
How did the Pandemic Exacerbate the Mental Health Crisis Across the Nation?

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Abstract

Surrounded by stigma and misconception, mental health is often overlooked - when someone does experience mental health concerns, those concerns become much more drastic due to the lack of immediate addressal. With consequences that are serious, even when resources are directly available, the question becomes to what extent are these concerns exacerbated as a result of the pandemic, given that the pandemic has cut many individuals off from various resources. We conducted a survey to gauge the degree to which individuals were suffering from mental health concerns prior to the pandemic, and during the pandemic in order to draw a comparison to conclude whether or not increases in mental health issues can be attributed to the pandemic. Results showed that for most of the younger respondents, this certainly was the case; mental health issues were most certainly exacerbated due to the pandemic, with many respondents associating the increase with the heightened feelings of disconnection from their social circles as a direct result of their inability to see friends, loved ones, or even coworkers. The study provided an incentive to see how much connection and disconnection can affect someone's mental health. While it may be apparent from our study alone that a disconnect from one's peers may prompt an increase in mental health concerns, future studies ought to be conducted to see whether this conclusion can be proven otherwise or if other fascinating and insightful results can be found.

Categories: Mental Health, COVID-19

Key Words: Stress, Depression, IEP

Literature Review:

Many individuals were hit hard by the COVID-19 pandemic - especially those who suffer from depression. The inability to interact with peers and friends has greatly diminished, as it has become increasingly difficult to go outside given the severity, prevalence, and negative implications of the virus. Given that many individuals turn to friends and family as a means of uplifting themselves and their feelings, it is only natural to expect that there would be a sharp decline in one's ability to maintain the same levels of happiness that they had had prior to the pandemic. Household situations have changed drastically as increased unemployment rates, remote learning, and a decline in job opportunities led to more people spending large amounts of time at home.

Mental health is largely overlooked in everyday life. Stigma surrounds mental health because most people denounce it as just being some sort of disability or mental condition. As a result, people who struggle with mental health often bottle up the emotions and struggles they experience - this bottling up increases the likelihood of the ramifications of mental health issues being much more severe. As much as 66% of studies indicated that adolescents demonstrated negative attitudes towards individuals that have mental health problems, and 1 in 5 had displayed actual/intended stigmatizing behavior ($I^2 \geq 95\%$). Not only that, but one-third of youth displayed a lack of knowledge of mental health problems (Gaiha S. et al., 2020). This society fosters an environment in which it almost appears as taboo to talk about mental health, which can often prove to be a rather ineffective way of dealing with mental health concerns. When it feels as though an individual cannot openly share the pain they are experiencing, they must resort to telling friends or family. However, even then, there exists the fear of being turned away by the aforementioned parties in fear of the idea that they would be disappointed or perceive the individual differently. Additionally, individuals may feel uncomfortable sharing their mental health concerns with trained professionals, as they have not developed any sort of connection with this professional and would not have done so until several meetings or sessions. Consequently, the circle of people to reach out to narrows. With a circle this small developing when people are able to openly interact with one another in person, the question becomes; to what extent has the pandemic exacerbated these mental health problems faced by individuals?

The United States in particular suffers from some of the worst consequences of the COVID-19 pandemic, with a staggering 24.3 million cases and roughly 402,000 deaths (Centers for Disease Control and Prevention, 2020). The pandemic may be very stressful for people as fear and anxiety about a new disease and what the future has in store for our world can be incredibly overwhelming. This pandemic has strengthened already prevalent issues such as alarming rates of food insecurity, unemployment, and

social interactions (Afrin, T., 2020). The inability to interact for one to interact with their peers and friends has greatly diminished as it has become increasingly more difficult to go outside given the severity and widespread impact of the virus. Given that many individuals turn to friends and family as a means of uplifting themselves and their feelings, it is only natural to expect that there would be a sharp decline in one's ability to maintain the same levels of happiness that had been felt prior to the pandemic.

