



# A Literature Review on Mental health of Online Learners during Covid-19 in India

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## Abstract

Covid-19 has created the largest disruption of education systems in human history with not just in Wuhan, China where the virus originated but in all the other higher education institutions globally. Teachers and students around the world have faced many challenges using online platforms for teaching and learning which resulted in serious implications on mental health, resulting in psychological problems including frustration, stress, and depression. This paper is a comprehensive review of the psychological impact on students' online learning during Covid-19 in India. Past studies and recent studies conducted in India show evidence that how students are affected psychologically and show symptoms of depression and anxiety. This article also put some light on the origin of online learning from the 200-year-old distance education system to the recent new normal trend of online education and includes the merits and demerits of online education in India and the consequence that online education has created on the mental health of online learners in India. This review also suggests critical successfactor and future suggestions for online educators and learners to ensure a stress free and academically friendly online education system.

**Keywords:** Covid-19, Online Education, Academic Performance, Mental Health, Psychological Impact

## 1. Introduction

On 24th March 2020, a Nationwide lockdown was observed due to the global COVID-19 pandemic. This pandemic has created the largest disruption of education systems in human history, affecting nearly 1.6 billion learners in more than 200 countries. Closures of schools, institutions and other learning spaces have impacted more than 94% of the world's student population (Desk, I. T. W. 2021). The COVID-19 pandemic has provided us with an opportunity to pave the way for introducing digital learning (Pokhrel 2021). Many countries have closed down schools to combat the spread of

COVID-19 infections that brought additional pressure on the mental health of school students. India has enforced the lockdown from 24 March 2020 with just a 4-hr advance warning that continued for over two months. Then, the curfews followed for a few months in some states that recorded more cases of infections. Most countries enforced a lockdown and everyone is required to work from home including the education sector. The strict lockdown measures forced the schools to shut down and therefore the mushrooming of online classes abruptly came into effect when the students were neither trained nor prepared for it. Teachers and students around the world have faced many challenges using online platforms for teaching and learning (Shahzad 2020). The most affected students belonged to the poorest section of the Indian socio-economic hierarchy where the parents depend on daily wages for survival (Agoramoorthy 2021). Online Education has compelled students to have digital devices for learning. As mode of learning has become online and all educational institutions using online platforms for providing education, it has compelled the students to have digital devices in their family. Along with the digital devices, they need a good quality internet connection or internet data in mobile phones which is not affordable by every middle class family. Eventually, the unavailability of digital devices and internet connections makes the students unable to attend their daily lectures and complete their assignments. It has further led to affect the mental health and academic performance of the students (Deshpande 2021).

Teachers and students are required to adapt to the online learning method to ensure it is carried out as usual even though they have difficulties in various ways. Some of them face depression and anxiety. Past studies determined students are affected psychologically and show symptoms of depression and anxiety. Nevertheless, many studies presented opposite results. Therefore, although it is undeniable that online learning is considered the best solution to ensure consistency of learning in the era of the “new norm”, there may be certain setbacks such as loss of human presence, detecting the incomprehension of students by facial gestures, cracking small jokes to light up the mood, student participation (Khalid & Quick 2016), and communication that can be achieved more effectively in class. On the bright side, this pandemic has opened opportunities for many people in various fields including teachers and students.

Toquero(2020) said that the global pandemic has opened up opportunities for the nation to update its current methods of education and turn its focus on utilizing technology. Most education sectors chose to conduct online teaching-learning as a way to prevent the virus from spreading. Dhawan 2020 mentioned that there was no choice but to switch completely to online teaching and learning for many academic institutions that were previously hesitant to change their traditional pedagogical approach. According to (Agoramoorthy, 2021) India’s health budget has persisted between 1.2 to 1.6% of the GDP from 2008 to 2020, which is one of the lowest in the world. Sadly, only 0.06% of the entire health spending has been allocated solely to solving mental health issues. When it comes to the care of a single mentally-ill person yearly, India spends only one USD, which portrays the chronic lack of money to tackle the inclusive mental health agenda in the world’s largest democracy. Kamaludin(2020) stated that fear and the risk to the health of a person can gradually dissipate as the pandemic reaches its tail end. Nevertheless, the idea of the disease itself and the desire to switch to a “new normal” will have a long-term psychological effect on the students. In exchange, this can influence the academic performance of the students.

