

COVID-19 pandemic impact on emotional aspects of high school students

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SUMMARY

The COVID-19 pandemic beginning in late 2019 resulted in several effects on people's lifestyles. One of the key affected areas was the academic sector, especially since schools had to be closed to protect students from contracting the disease. The fundamental purpose of this study was to assess the impact of shutting down schools on the emotional aspects of high school students. To measure this impact, we conducted an online survey. We found that factors such as lack of face-to-face interaction due to remote learning, e-learning challenges including inconsistent network connectivity, and uncertainties experienced during the pandemic had adverse effects on high school students' emotions. The emotions commonly identified in this group were fear and anxiety. Analyzing the patterns and problems that occurred during this unprecedented time, will allow for more focused improvements toward emotional health for teens in the future.

INTRODUCTION

The overarching scientific topic of this paper revolves around the effects of a world-spread disease that took the world by storm. As the disease that originated from Wuhan, China in 2019, rapidly dispersed around the world in a matter of months, many people became increasingly afraid as well as aware of the possible dangers around them. Some have also felt more insecure and unsafe in their environment, taking a toll on their emotional well-being (4). Both an indirect and direct cause of this was the method of education that students received in their respective schools. Safety measures that were taken to protect students and teachers from contracting the disease included social distancing and shifting to remote learning. These precautions had a significant impact on the general student health. A COVID-19 report by ECLAC and UNESCO argued that confinement measures resulted in adverse physical and emotional effects on adolescents (5). One of the key contributors to this was parents losing their jobs, which led to unforeseen economic crisis. Additionally, according to Hasan and Bao's research, about 25% of students suffered from anxiety and stress due to the inability to effectively access e-learning methods, secondary to their residential location (6). These emotions negatively impacted students' motivation to learn, their self-esteem, self-regulation, and work ethics (7).

We were interested in assessing the impact of COVID-19 pandemic on the emotional well-being of high school students. To do so, we initiated an online survey as a method

to identify various emotions that students experienced. We also aimed to collect information on key contributors to such emotional changes, their effects on student academics, and the overall preferred learning method. We hypothesized that the COVID-19 pandemic would have adverse effects on the emotional aspects of high school students because of many uncertainties.

RESULTS

In this study, we used an online questionnaire to evaluate the impact of COVID-19 pandemic on emotional aspects of high school students, as it was cost-effective and quick in getting responses. Also, the respondents could remain anonymous which encouraged them to express their opinions freely. The questionnaire was sent to a pre-defined group of high schoolers (Grades 9-12).

The results of my survey indicated that 77.3% of high school students experienced feelings of anxiety and fear, 2% experienced positive feelings of happiness, and 9% reported no change (Figure 1). Interestingly, the students who reported feelings of happiness consisted of 12th graders only. The percentage of high schoolers who reported fear and anxiety was almost equally distributed between the 9-10th and 11-12th graders.

Those who reported feeling fearful and anxious felt these emotions mostly at home (Figure 2). About 69.8% of high school students felt some fear and anxiety strongest at home. Out of this group, 32% were 9-10th graders and 37.8% were

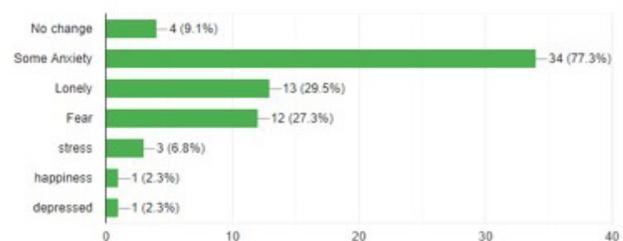


Figure 1: Emotions experienced during pandemic.

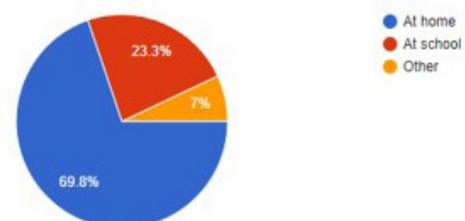


Figure 2: Environmental influence in students' emotions.

11-12th graders. Also, 15% of 9-10th graders reported that they felt fear and anxiety at school while only 8% of 11-12th graders felt the same at school. When asked about the origin of these emotions, 54.5% of high school students reported that the greatest source of their stress, fear or anxiety was the uncertainties relating to academics (Figure 3). Of these respondents, 38% were 9-10th graders and 15% were 11-12th graders.

