

# UC Berkeley

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### Title

Clinical and Self-Diagnosed Mental Health During Covid-19

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**Clinical and Self-Diagnosed Mental Health During Covid-19**

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## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

### **Abstract**

Depression and anxiety are two of the most common mental health issues that we face today, and yet they are often not addressed or treated insufficiently. They can lead to various other mental disorders and even impact physical health. Previous research conducted on this topic focused on the social determinants of mental health as well as the effects of the COVID-19 pandemic. Our study aims to determine the impacts that social factors in addition to the pandemic have on individuals' perceptions of mental health and their decision to seek clinical or personal treatment. A survey sent to students at the University of California, Berkeley was used to gauge the magnitude of anxiety/depression that respondents experienced as a result of their individual experiences with regards to collegiate life and the COVID-19 pandemic. It was found that participants that had doctors who thoroughly explained the effects of medications instilled more trust in their patients, which led to greater compliance with treatment prescriptions and higher satisfaction. The compassion of instructors also played a role in alleviating mental health issues during stressful periods in students' lives. Overall, there was a wide range of opinions as responses were affected by many individual circumstances.

## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

### **Introduction**

The COVID-19 pandemic essentially put a halt to many individuals' lives, forcing people to stay inside with lack of social interaction and engagement. However, it has opened the door to the education and acknowledgment of mental health. For a long time, mental health care has taken less importance compared to other forms of health due to generations of misperceptions regarding mental illnesses and treatments. The stigmas associated with mental health cause adolescents and young adults to perceive mental illnesses in a negative perspective, leading to lack of treatment. In fact, over 70% of people with mental illness receive no treatment from health care staff (Henderson et al., 2013). This lack of treatment can be associated with misconceptions about mental illness, ignorance on how one can access treatment, overall prejudice against those with mental illness, and the expectation of being discriminated against if one seeks treatment.

The existing body of research on this subject varies from discussion of the social prejudices associated with mental health to disparities in access to treatment and recently, the COVID-19 pandemic's contribution to the rise of anxiety and/or depression. However, they approach the study of mental health either qualitatively or quantitatively, opting to not explicitly use both. Furthermore, while the development of vaccines and precautionary measures has allowed much better control over its transmission, the pandemic is still ongoing and thus there is still inadequate research on its effects on mental health.

Along with the analysis of the current research on this topic, we created a Google Forms poll for UC Berkeley students. This poll specifically assesses the presence of any significant difference between those clinically diagnosed versus those self-diagnosed with anxiety and/or depression. The Google Forms poll includes guiding questions that compare the treatments and

## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

levels of satisfaction acquired by those who receive professional help and those who currently do not. It is important to note that prior research has indicated over a third of adults in the U.S. routinely use the internet to help diagnose their ailments, but results from online searches often lead to confusing and inaccurate information (Semigran et al., 2015). Because of the ongoing pandemic, schools have seen a negative correlation between mental health cases and academic performance in the student population. This can be attributed to any personal circumstances including but not limited to “uncertainty and abrupt disruption of the semester,” struggles with the enforced “loneliness and isolation,” and even increased anxiety concerning the “competitiveness of the job market” (Zhai & Du, 2020).

Due to the current climate of college students moving from a fully remote college experience to being back in person, it is important to address the mental and emotional effects that this transition can have on the collegiate population. Additionally, this era of education and acknowledgment of mental health, especially during COVID-19, may have affected students’ desire for treatment. The study of how one may target their issues with mental health will help readers understand how the college experience, as well as the COVID-19 pandemic, affects college students.

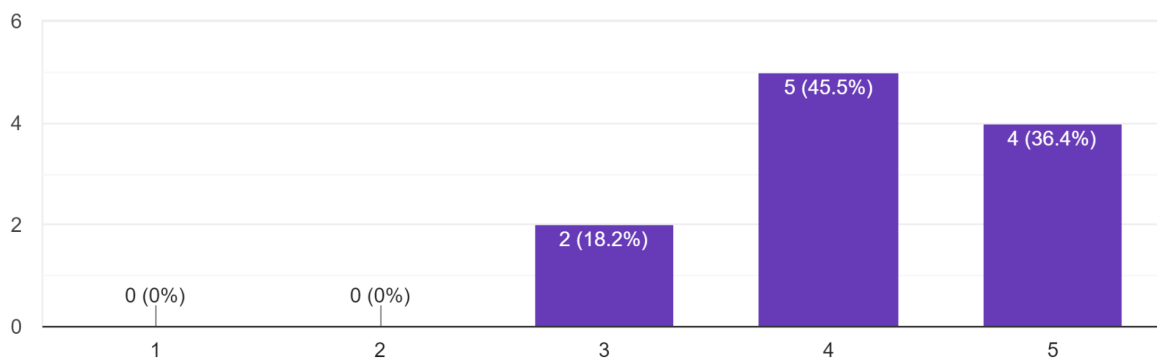
This research paper describes the significant differences between clinically-diagnosed and self-diagnosed depression and anxiety in college students, specifically targeting the differences in treatment types and satisfaction with them. In association with seeking treatments and availability, this research paper aims to determine how personal circumstances affect individuals’ mental health, particularly relative to the COVID-19 pandemic.

## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

### Data Analysis

The results from the survey showed that the average age of the 47 respondents was 19 with a standard deviation of 1.19. When asked to rate their physical and mental health, respondents indicated that they had somewhat good to average physical health, but somewhat good to somewhat poor mental health. Nevertheless, 93.3% of people agreed that mental health was important to them, and over 85% knew someone with anxiety or depression. Then, they were asked to identify as clinically-diagnosed for anxiety/depression, self-diagnosed, or neither. Those that indicated they were clinically-diagnosed were then asked about their recent mental state, medications, and relationship with their physician. The relationship between the doctor or general practitioner and the patient is a decisive factor influencing the mental health lifestyle of people. A positive correlation between trust in medical professionals and improved mental health can be seen in the following figures. Around 81.9% of the people surveyed (1 being strongly disagree and 5 strongly agree) mentioned that their doctor thoroughly explains the side effects of the medications before prescribing it to them (Fig. 1).

My doctor thoroughly explains what (side) effects a medication might have before prescribing it.  
11 responses



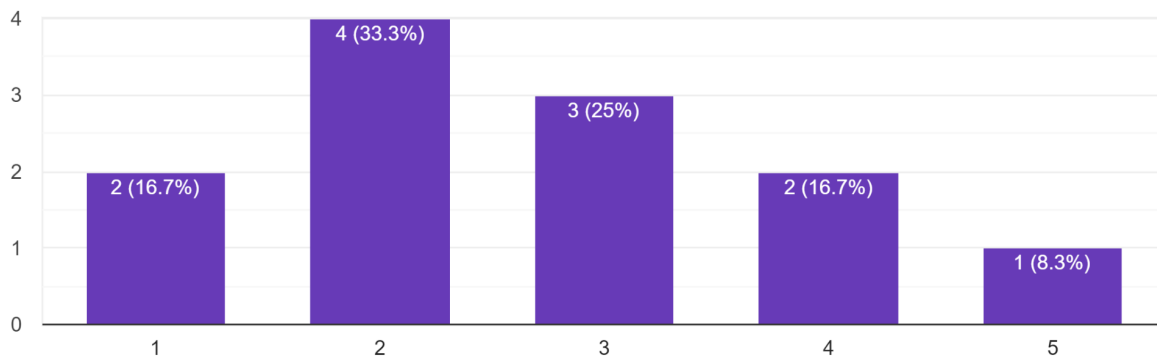
*Fig. 1: Physician explanations of medication*

Many also feel like they have a say in what medications are prescribed to them (Fig. 2).

## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

I feel like I don't have a say in what medications are prescribed to me.

12 responses

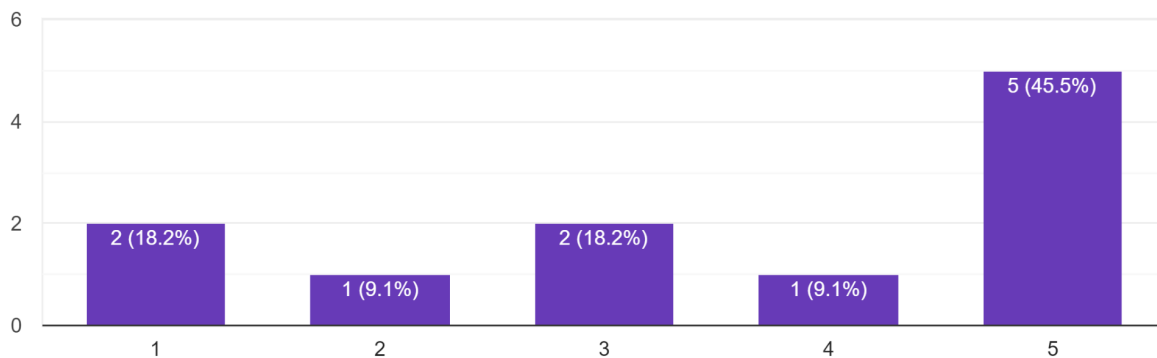


*Fig. 2: Patient preference in choice of medication*

The practice of transparency and providing space for the patient's opinion on the doctor's part is shown to have effectively motivated patients to stick to the treatment plan provided or recommended by their doctor. This is supported by the responses: 54.6% of people take medications regularly as prescribed and 72.7% do not self-regulate their plans (Fig. 3 & 4).

I take my medications regularly as prescribed.

