

The Impact Of Online System on Health During Covid 19: A Comprehensive Study



Author Notification
10 January 2022
Final Revised
24 January 2022
Published
31 January 2022

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To cite this document:

Rawat, B., Bist, . A. S., Rahardja, . U., Lukita, . C., & Apriliasari, . D. (2022). The Impact Of Online System on Health During Covid 19: A Comprehensive Study. ADI Journal on Recent Innovation, 3(2), 195–201. <https://doi.org/10.34306/ajri.v3i2.654>.

DOI : <https://doi.org/10.34306/ajri.v3i2.654>.

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Abstract

COVID-19 creates an unprecedented situation before humanity. Covid-19 has changed lives in all aspects, from education, industry and social life. However, the existence of Covid-19 has greatly impacted the field of education, where the applicable learning methods usually need to make drastic changes to decide the spread of Covid-19. The education sector is turning to online education because it is not possible to call students in schools and colleges. Technology online education is proving itself to be a cure for catastrophe and filling gaps. There are major challenges regarding student health due to the high use of mobile, tablet and computer screens. There are problems regarding student health in the application of technology online learning, in this paper we make a detailed study of the same problem with the ultimate goal of research to find out the preventive measures. In this paper, we use the literature study method to explore negative cases in terms of obtaining negative reasoning due to excessive screen use during the COVID-19 scenario.

Keywords: COVID-19, health, computer screen, online education



1. Introduction

COVID-19 (Coronavirus Diseases 2019) has impacted the life of each segment of individuals from businessmen, farmer, middle-class group to teachers and learners equally [1]. Face to face teaching-learning came to a standstill and educational institutions had to adopt online learning management systems to continue their academic activities such as teaching learning, evaluation, examination and result declaration among others. A large number of learning management software or digital platforms came up to meet this demand in the market. Some of the exams [2]. Some of this technology software are CANVAS, Google Classroom, Blackboard Learn and Moodle among others. Although these technology platforms are free to use, their full features are available only on purchase. Moreover, although they provide several advantages, in contrast, to face to face learning such as easily track learners' progress and performance, reduced learning and development cost, organizing e-learning content at one location among others the learners and faculties also face several health issues due to their high usage and more dependency on them [3]. The health issues could be seen in terms of physical, mental and physiological which ultimately leads to anxiety and stress among other problems. From our study of existing papers on this issue we have found that no paper covers all the aspects of health issues caused by excessive use of online systems. In order to fill this gap, we have taken up a study which comprehensively covers all the aspects of health issues and also suggest measures to deal with them.

In this paper we focus on how the usage of technology e-learning platforms affects the health of people in general and learners and faculties in particular in an educational institution and at what level and how these impacts can be alleviated by using some simple solutions [4]. The study discusses the effect of using online learning platforms on mental, physical and psychological health in different age groups and also tries to find out which age group has affected the most and also suggests ways on how to overcome these health issues [5].

This paper is organized as follows: Firstly, we provide an overview of various health problems faced by learners during online learning [6]. This is followed by a discussion on which age group has affected the most and why. Then, we discuss how these problems are affecting the performance of learners. We conclude the paper by providing solutions on how the impact of these problems can be reduced.

2. Research Method

In this paper, we use the literature study method in obtaining material sources related to this paper, to be investigated as a benchmark for the course of this research.

2.1 Impact on Health due to Online education system during COVID-19

There are various benefits of online education but it's causing various disorders:

1. Stress
2. Eye problems
3. Headaches



Fig 1. Online classes and health issues

Above mentioned effects are quite direct if students spend a long time in front of technology media electronics such as computer/mobile/ tablet screen. The situation becomes worse in case of students of a small age group or students that are suffering from any other eye disorders and related diseases. Other than this COVID-19 impacted health in following categories [7].

2.2 Emotional Health

Everyone cannot afford technology media electronics such as computers/tablet especially in low income group countries so it's creating kind of discrimination and effecting students emotionally [8]. Internet usage requires cost, and every student family cannot afford it. Back of the mind financially weak students feel depressed [9] [10]. There are several aspects of emotional health such as stress which can manifest itself in the form of the following:

- Feelings of fear, anger, sadness, worry, numbness, or frustration.
- Changes in appetite, energy, desires, and interests.
- Difficulty concentrating and making decisions.
- Difficulty sleeping or nightmares.
- Physical reactions, such as headaches, body pains, stomach problems, and skin rashes. Worsening of chronic health problems. Worsening of mental health conditions.
 - Students may feel heightened anxiety about keeping up to date with their schoolwork
 - Other teens may have trouble concentrating or staying focused while at home
 - For some adolescents and young adults, being in front of others on video can lead to its own anxieties
 - Students may find it difficult to receive the extra education support they need to succeed

2.3 Social Health

Due to isolation, no one is meeting and just looking at screens for information. Learning and mental growth requires social engagement especially in small kids but works for all. It is creating issues at the level of social health. The ministry of human resource development (MHRD) recommended just 30 hours of screen time for pre-primary students, two classes of

45 minutes each for classes 1 to 8 and four classes of 45 minutes each for classes 9 to 12, but that's not working, parents allege [11] [12]. Many schools are not following the directions, which anyway are not binding [3]. Many children developed fever and headaches after attending online classes [13].

Some parents are reporting mental health issues too due to excessive use of gadgets. Baljinder Singh of Sector 21, Chandigarh, suspects his children have increased mood swings now [14]. "They are already cooped up at home and are getting cranky and restless. After their online classes I find they are unable to focus on their work and suffer from headaches," he says [3]. Opticians say more cases of children with complaints of eye strain are coming to them. "At least three or four people come in every day to get their children's eyes tested because of increased screen time," says Samrat Arora, the general secretary of the Chandigarh Optical Association, who runs an eye care center in Sector 22 [15] [16]. "We prescribe blue light filtering glasses and anti-fatigue lenses to these children, which cost about Rs 1,200 and more [3] [17]."

