

Spring 4-23-2021

## Mental Health Among Nursing Students Amid the Coronavirus Pandemic

Cheydan Crump

Follow this and additional works at: <https://digitalcommons.murraystate.edu/honorsthesis>



Part of the [Nursing Commons](#)



This work is licensed under a [Creative Commons Attribution 4.0 International License](#).

---

### Recommended Citation

Crump, Cheydan, "Mental Health Among Nursing Students Amid the Coronavirus Pandemic" (2021).  
*Honors College Theses*. 72.  
<https://digitalcommons.murraystate.edu/honorsthesis/72>

This Thesis is brought to you for free and open access by the Honors College at Murray State's Digital Commons. It has been accepted for inclusion in Honors College Theses by an authorized administrator of Murray State's Digital Commons. For more information, please contact [msu.digitalcommons@murraystate.edu](mailto:msu.digitalcommons@murraystate.edu).

Murray State University Honors College

HONORS THESIS

Certificate of Approval

Mental Health Among Nursing Students Amid the Coronavirus Pandemic

Cheydan S. Crump

April 23, 2021

Approved to fulfill the  
requirements of HON 437

---

Dr. Jessica Naber Associate Professor  
Nursing

Approved to fulfill the  
Honors Thesis requirement  
of the Murray State Honors  
Diploma

---

Dr. Warren Edminster, Executive Director  
Honors College

Examination Approval Page

Author: Cheydan Crump

Project Title: Mental Health Among Nursing Students Amid the Coronavirus Pandemic

Department: Nursing

Date of Defense: April 23, 2021

Approval by Examining Committee:

\_\_\_\_\_

(Dr. Jessica Naber, Advisor)

\_\_\_\_\_

(Date)

\_\_\_\_\_

(Dr. Nancy Armstrong, Committee Member)

\_\_\_\_\_

(Date)

\_\_\_\_\_

(Dr. Tonia Mailow, Committee Member)

\_\_\_\_\_

(Date)

Mental Health Among Nursing Students Amid the Coronavirus Pandemic

Submitted in partial fulfillment  
of the requirements  
for the Murray State University Honors Diploma

Cheydan S. Crump

April 2021

## Table of Contents

Abstract.....	iii
Introduction.....	1
Significance.....	2
Review of Literature.....	4
General Public.....	4
Students.....	7
Healthcare Workers.....	9
Summary.....	12
Method.....	13
Sampling.....	13
Protection of Human Rights.....	13
Instrument for Data Collection.....	14
Data Collection Procedures.....	16
Results.....	16
Discussion.....	20
Limitations and Recommendations.....	31
Implications.....	32
Conclusion.....	34
References.....	37
Appendix A.....	41
Appendix B.....	42
Appendix C.....	43
Appendix D.....	47

List of Tables and Figures

Figure 1: Anxiety/Stress Levels Since December 2019.....18

Figure 2: Mental Health Disorders.....18

## **Abstract**

The purpose of this study was to determine the effects of the current pandemic on the mental health of nursing students at a rural university. This study examined various risk factors and potential indicators for mental health, such as changes in physical activity, sleep behaviors, and differing perceptions of support they have received from the nursing program and the participating university, throughout the spread of COVID-19. This study was a non-experimental, analytical study conducted in a rural university in the southern region of the United States. This convenience sample consisted of 21 students, all of which were enrolled in the nursing program at the university. Participants completed an online survey regarding their perception of stress and challenges they have faced throughout the course of the pandemic. This sample reported several indicators of increased mental distress related to the pandemic, which aligns with the hypothesis that the current pandemic has caused a widespread decline in mental health. However, it should be noted, due to the lack of information regarding this specific topic and the overall small and non-diverse sample, which was used in this study, it is hard to say that the results of the study were anything more than correlational.

