

# Effects on Stress Levels during COVID-19

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## ABSTRACT

The majority of individuals have been focusing on the spread and lethality of the coronavirus along with its effect on the economy, but it is also important to look at the impact it has on our mental health. The coronavirus has also indirectly led to more mental health problems like depression, anxiety, and, most importantly, stress, especially in the teen population. With the ongoing pandemic, how has this affected people's stress levels over the past year?

## Introduction

The shutting down of every school, workplace, and restaurant was the original step in reducing the impact of the coronavirus (COVID-19). Next came stay-at-home orders, work-from-home notices, and for some, layoff notices. This big change from going to work or school and meeting up with friends, to working from home and attending online school while not being able to see friends or go out, can cause people to become very stressed. Many ambitious individuals started up on new skills or goals, while others decided to take the more laid-back approach to quarantine and added Netflix to their daily routine. For some, changes in lifestyle can be a huge stressor, while for others, it's just another experience that they get to have. With the focus of COVID-19 being on the transmission rates, this would probably distract public attention from psychosocial consequences of the outbreak in the affected individuals and in the general population. The emerging mental health issues related to this pandemic may evolve into long-lasting health problems. (Torales et al., 2020)

The pandemic's effect on mental health issues for every age group is different, some worse than others. It's commonly assumed that adults might have the most stress; after all, they have to take care of their children while working at the same time. Adults could also be worried about the economy and their finances, as their investments in the stock market haven't been as appreciative as they wish they would be. In a survey conducted on behalf of the APA, it was found that 81% of adult participants reported the future of the nation and 80% of adult participants listed the coronavirus pandemic as a significant source of stress. (Bethune, 2021) University students might be sad that they don't get to have the real college experience like living in dorms, going to parties, or being part of a fraternity. Other university students might be happy to attend college from the comfort of their home. In a survey conducted on university students in Texas, United States, 71% of the 195 participants indicated that their mental health, specifically their stress, anxiety, and depression had become worse due to the pandemic and 86% of the 195 participants indicated that decreased social interactions were one of their main stressors during quarantine. (Son et al., 2020) Similarly, high school students face the same stressors as university students including social restrictions and losing important high school milestones like graduation or homecoming. Prior to COVID-19, 21% of adolescents in the United States were diagnosed with mental health disorders. (Williams et al., 2021) With quarantine adding new or additional stressors to students' lives it is very important that adolescents find a positive and healthy way to cope with the stress.

According to the American Psychological Association, teens reported that their stress levels during the school year far exceeded what they believed to be healthy (5.8 vs. 3.9 on a 10-point scale) and topped adults' average reported stress levels. Many teens also reported feeling overwhelmed and depressed or sad as a result of stress. (Bethune, 2014)

These statistics were from seven years ago, but by now these percentages would have increased significantly because of all the competition and requirements needed to get into reputable universities.

To test whether the statistics from previous literature are applicable to all students and adults, this study attempts to determine whether a specific group of students, specifically private-school-students, and adults follow the statistics or differ from the general public. It aims to establish how much stress each age group typically has and what people in each group do to try and reduce their stress. This research may assist individuals in finding ways to cope with stress during these times or if this type of scenario were to occur again in the future.

## Methods

### Setting and Participants

The participants of the study completed a survey through Google Forms and they received this survey through text messages. Many age groups completed this survey but the majority of them were high schoolers and working adults. The high school students who participated in this survey weren't completely socially restricted and met with friends from time to time. All participants of this survey were of Indian or East-Asian race, and were residing in the Bay Area with a few living in Los Angeles. Since most of the high school participants were my acquaintances, the majority of the high school students went to private schools but there were a few who went to public schools. I requested those I sent the survey to to send it to more people they knew and at the end I received a total of 88 responses.

### Assessments and Measures

This study used a questionnaire designed by the researcher. The questionnaire aimed to collect data on how much stress individuals had during quarantine and ways they reduced their stress. The questionnaire contained four questions: two multiple choice, and two short-answer questions. Some questions I thought about putting on the survey included:

- Do you prefer online/in-person school/work?
- Would you say your stress levels have considerably increased/decreased?
- Have you had a lot more free time during quarantine?
- Have you noticed any changes in your overall well being?
- How has your stress been affected by the pandemic and quarantine?
- Have you developed any hobbies to help reduce your stress or relax?

While these questions would provide more detailed and individualized responses, they would not be ideal when comparing a large collection of responses and finding an overall trend in responses received. For example, for the question "Have you noticed any changes in your overall well being?," some participants may give elaborate responses on how they've changed while others might give simple *yes* or *no* responses. In order to make data analysis easier, questions with less individualized responses were chosen and given to the participants. The participants were allowed to choose their answers to the questions based on their pre-quarantine life, with answer choices of less than, more than, or same as their life pre-quarantine.

To ensure the validity of the survey, no personal information was required from the participants in order to maintain anonymity of respondents. Additionally, all participants were only allowed to submit the survey once through a Google Forms built-in feature. Added below is a link to the Google Form.