The education sector is one of the biggest concerns and this review paper is an attempt to showcase the current status of online learning in India and its impact on the mental health of students. We have discussed various recent research papers conducted in India on similar issues. The first section of

this review paper showcases the current status of online education in India and its merit and demerit. The second section showcases the mental health status of students related to online education dealing with issues like stress, depression, anxiety, and urban-rural gender studies in India. Thus, this paper reviewed the literature on the issues of psychological impact on students' online learning.

## 2. Literature Review

### 2.1. Online learning and its theoretical foundation

Online learning is the amalgamation of digital technology with traditional face-to-face teacher-student learning. Online education represents one of the most exciting forms of distance education. Understood as an alternative or complementary form of instruction, distance education must be designed and implemented so that it observes all the quality pedagogical standards, meant to lead toward the best results which can be obtained in the teaching-learning-evaluation activity (Moore & Kearsley, 2012). Ispas (n.d) wrote about *Online Education—a Reality of our Times* and states that distance education undeniably brings about a series of advantages and limits to the education field. Their analysis allows the continuous improvement of theories and practices in the field of online education. Although online education seems to be the new normal in recent times however its theoretical foundation is 200 years old in the form of “distance education”. The concept of “distance education” often used as a synonym for online education has been known and applied in practice for at least 200 years. This concept originates in the educational practices of the United States in the 1800s when the teachers and the students from the University of Chicago, who were in different locations, tried to stay connected with the study programs from a distance by mail. In those times, the teachers used printed materials and postal services for what was called mail education (Mclsaac & Gunawardena 1996).

Many researchers described “distance education” from their own perspectives as “Distance education is a form of education in which the participants in the educational process – teacher and learners are physically separated and communicate by different means and at different times.”(Kiryakova 2009)

“Distance education is teaching and planned learning in which teaching normally occurs in a different place from learning, requiring communication through technologies as well as a special institutional organization” (Moore & Kearsley, 2012)

### 2.2. Online Learning during COVID-19

Even before the pandemic, Research and Markets forecast the online education market as \$350 Billion by 2025, so the numbers might be updated after analyzing the growth impacts of COVID-19 on the online learning market (Koksal 2020). UNESCO quotes that the pandemic affected more than 1.5 billion students and youth with the most vulnerable learners being hit hardest. 63 million primary and secondary teachers are affected by the unprecedented disruption caused by the COVID-19 pandemic, with school closures in 191 countries. Half of the total number of learners – some 826 million students – kept out of the classroom by the COVID-19 pandemic, do not have access to a household computer and 43% (706 million) have no internet at home, at a time when digitally-based distance learning is used to ensure educational continuity in the vast majority of countries. These

figures were compiled by the Teacher Task Force, an international alliance coordinated by UNESCO, on the basis of data from the UNESCO Institute for Statistics and the International Telecommunication Union (O'Hagan, C2020)

### 2.3. Merit and demerit of online education in India

According to research of Kearsley (1995) conducted on “The Effectiveness and Impact of Online Learning in Graduate Education”, online learning shows a positive impact on the graduation education of the students at George Washington University. Similarly speaking about the merits of online education and its future implications, a research study from (Volery & Lord 2000) focused on critical success factors in online learning. It showed that universities should capitalise on the Internet for the success of online learning. Thus, there should be progress in the delivery methods of online lectures. Thus, it found that the technology, the instructor and the previous use of the technology from a student's perspective are the three critical success factors. Thus, it also focused that the lecturer plays a central role in online education as a learning catalyst and knowledge navigator. Bharadwaz (2021) also concluded that the majority of the participants were satisfied with this mode of learning as the students could do their school work in the comfort of their home which was similar as they need not wake up so early to go to school and the academic performance of the majority of the participants was affected. Indeed, academic institutions would not be able to transform all of their college curricula into an online resource overnight. Distance, scale, and personalized teaching and learning are the three biggest challenges for online teaching. The challenge to educational institutions is not only finding new technology and using it but also reimagining its education, thereby helping students and academic staff who are seeking guidance for digital literacy (Dhawan 2020).

