



IMPACT OF ONLINE EDUCATION ON MENTAL AND PHYSICAL HEALTH

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Abstract

A revolutionary change can be seen in the education system from the new form of education, Online eEducation, its emergence has completely changed the educational scenario, due to this change, on one hand, education has become cheap, accessible and quality, on the other hand, many of its benefits have also changed. All negative effects can also be seen. The relationship between Online Education and health can be placed in this category. However, an educated person is expected to create conditions for a healthy life for himself. But, when the many method of acquiring education starts becoming a hindrance in its objective, then it becomes the need of the hour to think about it. In this article, keeping this need in mind, an attempt has been made to know how and to what extent the Online Education system is affecting our physical and mental health. And how can its impact be reduced so that we can benefit from the virtues of online education and avoid its harmful effects. This article highlights both positive and negative aspects of the impact of Online Education on health, considering factors such as sedentary behaviour, social interaction, screen time, insomnia, depression and stress. In this article, observational and analytical methods have been used while reviewing the related literature. From the research we learned that Online Education is deeply affecting the physical and mental health of students. Therefore, education systems need to be enabled and sensitized to understand the health of students and incorporate measures to provide support. Educational administrators, institutions and the government should seriously consider the social and medical impacts of Online Education on the physical and mental health of students and adopt appropriate strategies to minimize its negative impacts.

Key words: Online Education, Healthy Society, Mental Health, Depression, Insomnia, Sedentary Behavior

Introduction

Online Education began in the 19th century with the exchange of printed materials through mail, followed by the rise of distance education in the mid-20th century, when educational institutions began providing distance learning programs through radio and television broadcasting. began. Physical health concerns were less in this phase, but mental health concerns began to emerge thanks to social isolation and limited access to

educational resources. With the advent of the Internet, the prevalence of online education increased in the late 20th century. Initially online courses were primarily text based and did not involve much screen time. Physical health concerns were not so much present, but the potential for social isolation and self-motivation challenges were introduced, which were related to mental health. Multimedia elements expanded into online education in the 21st century, such as video lectures, interactive simulations, and virtual classrooms. This change increased screen time and led to physical health problems such as eye strain and muscle discomfort. The changing environment has forced millions of students around the world to move towards accelerated Online Education. This sudden change demonstrated the potential physical health effects of extended screen time, such as increased digital eye strain and wasteful behavior. Additionally, social isolation, anxiety, and stress associated with the pandemic further exacerbated mental health challenges related to online learning. In the present time, online education is evolving with innovations in technology such as virtual reality and artificial intelligence.

Nowadays, due to the advancement of digital technology, online education is being accepted as an important means of education, which provides a new medium to teach and impart education. It has gained fame as a flexible and accessible way of learning, but it affects physical health, mental well-being and overall lifestyle. By exploring these effects, the article aims to develop a comprehensive understanding of the relationship between online education and health.

Literature Reviews

There is a large amount of literature available related to the importance of online education, its benefits, challenges and possibilities, but there is very little literature regarding its impact on mental and physical health. Jessica Mangis (2016) states in her dissertation that online education has given rise to a sedentary lifestyle. Mangis further argues that online courses have provided students with the autonomy to work at their own location and pace, but the sedentary nature of online classes has led to health problems such as cardiovascular disease, diabetes and depression. In their study, Jha and Arora (2020) argue that online education has proven to be catastrophically harmful to children's developing brains. He says that e-learning poses a risk to young learners' lack of adaptability. Mendoza (2020) introduced the concept of "Zoom fatigue" to the discussion of mental fatigue, which is the fatigue experienced by learners during online classes. Similar to Jha and Arora, Mendoza says that our brains have to put in extra effort to stay focused in online classes, which leads to mental fatigue that results in students not being able to concentrate. Mendoza further argues that the transformation of traditional classrooms into a virtual space has made the student more conscious of their facial expressions and postures.