Introduction and Background:

All across the country, individuals have suffered greatly from the devastating blow that is the COVID-19 pandemic. The challenges faced by Americans during this time are multifaceted and have taken an incredible toll on the mental health of thousands of people across the nation. In particular, adolescents have reported that their mental health has worsened over the course of the pandemic. According to the World Health Organization, the adolescent age group encompasses all individuals who are between the ages of ten and nineteen years old. For our purposes, we will be examining adolescents in more of the 'teenage' phase of their life, which we have defined for our research as being in the age range of twelve to eighteen years.

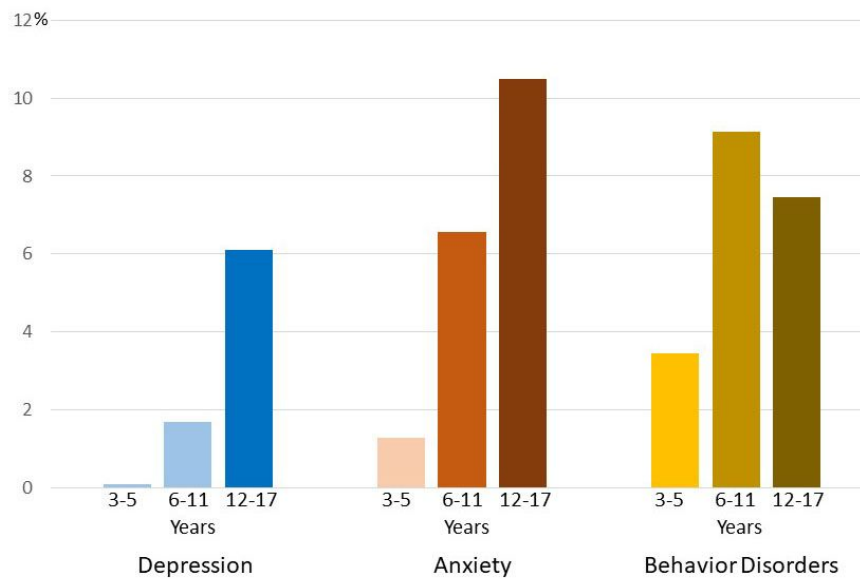
It likely comes as no surprise that poor mental health has ravaged more adolescent lives than we can imagine. With the many changes and "finding-of-the-self" periods that occur in these years of our lives, it is not difficult to imagine that adolescents may have a hard time coping with various transitions. No longer old enough to be considered a child, but not yet old enough to be considered a young adult, most of the members of the adolescent age group are lost somewhere in between childhood and adulthood and are unable to claim a spot on either side of the spectrum. This can often lead to bouts of confusion and questioning in their lives, which in turn can develop into depression. According to the National Institute of Mental Health (NIMH), approximately 3.2 million adolescents (aged 12-17) report at least one major depressive episode in their teenage years. When this number is compared to the roughly 21.05 million adolescents in the USA, it is quite shocking to see that close to fifteen percent of the adolescent population in America has been significantly affected by depression at some point in their life.

The NIMH also reports that 71% of the adolescents affected by depression have experienced severe impairments in their daily lives due to their symptoms. This translates to an estimated 2,272,000 adolescents who have experienced severe impairment as a direct result of depression. These statistics in themselves present a worrying truth: adolescents in America are being seriously impacted by symptoms of depression. Imagine, then, how much worse these symptoms may have become when the pandemic

abruptly changed the world as we knew it. The majority of adolescents in the U.S. are students, all of whom were deprived of the ability to physically go into school. While this may have been beneficial for reasons such as getting extra sleep or feeling comfortable at home, adolescents no longer had access to the essential ability to see their friends and peers in person. This lack of physical interaction may have more of an impact on mental health than one may think; as students fall into the monotonous cycle of virtual learning, they have little to look forward to, as they can no longer see their friends or engage in school extracurriculars in person. Furthermore, school often provided an escape to those who may have difficult family or housing conditions. Factors such as lack of food availability, abusive households, and the struggle to focus on school combined with the many other stressors of both normal and pandemic life, are enough to make any adolescent struggle to cope with challenges and take proper care of their mental health (Afrin, T., 2020).

