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Adherence to COVID-19 safety guidelines as a function of depression and anxiety

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Abstract

The entire world has been impacted by the COVID-19 pandemic in a multitude of ways. This project aimed to identify if those experiencing depression and anxiety are more likely or less likely to follow mandated guidelines and safety procedures for COVID-19 than those who are undiagnosed. For the purposes of this project, guidelines and safety procedures were defined as receiving the COVID-19 vaccines, wearing a mask, practicing social distancing, and avoiding social gatherings. Data were gathered through the construction and administration of a nationwide survey, and then depression and anxiety were correlated with each safety procedure separately. It was found that individuals with depression are more likely to follow certain COVID-19 safety procedures, such as following CDC guidelines and avoiding social gatherings at the beginning of the pandemic. On the other hand, it was discovered that those with anxiety were more likely to wear a mask and avoid social gatherings at the beginning of the pandemic. Within this research study, the implications for the findings will be thoroughly discussed.

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anxiety, COVID-19, depression, guidelines, pandemic, safety, symptoms

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ADHERENCE TO COVID-19 SAFETY GUIDELINES AS A FUNCTION OF DEPRESSION
AND ANXIETY

By

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Table of Contents

Abstract.....	3
Introduction & Literature Review.....	4
Methods.....	11
Results.....	14
Hypothesis 1.....	14
Hypothesis 2.....	16
Discussion.....	18
Conclusion.....	26
References.....	27
Appendices.....	30

Abstract

The entire world has been impacted by the COVID-19 pandemic in a multitude of ways. This project aimed to identify if those experiencing depression and anxiety are more likely or less likely to follow mandated guidelines and safety procedures for COVID-19 than those who are undiagnosed. For the purposes of this project, guidelines and safety procedures were defined as receiving the COVID-19 vaccines, wearing a mask, practicing social distancing, and avoiding social gatherings. Data were gathered through the construction and administration of a nationwide survey, and then depression and anxiety were correlated with each safety procedure separately. It was found that individuals with depression are more likely to follow certain COVID-19 safety procedures, such as following CDC guidelines and avoiding social gatherings at the beginning of the pandemic. On the other hand, it was discovered that those with anxiety were more likely to wear a mask and avoid social gatherings at the beginning of the pandemic. Within this research study, the implications for the findings will be thoroughly discussed.

Keywords: anxiety, COVID-19, depression, guidelines, pandemic, safety, symptoms

Adherence to COVID-19 Safety Guidelines as a Function of Depression and Anxiety

The severity of the COVID-19 pandemic has been a new and eye-opening phenomenon for all of humanity. Taken by storm, communities did not have much time to react and thoroughly prepare for this highly contagious disease. The COVID-19 outbreak has been the worst pandemic to hit the American public in over 100 years (Centers for Disease Control and Prevention, 2020). With not much information, the Centers for Disease Control and Prevention (CDC) and individual governments implemented a plethora of regulations that attempted to halt the rapid spread of this disease. It has been reported that the CDC has produced the longest response time to help regulate COVID-19 in all of its history (Centers for Disease Control and Prevention, 2020). The widespread impact of this pandemic has affected a multitude of communities, especially those who have a diagnosis of depression and/or anxiety. Due to increased stress, isolation, and seismic losses, the worldwide prevalence of depression and anxiety has witnessed an increase of 25% (World Health Organization, 2022). To further this, research reflects that there is an overall significant and positive correlation between the relationship of anxiety and the fear of COVID-19 and a significant and moderate correlation between depression and the fear of COVID-19 (Erbiçer et al., 2021). Therefore, exploring the relationship between COVID-19 and depression, as well as COVID-19 and anxiety, can aid us in understanding how individuals with these mental disorders view and adhere to safety precautions.

COVID-19 and Depression

Depression is a mental disorder that has been studied by many researchers for numerous decades. It can be defined as experiencing an extreme state of unhappiness and discontent that ultimately interferes with everyday living (American Psychological Association, 2023).

Depression can have a plethora of cognitive and physical impacts that can change one's sleeping patterns, eating habits, levels of motivation, interests in activities, and much more (American Psychological Association, 2023).

Social distancing is a term that most of humanity had to become accustomed to with the surge of COVID-19 cases. The six-feet-apart guideline evolved into many companies closing their offices, consequently forcing their employees at home. While beneficial to the slowdown of the spread of this disease, those with depression would likely feel further isolated. It was found that the working from-home status had many positive and negative effects. One study portrays that working from home over eight days allowed people with depression to relax their symptoms by deepening their connections with their families, however, it furthered their feelings of isolation from the outside world (Yu et al., 2021). Furthermore, a study done in Germany found that restrictions due to social distancing were associated with higher levels of psychosocial distress, loneliness, and lower levels of life satisfaction (Benke et al., 2020). All of these side effects of social distancing amplified symptoms and feelings of depression. In addition to this, research done in Brazil portrayed that the prevalence of depression significantly increased throughout the COVID-19 pandemic. With an index of 5.4% pre-pandemic, this number skyrocketed to 21.5% during COVID-19 events (Souza et al., 2021). Within this data, it was reported that women were more affected by this mental disorder than men. Additionally, those of a lower socioeconomic status and younger age were more severely impacted. With human beings being such social creatures, it is unsurprising that previous data supports the heavy practice of social distancing having a significant relationship with isolation and depression.

Stress throughout the COVID-19 pandemic is also identified to be a huge contributor to the presence of depression. A meta-analysis composed of 81 studies found that stress does

contain a significant relationship with depression, further amplifying the symptoms that one may feel (Sharpley et al., 2014). Stress can occur when there is difficulty adapting to a new situation. Furthermore, it has the potential to take a toll on one's mental health, consequently amplifying symptoms of poor mental health. Research shows that the fear of COVID-19 increased the prevalence of depression, anxiety, and stress among individuals all over the world. Symptoms of depression elevated with the high amounts of stress that were experienced throughout the entirety of the pandemic (Çıkrıkçı et al., 2022). The fear of the unknown and the dire need to quickly adapt to new societal regulations intensified feelings of worry, isolation, and panic within the majority of communities.

Demographic topics should also be taken into account when analyzing the concept of stress throughout the COVID-19 pandemic. Research reveals that stressors related to family issues have increased depressive symptoms worldwide. The pandemic has caused many to lose their jobs, homes, and loved ones, which has heavily contributed to the presence of stress and depression. Events like these have caused people to experience negative perceptions of family life, ultimately leading to the increased likelihood of moderate-to-severe symptoms of depression (Crandall et al., 2022). It can be hypothesized that being forced to reside in a singular place with less access to the outside world created dissonance in some familial relationships. As a result, it is quite evident that the COVID-19 pandemic has caused stressors of all sorts that have affected a plethora of individuals, especially those who possess and portray depressive symptoms.