It is not only COVID-19 that has created an opportunity for a new era of digital education but some countries are still lagging behind in some critical issues like weaker socioeconomic status and poor digital literacy which act as a speed breaker in the growth of digital education. Agoramoorthy (2021) stated that according to UNICEF, over 1.5 million schools were closed due to COVID-19 across India which directly impacted the students and teachers. The World Bank estimates that the sudden closure of schools to control the pandemic could cost India nearly USD 400 billion, which is an enormous economic loss. The strict lockdown measures forced the schools to shut down and therefore the mushrooming of online classes abruptly came into effect when the students were neither trained nor prepared for it. The most affected students belonged to the poorest section of the Indian socio-economic hierarchy where the parents depend on daily wages for survival. The abrupt lockdown policy not only shocked the daily wage workers but also activated enormous mental pressure on their school-going children. Sorrowfully, some students have ended up committing suicide to escape the mental torture inflicted by the insensitive policy. The latest data released by the National Crimes Record Bureau (NCRB) has revealed that more than 1.39 lakh Indians died by suicide in the year 2019, 67 per cent of which were young adults. (Rampal 2020)

*“A Class 11 student from Theni district in Tamil Nadu died by suicide after failing to cope with the pressure of online lessons. Vikrapandi, the deceased student, was facing problems in following online lessons from home.*

*In June, a 12-year-old schoolgirl from Gujarat's Rajkot died by suicide after being frustrated with online classes and homework. Her father had recently bought her a smartphone for online classes after much struggle.” (Nath 2020)*

The following statement above from the recent article is proof of the devastating effect on the mental health of online learners in India. Online Education has compelled students to have digital devices for learning. As mode of learning has become online and all educational institutions using online platforms for providing education, it has compelled the students to have digital devices in their family. Along with the digital devices, they need a good quality internet connection or internet data in mobile phones which is not affordable by every middle class family. However, all parts of society are not so efficient that they can afford all the necessary requirements of online education. Project Affected People are the most vulnerable population (World Bank, 2004) of any country or region. It is very necessary to provide the children of these families with the facilities required for online education platforms so as to cope with today's global crisis situation aroused due to the COVID-19 pandemic. The provisions made by the government for such students like scholarships for education, and the provision of required platforms for online learning will lead to a reduction in mental stress of these students and eventually improvement in their academic performance. Thus, most educational institutions and governments as well have to take initiative in providing all those facilities to the students which are necessary for online learning. There are some non-profit organizations that are providing tabs for students to facilitate online learning. Thus, the government can encourage such non-profit organizations by making necessary provisions. Further, as most of the project-affected people come under lower or middle-income groups, the government can take necessary steps to improve their educational status by providing their children with educational subsidies or financial assistance (Deshpande 2021). Dhawan (2020) also quote that there is n number of technologies available for online education but sometimes they create a lot of difficulties. These difficulties and problems associated with modern technology range from downloading errors, issues with installation, login problems, problems with audio and video, and so on. Sometimes student finds online teaching to be boring and unengaging. Online learning has so much time and flexibility that students never find time to do it. Personal attention is also a huge issue facing online learning. Students want two-way interaction which sometimes gets difficult to implement. The learning process cannot reach its full potential until students practice what they learn. Sometimes, online content is all theoretical and does not let students practice and learn effectively. Lack of social interaction is the most critical factor in the decline of students' level of motivation and overall well-being. Almendingen (2021) quote that the most pressing concerns among students were a lack of social interaction, housing situations that were unsuitable for home office purposes, insufficient data bandwidth, and a sense of reduced motivation and effort. The students expressed that online teaching with a lack of social interaction leads to worse learning outcomes and lower levels of motivation and well-being.

## 2.4. Mental health of online learners in India

### 2.4.1. Depression, Stress and Anxiety

According to the Indian Psychiatry Society, "There was a 20% rise in the number of cases of mental illness at the end of March 2020". UNESCO suggested that students are in need of mental health support because they cope up is very necessary, especially for students. Online learners were under extreme pressure whenever they have issues with the availability of networks or related technical issues. Computer illiteracy plays a dominant role in triggering the symptoms of anxiety and depression among students. For instance, students have trouble accessing online learning due to an insufficient network and have to use their mobile phones on an ongoing basis. This causes them to be left out of the lessons that were conducted and it affects their academic achievement. These factors lead students to have depression and anxiety. (Thandavaraj 2021). It was evident during the period of COVID-19 lockdown that there was sudden awareness and concern for mental health among all age groups which results in the increase in cases of depression, loneliness, drug use and suicidal behaviour. Students' mental health was a great concern as they were supposed to continue their education in online mode, which came out to be an unexpected routine on their side in comparison to the offline daily routine study system. Dash (2021) in her study focus is to find out the relationship between online learning and the mental health of the learners. The findings suggest that Students' mental health situation is not stable, maybe because they are away from their peer group or maybe, they are facing so many problems regarding this online learning but are not able to share with their peer group or any of their teachers. Some students are not able to cope with this situation. The correlation between online learning and mental health found that  $-0.054$  means that online learning hampers the mental health of higher education learners but the degree of influence of online learning on mental health was found to be very low. There was a significant difference found between Male and Female Higher Education Online Learners in their Mental Health.