11 responses

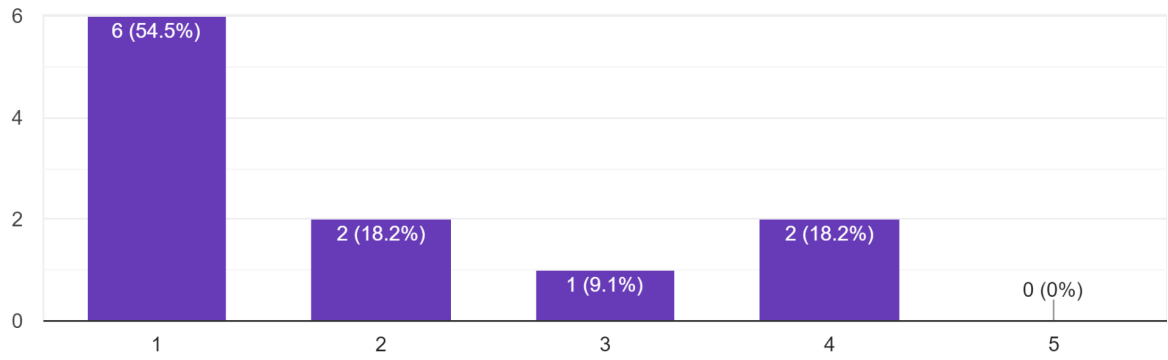


*Fig. 3: Patient compliance with prescription*

### CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

I usually take less medication when I feel like I'm getting better before the end of the prescribed treatment.

11 responses

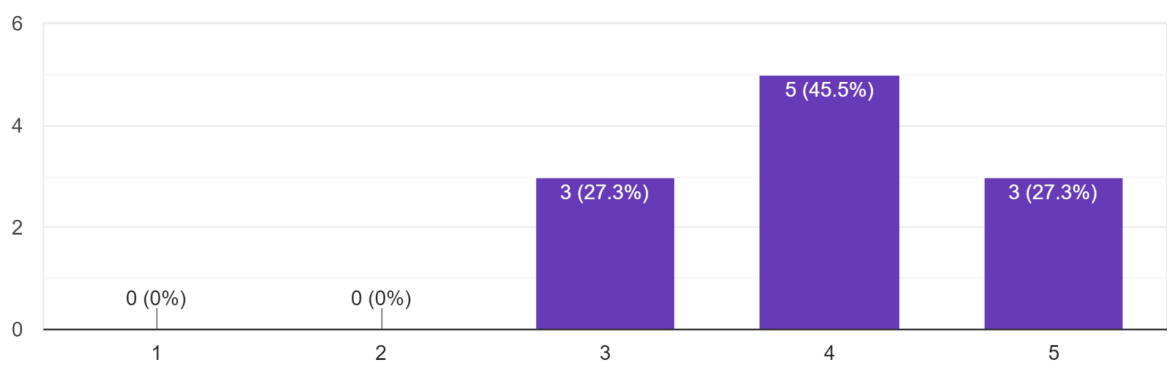


*Fig. 4: Patients' willingness to take medication when feeling better before end of treatment*

As a consequence, 72.8% of the audience experienced an enhanced quality of life post-treatment (Fig. 5). Therefore, a good relationship between the doctor and the patient fosters healthy mental health practices and contributes to the efficacy of the treatment.

I think my quality of life has increased since seeking intervention by a medical professional.

11 responses



*Fig. 5: Patient quality of life after seeking intervention by a medical professional*

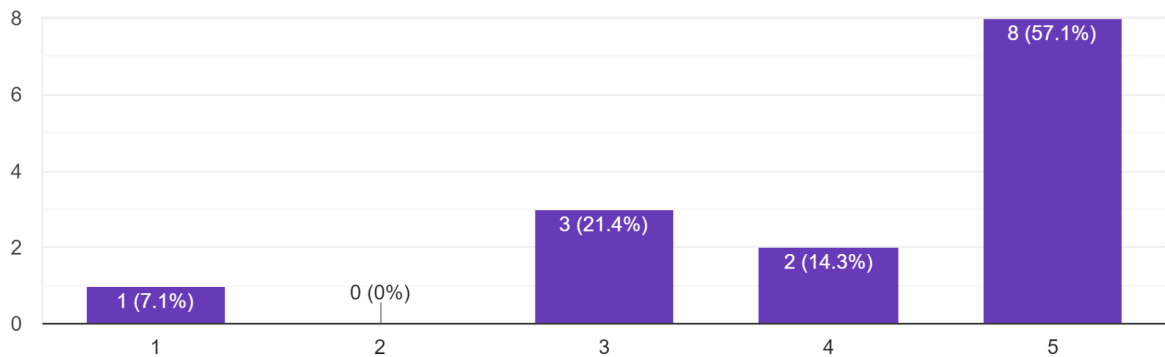


## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

However, when given a choice, 71.4% of the people are shown to have preferred therapy over medication (Fig. 6).

I would prefer therapy over medication.