COVID-19 and Anxiety

Often comorbid with depression, anxiety is a disorder that can be defined as extreme psychological tension that one may feel in response to a perceived sense of danger, misfortune, or catastrophe (American Psychological Association, 2023). The body responds to anxiety in a

multitude of physical, emotional, and mental manners such as increasing the rate of breathing, tensing up of the muscles, and elevating the heart rate. It is unsurprising that there is a strong comorbid relationship between depression and anxiety during the COVID-19 pandemic, for these two disorders often go hand-in-hand (Çıkrıkçı et al., 2022). This pandemic has done nothing but instill an immense amount of fear and anxiety within many individuals. Research shows that when this fear becomes dysfunctional, it can contribute to the development of extreme anxiety (Erbiçer et al., 2021). Furthermore, the lack of valid and often conflicting information provided by news outlets and the frequent hearing of deaths has implemented a culture that influences the formulation of self-constructed conclusions and anxious thoughts.

Other negative outcomes can also be linked to the development and intense feelings of anxiety. In one study, it was found that insomnia during the first wave of the pandemic had a significant impact on many people. Data suggests that living alone or in a household of 5 or more people had significant negative effects on one's sleep, leading to the development of insomnia (Morin et al., 2021). Lack of sleep has been linked to a plethora of physical and psychological problems, including anxiety. It can be argued that those who already contain an anxiety disorder and do not receive enough sleep may find themselves having amplified symptoms of this mental disorder. To further this, research regarding mental health during the pandemic was conducted in six different European countries and Australia. It was found that those who possessed prior mental health issues in all six countries portrayed a higher prevalence of experiencing symptoms of both depression and anxiety. Moreover, there were no significant differences between the development of both disorders, adding to their tendency to be highly comorbid (Gémes et al., 2022). When it comes to demographics, it was reported that age, gender, living conditions, social support, education, and somatic illness all contributed to the prevalence of experiencing

symptoms of these disorders. This fact suggests that some individuals may be in a position that predisposes them to develop or experience symptoms of anxiety.

Anxiety not only impacts adults that are facing the pandemic, but children and students as well. In a study with primary and secondary school students as participants, it was found that most of them experienced moderate to severe levels of depression, stress, and anxiety. Secondary students possessed moderate levels of stress, whereas they had extreme levels of anxiety. When it came to the primary students, they showed signs of mild stress and moderate levels of anxiety (Radwan et al., 2021). Age could be considered a significant variable within this study, as secondary students may have been more aware of the consequences of the COVID-19 pandemic. According to Radwan et al. (2021), secondary students were very concerned about their academic achievements and relationships due to the closing of various schools and the lack of face-to-face support. Additionally, family size was identified to have a significant correlation with the levels of stress and anxiety that primary and secondary students possessed about COVID-19. Those with larger families were more likely to show higher levels of anxiety and worry, possibly due to the lack of space and increased chance of contracting the disease (Radwan et al., 2021; Morin et al., 2021). Studies like this can be generalizable to schools and students all over the world, as many suffered the inevitable consequences of this pandemic.

Lockdown and quarantine are also important factors to consider when exploring anxiety's relationship with COVID-19. The stay-at-home order was reported to increase the feeling of loneliness within individuals, ultimately causing extreme psychological distress. Consequently, depressive and anxious symptoms were increased in those who participated in the lockdown (Benke et al., 2020). This is unsurprising, as human beings rely on each other to survive and thrive. Many people value and depend on their social connections to stay busy and maintain a

mentally healthy mindset. The loss of this integral aspect of human life undoubtedly negatively impacted the mental health of a multitude of communities. Students also experienced high levels of anxiety when being forced to undergo lockdown. Studies portray that secondary students endured extreme anxiety, as they were not sure if they were going to be able to return to their place of learning to finish their academic studies (Radwan et al., 2021). Moreover, college students were also significantly impacted. Research suggests that many undergraduate and graduate students experienced moderate to high levels of anxiety, with some reporting that their lives were altered in a plethora of stressful manners (Hoyt et al., 2021). The overarching theme of uncertainty impacted all kinds of communities all over the world. Children or adults, students or employees, many faced an abundance of challenges and anxiety when coping with the COVID-19 pandemic.

Other Factors

There are many other contributing factors to the symptoms of depression and anxiety throughout the COVID-19 pandemic. One major finding explains how media consumption is significantly positively correlated with the presence of symptoms for these two mental disorders. A Study done in Germany explored the relationship between media consumption, depression, and anxiety and discovered that all forms of media serve as a critical stressors. Spending up to 2.5 hours a day on social media that covers the COVID-19 pandemic increased anxiety and depression by 7 times (Antonia et al., 2021). Furthermore, Benke et al. (2020) suggests that certain information regarding the pandemic can spike anxious reactions within the public. It was found that receiving news from medical professionals about COVID-19 was linked to having lower mental health. It was also discovered that fake news and false information were heavily correlated to an increase in psychological distress (Antonia et al., 2021; Benke et al., 2020). It

can be inferred that consuming media from medical professionals, while important, frightened communities all over the world. Hearing the truth from doctors and clinicians alike established the truth and made the pandemic feel all the more real and threatening. In addition, unverified websites and unaccredited social media platforms that spread misinformation regarding the pandemic were only harmful to the mental health of many people. It is crucial that individuals are aware of where they receive their information about the pandemic, as not everything on the internet is true.

While the COVID-19 pandemic has increased the prevalence of stressors in communities worldwide, the perspective that one possesses is also a contributing factor to one's mental health. It may be confusing as to how some people may have maintained a mentally healthy mindset during a time like this, so how have they managed? Research shows that hope is an extremely important factor for sustaining motivation. It was found that hope was crucial for those who had symptoms of depression and anxiety while actively enduring the COVID-19 virus (Wang et al., 2022). Wang et al. (2022) further suggests that individuals with a high level of hope are better able to effectively protect themselves from strong feelings of depression and anxiety. Hope is linked to higher confidence and resistance to negative feelings of malevolent events. It is at times like this that having an external locus of control and maintaining a positive outlook may improve upon one's symptoms of these two mental disorders.