# Mental Health Among Nursing Students Amid the Coronavirus Pandemic

## Introduction

In December 2019, a highly contagious, respiratory illness of unknown origin was identified in Wuhan, China (Shaukat et al., 2020). This illness, now well known as COVID-19 or coronavirus disease 2019 (SARS-CoV-2), has spread to 223 countries as of February 2021. It has taken the lives of approximately 2.5 million people and has infected more than 111 million people worldwide. In the United States alone, the virus has infected 28.4 million people and killed more than 506,000 people (World Health Organization [WHO], 2021). According to the Merriam-Webster dictionary in 2021, a pandemic is defined as “occurring over a wide geographic area (such as multiple countries or continents) and typically affecting a significant proportion of the population”. Considering that the last global pandemic was the Spanish flu pandemic of 1918, which infected an estimated 500 million persons and killed approximately 100 million persons, it can be said that the world was not prepared for the sudden emergence of this virus (Kaligis et al., 2020). This can be evidenced by how the pandemic has disrupted nearly every aspect of one’s daily life, specifically one’s overall physical and mental well-being.

COVID-19 is mainly spread through the transmission of respiratory droplets while in close contact with others (Naser et al., 2020). Once effectively transmitted, the disease primarily attacks the lungs of an individual, causing a plethora of pneumonic symptoms (Khan et al., 2020). This vital information has prompted several countries and their governments, including the U.S., to mandate lockdowns, social distancing measures, and the closure of schools and businesses. These mandates were designed to help slow the spread of infection and to help local and federal governments alike, obtain a better grasp on the handling of the pandemic (Russel et al., 2020). While these regulations have helped spare some individuals from the physical effects

of the disease, they have also undoubtedly taken a toll on the mental health of individuals across the globe.

Research shows that community-wide disasters, such as COVID-19, can cause people to experience traumatic stress, which can lead to the development of and/or the worsening of existing mental health conditions. Factors or stressors which can lead to the decline of one's mental health during quarantine include prolonged periods of self-isolation, fear of infection, financial difficulties, feelings of uncertainty, frustration, boredom and loneliness, insufficient access to supplies and information, and stigma (Russel et al., 2020). These factors can lead to many changes in behavior, which are indicative of stress. Changes in one's sleeping patterns, eating patterns, levels of physical activity, levels of sexual activity, alcohol consumption, and social media consumption are all considered behavioral manifestations of stress. While it is normal to experience stress in the middle of a crisis, extended periods of stress can lead to the breakdown of the body's physiologic functions (Kaligis et al., 2020). Therefore, mass quarantine is likely to increase the rates of mental health disorders, such as anxiety, post-traumatic stress disorder (PTSD), and depression, within the general population.

Researchers suggest that the only way to make sure a substantial decline in mental health does not occur over quarantine, is to ensure adequate support is provided to people during this time. This support can be provided in the form of mental health hotlines, food banks, financial aid services, and counseling services (Browning et al., 2020). In other words, if the factors known to cause stress are lessened during quarantine, then the occurrence of mental health abnormalities within the population will also lessen.

## **Significance**

Before the spread of COVID-19, college students were already at an increased risk of undergoing psychological issues due to the academic pressure to do well, being far away from home, financial concerns, and uncertainty regarding their future career. Globally, college students were already reporting increased levels of anxiety and symptoms of depression well before December 2019 (Browning et al., 2020). Therefore, the current pandemic makes them an especially vulnerable group in regard to their mental health.

In addition to this, compared to non-health care workers, health care workers were at an increased risk of experiencing mental health distress due to their increased risk of being exposed to COVID-19 (Kaligis et al., 2020). The purpose of this study was to determine what effects the pandemic has had on the mental health of nursing students at the participating university. Since nursing students are college students who were already at an increased risk of experiencing stress not only due to their rigorous training, but also due to their increased risk of contracting coronavirus through their exposure to hospital settings, this study helped to determine just how vulnerable nursing students were to fluctuations in mental health during this time. Additionally, this study helped identify strategies that the participating university could use to help alleviate stress, anxiety, or other symptoms of mental health conditions.

## **Review of Literature**

Due to the recent onset of COVID-19 there were no research articles available regarding, specifically, the mental health of nursing students during the pandemic. However, there were several research articles available pertaining to the mental health of the general public, students, and healthcare workers during the pandemic. Therefore, the information in these studies was combined in order to best infer the effects the pandemic would have on the mental health of nursing students as well as to explain why such effects would occur. Additionally, these studies were used to determine factors which indicate changes in mental health and to determine methods that could be implemented in order to prevent or promote said changes.