Another mental health issue that affects a wide range of adolescents both in the US and across the world is anxiety and anxiety-related disorders, which are often closely tied with symptoms of depression. According to the Centers for Disease Control (CDC), about 3 in 4 children between the ages of three and seventeen with depression also have some form of anxiety, which constitutes to about 73.8% of these individuals (Centers for Disease Control and Prevention, 2020). Furthermore, nearly 1 in 2 individuals aged 3-17 with depression also have behavior problems (47.2%). These statistics effectively prove a very strong correlation between depression and anxiety in adolescents. The CDC also reports that those aged 12-17 have the highest rates of both anxiety and depression in the age group of 3-17.

Depression, Anxiety, Behavior Disorders, by Age



(CDC Children's Mental Health- <https://www.cdc.gov/childrensmentalhealth/images/Depression-Anxiety-Behavior-Disorders-chart.jpg>)

Experts at the CDC report that rates of depression and anxiety amongst youth have constantly been increasing over the past decade or so, and these increases were taking place *before* the world was struck by the coronavirus pandemic. It is difficult to imagine how much worse these anxiety symptoms may have gotten in adolescents who had no choice but to be cooped up all day in their homes with their eyes glued to a computer screen. The pandemic certainly shook up the world and struck us all hard, but the adverse consequences caused by COVID-19 for those in their adolescent years have been particularly devastating on the mental health of teenagers who are just beginning to find their way in the world.

Materials and Methods:

In order to test our hypotheses, we conducted an anonymous survey in which we asked a series of questions that attempted to gauge the feelings of numerous people. The survey was broken up into parts, starting with questions that overlooked the respondent's background. These were asked in the beginning of the survey to understand the age, grade level, and location of the participants. We asked if they were from New York in order to have the accurate sample size of individuals from a set area. This would strengthen our evidence of how the mental health of these people from this state has been affected by the ongoing pandemic. The survey then asked for the participants to describe the changes, if any, to their stress level that they had experienced since March 2020. This was measured on a 1-5 scale where increasing numbers correlated with increasing stress

levels (1- reduced significantly, 2- reduced a little, 3- no change, 4- increased a little, 5- increased significantly). In order to capture a more accurate picture of these increases or decreases of stress, the following questions were related to how this change took place. It was collected through an open-ended questionnaire asking participants how their stress levels changed over time since March 2020. In the space provided, they were expected to answer by describing the trends over the various months that followed the start of quarantine.

Additionally, a question asked for the participants to associate the change in their stress levels to the COVID-19 pandemic. Adolescents were the main participants of the survey as online school and remote learning was a topic we wanted to explore. This is because our research has shown that education plays a major role in depression and anxiety among individuals. The next set of questions in the survey examined whether online school has been more stressful than in-person school and whether the home/school workload has increased since the pandemic began for the respondents. We also included a question regarding learning disabilities or having an IEP to ensure that many education measures were accounted for. This type of question was asked through the format of being able to choose the answer that applied best to the participant. If they chose the first or second choices for the previous question, we asked a follow up question regarding if their symptoms began before or after the pandemic started (For our research purposes, “after the pandemic started” would be after the lockdowns of March 2020). Lastly, we asked one final question that was open-ended about whether or not these participants had anything they wanted to add to their responses about depression/anxiety symptoms or their stress levels.

The survey allowed us to collect an adequate amount of data to effectively assess how COVID-19 has impacted individuals and their mental health. The variety in the questions focused on different factors that would play a role in the way in which an individual suffers from symptoms of depression or anxiety. Prior research was conducted and analyzed in order to administer this survey to the best of our ability. We researched the top factors leading to increased levels of depression, anxiety and stress among individuals due to COVID-19 as well as the multitude of coping mechanisms that can be implemented to an individual’s life in order to combat these symptoms (Miranda D. et al., 2020). The conducted survey was established through the use of social media outreach, email, and text/phone calls. This allowed for a variety of different answers and participants.