The Current Study

As seen from previous research, COVID-19 has had a significant impact on all of society, especially those experiencing symptoms of depression and anxiety. While previous studies have addressed certain topics and stressors regarding how COVID-19 has impacted those with depression and anxiety, questions about how individuals with these mental illnesses respond to

this pandemic remain unanswered. How do individuals with one or both of these mental disorders perceive the COVID-19 pandemic? To what extent do these individuals protect themselves and others from contracting this disease? This study will aim to answer how those who have depression and anxiety view the pandemic and respond to the safety precautionary procedures that have been established by state governments and the CDC. It will add to previous research in order to further understand the COVID-19 pandemic overall. With the use of this study, governments and communities may be able to handle the COVID-19 pandemic in a more efficient manner, especially those with symptoms of depression and anxiety. Furthermore, individuals with these mental disorders may have the opportunity to find manners in which they can suppress their symptoms. There are two hypotheses for this study. The first one is that people experiencing depressive symptoms will be less likely to adhere to COVID-19 safety precautions. The second hypothesis states that individuals experiencing anxiety will be more likely to adhere to COVID-19 symptoms. Through the exploration of these hypotheses, this study will aim to answer the questions posed above.

Methods

Participants

Through the use of the online survey platform, Prolific, 126 individuals were recruited for this study from across the entirety of the United States. The average age was 37.12 years old with 47.6% of participants being male, 49.2% being female, and 3.2% being non-binary. 23% of the participants reported that they were unvaccinated, whereas 77% said that they had received at least one dose. The average income of the participants was reported to be \$36,461. Furthermore, 82% of participants were reported to be Caucasian. These demographic variables are essential to understand in order to further comprehend the data presented by this study.

Measures

All recruited participants were asked to complete a survey that we constructed called “Perceptions of COVID-19 and Its Impact on Mental Health.” This survey consisted of many sections in order to gather a variety of data for potential future research. The sections included were depression and anxiety, extraversion and introversion, and questions related to healthcare. This study was a combined effort with multiple researchers who all focused on different variables. Because of this, the variables regarding extraversion and introversion and questions related to healthcare are not present in this analysis.

To begin the survey, participants were asked a series of demographic questions that included their gender, race, sexual orientation, level of education, and socioeconomic status. This survey always included an option for “other” in case none of the categories could be applied to themselves. They were also asked to fill out their age in a fill-in-the-blank formatted question. This survey also inquired about their diagnosis history regarding depression and anxiety. If they had been diagnosed with either or both of those mental illnesses, they were asked if they took medication for them. Participants were then asked about their COVID-19 vaccination status, specifically if they had received one or two doses of the Pfizer, Moderna, or Johnson and Johnson vaccines. In addition to this, there was a separate question pertaining to if they had received any booster shots and how many. Furthermore, there were two open-ended questions that participants were asked to answer on how many screening tests they had undergone. These questions required participants to fill in the blank with a numerical response. These referred to if they had been tested for COVID-19 at any point during the pandemic. Following this, participants then answered if these tests were mandated by their place of work or another circumstance.

When focusing on the non-demographic questions, this study will solely cover the questions related to the variables of depression and anxiety. There were many general questions that were related to depression and anxiety regarding the COVID-19 pandemic that were composed for this specific study. These questions utilized a Likert scale of 1-5 with 1 being “never” and 5 being “always” with each individual response. Participants that answered these items with a number closer to 1 indicated that they felt as though the content of that question did not strongly pertain to them. On the other hand, items that were answered closer to 5 meant that participants felt as though the question more closely pertained to them. In addition to these questions, the Beck Depression Inventory (Beck et al., 1996) and the Hamilton Anxiety Rating Scale (HAM-A) (Hamilton, 1959) were employed to better understand each of the participants. The Beck Depression Inventory is a self-report survey that is composed of 21 items relating to the severity of depression. The Beck Depression Inventory utilizes a Likert scale of 0 to 3 that covers a variety of topics related to this mental disorder. An example of a question from this survey is “0 - I do not feel sad, 1 - I feel sad, 2 - I am sad all the time and I can’t snap out of it, 3 - I am so sad and unhappy that I can’t stand it” (Beck et al., 1996). The HAM-A is a self-report scale that is composed of 14 items that measures the intensity of anxiety symptoms. Each item on the HAM-A has an overall theme appointed to it with symptoms related to it. Furthermore, this survey uses a Likert scale of 0 to 4 in order to measure the severity of anxiety. An example question from the HAM-A is “Anxious mood. Worries, anticipation of the worst, fearful anticipation, irritability. 0, 1, 2, 3, 4” (Hamilton, 1959). The current study’s survey also asked questions about COVID-19 safety precautions (i.e. social distancing, wearing a mask, receiving the COVID-19 vaccine(s), and following CDC guidelines) in order to measure their correlations with the variables of depression and anxiety. An example regarding the safety precaution

questions includes “answer the following statements on a scale of 1-5 with 1 being "never" and 5 being "always". When the COVID-19 pandemic first started, how often were you socially distancing in public places?” These relationships will be covered in the discussion section of this paper.

Procedure

The participants in this study were given an informed consent agreement document that they were asked to electronically read and sign before they proceeded with the study. The informed consent form provided the participants with information on risks, prior research of the topics, the purpose of the study, confidentiality, benefits, and the contact information of the mentors for this study (Dr. Natalie Dove and Alexander Karl). Additionally, individuals were compensated with \$3.25 for their participation. The option to stop the study was also emphasized if participants felt uncomfortable or if they were not able to complete the survey due to any circumstance.

One page of questions was given to the participants at a time through Prolific in order to complete the study. Furthermore, each page included instructions on how to answer each of the questions. Each individual was asked to complete the entire survey in order for their participation to be counted. In order to receive compensation of \$3.25, the participants were required to complete the survey in full. They then would be notified that the compensation has been deposited into their Prolific account. All of the answers from the survey were imputed into the statistical database, Qualtrics. This computer program granted researchers the ability to further analyze the relationships between the main variables of depression and anxiety, the safety procedure variables, and the demographic questions.

Results

In order to thoroughly test and analyze the two hypotheses that this study was based on, we utilized statistical analysis. This process allowed us to correlate multiple safety precautionary measures with our main two variables of interest, depression and anxiety. In each relationship that we examined, we tested the level of significance to determine if the hypotheses could be supported or not. As mentioned in the methods section, each participant was asked questions using a Likert scale of 1-5, with 1 being “never” and 5 representing “always.” For demographic and fill-in-the-blank questions, participants were asked to give responses with one of the options that was provided to them. With all of this information, the data will be analyzed and thoroughly discussed below for each respective hypothesis.