<https://forms.gle/73pecZ2TQD3tHAI67>

Results

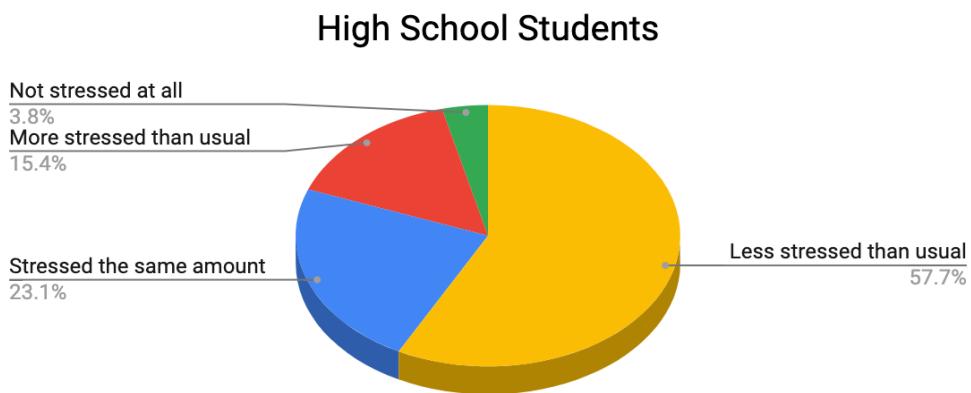


Figure 1. High School students' responses

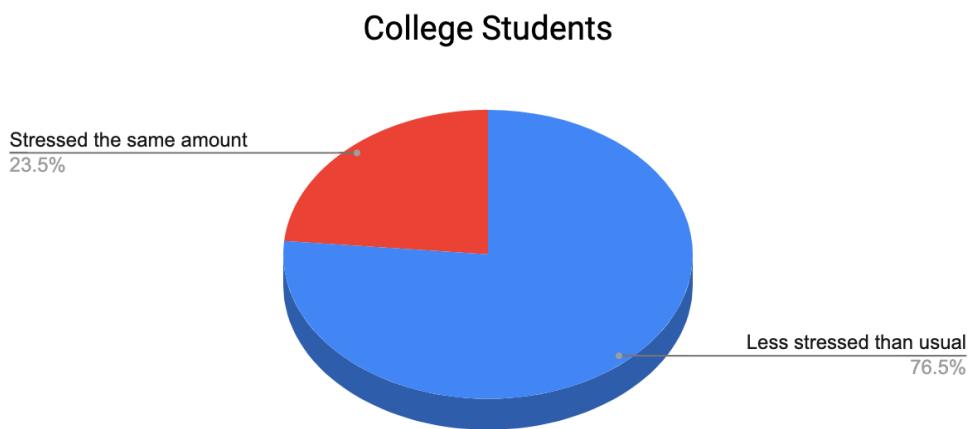


Figure 2. College students' responses

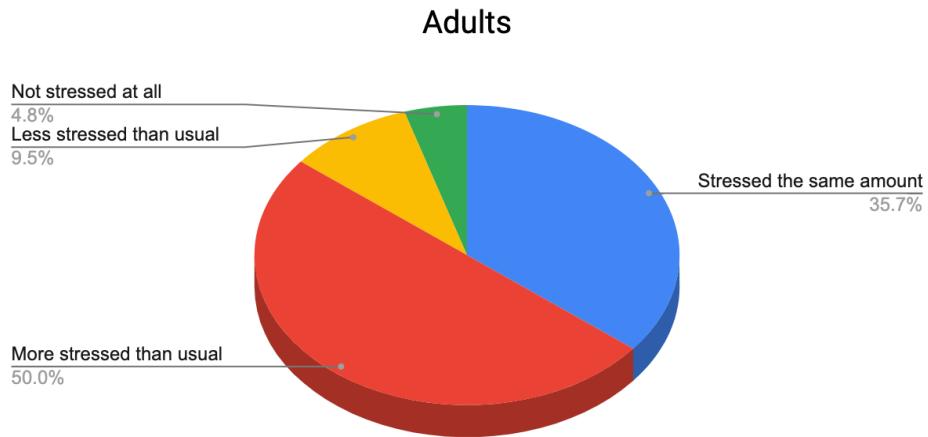


Figure 3. Adult Responses  
 Changes in Stress Levels

A total of 85 individuals completed the questionnaire, of which 27 were high school students, 17 were college students, and 42 were adults. Of all the high school respondents, 57.7% were less stressed than they would be in their normal lives. Out of all the adult respondents 50% were more stressed than they would be when compared to their normal lives, and 35.7% of the adult respondents were as stressed as they would be in their normal lives. Of the 17 college respondents, 76.5% were less stressed than they would be in their normal lives.