Harjule (2021) carried out a cross-sectional study in order to investigate the opinions and perspectives of the parents of school children. The variation of the stress, anxiety and mental health of the children and their parents is studied by creating a composite anxiety index. The study confirms the significant difference between the parent's confidence in online education and their mental health which was generally expressed as stress. It was evident that a child's online education affected parents' mental health. The parent's confidence level was low and they did not feel comfortable with accessing and operating the technology associated with the digitized education of their child at home. Most parents (84%,  $n = 633$ ) felt worried about sending their children to school even if the containment measures were to be lifted. Results reveal that the Composite Anxiety Index (CAI) to be about 85% of the children have shown the syndromes of moderate or severe anxiety among them 46% have shown severe anxiety syndromes. This finding suggests that parents may need to give more time to their children so that they can have a better outcome in at least family-level socializing, increased physical activities as well as reduced exposure to the internet and harmful content.

In a recent study conducted for the divisions of Rajasthan and three major cities of India (Mumbai, Bengaluru and Delhi), the mental health analysis of students is analysed by analysing the severity of the depressing tweets. It was observed in the analysis that the depressing tweets were at their peak as the corona cases were increasing rapidly after the relaxation of lockdown in the month of June 2020. The sentimental analysis was performed using a text blob package to get the severity of

tweets, and average severity is used to define the severity level in the major cities of India. It was also observed that depression was decreasing with a percentage increase in recovery rate. 6.62% of depressing tweets were from students. It was also seen that the tweets of students were maximum at the end of the first lockdown. Also, the majority of tweets of students from Kota have majorly shown their concern about the uncertainty of their exams and they are being stranded away from their hometown (Agarwal 2021). It is not only the mental health of students that were under threat due to the sudden onset of online education but the academic performance of students was largely affected. This variation in academic performance due to online learning was found to be greater in rural parts of India. From recent research conducted among children of project affected of Navi Mumbai, it was found that 20% of the students feel anxious while attending the online lectures. It can be due to mental stress as they do not understand the online lectures. Around 70% of the students feel anxiety on average. 30% of the respondents agree that the use of online material leads to stress. 46% of them are neutral about their opinion and 6% of them strongly agree that the use of online material is stressful. It can be concluded that the previous problems in accessing online study material lead to stress and therefore on average students feel stress in using online study materials. 34% of students feel that online learning has affected their learning ability. The percentage of such students is less than fifty per cent as most of the students face difficulties at the financial level and thereby it affects their mental health and learning ability. 58% of the students feel that the online mode of learning has increased their academic performance. The remaining 42% of the students do not see any improvement in their academic performance due to online learning. This can be because of their limited use of online study material and less attendance in online classes. concluded that students prefer online learning, however, due to difficulties faced on financial grounds and thereby in the online learning process; they do not prefer face-to-face learning in future. (Deshpande 2021). It is therefore evident from the recent research that the increased level of stress among students due to online education directly impacted their academic performance. Similar research was conducted on school students of Chennai to measure the impact of online education on their stress levels and academic performance. Among 120 students of Chennai schools students, the recent study may provide direction to online learners to know stress levels and be aware to take steps to overcome the stress and increase their academic performance. The study concluded that 43.33% felt that online classes were stressful. 54.17% of the participants were satisfied with this mode of learning. Female students were more stressed than male students which was not significant. It was found that female students were more depressed than male students. 54.17% were not sure about online learning causing depression. 29.17% responded that it didn't cause depression and 15.83 agreed that it causes depression. 55% felt their academic performance was affected due to online classes 54.17% were satisfied with this new mode of learning. 44.2% were moderately motivated during online classes (Bharadwaz 2021). Due to the situation of Covid-19, many students are likely to suffer from stress, anxiety, and depression, so it is necessary to provide emotional support to students. Future work in this direction could be to analyze the association of different stress busters on the mental health of the students. Moreover, guidelines should be created to anticipate the needs of the vulnerable student population. Improved healthcare management would ensure the delivery of mental health support (Chaturvedi 2021). Not only mental health and academic performance factors were explored by many recent researchers but some researchers were interested to know the underlying perception and preference toward online learning. Muthuprasad (2021) focuses on understanding Agricultural Student's perceptions and preferences toward online learning through an online survey of 307 students. The study explored the student's preferences for various attributes of online classes, which will be helpful to design an effective online learning environment. The results indicated that the majority of the respondents (70%) are ready to opt for online classes to manage