Hypothesis 1

The first hypothesis in question is that people experiencing depressive symptoms will be less likely to adhere to COVID-19 safety precautions. To begin, it should be noted that out of the 126 participants, 40 reported to be diagnosed with depression and 86 reported to not be diagnosed. To find this out, participants answered a yes or no question related to if they have been diagnosed with depression in the past. This question was asked as, “have you been diagnosed with depression?” When analyzing data for this hypothesis, we identified relationships between three COVID-19 safety precaution variables. The first relationship we analyzed was between participants who were diagnosed with depression and not diagnosed with depression and vaccination status. The question was formatted as, “have you received the COVID-19 vaccine, and if so, how many doses?” For participants with a diagnosis of depression, the average amount of doses was reported to be 3.03, whereas the mean was 3.16 for those who were undiagnosed. This difference, however, was not significant ($t(124) = -1.173, p = .121$), meaning

there was no impactful relationship between participants who were diagnosed with depression and individuals who were not diagnosed with receiving the COVID-19 vaccine(s).

Another relationship that was studied in regard to this hypothesis was between diagnosed and undiagnosed participants with depression and following CDC guidelines. The specific question that made up this variable was, “throughout the COVID-19 pandemic, I have followed CDC guidelines.” It was assumed that people who were diagnosed with depression would be less likely to follow CDC guidelines than undiagnosed participants. When analyzing this relationship, it was found to be significant, but in the opposite direction of this hypothesis ($t(124) = 1.886, p = .03$). Furthermore, the mean for diagnosed participants was 4.18 and 3.83 for undiagnosed individuals. In other words, the data indicate that participants who were diagnosed with depression were indeed more likely to follow CDC safety procedures.

Depression diagnoses were then correlated with the variable of social distancing at the beginning of the COVID-19 pandemic. The question regarding this variable was asked as, “when the COVID-19 pandemic first started, how often were you socially distancing in public places?” The mean for diagnosed individuals was found to be 4.33, whereas undiagnosed participants had a mean of 3.97. This relationship was discovered to be positive and in the predicted direction ($t(124) = 1.415, p = .080$), meaning that participants who were diagnosed with depression were more likely to practice social distancing at the beginning of the COVID-19 pandemic than those who were not diagnosed. In addition to this, the variable of avoiding social interactions was also correlated with depression. This question was expressed in the questionnaire as, “when the COVID-19 pandemic first started, how often were you avoiding social gatherings in order to reduce COVID-19.” For this relationship, the mean was determined to be 4.41 for diagnosed participants and 3.97 for undiagnosed individuals. The relationship between these two variables

was found to be positive and significant ($t(124) = 1.731, p = .043$). Once again, the data shows that participants who were diagnosed with depression were more likely to practice social distancing at the start of the COVID-19 pandemic.

Hypothesis 2

The second hypothesis of this study was that people experiencing symptoms of anxiety will be more likely to adhere to COVID-19 safety precautions. The goal of this hypothesis was to explore how likely it was for participants diagnosed with anxiety to follow COVID-19 safety precautions. The data reported that 49 participants were reported to be diagnosed with anxiety, whereas 77 of the participants were reported to be undiagnosed. Like the depression variable, the participants were asked to answer yes or no to the question, “have you been diagnosed with anxiety” in order to gather this finding. The first relationship that was looked at regarded those diagnosed and undiagnosed with anxiety and vaccination status. This question was shown as, “have you received the COVID-19 vaccine, and if so, how many doses?” The mean for diagnosed individuals with anxiety was 3.08 and 3.14 for undiagnosed participants. It was found that the correlation was not significant ($t(124) = -.544, p = .294$), meaning there was not a noteworthy relationship between anxiety diagnoses and receiving the COVID-19 vaccine(s).

Another variable that was correlated with anxiety, was following CDC and state guidelines. The questions used from the survey that were utilized to study these relationships were, “throughout the COVID-19 pandemic, I have followed CDC guidelines” and “throughout the COVID-19 pandemic, I have followed state guidelines in regards to personal protection.” There seemed to be no difference between the correlations of these two questions when studying their relationship with anxiety. However, the data for their correlation was deemed to be marginally significant ($t(124) = 1.333, p = 0.92$). Furthermore, the mean for participants with a

diagnosed anxiety disorder was 4.08 and 3.84 for undiagnosed individuals. This means that individuals that were diagnosed with anxiety were more likely to follow both state and CDC guidelines.

The next relationship that was studied was between anxiety and wearing a mask in public. In the survey, this question was presented as, “when the COVID-19 pandemic first started, how often were you wearing masks in public places?” The mean for diagnosed individuals with anxiety was 4.35 and 3.90 for undiagnosed participants. The correlation between these two variables was positive and significant ($t(124) = 1.775, p = .039$). This means that individuals who were diagnosed with anxiety were more likely to wear a mask in public at the beginning of the COVID-19 pandemic, whereas those who were not diagnosed with anxiety were less likely to wear a mask. Following this safety precaution, the next relationship that was studied regarded anxiety and participating in social distancing at the start of the pandemic. This question occurred in the survey as, “when the COVID-19 pandemic first started, how often were you socially distancing in public places?” The mean for diagnosed individuals with anxiety was 4.27 and 3.96 for undiagnosed participants. The correlation between these two variables was found to be positive and in the predicted direction ($t(124) = 1.247, p = .107$). In other words, those who were diagnosed with an anxiety disorder were somewhat more likely to practice social distancing at the beginning of the COVID-19 pandemic.

The next relationship that we analyzed was between anxiety and avoiding social gatherings at the beginning of the pandemic. This question appeared in the survey as, “when the COVID-19 pandemic first started, how often were you avoiding social gatherings in order to reduce COVID-19.” The mean for those who experienced an anxiety disorder was reported to be 4.42 when it came to avoiding social gatherings at the beginning of the COVID-19 pandemic,

whereas the mean was 3.91 for those who were not experiencing an anxiety disorder. The correlation between this relationship was found to be positive and significant ($t(124) = 2.083, p = .020$). This means that participants who were experiencing anxiety were more likely to avoid social gatherings than those who were not experiencing anxiety. To follow this up, the relationship between anxiety and the current tendency to avoid social gatherings was studied. This question was worded in the survey as, “currently, how often are you avoiding social gatherings in order to reduce COVID-19 risk?” The average for those who were diagnosed was 2.94 and 3.27 for those who were undiagnosed. The correlation was reported to be negative and in the opposite direction ($t(124) = -1.284, p = .104$). This is interesting, as the data was found to be significant in the opposite direction of this hypothesis. All of these findings will be further analyzed in the discussion section.