Through this survey, we were also able to find that students interacted with each other virtually via texting, calling and video chatting. A percentage as high as 84.6% admitted that they used these online communication methods every day, whereas the remaining 15.4% communicated only few times a week (Figure 4). This makes it easy to interpret that students needed face-to-face interaction.

Although some students were struggling to find their way through this rough period, positive and negative changes occurred for each student. According to one of the graphs (Figure 5), 50% surveyed students responded that they did not experience any sort of positive impact whereas 18.2% responded that they did. The remaining students of 31.8% stated that they might have undergone a positive or a negative change, because at the time of the survey, they were unsure.

Of the surveyed high school students, 32.8% preferred the hybrid model with a combination of in-person and remote learning, 23.3% preferred 100% online and 25.6% preferred 100% in-person/on-campus learning (Figure 6). Interestingly, 18.6% of students stated no preference at all.

DISCUSSION

The sole purpose of the research was to gain insight on the impacts the pandemic had on teens on a small scale. The emotional well-being of adolescents varied from positive changes to negative changes. Through the survey, we were able to further comprehend the immediate and delayed effects this widespread disease indirectly or directly caused. The amount of people that felt some sort of uneasiness during this period covered majority of the received responses. However, the few that acknowledged that they felt a sense of happiness was identified as 12th graders. Apart from these findings, it

could also be concluded that some who were questioned regarding their ideal learning environment responded with a somewhat split preferences of in-school, distance, or hybrid learning, except for a portion that did not provide any opinion.

It was evident from the survey results that the COVID-19 pandemic had an impact on the emotional well-being of high school students in diverse ways. Some experienced positive changes and many others dealt with challenging emotions. Based on the experimental survey, we could conclude that the key contributors to emotional changes in high school students during the pandemic were lack of face-to-face interaction with peers and uncertainties related to academics.

The majority of the high school students (77.3%) reported feelings of fear and anxiety (Figure 1). This could be primarily due to the unexpected changes caused by the pandemic and many other uncertainties relating to academics. High school freshmen and sophomores who had planned on summer activities in support of their college admission preparation had to abruptly stop and prepare to take more challenging courses in the future to compensate for the loss of time. Juniors and seniors who initially feared about their college admission plans and participation in championship sports, later felt relieved as the colleges relaxed their admission criteria in many ways for the corresponding graduating years of 2021 and 2022. This could explain the reason for the difference in the percent of responses (Figure 3).

About 69.8% of high school students reported feelings of fear, anxiety and stress being stronger at home than at school. Many adolescents want to be in the company of their friends, rather than just with their parents and siblings. In school, students can meet their peers face-to-face and discuss school events and sports more easily than with their limited interaction at home. Therefore, it was not very surprising to learn many students preferred a hybrid learning method (Figure 6). An appropriate combination of remote learning and in-person learning, particularly for lab work, may significantly improve the efficiency of students, which will have a positive effect in their academic performance.

Factors that could have influenced my study results were the small sample size chosen and limiting the sample

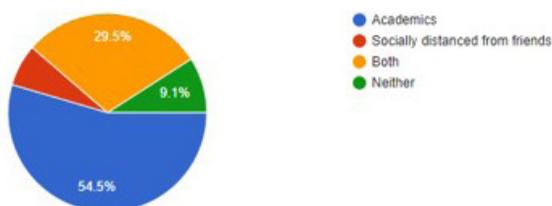


Figure 3: Source of stress.

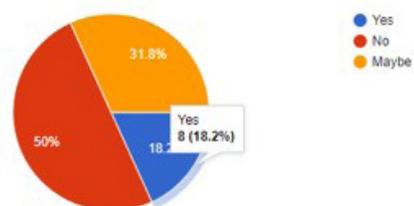


Figure 5: Measure of positive changes.

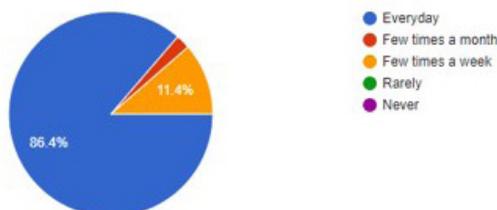


Figure 4: Frequency of communication.