14 responses

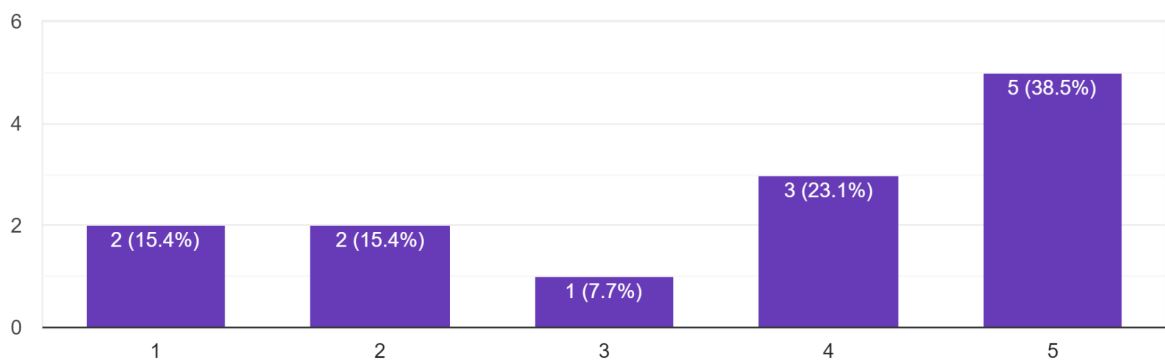


*Fig. 6: Preference for therapy vs. medication*

One possible reason behind this choice could be their apprehensions about getting dependent on the medications to continue feeling better. This is reinforced by the majority of 61.6% of people voting for the same (Fig. 7).

I am worried about getting dependent on medication to feel better.

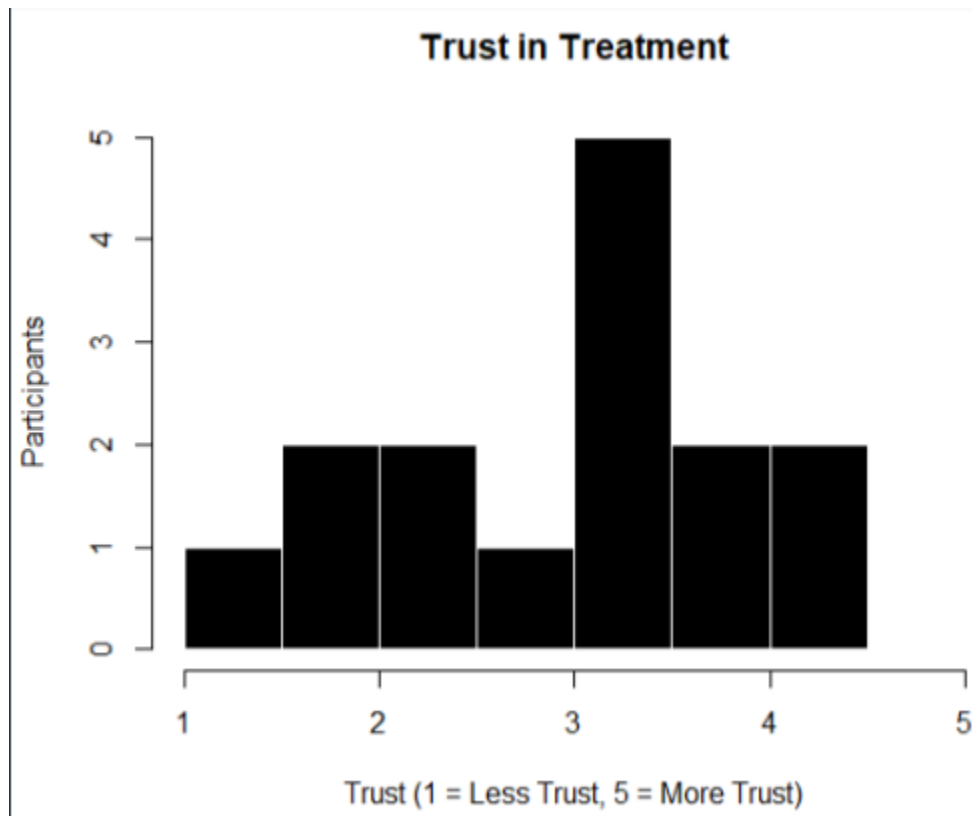
13 responses



*Fig. 7: Apprehension of medication dependence*

## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

These results can be further extrapolated as an indication of treatment trust with a median of 3.1 and a standard deviation of 0.88 (Fig. 8). There seems to be a slight left skew, indicating more trust in treatment than less, but cannot be considered statistically significant.