Discussion

The COVID-19 pandemic is a phenomenon that is fresh to the realm of research. In other words, not many studies exist that analyze the impact that this disease has had on different communities. The goal of this study was to uncover if individuals with depression and anxiety were more or less likely to follow COVID-19 safety precautions, including CDC guidelines and receiving the vaccine(s). Furthermore, we wanted to uncover reasons as to why individuals with these disorders keep themselves safe or not. We also wanted to find answers to how people with symptoms of depression and anxiety perceived this pandemic. The way in which we gathered substantial data was by creating a questionnaire and administering it all over the United States. In addition to this, after analyzing the results, we aimed to identify what the data suggests in regard to reasons why participants may or may not participate in specific COVID-19 safety precautionary behaviors. With the use of this data, we may be able to formulate better protocols

for individuals facing depression and anxiety if society ever has to endure another worldwide pandemic.

The first hypothesis within this study stated that people experiencing depressive symptoms will be less likely to adhere to COVID-19 safety precautions. When analyzing this data, we specifically looked at the relationship between depression and the COVID-19 safety precautions of receiving the vaccine(s), following CDC guidelines, practicing social distancing at the beginning of the pandemic, and avoiding social interactions at the beginning of the pandemic. It should be noted that the participants who were diagnosed with depression scored on the lower end of the Beck Depression Inventory, as only three participants scored over a 2.0. In addition, many results in regard to these variables were found to be interestingly in opposition to this hypothesis. While many of our findings did not align with our original hypothesis, they are still quite significant and hold important meaning.

When it comes to who was most likely to receive the COVID-19 vaccines, it was found that participants with depression were actually more inclined to receive the vaccine than those who were undiagnosed. This finding was different than what was stated in the hypothesis, as we theorized that people who were undiagnosed would be more likely to receive the vaccines. Also in contrast with our hypothesis was the finding that individuals with depression were more likely to follow CDC guidelines. In our hypothesis, we thought that participants with depression would be less likely to follow what the CDC recommends, however, the data seems to suggest otherwise. Following this trend, we initially theorized that individuals with depression would be less likely to practice social distancing at the beginning of the pandemic, however, our findings support the opposite. It was found that those with this mental disorder were more likely to follow social distancing guidelines at the beginning of the pandemic than those who were not diagnosed

with depression. Furthermore, when analyzing the relationship between depression and the tendency to avoid social gatherings at the beginning of the COVID-19 pandemic. Our data, yet again, supports the opposite of our hypothesis, as participants with depression were more prone to staying away from social gatherings and events at the beginning of the pandemic.

This study's second hypothesis theorized that people experiencing anxiety symptoms will be more likely to adhere to COVID-19 safety precautions. It was found that there was no significant relationship between receiving the COVID-19 vaccines and having a diagnosis of this mental disorder. When it comes to the variables of following state and CDC safety guidelines, there was a marginally significant relationship that deemed how individuals that are diagnosed with anxiety tend to follow their recommendations more. This finding was in conjunction with our hypothesis, ultimately supporting our initial assumption. Furthermore, the data suggests that individuals who were diagnosed with anxiety were more likely to wear a mask in public at the beginning of the pandemic. Once again, with these two variables possessing a positive and strong correlation, we are further able to support our second hypothesis. When analyzing the variables of practicing social distancing at the beginning of the pandemic and anxiety, it was found that individuals who were experiencing this mental disorder were only slightly more willing to partake in this safety precaution. With that being said, the data could not support it to a significant level. In contrast, participants who were diagnosed with anxiety were more willing to avoid social gatherings at the beginning of the pandemic than those who were not diagnosed. Interestingly, when analyzing the relationship between anxiety and the variable of currently avoiding social gatherings, that result was found to be negative and significant. In other words, this finding was in opposition to our original hypothesis. All of these findings serve as essential information that can be connected to research that has been conducted in the past. Furthermore,

data from this study can be utilized as the foundation for future investigations in order to expand upon these results.

When interpreting this data, it is quite evident that individuals facing symptoms of depression and anxiety were more likely than not to practice behaviors that reduced the risk of them contracting the COVID-19 disease. The question of “why?” then arises in response to this data. For the variable of depression, there is much to be evaluated and deciphered. The data reports that participants with depression were overall more likely to participate in following COVID-19 safety procedures. It is possible that this is due to the fact that individuals with depression may be more influenced by societal norms and regulations. For this reason, the level of compliance for individuals affected by this mental disorder may be significantly higher than for those who are undiagnosed. Furthermore, as the American Psychological Association (2023) states, depression can be characterized by the feeling of unhappiness. This fact could help communities further comprehend the idea of compliance and how individuals facing this mental disorder may be more willing to receive the COVID-19 vaccines, as well as follow other safety precautionary procedures. When it comes to the variables of social distancing and avoiding social gatherings, individuals with depression may be predisposed to thoughts of loneliness, ultimately leading them to have a higher chance of participating in these events. Similarly, Benke et al. (2020) found that loneliness was a significant result of those who socially distanced themselves from others. With that being said, it is possible that people experiencing depression perceived this mandate to be even more isolating.

Oftentimes, the symptoms portrayed by those experiencing depression and anxiety tend to be very similar, consequently leading them to be highly comorbid with each other (Gémes et al., 2022). Similar to the depression variable, it was also found that in most cases, individuals

who were diagnosed with anxiety were more willing to follow COVID-19 safety precautions. When analyzing the anxiety variable separately, it could be assumed that the age variable has heavily influenced these findings. The average age of the participants in this study was determined to be 37.12 years. It is possible that participants were highly aware of the consequences of being diagnosed with this disease, ultimately persuading them to participate in the many mandated safety precautionary procedures. Similarly, as stated earlier in this study, it was found that secondary students felt more threatened by the COVID-19 pandemic than primary students (Radwan et al., 2021). This could be due to the fact that they were older and were more knowledgeable about the drawbacks of contracting this disease.

In addition to this, when interpreting the results of social distancing and avoiding social gatherings at the beginning of the pandemic, anxious individuals may also be more likely to conform to what the majority of the population is doing. Moreover, it is possible that people experiencing symptoms of anxiety look at other members of society to relieve their symptoms and to find reassurance. A lot of the time, this may involve turning to the internet to find the latest information about the disease, however, this could only worsen the anxious feelings. The internet is home to endless false information regarding the COVID-19 pandemic, which can consequently increase symptoms of this mental disorder (Antonia et al., 2021). Interestingly, as stated earlier, it was found that individuals who were diagnosed with anxiety were less likely to avoid social gatherings in the present time of the pandemic. This is surprising, as it is significantly different than the results of the variable of avoiding social events at the beginning of the pandemic. A couple of reasons as to why this may be is due to these individuals being vaccinated and being more comfortable venturing into new social situations. It is also possible that they found their own safe social bubble and only attend social gatherings with individuals

that they feel comfortable around. While there are many speculative ideas revolving around the behavior of these individuals with anxiety, additional research is required to further understand them.