Various resources were used to compile accurate and effective data and statistics for analysis. This includes archival data as well as demographic data from psychiatric journals, medical blogs, mental health entries, etc. The study selection was conducted

through the search of all databases and reviewing studies based on the eligibility criteria, reading abstracts, analyzing titles, and reading through select texts and references. The framework for the data extraction was from all of the compiled research from the studies conducted by certified authors and mental health professionals. This was then implemented into our survey, which was sent out to a broad audience through various social media and outreach channels. The principles measures utilized in the primary studies included levels of significance (p-values), percentages, means and standard deviations. Ultimately, a plethora of websites and accounts were used to assess the different symptoms of depression/anxiety in the population, levels of stigmatization and coping mechanisms applied during COVID-19. Studies were excluded if results indicated that participants were inaccurately representing levels of stress and symptoms of mental illnesses.

Results/Data Analysis

Following analysis of every single one of our graphs that were derived from answers to our online survey, we found that the pandemic itself was indeed a major stressor when it came to the exacerbation of the mental-health crisis. Results demonstrated that changes in stress levels from the beginning of the pandemic to the present were usually extreme. Figure 1 details how most respondents found that their stress levels had increased either a little or quite a bit. 36% of the respondents reported drastic increases in their stress levels since March 2020. This only adds onto conclusive evidence that the pandemic itself, along with its cross impacts of family death, mourning, and the move to remote learning, was most certainly a key player in the mental-health-issues epidemic. The majority of our respondents displayed in Figure 2 ranged from ages 15-17, with an overwhelming majority (76%) of our respondents being aged 16.

When asked specifically about how their stress levels changed over the course of the year, respondents also saw fluctuations in their stress levels. One respondent reported that “From March to June my stress levels were neutral and it was around May with the increase of cases that made me feel overwhelmed. From July to early September my stress levels decreased and around late September to early December my stress levels continued to increase. Currently from December to January my stress level has been neutral.” Here we see that fluctuations in stress were also common for many members of the youth population. It may have been a possibility that these fluctuations came from time periods in which these people were grieving for the loss of life within their families or accepting reality within a strenuous pandemic.

How would you describe any change in your stress level since March 2020? (1- reduced significantly, 2- reduced a little, 3- no change, 4- increased a little, 5- increased significantly)
25 responses

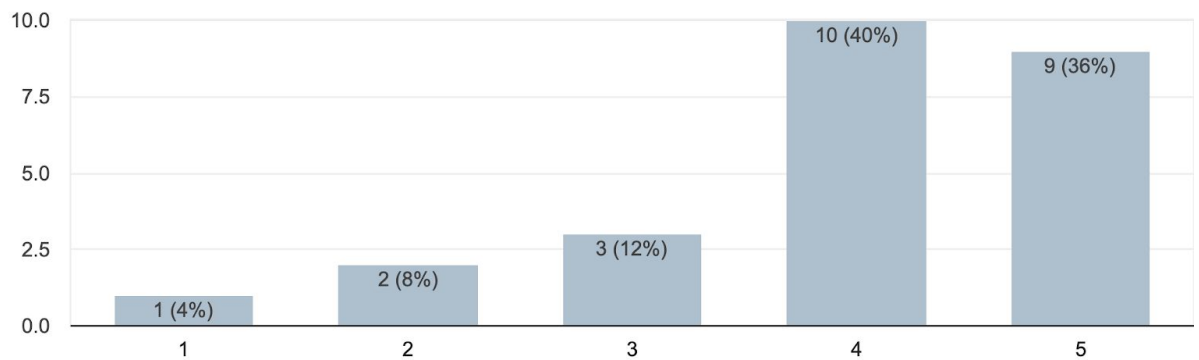


Figure 1: Bar graph above displays whether or not stress levels changed since March 2020, students had to pick from choices 1-5, each number representing a drastic positive change, negative change or neutral change.