Effects on Physical Health

Excessive or prolonged use of screen time impacts physical health, increasing the chances of eye strain, leg pain, hand disability and arthritis, etc. The impact of online learning and technology on students' physical, mental, emotional, and social health has been said to impact students' self-esteem, personal worth, and cause undue stress (Halupa, 2016). Intensity or frequent use of mobile phones may be an influencing factor for many mental health problems in the university student community (Wizenic et al., 2018). In most online education settings, students' study from their homes, which may reduce their exercise levels and affect their physical

health. The reason for increasing eye problems along with frequent headaches is spending time on screens for long periods of time. Additionally, being confined at home is leading to increased anxiety and depression as well as sleep disorders. Children attending online classes at home are not bound to classroom professionalism. Therefore, their physical health is also deteriorating in many ways. Kids take online classes at home in bed and on the couch, which we can attribute to the recent increase in back pain or fibromyalgic pain.

Lack of physical activities: Obesity in children is increasing either due to lack of outdoor physical activities or due to overeating and easy availability of junk food at home. Children's muscles are becoming weak and fat is increasing, which is affecting their development. Research has shown that the more physically active a child is during development, the better his or her physical and mental health for the next 3-4 decades of life. Due to being physically inactive, children are also losing their muscle tone, which will make it very difficult for them to play due to muscle stiffness when they start playing again in the future.

Digital Screen Pressure: Digital screen pressure is a condition in which a person spends a long time sitting in front of the screen of an electronic device, and this puts a strain on their physical and mental health. While working or studying, sitting in front of a screen for a long time causes excessive strain on the eyes, which can lead to problems like Computer Vision Syndrome (CVS).

Insomnia: Medically, insomnia can be defined “by the presence of a person having difficulty in sleeping” (Ruth, 2007). Sleep is a state in which the body rests by reducing contact with its surroundings, which helps the body recover from daily fatigue. Lack of sleep and irregular sleep cycles can have negative effects on memory, concentration and performance. Rosenberg et al. (2019) state that spending too much time in front of digital screens is seriously dangerous, affecting sleep quality and causing difficulty falling asleep. Ruchir Khare et al. (2020) state that during COVID-19, increasing screen time adversely affects the sleep health of students. Sitting and working in front of digital screens for long periods of time can lead to sleep problems, as blue light screens interfere with the production of a sleep-inducing hormone called melatonin.

Physical Inactivity: While working while sitting in front of a digital screen, a person's physical health can suffer from lack of adequate exercise and physical activity, which can lead to obesity, loss of muscle mass, and other health problems. Therefore, it is important to manage digital screen pressure and take regular required breaks so that it does not negatively impact personal health.

Negative Effects on Mental Health

Depression: Depression is an impactful phenomenon. It can be defined as a state of inertia that shatters the patient's sense of self. People suffering from depression experience sadness and loneliness for no known reason. Nader Salari et al. (2020) have explained that the COVID-19 pandemic has had a severe impact on mental health and well-being. Social isolation due to online classes contributes to the risk of clinical depression. Because students are not able to interact with teachers and academic peers (Rajkumar, 2020). P. Venugopal, head of the department at Andhra Medical College, says that students in schools and colleges have the free time that they can use for socialization. Unfortunately, online classes provide little scope for this, creating stress in the mind. Internet addiction can cause social isolation, which ultimately leads to depression. Jha and Arora (2020) state that mental health is a matter of concern. Online classes impair the

social cognitive abilities of learners. Online classes hinder the standard development of influential factors like empathy, teamwork and peer relationships.

This isolation is clinically considered to cause depression and anxiety. In the current scenario, depression is recognized as a major risk factor for suicidal tendencies among youth. Recent behavioral studies have concluded that low self-esteem, sadness, distress, and depression are higher in Internet communities. Light emitted from cell phones can disrupt the natural sleep cycle leading to sleep disruption (Acharya et al., 2013). Affective changes such as sleep disturbance, depression, somatic pain and increased screen exposure lead to increased sleepiness and depressive symptoms in office workers and students, which is a matter of concern (Majumdar et al., 2020). Spending more time on screens is directly related to depression. There has been a sudden change in the method of teaching from traditional mode to virtual framework system due to online learning and academic stress among university students during COVID-19, which may cause stress among students (Moawad, 2020).