The information provided in this study may be crucial for the comprehension and better implementation of protocols for potential future health crises. It should be noted that pandemics are harmful to the mental health of all communities. Depression and anxiety are not the only two mental disorders that are impacted by this global pandemic. There are multiple other disorders that have been affected that could utilize the findings in this study to further understand possible changes in behavior. Governments and public leaders should explore manners in which they can better support people with pre-existing diagnoses, as well as the rest of society. The research presented in this study should serve as a wake-up call to communities around the world, as it is evident that the COVID-19 pandemic has severely hurt a plethora of lives. In the future, therapy could be offered to individuals all over the world at a reduced cost. Additionally, awareness of these mental disorders should be spread through news outlets, social media, and more in order to let people know that they are not alone. While it is important to cover updates regarding serious diseases, it is also important to acknowledge the hardships that they may cause when it comes to leading a mentally healthy lifestyle. In order to combat this, more time should be spent positively identifying ways to cope with these disorders and providing outlets to reach out to. In the end, nobody should have to struggle alone.

Limitations

Research is not without its limitations and this study is no different. It should be noted that the sample size utilized to research our variable may not be sufficient enough to generalize the results to all communities. Additionally, the variables utilized in this study tend to lean one

way or another (i.e. being diagnosed with a mental disorder or not. There is no in-between). With that being said, the data is also a combination of clinical and experiential responses, which relies on our trust in the participants taking the questionnaire. Furthermore, since this questionnaire was sent anonymously, sometimes people do not want their personal information out there, even when their name is not attached to their responses. Admitting a diagnosis to oneself through a survey can also be difficult, which may have prompted participants to not respond truthfully. Overall, while there is no way to ensure completely accurate results through an anonymous questionnaire, future research may replicate this study in order to increase its validity.

Questions Remaining

While this study aided us in understanding how individuals with depression and anxiety respond to the COVID-19 pandemic, there are still many questions that remain unanswered. The data that was collected and reported upon in this study can serve as a foundation for more research to be conducted in the future. Data from both hypotheses of this current study can be combined in order to formulate even more questions to be tested. Some of these questions will be posed below.

One topic that would be intriguing to investigate further is if the behavior presented by individuals with depression and anxiety through this pandemic is learned or if it is an unconscious reaction. The current study suggests that people with depression and anxiety may act this way, however, the questions of “why?” and “how?” still linger. Conducting a study on individuals solely with depression and anxiety and their responses to this pandemic would significantly help communities further understand their behavior. It may also allow clinicians and medical professionals to develop new ways of reaching out to these individuals to help support them.

Another question that could be considered for future research is how the motivation of individuals with these mental disorders has been impacted and how that has affected their response to the COVID-19 pandemic. It can be argued that the locus of control in people with anxiety and depression varies, however, does it range from individual to individual or from disorder to disorder? As seen in this study's data, individuals with depression and anxiety were more likely to participate in safety precautionary procedures than undiagnosed people, especially at the beginning of the pandemic. The idea of motivation and what keeps depressed and anxious people inspired to combat hardships presented by this pandemic would be a field of study to highly consider delving into.

Another question that remains unanswered is how people with anxiety and depression coped with all of the turmoil brought on by the COVID-19 pandemic. Wang et al. (2022) suggests that hope is an integral component of staying positive, however, other coping strategies should be researched. It is one thing for people to react to the pandemic, however, it may be helpful for all of society to explore ways to manage the pandemic itself together. In addition, it could be studied how specific communities cope, as some people have better access to resources than others. For example, one could utilize the variables of therapy, different ethnic groups, and varying socioeconomic status in order to conduct their own research. In doing so, they could uncover how effective therapy has been for communities all over the nation.

Conclusion

Throughout this research study, our goal was to identify answers to the question "to what extent do individuals in the United States with depression and anxiety follow COVID-19 precautionary procedures?" This study aimed to uncover how people with symptoms of depression and anxiety reacted to the pandemic and how they perceived various state and

government mandates. Within this study, we found that there was no significant correlation between depression and getting vaccinated. There was, however, a significant correlation between depression and following state and CDC guidelines. In addition, our research found that there was a significant relationship between being diagnosed with depression and practicing social distancing at the beginning of the pandemic. There was also a significant correlation between the variable of depression and avoiding social interactions at the beginning of the pandemic. When it comes to the variable of anxiety, there was no significant relationship with receiving the COVID-19 vaccines. There was a marginally significant correlation between anxiety and following state and CDC guidelines. Furthermore, a significant and positive relationship can be viewed in the variables of anxiety and masking at the beginning of the pandemic. Similarly, there was a significant positive correlation between a diagnosis of anxiety and social distancing at the start of this crisis. Lastly, there was only a marginally significant relationship between participants with anxiety and currently avoiding social gatherings.

Overall, this study possessed the goal to comprehend how those with depression and anxiety view the severity of the pandemic and how they act in response to it. We also desired to interpret why these individuals may behave the way that they do in response to the surge in COVID-19 cases. This research provided us with a basis for how individuals with depression and anxiety perceive the threat of this disease. In order to further discover more about these relationships, more research needs to be conducted about how all mental disorders are impacted by worldwide pandemics. This information can assist in providing a variety of professionals with information on how to better manage health crises, especially for those who possess a mental disorder. With the help of these findings and further research, the relationship between

depression, anxiety, and worldwide pandemics can be better acknowledged and thoroughly understood.

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Appendix A: Demographic Survey Question

Q1.1 What is your current age?

Q1.2 Which categories describe you: Select all that apply to you:

- American Indian or Alaska Native (for example: Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community) (1)
- Asian (for example: Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese) (2)
- Black or African American (for example: Jamaican, Haitian, Nigerian, Ethiopian, Somalian) (3)
- Hispanic, Latino or Spanish Origin (for example: Mexican or Mexican American, Puerto Rican, Cuban, salvadoran, Dominican, Columbian) (4)
- Middle Eastern or North African (for example: Lebanese, Iranian, Egyptian, Syrian, Moroccan, Algerian) (5)
- Native Hawaiian or Other Pacific Islander (for example: Samoan, Chamorro, Tongan, Fijian, Marshallese) (6)
- White (for example: German, Irish, English, Italian, Polish, French) (7)
- I prefer not to answer (8)

- Some other race, ethnicity, or origin, please specify: (9)
-

Q1.3 What is your current gender identity?

- Female/Woman (1)
- Male/Man (2)
- Trans Female/Trans Woman (3)
- Trans Male/Trans Man (4)
- Genderqueer/Gender non-conforming (5)
- I prefer not to answer (6)
- Different identity, please specify: (7)
-

Q1.4 Do you consider yourself to be:

- Heterosexual or straight (1)
- Gay or lesbian (2)
- Bisexual (3)
- Fluid (4)
- Pansexual (5)
- Queer (6)
- Demisexual (7)
- Questioning (8)

- Asexual (9)
- I prefer not to answer (10)

Q1.5 Which of the following options best describes your current employment?