Online school has been more stressful for me than in-person school was.

25 responses

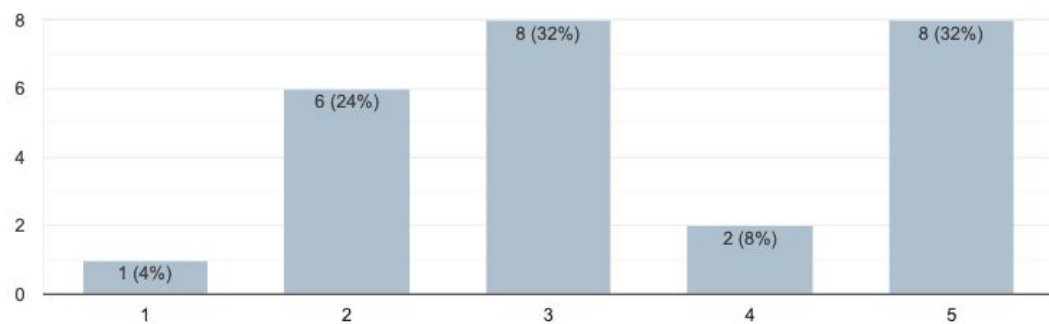


Figure 2: Bar graph above displays a choice between 1-5 for whether or not online school has been more stressful or not. The increase in numbers shows progressive increase in stress changes.

My home and/or school workload has increased since the pandemic began.

25 responses

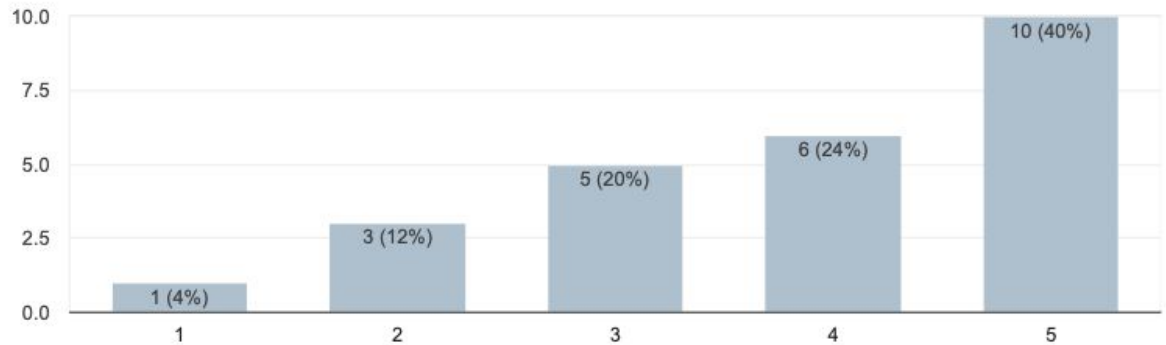


Figure 3: The bar graph above displays the results of whether or not respondents saw an increase in workload since the pandemic began.

A potential issue with our data is that it does not account for people of older generations to gain insight into how stress may have negatively impacted their lives and well beings. Still, our data indicates that the pandemic had a negatively impactful role on the mental health of students. Another sample of data was derived from the works of International Socioeconomics Laboratory (ISL) through a survey that assessed the psychological impacts of social media on the mental health wellbeing of participants. There were 85 participants ranging from the ages of 12 to 20, however only one participant was 12 years old and majority of the participants were 16 years old (63.5%). Participants were not given any incentives to complete the survey. All participants resided in the United States, with the majority living in New York City (91.6%). Three participants indicated that they lived in California, Long Island, and Westchester County.