### **General Public**

In a study by Russel et al. (2020), the impact of the pandemic on the mental health of caregivers and parent-child relationships was explored. The population of the study included adults 18 years or older living in the United States who spoke English and were caring for a child under the age of 18. The survey was administered in April 2020, approximately one month after the first quarantine measures were implemented within the U.S. The study examined the relationship between caregiver burden, mental health, and parent perceived child stress (Russell et al., 2020).

The results of the survey suggested that child responses to community-wide disasters, such as the coronavirus outbreak, were worse among children of highly distressed parents. In addition to this, parents who indicated higher rates of caregiver burden also indicated higher rates of mental distress, in the form of depression and generalized anxiety, and parent perceived child stress. Lastly, parents who indicated more symptoms of depression and parent perceived

child stress also indicated more instances of child parent conflict and decreased relationship closeness. In contrast, parents who indicated more symptoms of generalized anxiety indicated no significant change in child parent conflict and relationship closeness. According to the results of the study, community wide disasters, such as the current pandemic, have a pervasive negative impact on the mental health of individuals and families as a whole. Thus, authorities will need to implement specific, supportive measures to aid parents in providing for their children in order to preserve the mental health of American families throughout quarantine. These measures can come in the form of easy access to financial resources, mental health providers, and family support professionals (Russell et al., 2020).

In an effort to promote public mental health during the coronavirus outbreak, the Indonesian federal government launched a counseling hotline service, called *Sejiwa*, to help facilitate psychological consultations for its citizens. From April to May 2020, *Sejiwa* provided early psychological help to 14,916 callers across the country. Based on the calls they received, *Sejiwa* determined the demographics most vulnerable to declines in mental health during the pandemic were children, teenagers, healthcare workers, and people of reproductive age. In addition to this, the Indonesian Psychiatric Association conducted a survey in May 2020, which assessed for psychological issues among individuals during the spread of COVID-19. The population of the survey consisted of 2,364 people from 34 Indonesian provinces. Of the 2,364 people, 1,631 (69%) reportedly experienced psychological problems, 1,109 (68%) reportedly experienced symptoms of anxiety, 1,093 (67%) reported experiencing symptoms of depression, and 1,255 (77%) reportedly experienced psychological trauma (Kaligis et al., 2020).

Due to the high instances of people experiencing mental health issues during the coronavirus outbreak, as indicated by *Sejiwa* and the previously mentioned survey, the

Indonesian Psychiatric Association has issued public guidelines for maintaining mental health throughout the pandemic. These guidelines include limiting exposure to excessive information, performing relaxation techniques, engaging in fun activities, the community providing adequate resources to support its members during this time, and speaking with individuals, one is close to, about fears and worries concerning the pandemic. Thus, according to the study, in order to successfully limit the negative impact of the pandemic on mental health it will take the combined efforts of authoritative figures/institutions and individual citizens to do so (Kaligis et al., 2020).

In a study by Asiamah et al. (2020), the impact of the pandemic on the mental health of Ghanaian citizens was determined. The population of the study included residents of Ghanaian cities facing mandatory lockdown who had a basic understanding of the English language. The study assessed short-term behavioral outcomes related to COVID-19 social distancing protocols and their subsequent effects on mental health. The short-term behavioral changes included in the study were changes in physical activity, sedentary behavior, smoking frequency, frequency of alcohol intake, eating frequency, and frequency of sexual activity (Asiamah et al., 2020).

The survey results indicated that overall sedentary behavior and decreases in physical activity were associated with decreases in mental health. Additionally, drinking alcohol at the same frequency or diminished frequencies were linked to increases in mental health. Abstaining from smoking was also linked to increases in mental health. Lastly, increases or decreases in eating frequency were both strongly linked to decreased mental health while increased sexual activity was linked to increased mental health. Due to these short-term changes in behavior affecting the mental health of those in social isolation, the study suggests that public education regarding health-promoting behaviors should be implemented alongside social distancing measures. This would discourage people from engaging in unhealthy behaviors while

simultaneously encouraging them to engage in healthy ones, which could limit their susceptibility to COVID-19 (Asiamah et al., 2020).