- Employed full-time (40 hours per week) (1)
- Employed part-time (Less than 40 hours per week) (2) Self-employed (3)
- Full-time student (4)
- Part-time student (5)
- Unemployed (6)
- Stay at home parent (7)
- Other, please specify: (8) _____

Q1.6 What is the highest degree or level of school you have COMPLETED? If you are currently enrolled, mark the previous grade or highest degree received.

- No schooling completed (1)
- Nursery school (2)
- Kindergarten (3)
- Grade 1 through 11 -- Specify grade 1-11 (4)

- 12th grade (No Diploma) (5)
- Regular high school diploma (6)

- GED or alternative credential college OR some college (7)
- Some college credit, but less than 1 year of college credit (8)
- 1 or more years of college credit, no degree (9)
- Associate's degree (for example: AA, AS) (10)
- Bachelor's degree (for example: BA, BS) (11)
- Master's degree (for example: MA, MS, MEng, MEd, MSW, MBA) (12)
- Professional degree beyond a bachelor's degree (for example: MD, DDS, DVM, LLB, JD) (13)
- Doctorate degree (for example: PhD, EdD) (14)

Q1.7 What was your total income during the PAST 12 MONTHS? Please check the box that applies, whether you have had an income in the past 12 months, have had no income, or have had a loss of income. If you have gained income or lost income, please write the approximate amount on the corresponding line.

Income of \$ _____ .00 (TOTAL AMOUNT for the past 12 MONTHS) (1)

Loss of \$ _____ .00 (2) _____

None (3)

Q1.8 Is your house, apartment, or mobile home:

Owned by you or someone in your household with a mortgage or loan/home equity loan? (1)

Owned by you or someone in your household free and clear (without a mortgage or loan)? (2)

Rented? (3)

Occupied without payment of rent? (4)

Q1.9 Have you been diagnosed with depression?

Yes (1)

No (2)

Q1.10 Do you take any medication for depression?

Yes (1)

No (2)

N/A (3)

Q1.11 Have you been diagnosed with anxiety?

Yes (1)

No (2)

Q1.12 Do you take any medication for anxiety?

Yes (1)

No (2)

N/A (3)

Q69 Have you received the COVID-19 vaccine, and if so, how many doses?

Yes, 1 dose (Pfizer-BioNTech or Moderna) (1)

Yes, 1 dose (Johnson & Johnson) (2)

Yes, 2 doses (Pfizer-BioNTech or Moderna) (3)

No (4)

Q1.13 Have you received a COVID-19 vaccine booster dose?

Yes (1)

No (2)

Q1.14 Have you been diagnosed with a long-term or chronic illness that affected your decision of whether or not to get the COVID-19 vaccine?

Yes (1)

No (2)

N/A (3)

Q1.15 Approximately how many COVID-19 screening tests (to see if you have the virus) have you taken since the start of the pandemic?

Q1.16 Approximately what percentage of your COVID-19 tests were for mandatory reasons like workplace or event attendance? (Please only enter the number within the text box)

Appendix B: Current Study Survey

Depression Survey Questions

- 1) Have you been diagnosed with depression?
- 2) Do you take any medication for depression?
- 3) On a scale of 1 to 5, with 1 being rarely and 5 being very frequently, how often did you experience the feeling of worthlessness *prior* to the COVID-19 pandemic?

- 4) On a scale of 1 to 5, with 1 being rarely and 5 being very frequently, how often did you experience the feeling of worthlessness *within* the COVID-19 pandemic?
- 5) On a scale of 1 to 5, with 1 being rarely and 5 being very frequently, how often did you experience the overwhelming feeling of sadness and despair *prior* to the COVID-19 pandemic?
- 6) On a scale of 1 to 5, with 1 being rarely and 5 being very frequently, how often did you experience the overwhelming feeling of sadness and despair *within* the COVID-19 pandemic?
- 7) On a scale of 1 to 5, with 1 being rarely and 5 being very frequently, how often did you feel optimistic for the future *prior* to the COVID-19 pandemic?
- 8) On a scale of 1 to 5, with 1 being rarely and 5 being very frequently, how often did you feel optimistic for the future *within* the COVID-19 pandemic?
- 9) On a scale of 1 to 5 with 1 being rarely and 5 being very frequently, how irritable did you find yourself to be *prior* to the COVID-19 pandemic?
- 10) On a scale of 1 to 5 with 1 being rarely and 5 being very frequently, how irritable did you find yourself to be *within* the COVID-19 pandemic?
- 11) On a scale of 1 to 5 with 1 being rarely and 5 being very frequently, how often did you find yourself losing interest in activities that you once found enjoyable *prior* to the COVID-19 pandemic?
- 12) On a scale of 1 to 5 with 1 being rarely and 5 being very frequently, how often did you find yourself losing interest in activities that you once found enjoyable *within* the COVID-19 pandemic?

Anxiety Survey Questions

- 1) Have you been diagnosed with anxiety?
- 2) Do you take any medication for anxiety?
- 3) On a scale of 1 to 5, with 1 being rarely and 5 being very frequently, how often did you find yourself excessively worrying *prior* to the COVID-19 pandemic?
- 4) On a scale of 1 to 5, with 1 being rarely and 5 being very frequently, how often did you find yourself excessively worrying *within* the COVID-19 pandemic?
- 5) On a scale of 1 to 5, with 1 being rarely and 5 being very frequently, how often did you find yourself fearing crowds *prior* to the COVID-19 pandemic?
- 6) On a scale of 1 to 5, with 1 being rarely and 5 being very frequently, how often did you find yourself fearing crowds *within* the COVID-19 pandemic?

Safety Precaution Questions

- 1) Answer the following statements on a scale of 1-5 with 1 being "Never" and 5 being "Always". When the COVID-19 pandemic first started, how often were you wearing masks in public places?
- 2) Currently, how often are you wearing masks in public places?

- 3) Answer the following statements on a scale of 1-5 with 1 being "Never" and 5 being "Always". When the COVID-19 pandemic first started, how often were you socially distancing in public places?
- 4) Answer the following statements on a scale of 1-5 with 1 being "Never" and 5 being "Always". Currently, how often are you socially distancing in public places?
- 5) Answer the following statements on a scale of 1-5 with 1 being "Never" and 5 being "Always". When the COVID-19 pandemic first started, how often were you avoiding social gatherings in order to reduce Covid-19 risk?
- 6) Answer the following statements on a scale of 1-5 with 1 being "Never" and 5 being "Always". - 6. Currently, how often are you avoiding social gatherings in order to reduce COVID-19 risk?