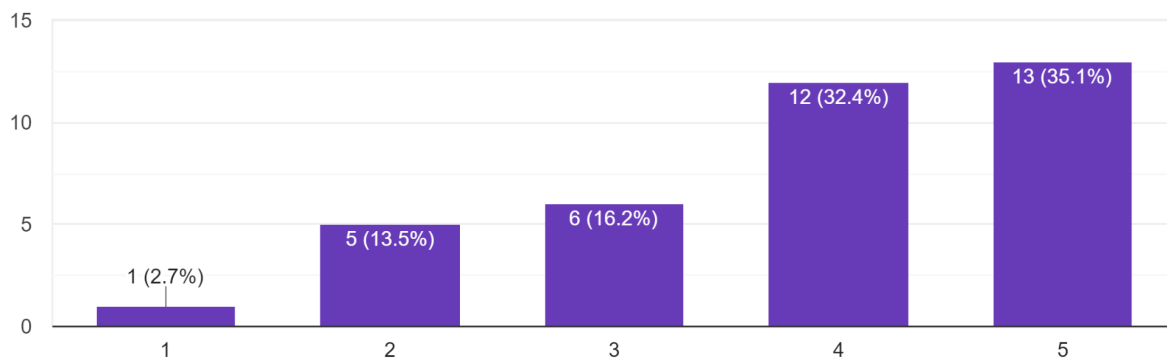
*Fig. 8: Trust in treatment*

Subsequently, the respondents were asked to complete a portion of the survey regarding their mental health and how the COVID-19 pandemic may have influenced it. The first question of this section asked the participants to rate their agreement with a statement regarding stress levels and quarantine. A majority of the respondents agreed that they had prolonged periods of stress or frustration from the quarantines and lockdown periods of the pandemic (Fig. 9).

## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

I have experienced prolonged periods of stress or frustration due to lockdowns/quarantines.

37 responses

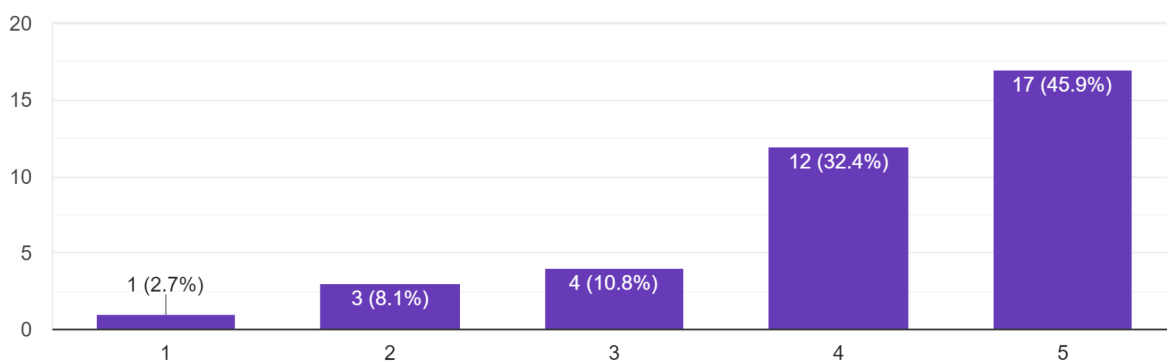


*Fig. 9: Stress or frustration due to lockdowns/quarantines*

Then, the respondents were asked to rate their agreement with a statement regarding burnout and/or a drop in motivation during the pandemic. Most of the respondents agreed that the pandemic had affected their overall motivation in life (Fig. 10).

I have experienced more frequent burn-outs or drop in motivation.

37 responses

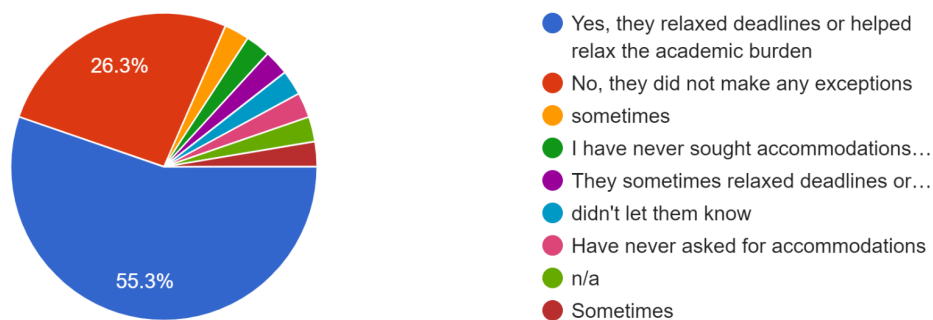


*Fig. 10: Frequency of burnouts or drop in motivation*

## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

The participants were then asked to agree, disagree, or provide an explanation for a differing opinion on how their professors had accommodated them and provided compassion when they were struggling with their mental health. Over half of the respondents agreed and stated that their teachers had postponed deadlines for assignments or relaxed the academic burden of their courses. Nevertheless, over a fourth of the respondents stated that their teachers did not make any exceptions during a time in the pandemic when they were struggling with their mental health (Fig. 11) It is noteworthy that one more participant chose to respond to this segment.

