BRAIN. Broad Research in Artificial Intelligence and Neuroscience
ISSN: 2068-0473 | e-ISSN: 2067-3957
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2022, Volume 13, Issue 1, pages: 534-545 | https://doi.org/10.18662/brain/13.1/298

Online Education and Effects During Covid-19 Pandemic

Betul ULUKOL[1]

[1] Professor Doctor MD, Ms., Ankara University School of Medicine, Ankara, Turkey, betul.ulukol@gmail.com

Abstract: *Covid 19 infection first emerged in Wuhan, China in December 2019 and spread rapidly and became a pandemic that affected the whole world. Almost 94 % of learners worldwide were affected by the pandemic. In many countries, schools were closed for a period of time. Education has changed dramatically, with the distinctive rise of e-learning, whereby teaching was undertaken remotely and on digital platforms. In this paper the effect of online education during covid -19 pandemic has been discussed with under the headlines of advantages or disadvantages of technology, how effective is distance learning and the problems of children having to stay home all the time due to lockdown.*

Keywords: *Covid-19 Pandemic, Online education, technology based learning.*

How to cite: Ulukol, B. (2022). Online Education and Effects During Covid-19 Pandemic. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 13*(1), 534-545. https://doi.org/10.18662/brain/13.1/298

1. Introduction

The Pandemic is an outbreak of a disease that occurs over a wide geographic area and typically affects a significant proportion of the population (Cristea, 2019; Huidu, 2020; Jaradat & Breaz, 2020; Tripon, 2019). In addition to the effects of the disease caused by the pandemic, there are many negative effects. In pandemics people are generally stressed and anxious, fear and feelings of helplessness are the most common ones. The people fear of getting sick and dying, losing livelihoods and not being able to protect loved ones and losing loved ones. Difficulty in working and living conditions also increase their fears and anxieties. Especially being unable to work in isolation or getting fired from their jobs.

Lockdown is another stress factor. Due to the isolation conditions, helplessness, distress, loneliness and depressive feelings are gradually intensifying. Feeling fear and anxiety of being separated from loved ones and caregivers due to quarantine practice is very hurtful for everyone. In addition to all these, being unemployed, losing income and disrupting children's education affect people even more negatively (United Nations, 2020; UNESCO, 2021a, b).

Covid 19 infection first emerged in Wuhan, China in December 2019 and spread rapidly and became a pandemic that affected the whole world. The whole world is in distress due to the threats of COVID-19, and the education sector remains one of the sectors most affected by the Coronavirus outbreak. In 200 countries, 1.58 billion children and youth are in the focus of this problem (UNESCO, 2021c).

In many countries, schools were closed for a period of time. In Romania schools were closed for 32 weeks. In Turkey, they remained closed for 38 weeks (UNESCO, 2021c). With the significant rise of e-learning, where education takes place remotely and on digital platforms, education practices has changed dramatically. In this paper online education and effects during covid -19 pandemic has been discussed.

2. Advantages and Disadvantages of Technology Based Learning

Today, technology is widely used in almost every field. Online learning or online education is such a part of technology based learning (Anohina, 2005). No doubt, we are using technology for online education and of course we have to use it in pandemic.

The pandemic has made technological development necessary all over the world. We have seen the most striking examples of COVID vaccine

production and innovation in rapid production/development of technology. Advances in technology have also had positive effects on the hardware and software used for online education. Increasing educational opportunities has been a major advantage of using technology (Burlea et al., 2010; Vargo et al., 2021).

Broad ranges of online education tools/platforms became more easily accessible for education particularly in the pandemic. The use of language apps, virtual tutoring, video conferencing tools or online learning software has increased significantly during the COVID-19 pandemic (Andress et al., 2020; Kelly, 2020). Tools that motivate learning by making online education fun and enjoyable have been developed and made more accessible.

One of the most important advantages of using technology in education is that this education system is suitable for the learning styles of alpha and z generation children. People's school perceptions, learning styles, the media they get advice are changing from generation to generation. Online education is very suitable for the z generation, but especially for the alpha generation (Renton & McCrindle, 2020). It is important to understand the characteristics of Generation Alpha, they are currently the youngest generation, who shape the social media landscape and they are popular culture influencers.

Consisting largely of children and adolescents, Gen Z members are a more self-aware, confident, innovative and goal-oriented group. They tend to live their entire lives online and through their smartphones. This can have profound implications for everything from their relationships to how they learn to virtual reality training and problem solving. Generation Z also has a different tech experience than Millennials that will impact every aspect of their lives, from health to education (Renton & McCrindle, 2020).

However, in the pandemic, all education processes have become dependent on technology with distance education. This brought out the advantages of online education as well as the risks that could pose some problems. In this situation to know of disadvantages of using technology more important, especially if all components of education dependent to advanced technology.

All the advantages of technology can only be realized when this opportunity is offered to all children.