When asked about ethnicity, 61.9% identified as Asian, 20.2% identified as White or Caucasian, 8.3% identified as Mixed, 4.8% identified as Hispanic or Latino, 3.6% identified as Black or African American, and 1.2% identified as American Indian or Alaska Native. The data highlights the diversity of respondents in order to provide different perspectives as well as varying effects of those impacted by mental illnesses. One of the indirect impacts of the pandemic that has also had a drastic effect on mental health has been, the arrival of online school. Figure 3 indicates how 32% of students felt that online classes and school was far more stressful than in-person school was. Figure 4 displays evidence that 64% of respondents had their workload increase either drastically

or in small amounts since the beginning of the pandemic. This could be attributed to changes in grade levels or possibly the take-on of different extracurricular activities.



Figure 4: The circle graph shows the percentages of the values for whether or not respondents have been or believe they were diagnosed with depression or any other mental illness.

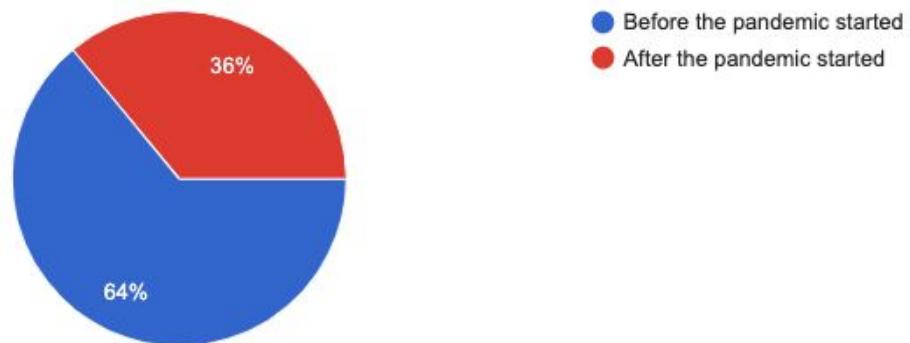


Figure 5: The circle graph above displays answers to if symptoms for our respondents began after or before the pandemic.

However, the pandemic has made both of these more difficult to acknowledge and address. 56% of the respondents believe they have or have been diagnosed with clinical depression. 36% of respondents found that their symptoms increased or started after the

pandemic. One respondent explained that “Due to the COVID-19 pandemic, finding ways to cope with depression and anxiety is overwhelming as many such as myself are forced to stay in households who don’t believe in mental illnesses”. With access to mental-health resources effectively cut off for thousands of people by the pandemic, especially minority or low-income groups, it would be no surprise to see that the pandemic has played a critical role in the exacerbation of the country’s mental health crisis. With this taken into consideration, students would only sink further into a cycle of ongoing depression highlighting the negative consequences the pandemic has had on the mental-wellbeing of kids throughout the country.

Discussion and Conclusion

Understanding the key issues behind one’s study is fundamental to developing and furthering scientific understanding - that is no different for our study. One key issue with our study was the lack of a broad variety of age groups to take data from surveys upon. This was already established in the results section, where detailing whether or not different age groups have seen different levels of exacerbation of mental health could have a substantial effect on the reliability of our claims. Our effective claims are backed up with substantial evidence, yet by leaving out age groups that often bear different responsibilities and different stressors, we close off understanding a different page of the story of this pandemic. Adding onto the issue of sample size, we did not actually focus on key stressors from certain races as that was not the primary goal of our study. However, if we expanded upon routing to discover whether issues such as tiger parenting or cultural variances had an effect on mental health, it could have also provided a new light to our study. Our results also cannot account for the different financial and family situations of participants and how that affects their access to technology and a scholarly environment. To add on, the results were only adolescents in New York and/or receiving a New York State education. This means it is likely that not many schools or schools with varying education quality are represented in this data. This results in a lack of variation within our testing group. During this time of COVID-19, it became more difficult to conduct in-person surveys with not only anonymous answers - had we been able to derive personal struggles from our stories, the problem of the pandemic could have really been framed differently. How one responds to stress during the pandemic can depend on their background, their social support from family or friends, their financial situation, their health and emotional background, and the community they live in, amongst other factors.