My teachers have been accommodating and compassionate when I was not doing well mentally.  
38 responses



*Fig. 11: Compassion by teachers when students struggled with mental health*

At the time of this survey, the City of Berkeley announced that masks would not be required for fully vaccinated individuals inside buildings. The next question asks respondents if the lifting of the mandates for COVID-19 makes them feel anxious. Over half of the respondents stated that the relaxing of COVID-19 precautions made them anxious, while almost 40% of respondents disagreed. There were two respondents that selected “other” with an explanation that they felt indifferent or that they worried for others (Fig. 12). There has been a wide range of

CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

reactions to COVID-19 mandates to promote public health safety, and it seems appropriate that these results reflect that. After two years of adhering to mask mandates, the participants display their worry, or lack thereof.

I feel anxious about the lifting of the mask mandate.  
38 responses

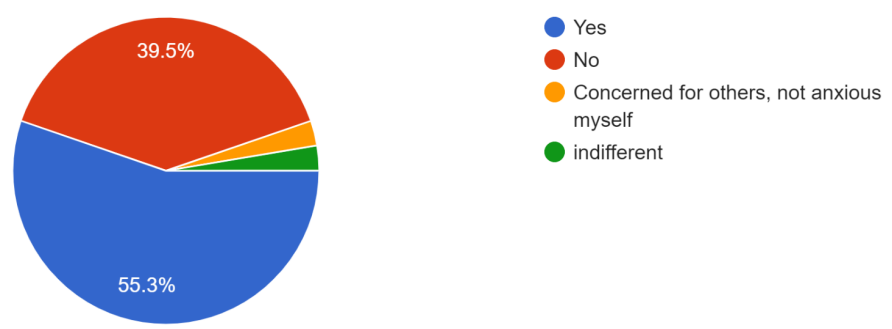


Fig. 12: Anxiety about lifting of the mask mandate

The stress, burnout, and mask mandate impressions were then compiled into a variable called Pandemic Experience with a median of 2.33 and standard deviation of 0.89 (Fig. 13). There seems to be a slight right skew, indicating less positivity regarding the pandemic experience than more, but cannot be considered statistically significant.