Challenges styling, maintaining, and improving of distance learning are at the top of them. As the schools closed, the demand for distance education increased. Moving learning from the classrooms to the home on a massive scale and in haste has created serious human and technical

challenges (Van Lancker & Parolin, 2020; United Nations, 2020, UNESCO, 2021a).

When one of the parents had to be with the child this caused difficulties for parents both in terms of their work and time. In addition, the provision of the necessary infrastructure for children's online education has also economically created a burden for families (UNESCO, 2021b).

Without reliable internet access and/or technology, some students found it difficult to participate in digital learning; this difference is seen between countries and between different income groups within countries. For example, according to OECD data, 95% of students in Switzerland, Norway and Austria have a computer to use for their schoolwork, compared to only 34% in Indonesia (OECD, 2020).

The increase in the use of technology by children leads to an increase in technology-related abuse incidents. In a study examining the change in the frequency of child sexual abuse before and after the pandemic in Turkey, it was found that the frequency of online sexual abuse increased 2.9 times during the covid-19 pandemic (Ulukol et al., 2021). Especially in stressful environments, children staying away from the supervision or the epidemic disrupting the family dynamics cause children to remain uncontrolled and more open to abusive factors.

According to The Guardian newspaper in May 2020; Child abusers have created and shared an online guide describing ways to manipulate and exploit the more number of children at home and online during Covid-19 (Davey, 2020).

In a study by Babvey et al. (2021), it was shown that Twitter data shows significant rise in abusive content during stay-at-home restrictions in covid-19 pandemic.

3. Is online learning effective?

There is evidence that online learning can be much more effective for those with access to appropriate technology (Suresh et al., 2018). In a study conducted by the Research Institute of America, it was determined that e-Learning increases the retention rates of knowledge by 25% to 60%, while the retention rates of face-to-face education are very low (8% to 10%). A Brandon-Hall Study has shown that learning the same material through e-learning requires 40% to 60% less study time than learning in a traditional classroom setting (Pezold, 2017).

It is also claimed to be the Future of Education because online learning is flexible, accessible and more cost effective. Online education can

be effective when all the prerequisites are met. However, it is not possible to say that these conditions can be achieved during the pandemic process. The necessity of online education during the pandemic process caused confusion and stress in teachers. As schools closed unexpectedly, teachers were often unsure of their obligations and how to connect with students to support their learning. The lack of experience of transitioning to distance education platforms caused them to feel inadequate. Parents were unprepared for distance learning and homeschooling: When schools closed, parents were often asked to facilitate children's home learning, and the might found it difficult to fulfill this task. This left parents with limited resources and education in an even more difficult situation (Onyema et al., 2020;UNESCO, 2021b; Van Lancker & Parolin, 2020).

However, some studies evaluating online education show that online education is effective, especially in higher education (Luca et al., 2020). A study of about 40,000 students at Southeast University in China evaluated the effectiveness of these digital learning activities. They found that about 50 % of students believed that the planned teaching goals were fully achieved and 46 % believed that the goals were basically achieved (Sun et al., 2020).

4. School closures and lockdown effect on children

School closures and lockdown caused children to spend almost all of their time at home. Quarantine is a situation that is generally unpleasant and has negatively affects the comfort of life. For children, separation from loved ones and friends, loss of freedom, insufficient knowledge about illness, uncertainty about the future, and boredom can sometimes have serious effects (Brooks et al., 2020; Lee, 2020; Tang et al., 2021, UNESCO, 2021b).

3.1. Mental health effects of school closures during COVID-19

It has been shown in many studies that the Covid 19 Pandemic and curfew have negative effects on children's mental health. In a systematic review of 24 studies, the social psychological effects of the curfew during the pandemic were examined. It was determined that the prevalence of acute and post-traumatic stress disorder symptoms, depression, general psychological symptoms, irritability and sleep problems due to anxiety were more common in quarantined persons (Brooks et al, 2020).

Attending school is a situation that supports coping mechanisms, especially for adolescents with mental health problems. As this support disappears when schools close, symptoms may recur. Children with special educational needs, such as autism spectrum disorder, are also at increased

risk for their needs when they are away from school. Disruption of their daily routines reflects negatively on children's moods and may cause them to become irritable and irritable (Fegert et al., 2020; United Nations, 2020; Vinisha, 2020).

In a study conducted with primary and secondary school students, it was found that anxiety, depression and stress were the most common symptoms during the closure of schools, although students expressed satisfaction with life in general. In these conditions, it was determined that the most effective protective factor in terms of child mental health is communication and discussion between parents and children (Tang et al., 2021).