3. Result and Discussion

Changes in the learning system that occurred during the pandemic have become a hot topic that is growing every day to see the advantages and negative impacts of technology given to changes in online learning methods. There is a change in online learning methods, as for the impact on increasing technology and the use of smartphones, computer screens and tablets among students [19]. There is an increase in the use of electronic media to open social media and learning media, there are negative impacts that occur due to excessive use. Negative Reasoning and suicidal tendencies The Covid-19 situation results in excessive free time in front of youth and people of different age groups. Studies say that the use of social media and negative keyword searches through the internet increased during this period [20]. This leads to depression and suicidal tendencies. Job loss, unemployment and migration are making the situation worse. Governments in different parts of the world are dealing with this issue at their discretion and trying to resolve the situation.

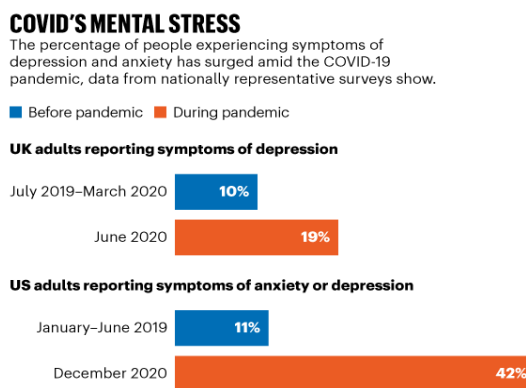


Fig 2. Depression spike in COVID-19 [21]

Following figure depicts the negative effects of excessive use of social media as it's already discussed about massive usage of it during the pandemic.

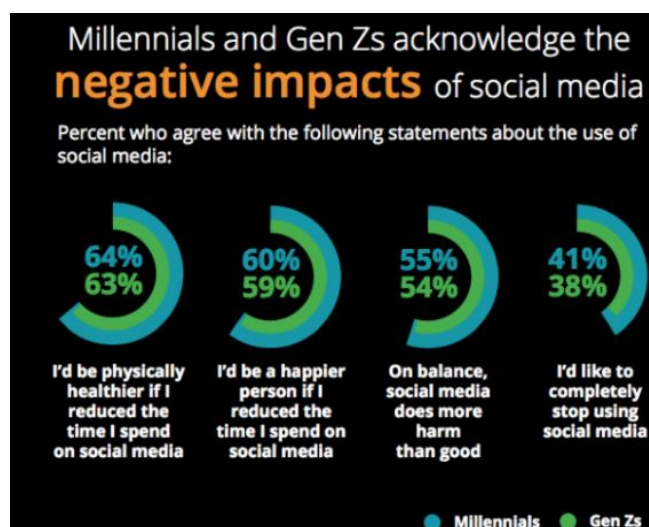


Fig 3. Negative impact of using social media [22].

Physical health It is reported that students attending online classes are becoming lazy as they are not doing physical activity such as exercise and their concentration becomes poor day by day. In other studies, it is found that learners are having joint pain as they are sitting all day long to attend online classes [23]. Lack of physical activity leads to bad effects on mental health as well which ultimately affects the mood also. All the assignments, notes, quizzes are coming online, and learners must study them online only to complete their assignments which is also severely affecting their health. Constant seating in one position, No exercise involved this all will lead to problems related Posture, backache etc [24].

Exposing children to screens from a young age for online classes is not right. It can hamper their growth and development. The radiation emitted from the screens can stress children's eyes and could lead to eyesight problems throughout their lives. Watching a screen is also a stationary activity that can make children inactive and dull, affecting their thinking skills. Connecting with academic peers, communicating with the instructor, and maintaining a personal social life can become a challenge when all interactions take place remotely.

It can lead to social isolation, ultimately resulting in decreased academic achievement and even mental illnesses such as depression. Procrastination has been a major problem affecting online courses. Students tend to wait for the assignment due dates approach before completing coursework, often submitting within an hour of the deadline. Gradually the fear of deadlines alters the learners' sleeping schedule too. Spending an extended amount of time on a computer can have negative physical effects on your body. Sometimes, because of procrastination, new e-Learners may find themselves studying and completing assignments for sessions lasting several hours. This behavior can lead to a wide range of health risks to them in future [25].

Based on the problems that occur, this study will describe the **Handling of Health Problems due to the Online Education System during COVID-19**: To continue effective online education, the above health problems need to be addressed in a timely manner before reaching an advanced stage. There are several ways to deal with stress as mentioned below [26] [27]:

- Do not spend too much time on your computer screen and mobile screen watching, reading and listening news stories as these platforms offer all types of negative news which affects the mood of people and hence leads to depression, anxiety and all sorts of emotional problems [28].
- Moreover, one should take a small break from continuous watching of programs on a computer screen or television which also gives time to refresh and re-energize the human being [29].

- Another very important point to consider here is to take care of your body by taking deep breaths, stretching or meditating [30].
- A good balanced diet helps to maintain body and mind as well.
- Exercise regularly and it also slows impact of COVID-19.

4. Conclusion

In this paper we are discussing the impact of using excessive system screens in different scenarios and found various issues associated. Later we identified initiation of negative reasoning and suicidal tendencies in different age groups. Subsequently different countermeasures are also highlighted to tackle the issue. This study will be helpful to handle concerned issues in the present and future. Future work will include study about in-depth medical reasons and cure at medical level.

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