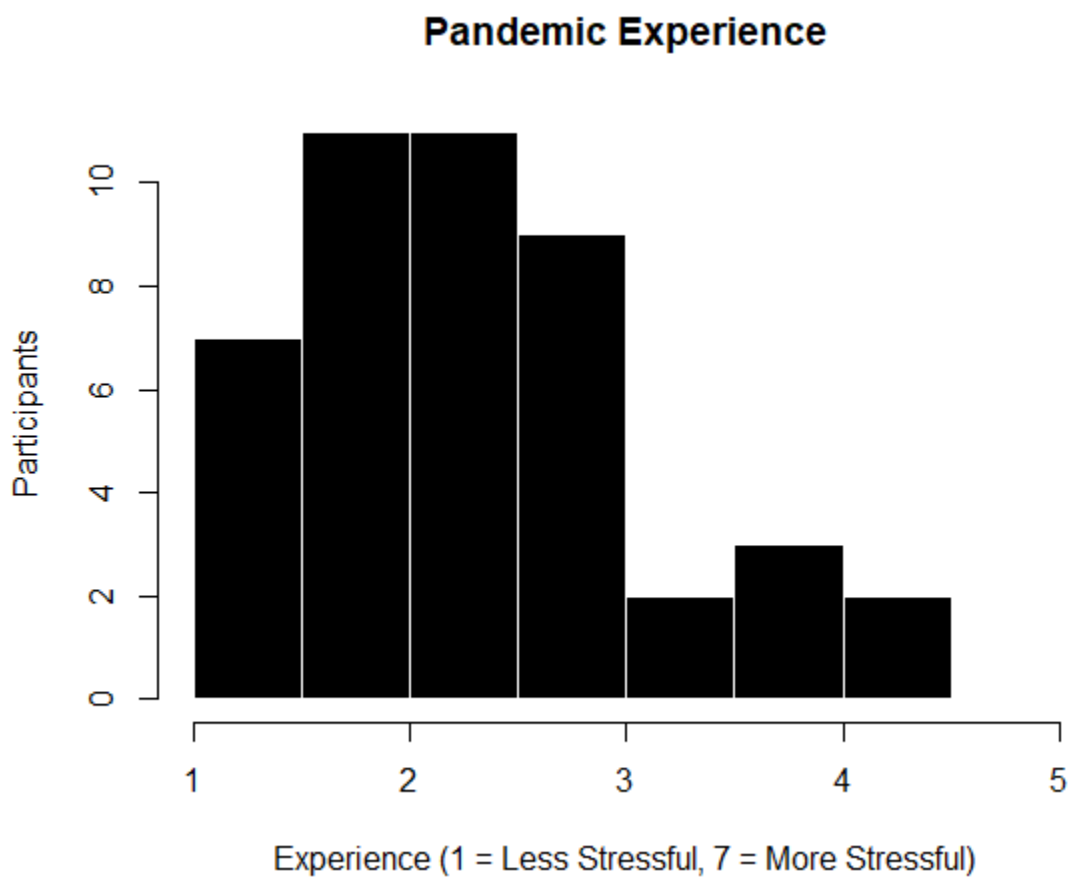


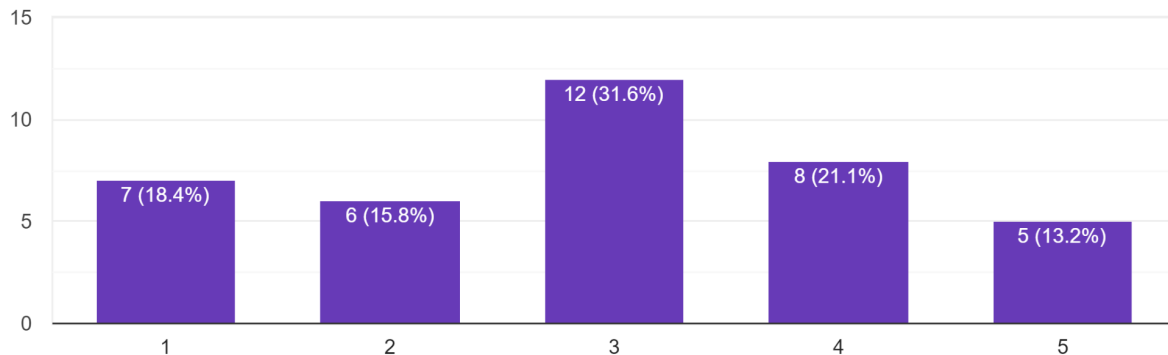
Fig. 13: Pandemic experience

The last part of this section asked respondents to rate their quality of life since the start of the pandemic. There were a wide range of opinions, with almost a third of the participants saying that they do not particularly feel that they agree or disagree with the statement (Fig. 14). The COVID-19 pandemic changed the lives of many college students, and there is no clear consensus if this had a positive or negative effect overall.

## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

I think my quality of life has increased since the onset of the pandemic.

38 responses



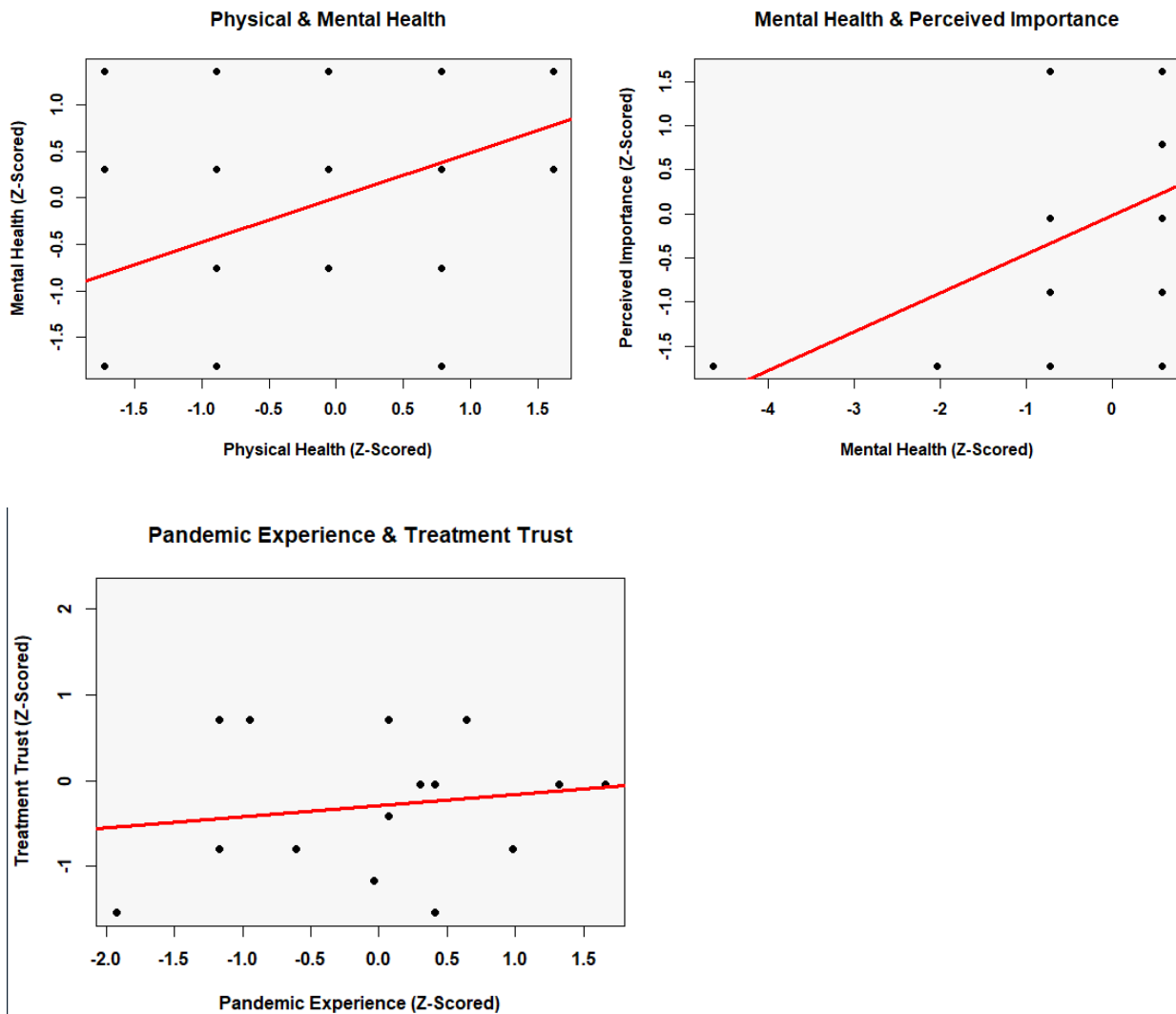
*Fig. 14: Quality of life since the onset of the pandemic*