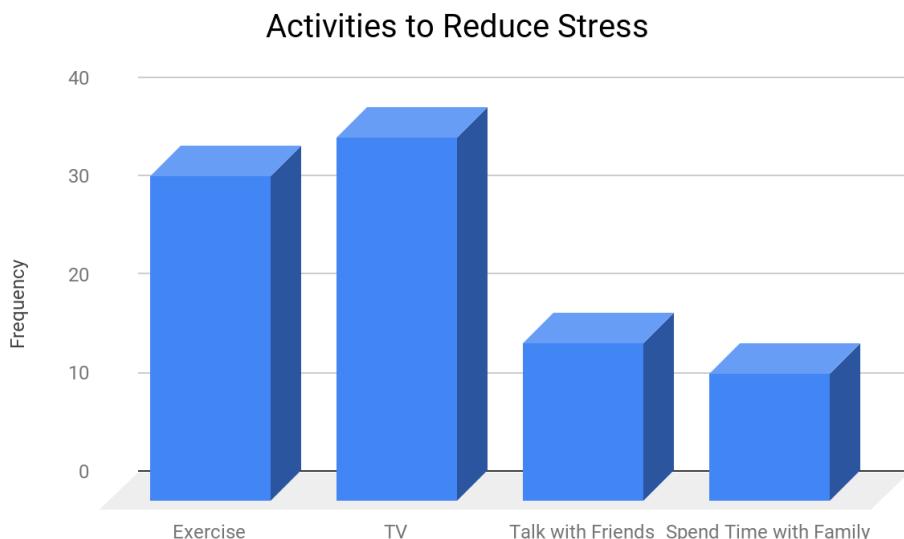


Figure 4. Activities that people used to reduce stress  
 Activities to Reduce Stress

One of the questions the researcher posed was how people reduced stress or had fun during quarantine. A few common responses were that individuals would watch TV(either Netflix or movies), participate in some form of exercise (including going on walks and doing Youtube workout programs), or talk to their friends and family. A few individuals also included cooking and baking in their responses.

## Discussion

Stress is a daily factor in people's lives, and whether it comes from work, school, or family depends on the age of the person. While stress can look like a small problem, it can lead to larger mental and physical health problems like burnout, fatigue, obesity, and depression. The primary objective of this study was to figure out whether private school students were one among the many high school students who experienced an increase in stress or if they were an outlier to this statistic. The same goes for Bay Area adults and whether they are a small group of the general public who conform to the data collected or if they are also outliers to the current data presented by the APA.

As stress levels were the main topic of this study, the first question of the survey asked participants to evaluate their stress levels compared to pre-quarantine. As shown in Figure 1 and Figure 2, more than 50% of the high school participants and 75% of the university students listed that they felt less stressed than they previously had felt. This does not follow the statistics or the literature in many published articles and a common reason for this, found in participants' opinions of quarantine, was that online school made private school academics easier for the students giving them more time to socialize or relax. Adults responses were more conforming with general public data with 50% listing that they felt more stressed during quarantine. Those who felt more stressed added that economic uncertainty and general fear of contracting the virus were two of their main stressors. While 50% isn't the same as 80% of the general public, this sample size was much smaller and much more limited than the surveys conducted by the APA.

Data on methods to reduce stress and relax was also collected to see whether there was a trend on what participants did to relax based on their age group. The majority of the adolescents listed watching tv or calling friends as their main source of relaxation, while adults mainly listed exercising or spending time with family as their way of relaxing. In order to maintain their friendships and have daily social interaction, calling friends is a very reasonable and healthy way for adolescents to minimize stress. As for adults, exercise is a great way for them to stay in good health as they grow older.

## Conclusion

Quarantine was a time of uncertainty and was a stressor for many over the past year. Although students complained about not being able to see their friends or not enjoying online school, the results show that 57% of the high school students felt less stressed than they normally would have felt pre-quarantine. These results do go against data provided by the APA that the majority of high school students feel more stressed during quarantine, but a possible explanation for this difference is that high school students attending private schools might find that they have less work or potentially easier classes which would significantly lower their stress. The adults on the other hand felt more stressed than they would have felt pre-quarantine, which is synonymous with the APA statistics. When asked about their opinion on quarantine, adults listed that while they did have more time to exercise or relax, there was the new stressor of economic uncertainty and the constant worry of one of their loved ones contracting the virus. This all goes to say that while quarantine cannot be stopped as it is essential to getting rid of COVID-19, there should be protocols placed by workplaces and schools that allow their employees and students to get more days off to recharge or deal with other matters instead of having to sit at their desks the entire day doing work.

While this study cannot be applied to the general public population of high school students or adults, it gives us insight into how private school students were positively or negatively impacted by quarantine. If this research were to be improved or repeated, a larger sample size or more responses to the survey, would be ideal to get a better understanding of how private school students were affected as well as parents of high schoolers during the pandemic. This survey could also be sent out to public high schoolers in the Bay Area to see if there is a difference in responses between private and public school students and possibly figure out the cause for these responses by asking respondents to specify why they chose their answer. Currently, the results of this survey can be used to generalize private high school students in the Bay Area but the responses could vary depending on the region the school is located in.

## Acknowledgments

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