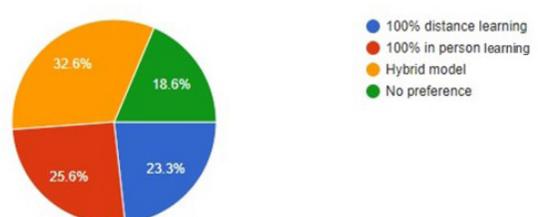


Figure 6: Preferred method of learning.

population to a smaller locality versus approaching high school students from other schools within the same county and neighboring counties. The use of small sample size could have made my results non-generalizable to a bigger population like statewide or nationwide high schools. However, we believe our small-scale data can be used to design a larger, confirmatory study.

Another limitation of my study was that the survey question about the most recent emotion experienced by the high school students (**Figure 1**) could have included more choices of positive emotions other than just happiness.

Future experiments can include a balance of both positive and challenging emotions in the survey questions. Additionally, future studies can focus on including a larger sample size and different schools with learning methodologies for control and experimental groups.

The research completed in this paper can assist future researchers by providing a basis for further in-depth research study on the best method of learning for high school students.

If you are struggling, please reach out for help through the Crisis Text Line (nimhinfo@nih.gov: 1-866-615-6464), UNICEF (www.unicef.org), Substance Abuse & Mental Health Services Administration (1-800-662-4257) or the National Suicide Prevention Lifeline (1-800-273-8255).

MATERIALS AND METHODS

Participants

The survey was sent to 76 students ranging from 9-12 grades and ages 14-18 years. Since the respondents were anonymous to the author, the gender could not be specified. Only 44 out of the 76 (57%) students responded to the survey questions.

Materials

This study used a computerized online survey method. This method was chosen as it was found to be the quickest, simplest, and most cost-effective. The research instrument used was an online questionnaire consisting of multiple-choice questions, which were designed to assess students' tenets of social emotional learning: self-management, self-efficacy, self, and social awareness, as they were directly related to their academic performance.

Survey questions

1. The following survey questions were included in the survey. What is a recurring emotion that you have been experiencing recently?
2. Generally, where do you feel this/these emotions, the strongest (at home, school or other)?
3. Outside of school, how often do you communicate with your friends electronically?
4. What has been the greater source of stress for you this past year?
5. Would you consider yourself as one of the students who is experiencing/has experienced positive changes during this period?
6. Given a choice, which method of learning would you choose?

Procedure

A teacher from each grade was approached and requested to send the online survey to their respective students. The

survey was designed to be brief and sent via online google forms. Most of the participants were 10th and 12th graders. The responses were public, but their names and gender were anonymous to both the author and other participants.

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REFERENCES

1. Allcoat, D., and A. von Mühlhelen. "Learning in Virtual Reality: Effects on Performance, Emotion and Engagement". *Research in Learning Technology*, vol. 26, Nov. 2018, doi:10.25304/rlt.v26.2140.
2. Aristovnik *et al.* "Impacts of the COVID-19 pandemic on life of higher education students: A global perspective." *Sustainability* 2020, 12(20), 8438, doi:10.3390/su12208438.
3. NU. CEPAL. *The 2030 Agenda for Sustainable Development in the new global and regional context: Scenarios and projections in the current crisis*. 2020, repositorio.cepal.org/bitstream/handle/11362/45905/1/S2000509_en.pdf
4. Child & Adolescent Behavioral Health. "The Impact of COVID-19 on High School Students". 2020, www.childandadolescent.org/the-impact-of-COVID-19-on-high-school-students/
5. ECLAC-UNESCO. "Educating in the time of COVID-19". 2020, repositorio.cepal.org/bitstream/handle/11362/45905/1/S2000509_en.pdf
6. Febrilia *et al.* "University Students' Emotional State and Academic Performance: New insights of Managing Complex Cognitive." *Journal of e-Learning and Higher Education* 2011, 2011, doi:10.5171/2011.879553.
7. Hasan, Najmul, and Yukun Bao. "Impact of "e-Learning crack-up" perception on psychological distress among college students during COVID-19 pandemic: A mediating role of "fear of academic year loss".", doi:10.1016/j.chilgyouth.2020.105355.

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