the curriculum during this pandemic. The majority of the students preferred to use a smartphone for online learning. Around 50% of the respondents agree with the statement online learning improves their technical skills as compared to face-face classes. It is also evident that about 60% of respondents agree with the statement that online classes are less effective when it comes to communication with the instructor as compared to face-face classes. Most respondents preferred online classes to cope with the curriculum due to the lockdown in the wake of the COVID-19 pandemic, whereas 30% of the respondents suggested suspending the classes or providing reading materials until the lockdown is lifted.

#### 2.4.2. Urban-Rural and Gender studies in India

People staying in village areas have network issues and not an appropriate environment for study purposes. It indirectly affects the mental state of learners. Especially students from rural backgrounds are going under these connectivity issues and are not able to participate in the online class, evaluations, and assignments. According to a recent survey regarding the topic *Proposal for online classes elicits mixed responses from UoH students: Survey*. (n.d.)- The University of Hyderabad conducted an in-house survey with 2500 students, 90% of them have mobile phones but only 63% of students were only able to access online classes. In this study when the children are already struggling with mental health issues during this lockdown period, the research was conducted to explore how they are able to deal with these problems regarding online classes. Recent studies found that the mental health of rural learners was better than urban learners in higher education under which the mental health of rural females was better than rural males and the mental health of urban females was also better than that of urban males. There was a significant difference found between Male and Female Higher Education Online Learners in their Mental Health. Male learners are facing more mental health problems in comparison to female learners. However, there was no significant difference found between the Mental Health of rural and urban higher education online learners (Dash 2021)

Deshpande (2021) conducted a study to find out the impact of online education on the mental health and academic performance of specific children from Project Affected Families in the Navi Mumbai region. The studies highlight that Project Affected People are the most vulnerable population (World Bank, 2004) of any country or any region. It is very necessary to provide the children of these families with the facilities required for online education platforms so as to cope with today's global crisis situation aroused due to the COVID-19 pandemic as all the parts of society are not so efficient that they can afford all the necessary requirements of online education. The studies statistically highlight that 46% of the students do not access online study material due to limited mobile phone storage capacity and 34% of the state that it requires huge internet data for accessing online study material. It is because most of the students are from middle class families and cannot afford mobile phones with huge storage capacity and unlimited internet facilities or Wi-Fi facilities. It also gives raises mental stress on the grounds of online learning. 48% of students attend on average three online lectures every day. There are various reasons for not attending all online lectures. The main reason behind not attending lectures is a poor internet connection and limited mobile data. Around 20% of students face difficulties in understanding online lectures. This can be led to mental stress among students.

### 3. Conclusion

Online education is the need of today's era and is perceived as the new normal status in the current post covid times. This review paper highlights the issues encountered by students and educators during the COVID-19 pandemic. It is evident from the discussed works of literature that online learners and teachers were not prepared to handle this kind of education pattern, many challenges were noticed in this regard such as internet issues, lack of gadgets and communication barriers thus aggravating psychological symptoms like depression and anxiety among students. Hence, there is a need to enhance and remodel online education more inclusive and easier through which students can give their best potential without any physical and mental stress. Online education has proven a milestone in the learning process. However, all parts of society are not so efficient that they can afford all the necessary requirements of online education. It is therefore evident from this review paper which has suggested that the government sector should take relevant steps in this regard by providing especially to underprivileged students with good internet connectivity and necessary gadgets which are the key prerequisite to be eligible to enrol in online courses, this will also serve to decrease the percentage of mentally impaired students due to their academic achievement. The new policies and guidelines in this direction would help mitigate some of the negative effects and prepare educators and students for the future health crisis.

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