Mental Stress: Due to digital screen pressure, one spends more time on internet and social media, thereby having to bear the pressure, stress etc. that comes with social media.

Decrease in Sociability: Due to digital screen pressure, the individual is moving away from his/her social contexts and thereby depriving himself of a social life. Technology, Internet connectivity problems, and communication difficulties in online learning can contribute to stress and frustration, affecting mental and emotional health.

Social Isolation and Loneliness: The lack of personal interaction in online education can reduce social connectedness, increasing feelings of isolation and loneliness, which negatively impact mental health.

Positive Impact on Mental Health

Lack of Stress and Pressure: One advantage of online education is that students study at home, which reduces social pressure and makes them more independent. This can improve their mental health.

Thoughtfulness and Self-Assessment: In online education, students can make the time of their own activities meaningful and move towards thoughtfulness, which leads to their self-development.

Flexibility and Less Stress: The flexibility of online education allows learners to manage their schedules, reducing the stress and anxiety associated with rigid time tables. This adaptability has a positive impact on mental health.

Accessibility for diverse health conditions: Online learning provides opportunities for individuals with health challenges to receive education from the comfort of their homes, promoting inclusivity and equal educational opportunities.

Customized Learning Environment: Learners can tailor their study environment to their preferences, contributing to a comfortable and productive environment that has a positive impact on concentration and learning outcomes.

Health-related learning opportunities: Online platforms provide courses on a variety of health topics, empowering individuals to make informed decisions about their well-being, promote healthy habits, and acquire relevant skills.

Combination of online information: Online education gives students a chance to get various information from the internet, which can enhance their mental health.

Ways to reduce the negative effects of Online Education on health

Prolonged use of laptops and phones to attend online classes is affecting their mental and physical health. Maintaining proper posture and understanding the effects of prolonged exposure to electronic devices is the need of the hour. Although it is not possible to completely avoid the risks at present, incorporating simple exercises and posture advice into the daily routine can avoid long-term adverse effects. Through online education, students can become more aware of their health and understand the importance of a healthy lifestyle for themselves.

Course design, online presentation, and the quantity and quality of information provided will have to be reorganized. Make sure that students do not spend most of their quality time in front of their screens. More emphasis should be given on group activities and group teaching so that students do not feel isolated. Furthermore, parents should be made aware about the infrastructure and study conditions that need to be maintained while conducting classes. Physical activity plays a big role in calcium and vitamin D levels in the body. In recent times, these deficiencies are increasing in children and their reasons are very clear, hence there is a need to be aware in this regard. Parents limit screen time for mobiles and tabs after class time and encourage children to stay away from electronic devices. Healthy muscles require good hydration and healthy eating habits, so students need to avoid overeating and junk food. It is important for all growing children to have 30-45 minutes of exposure to sunlight for at least 1-1.5 hours a day with vigorous physical activity like gym/aerobics/yoga or outdoor physical activities. Therefore, arrangements will have to be made for this.

Conclusion

The relationship between online education and health is complex with both positive and negative aspects. While online education offers flexibility, accessibility and health-related learning opportunities, at the same time, it also presents challenges related to sedentary behaviour, social isolation, screen-related health issues and stress. To maximize the benefits and minimize the risks, individuals must adopt strategies to maintain a balanced and healthy lifestyle while engaging in online learning. Educational institutions and online platforms also play an important role in promoting wellness awareness, incorporating physical activities, and promoting social interaction in the virtual learning environment.

A holistic approach to online education that considers both academic and health aspects can contribute to improved well-being and successful learning outcomes.

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