Appendix C: Beck Depression Inventory & Hamilton Anxiety Rating Scale

Beck Depression Inventory

Please answer the following list of questions to your best ability in regards to how you have felt over the COVID-19 pandemic.

1.

0 I do not feel sad.

1 I feel sad

2 I am sad all the time and I can't snap out of it.

3 I am so sad and unhappy that I can't stand it.

2.

0 I am not particularly discouraged about the future.

1 I feel discouraged about the future.

2 I feel I have nothing to look forward to.

3 I feel the future is hopeless and that things cannot improve.

3.

0 I do not feel like a failure.

1 I feel I have failed more than the average person.

2 As I look back on my life, all I can see is a lot of failures.

3 I feel I am a complete failure as a person.

4.

0 I get as much satisfaction out of things as I used to.

1 I don't enjoy things the way I used to.

2 I don't get real satisfaction out of anything anymore.

3 I am dissatisfied or bored with everything.

5.

0 I don't feel particularly guilty

1 I feel guilty a good part of the time.

2 I feel quite guilty most of the time.

3 I feel guilty all of the time.

6.

0 I don't feel I am being punished.

1 I feel I may be punished.

2 I expect to be punished.

3 I feel I am being punished.

7.

0 I don't feel disappointed in myself.

1 I am disappointed in myself.

2 I am disgusted with myself.

3 I hate myself.

8.

0 I don't feel I am any worse than anybody else.

1 I am critical of myself for my weaknesses or mistakes.

2 I blame myself all the time for my faults.

3 I blame myself for everything bad that happens.

9.

0 I don't have any thoughts of killing myself.

1 I have thoughts of killing myself, but I would not carry them out.

2 I would like to kill myself.

3 I would kill myself if I had the chance.

10.

0 I don't cry any more than usual.

1 I cry more now than I used to.

2 I cry all the time now.

3 I used to be able to cry, but now I can't cry even though I want to.

11.

0 I am no more irritated by things than I ever was.

- 1 I am slightly more irritated now than usual.
- 2 I am quite annoyed or irritated a good deal of the time.
- 3 I feel irritated all the time.

12.

- 0 I have not lost interest in other people.
- 1 I am less interested in other people than I used to be.
- 2 I have lost most of my interest in other people.
- 3 I have lost all of my interest in other people.

13.

- 0 I make decisions about as well as I ever could.
- 1 I put off making decisions more than I used to.
- 2 I have greater difficulty in making decisions more than I used to.
- 3 I can't make decisions at all anymore.

14.

- 0 I don't feel that I look any worse than I used to.
- 1 I am worried that I am looking old or unattractive.
- 2 I feel there are permanent changes in my appearance that make me look unattractive
- 3 I believe that I look ugly.

15.

- 0 I can work about as well as before.
- 1 It takes an extra effort to get started at doing something.
- 2 I have to push myself very hard to do anything.
- 3 I can't do any work at all.

16.

- 0 I can sleep as well as usual.
- 1 I don't sleep as well as I used to.
- 2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.
- 3 I wake up several hours earlier than I used to and cannot get back to sleep.

17.

- 0 I don't get more tired than usual.
- 1 I get tired more easily than I used to.
- 2 I get tired from doing almost anything.
- 3 I am too tired to do anything.

18.

- 0 My appetite is no worse than usual.
- 1 My appetite is not as good as it used to be.
- 2 My appetite is much worse now.
- 3 I have no appetite at all anymore.

19.

- 0 I haven't lost much weight, if any, lately.
- 1 I have lost more than five pounds.
- 2 I have lost more than ten pounds.
- 3 I have lost more than fifteen pounds.

20.

- 0 I am no more worried about my health than usual.
- 1 I am worried about physical problems like aches, pains, upset stomach, or constipation.
- 2 I am very worried about physical problems and it's hard to think of much else.
- 3 I am so worried about my physical problems that I cannot think of anything else.

21.

- 0 I have not noticed any recent change in my interest in sex.
- 1 I am less interested in sex than I used to be.
- 2 I have almost no interest in sex.
- 3 I have lost interest in sex completely.

Hamilton Anxiety Rating Scale (HAM-A) (0 = Not present, 1 = Mild, 2 = Moderate, 3 = Severe, 4 = Very severe.)

To the best of your ability, please rate your experience with each of the following categories over the COVID-19 pandemic.

1) Anxious mood.

Worries, anticipation of the worst, fearful anticipation, irritability. 0 1 2 3 4

2) Tension.

Feelings of tension, fatigue, startle response, moved to tears easily, trembling, feelings of restlessness, inability to relax. 0 1 2 3 4

3) Fears.

Of dark, of strangers, of being left alone, of animals, of traffic, of crowds. 0 1 2 3 4

4) Insomnia.

Difficulty in falling asleep, broken sleep, unsatisfying sleep and fatigue on waking, dreams, nightmares, night terrors. 0 1 2 3 4

5) Intellectual.

Difficulty in concentration, poor memory. 0 1 2 3 4

6) Depressed mood.

Loss of interest, lack of pleasure in hobbies, depression, early waking, a constant change in mood throughout the day. 0 1 2 3 4

7) Somatic (muscular).

Pains and aches, twitching, stiffness, involuntary muscle jerks, grinding of teeth, unsteady voice, increased muscular tone. 0 1 2 3 4

8) Somatic (sensory).

Tinnitus, blurring of vision, hot and cold flushes, feelings of weakness, pricking sensation. 0 1 2 3 4

9) Cardiovascular symptoms.

Overly fast heart rate, palpitations, pain in chest, throbbing of vessels, fainting feelings, missing beat. 0 1 2 3 4

10) Respiratory symptoms.

Pressure or constriction in chest, choking feelings, sighing, hard time catching your breath. 0 1 2 3 4

11) Gastrointestinal symptoms.

Difficulty in swallowing, wind abdominal pain, burning sensations, abdominal fullness, nausea, vomiting, constant growling stomach, looseness of bowels, loss of weight, constipation. 0 1 2 3 4

12) Genitourinary symptoms.

Frequency to urinate, urgency to urinate, absence of menstrual period, menstrual period that has lasted more than 7 days, development of frigidity, premature ejaculation, loss of sexual desire, inability to orgasm. 0 1 2 3 4

13) Autonomic symptoms.

Dry mouth, flushing, unusual pale appearance, tendency to sweat, giddiness, tension headache, raising of hair. 0 1 2 3 4