Young Minds, a mental health association in England, conducted 4 surveys during the pandemic and evaluated the impact of the pandemic on the mental health of young people. In the first survey, 32% of respondents agreed that it made their mental health much worse, and 51% agreed that it slightly worsened their mental health. In the latest survey over the 2,000 young people's responses, 75% of respondents agreed that they think coping with the current lockdown is more difficult than before. 67% believe the pandemic will have a long-term negative impact on their mental health. 79% of respondents agreed that their mental health will begin to improve once most restrictions are lifted (Thomas, 2021). These researches show that Young people have been very affected by the pandemic and especially lockdown. But many of those surveyed thought their mental health would begin to improve if the restriction was lifted.

3.2. Problems with prolonged screen exposure

Another big problem is prolonged screen times related with lockdown. The child, who spends all the time at home, starts to use the technological equipment provided for educational purposes in all recreational activities, except education. In a study conducted in Turkey, the screen exposure time of children was determined that an average up to 7 hours in pandemic (Eyimaya & Irmak, 2021). Increased screen time can cause vision problems, sleep problems, inactivity, changes in feeding behavior, and problems with the skeletal system (Barlett et al., 2012; Domingues-Montanari, 2017; Wong et al., 2021).

In a meta-analysis, it was determined that increase in digital screen time and the decrease in outdoor activities was related the onset of myopia and the progression of existing myopia, and it was stated that it could potentially worsen after the pandemic period (Wong et al., 2021). According to the data of another study conducted in Italy, it was determined that

children's screen time increased during quarantine, excluding online lessons. It has been shown that the prevalence of nightmares, sleep terrors, difficulties in sleeping and anxiety at bedtime increase (Bruni et al., 2021).

There are many studies show that the childhood obesity epidemic is exacerbated related school closures (Rundle, et al., 2020).

3.3. Gaps in childcare / Failure of recognize the risks

The closure of schools caused the disruption of some services provided within the scope of school health services Van Lancker & Parolin, 2020; United Nations, 2020, UNESCO, 2020-c).

In addition, the chance of teachers to supervise and evaluate children in terms of negativities has disappeared such as physical and mental health problems. The role of the teacher in monitoring children's health is essential. The closure of schools and the fact that children cannot be observed by their teachers delayed or made it difficult to realize the problems that the child was experiencing in terms of both physical and mental health. This caused the risks that the children were in to go unnoticed (United Nations, 2020).

The fact that students attend the school is an important factor that ensures that the maltreatment and neglect they encounter are recognized and the necessary intervention is made promptly. The closure of schools has also created an obstacle to the intervention of abused children. In a study conducted in Turkey, a 5% decrease was found in the number of child abuse cases reported by teachers during the Covid -19 pandemic (Ulukol et al., 2021).

If parents do not have adequate support mechanisms to provide care for their children, children of working parents are often left alone when schools close, which increases the risk of peer pressure, substance use and accidents, and may increase the likelihood of experiencing harmful behaviors.

3.4. Increased exposure to violence and exploitation

Many researchers state that in addition to increasing anger, anxiety and depression in those exposed to quarantine, the frequency of substance use also increased. Emotional instability and substance use in the family also carry the risk of increasing the frequency of domestic violence. Whether children witness domestic violence or directly experience it, post-traumatic stress disorder and other serious emotional and behavioral problems can occur. Thus, the closure of schools and the introduction of curfews during the pandemic have created new vulnerabilities for children and made

existing ones worse (Brooks et al., 2020; Humphreys et al., 2020; Katz, & Fallon, 2021; Romanou & Belton, 2020).

During the pandemic period, the communication and interaction of families with social service institutions and organizations decreases. This negatively impacts access to institutions and services that would normally provide support to protect children from maltreatment. The stress environment of caregivers, the weakening of the child's defense mechanisms and the weakening of security measures increase the potential for all kinds of new and repeated abuse cases (Romanou & Belton, 2020).

In a large study, we found that there was an increase in the rate of both physical abuse and neglect. We reviewed the 2019 and 2020 pediatric patient admissions of 12 large hospitals. We analyzed the hospital records of approximately 3.5 million children. The number of children admitted to the hospital in the pandemic has decreased by about 50%. However, the decrease in the number of physical abuse and neglect was only 13 and 22 %. This is an indicator of the proportional increase in abuse and neglect. (Ulukol et al., 2021)

5. Conclusion

In these days, when the covid-19 pandemic is still going on, we have to continue with the lessons we learned from the problems experienced at the beginning of this period (UNESCO, 2021d). It seems that online education will continue to be a part of the education system in the world. It should be adopted new principles for education and revise educational practices with the lessons we have learned from the experiences we gained last year. Distance education in other words online education must be builded on a child-friendly system. All children should be provided with equal opportunities in the full sense of the word, without any discrimination. It is necessary to ensure that distance education programs are not only for teaching purposes, but also in a system where children are closely monitored by their teachers. Training of teachers about signs of trouble/distress to identify children who may need special protection and provide the necessary guidance will be an important initiative to protect children. In addition, providing effective guidance to families and caregivers is essential, especially in extraordinary circumstances.

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