [33]. Measures to overcome the technostress and burnout among teachers can influence the outcome of teaching. Teachers are entrusted with the huge responsibility of catering to the educational needs in the prescribed format to the needy students. Schools and educational institutes have been shut for more than a year. This crucial time should be utilized for coping mechanisms that help to overcome the current crisis for the educational transaction.

Parents have to play a supportive role in e-learning. They have the responsibility of ensuring an adequate learning environment without any bothering to their children. Pandemic has induced fatigue which has exceeded the mental capacity of individuals. Resilience building in terms of assuming positive affirmations can have profound effect on the mental struggle by individuals.

Students are deprived of social and emotional learning during lockdown-induced closure of schools. Coping ability among young adolescents is considered an essential element to face uncertainty. Emotional resilience should be encouraged by positive emotions which can improve academic efficiency [34].

## 7. Conclusion

The pandemic-induced lockdown has made drastic changes in the education sector worldwide. With uncertainty prevailing about the future, the stakeholders are subjected to a state of psychosocial stress which requires efficient handling to form a strong community to face the crisis. Though online education has completely taken over traditional method of teaching and learning, novel techniques are adapted with full vigor to overcome the challenges. Students of school education, as well as higher institutes, exhibit problems in online learning which can be overcome by effective participation and timely feedback analysis. The role of parents is mere supportive in aiding their children in e-learning which is evident by our survey analysis on knowledge and attitude of parents on online learning. Ministry of education, Government of India has recommended usage of mass media network and other technological innovations to aid in remote learning to keep the process of continuing education across all age group of students. Unprecedented challenges and uncertainty are to be embarked upon to mitigate the crisis by building resilience among the public which is considered as the need of the hour.

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## Acronyms and abbreviations

AV	Audio Visual
DES	Digital Eye Strain
MSD	Musculoskeletal Disorder
NCERT	National Council for Educational Research and Training
NCF	National Curricular Framework
WFH	Work From Home

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