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COMMENTARY

# Changes in Adolescents' Mental Health After COVID-19

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## Introduction

In February 2020, The United States was shocked with a virus that abruptly changed citizens' lives, particularly those of adolescents. Initially, Students were let out for an extended spring break, only to find out that they would not be returning to in-person instruction until further notice. COVID-19, also known as the coronavirus disease, was first discovered in Wuhan, China in December of 2019. Research has shown that specific viruses, such as beta coronaviruses and alpha coronaviruses, are known to have the main host be a bat or other zoonotic organism (1). An individual who contracts this disease may experience symptoms such as fever, chills, cough, shortness of breath, difficulty breathing, fatigue, muscle or body aches, headache, loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, and diarrhea (2). SARS-CoV-2 is transmitted by direct or close contact with aerosolized particles of the virus thus causing a respiratory infection. To regulate transmission, society was put under a worldwide quarantine. Citizens were expected to stay in their houses, universal mask mandates were imposed, and copious amounts of hand sanitizer and disinfecting wipes were utilized like never before. Due to the social isolation brought along with this global pandemic, society has been presented with a staggering 60.8% increase in anxiety, a 54.1% increase in the feeling of loneliness, and a 59.8% increase in depression (3). The impact on society's mental health was unparalleled.

## Social Isolation

Social interaction is essential in a person's life, therefore government imposed lockdowns may cause isolation and loneliness. An article from 2020 stated that social isolation and loneliness increased the risk of depression, and possibly anxiety up to 9 years later. They also found that duration of loneliness was more strongly correlated with mental health symptoms than intensity of loneliness (4). Results from this study show that potential issues with depression and anxiety can follow the events of isolation. In the context of

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COVID-19, we know that some students were forced to stay home to take care of their younger siblings, forced to go to work because their parents were unemployed due to COVID-19, or weren't able to communicate with people because they didn't have the financial and technological resources needed to communicate with others. Previous literature has also found that loneliness has been a factor for sensory loss, connective tissue, auto-immune disorders, cardiovascular disorders and obesity. If loneliness continues, it may decrease physical activity leading to an increased risk of frailty and fractures (5). The study shows that not only does social isolation affect mental health but physical as well. As researchers, there should be work to mitigate the effects of isolation in the youth population. Adolescents are likely to experience depression and anxiety during and after quarantine, so clinical services should offer support and interventions as well as be prepared for the increase of mental health problems.

## Depression

Depression is a mental condition characterized by chronic sorrow and loss of interest. It affects how you feel, think, and behave and can lead to a variety of mental and physical difficulties. It is also known as major depressive disorder and is defined as "a sad mood lasts for a long time and begins to interfere with normal, everyday functions." (6) In a study done on Chinese adolescents in Shanghai, a survey was distributed to 4,342 primary and secondary school students that included questions about their physiological distress, life satisfaction and perceived view on at-home quarantine. The results showed that depression was the second most prominent disease with (19.7%) of the participants developing new symptoms (7). Concerning, amongst the participants, each developed new issues, after being sent home for quarantine. Under-recognized and untreated depression and anxiety symptoms have deleterious effects on physical functioning and social interaction which would lead to an increase in fatigue (8). In this study, depression also increased across participants due to the lack of student interaction within one another. As an additional burden, COVID-19 restrictions kept students from attending practice, going to the gym or doing any sort of physical activity, which are important activities to combat signs of depression.

These findings are not unique to adolescents suffering in Asia but also affecting children in North America. Similarly, in a study conducted on adolescents in the United States, an online questionnaire was used to gather information regarding students' mental health post-lockdown. The results indicated that an alarming 39% of the 1,948 participants developed symptoms of depression after the government-mandated lockdown (9). Common causes amongst students were fear of getting infected, being unaware of the effects of COVID-19, facing the rapid increase of cases, contemplating the detrimental outcomes including death, and having to adjust to a new environment of learning. With problems such as having to worry about not having the internet available, a less peaceful atmosphere where students can't focus, especially if siblings participate in online classes, and not having the peace of mind that they are able to discuss their problems or questions to the professor easily, there's no doubt students have developed some mental blockade from its notable effects. Similarly, both continents have both grown equally in depression cases, living in similar conditions (7,9).

## Anxiety

Anxiety is the excessive, constant fear and intense worry about everyday situations. It is an emotion characterized by their feelings of tension and certain thoughts (10). People with anxiety disorders often have recurring thoughts or concerns that bother them. They may avoid certain situations out of fear, creating general anxiety. COVID-19 has caused adolescents to worry about getting sick during the pandemic, and constantly worrying about the future. Anxiety may also have physical symptoms such as sweating, trembling, dizziness or a fast heartbeat (10).

Many young adolescents have suffered from anxiety throughout COVID-19, specifically from being isolated throughout the pandemic and not participating in any social interactions (11). Young children were left alone by working parents, unsupervised at home, which had an effect on many children creating separation anxiety. Bottling up many feelings and not being able to talk to someone was also a cause which created excessive feelings in many situations.

Many families have also lost close relatives due to COVID-19 and did not have any social support, which caused them to be irritable and angry. The pandemic made it hard for many, specifically adolescents who were already struggling with mental health, bringing them a sense of loneliness and stress after being isolated in their own homes for a long

period of time and then having to return to their original lives. Although being isolated caused many to encounter anxiety symptoms, having to return to the community, their normal routines and hide the setbacks in their academic and professional work has been difficult for many people (12). This can increase rates of elevated anxiety and depression symptoms in young adolescents, which can lead to frustration and helplessness.

It is presumed that children might resist going to school after the lockdown is over and may face difficulty in establishing rapport with their mentors after the schools reopen. Consequently, the constraint of movement imposed on them can have a long term negative effect on their overall psychological wellbeing (13). Two studies have reported rates of anxiety ranging from 18.9% to 37.4% in young people during the pandemic (14). Because of school closure, it has influenced the behavior of many adolescents. Many school activities helped these teens with their physical and mental health.

## Conclusion

The worldwide coronavirus pandemic has presented society with many aspects, a large majority of them negatively impacting one's mental health. To name a few of these effects, social isolation, leading to loneliness and mental health issues, such as depression and anxiety. If one already had any of these issues, they would escalate to an unthought of extent and would lead to an increased rate of suicides. The result of this pandemic has caused a mental health impact that is just staggering. These emotional reactions were outcomes from being secluded from the world throughout COVID-19. This pandemic has had such a great impact on everyone, especially on adolescents affecting their mental health immensely. We can help our adolescents by taking them to a therapist where they can get help, where they can talk about their troubles or just somewhere we know they can get better. We are still trying to recover slowly but surely.

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