It was hypothesized that the pandemic would indeed cause a major and largely negative impact on the lives of many of these young adolescents, and this claim was proven by the data that we collected. Figures 1 and 2 both show how the pandemic

drastically increased depression levels and mental health issues in teenagers. It was an expected result in the study, as the pandemic shut people off from the key resources needed for the mitigation of mental health issues and contributing factors such as loneliness, being exposed to few people, and staring at the screen all day. Since struggling with mental health is considered taboo for many, adolescents have also struggled with finding help and positive coping mechanisms, and have been dealing with a lack of understanding and/or consideration from those around them. The inadequacy of available resources and materials in households prevents individuals from receiving the best treatment possible for their personal situations.

Furthermore, due to the COVID-19 pandemic, it was noted that increased time spent in homes has led to a disconnect from in-person relationships. Many adolescents have turned to social media in an attempt to cope with their constant battle with depression and anxiety. Although this measure initially was meant to be a deterrent to depression, there were clear negative psychological effects of social media that have shown that it takes a toll on the well-being of teens in particular. Depression diagnoses in the past several decades have been on the rise. However, social media use, specifically excessive social media use, was only seen as a suggested cause of a decrease in the standard teen psychological well-being. Potential causes of this downturn include the decreased amount of face-to-face interpersonal interactions, addiction-like behaviors regarding social media influences, social pressures arising as a result of comparisons, stereotypes, etc, and possibly a social media contagion effect that simply worsens the aforementioned conditions. The overarching intent of the research is to utilize coherent and efficient questioning to provide an accurate analysis on how mental health illnesses such as depression and anxiety have been enhanced by COVID-19; this included social media and boundaries as well as adjustments to online learning. An issue with such a widespread survey that incorporated a population of individuals (mainly teens) is that traces of partiality or other external factors that may impact the reliability of our results may be present, such as a lack of honesty, a misunderstanding of the questions, or even just a natural reluctance to share information regarding mental health through this type of platform.

Discontent and the rise of poor mental health throughout the pandemic can also be traced back to the stress and workload from schools and the pandemic itself. A significant amount of participants have reported having increased school workloads since March and as the next school year began as well. The adolescents interviewed have also agreed that they can associate their change in stress level with coronavirus pandemic with varying levels of intensity. As schools were unaware of how to handle the rapid transition into online learning, most students say that they had mutual stress for the most part during the

months between March and June, where the school year continued to take place. As the year progressed, there was more leniency and forgiveness for students because of the challenges that the pandemic presented, given how well students could perform and how schools could help in an attempt to reduce stress and consequences. With the return to school and the attempts to have online learning resemble a normal year, stress levels have only worsened all over again, and in many cases, become even greater than those of the 2019-2020 school year, given the increased workload and the new situation students needed to adjust to. Sitting in front of a screen in the same location for hours on end has shown to create a disconnect from others among peers, teachers, and even friends. The lack of changing environments, social interaction, and motivated peers continues to leave adolescents in new situations bound to stress them out.

Mental-health is an often overlooked part of society that generations over time have had harder and harder times dealing with. In an era of modern technology fusing with a deadly pandemic, the mental-health crisis has never been clearer. The unique cross impacts caused by the COVID-19 pandemic brought upon symptoms of depression, anxiety and overwhelming stress to many members of the younger generations. While limited, the coping mechanisms developed throughout the duration of the pandemic have proven to be useful in creating an alternate world in which people can immerse themselves into. In future studies there should be a greater emphasis on understanding how older generations were affected by the pandemic. A possible longitudinal study to reference and see how different races mentally reacted to the pandemic and the after effects of attempting to recover from the stress due to the pandemic is also in line. There can also be an increased time interval to allow for more responses to be collected from the participants. The location could also be expanded such that the data would be gathered from a multitude of areas in order to broaden the horizons of our research. In sum, our hypothesis was proven to be correct and it established that the pandemic played a significant role in the exacerbation of the mental-health crises and the rise in mental health issues in the last year.

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