Regarding the population's general physical and mental health self-diagnosis, these variables' relationship was tested via a bivariate linear regression model that predicts mental health from physical health. With a beta value of 0.48,  $R^2$  of 0.23, and p-value of  $8.3e-4$ , this model suggests that physical health significantly predicts mental health.

A model predicting perceived importance of mental health from mental health has a beta value of 0.44,  $R^2$  of 0.2, and p-value of  $2.6e-3$ . This suggests that mental health predicts perceived mental health importance.

A model predicting treatment trust from pandemic experience has a beta value of 0.13,  $R^2$  of 0.2, and p-value of 0.55. This suggests that pandemic experience does not predict treatment trust. However, more data will need to be collected because of the limitations in sample size, demographics, and confounding variables.

CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19





## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

### **Conclusion**

As circumstances between remote and in-person instruction have teetered back and forth, it makes sense that the pandemic has had an immense impact on the undergraduate population of UC Berkeley. This study set out to investigate this impact and the differences in the quality of life between students with clinically-diagnosed anxiety & depression and students who are self-diagnosed. Some students have decided to seek professional medical intervention while others have decided to self-medicate. Some have had to deal with the immeasurable loss of their loved ones, while others may have experienced economic prosperity, so it is difficult to reach a clear consensus on how students feel as a whole. By polling this population, this study established an overall trend for increased stress and frequent drops in motivation among the students. However, it is important to note that there is a high degree of variation among the population when it comes to the change in the quality of life.

Among the students who had received a clinical diagnosis for depression and/or anxiety, over 72% of respondents felt that their quality of life has increased since seeking the help of a professional. Generally, the responses were varied with some feeling the pandemic had improved the quality of their life, some feeling indifferent, and some feeling the pandemic had worsened their quality of life. Although a multitude of factors can be at play for these different attitudes, one major factor is academic accommodations. Most students felt that their professors were accommodating when it came to instruction. However, some students felt the opposite. This added degree of academic stress on top of a pandemic can worsen anxiety and depression, which may be why there are differences in opinion. This variability in response is mirrored when it comes to lifting the mask mandate. Some feel that the mask mandate lift has worsened their anxiety while others feel relieved.

## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

This study ran into an assortment of difficulties and limitations in the construction of the survey form, which was meant to direct participants to a separate part of the form depending on their response regarding self-diagnosis. It seems that only around half of the participants were able to access and answer the treatment trust scales, the data of which likely is statistically unreliable. If this study were to be done again, the survey would need to be designed and stress tested to properly measure these variables, and distributed to a larger population. That said, the trends we were able to observe through our data falls in line with other studies done on the pandemic's impact, though further observations should be made to understand the long-term effects of this global event.

While there were many variables that affected our findings, we did see that undergraduate students at UC Berkeley generally had poorer mental health than physical health. Those that sought a diagnosis by a medical professional and indicated trust in their treatment by developing a good relationship with their doctor and taking their medications had a greater overall increase in mental health than those that didn't seek professional assistance or chose not to take their medications. We hope that the data and findings resulting from this study can help destigmatize mental health topics because everyone has different circumstances and the prevalence of conditions among the survey respondents indicates that concerns about mental health are fairly widespread. In order to further narrow down the differences between clinically-diagnosed and self-diagnosed individuals with anxiety/depression, future studies can be designed to eliminate external factors and focus on any variability in medications used, length of use, and any supplemental treatments that were undertaken. The study would need to be conducted in a large population representative of the general demographic. These additional measures would help better ensure that the results and findings are not affected by personal circumstances.

## CLINICAL AND SELF-DIAGNOSED MENTAL HEALTH DURING COVID-19

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