## **Students**

In a study by Elmer et al. (2020), the impact of the coronavirus outbreak on the mental health of Swiss university students was determined. The population of the study included Swiss students who began their undergraduate studies in 2017, within two different natural science/engineering programs, and Swiss students who began their undergraduate studies in 2016, within one study program. The Swiss students who began their undergraduate studies in 2017 experienced what being enrolled in university was like before the COVID-19 crisis and during the COVID-19 crisis. Conversely, the Swiss students who began their undergraduate studies in 2016 did not experience the crisis at all while enrolled in university (Elmer et al., 2020).

Throughout the study, changes in social interactions and mental health, between the different groups, were compared and contrasted. Therefore, in this study, the mental health of Swiss undergraduate students who experienced the COVID-19 crisis had their current mental health compared with their mental health before the COVID-19 crisis. This is referred to, in the study, as the within-person comparisons. Additionally, the mental health of Swiss undergraduate students who experienced the crisis had their current mental health compared with undergraduate students who did not experience the crisis while enrolled in university. This is referred to, in the study, as the between-cohort comparisons. These comparisons were made in order to determine what effects the outbreak of coronavirus had on the overall mental health of Swiss undergraduate students (Elmer et al., 2020).

The results of the study indicated that, in the within-person comparisons of social networks, students interacted with fewer people outside of their already established friend and support groups during the COVID-19 crisis than they did before it. This resulted in most students' friendship and support groups staying relatively the same. The within-person comparisons of changes in mental health, also indicated that most students experienced increased levels of stress and exhibited more symptoms of depression and anxiety during the COVID-19 crisis than they did before the COVID-19 crisis. Thus, most students reported that the COVID-19 crisis negatively affected their lives. However, some students reported that the COVID-19 crisis positively affected their lives in regard to decreased 'fear of missing out' and decreased academic competition among classmates (Elmer et al., 2020).

Like the within-person comparisons of social networks, the between-cohort comparisons of social networks indicated that students who experienced the COVID-19 crisis interacted with fewer people outside of their already established friend and support groups than students who did not experience the COVID-19 crisis. However, unlike the within-person comparisons of changes in mental health, the between-cohort comparisons of changes in mental health indicated no significant differences between those who experienced the COVID-19 crisis and those who did not experience the COVID-19 crisis (Elmer et al., 2020).

Furthermore, if a person experienced a decline in their mental health, in both the within-person comparisons and the between-cohort comparisons, it was often attributed to concerns about one's family and friends, concerns about one's future career, having to face problems one previously avoided, living alone, and having less contact with and support from one's personal networks. Thus, the study suggests that individuals who are more inclined to worry about various aspects of their lives, individuals who are more socially isolated, and individuals who receive

less social support are more likely to experience a decline in mental health during the coronavirus outbreak. This could possibly result in them developing serious mental disorders as well as make them more susceptible to COVID-19. Therefore, it is important that specific interventions, which target these susceptible individuals are implemented within universities around the world so as to stem the negative impact the pandemic will have on their mental health (Elmer et al., 2020).

### **Healthcare Workers**

In a rapid review by Stuifzand et al. (2020), the effect of the pandemic on the mental health of healthcare professionals was examined. The rapid review was comprised of 50 studies, from the years 2003 and onward, which revealed the impact of the most recent epidemics/pandemics, including the Severe Acute Respiratory Syndrome (SARS) and COVID-19, on the mental health of healthcare professionals (HCPs) around the globe. These studies included data collected from Europe, Africa, Canada/USA, and Asia through both diagnostic assessment tools and self-report measures (Stuifzand et al., 2020).

Throughout the studies, certain factors or predictors were identified as having a significant impact on the mental health of HCPs. These factors were categorized as organizational, social, personal, and psychological predictors. Organizational predictors included occupational role, specialized training and preparedness, high-risk environments, job stress, and perceptions of safety threat and risk. The ‘occupational role’ predictor indicated that those in direct contact with infected patients were more likely to exhibit poor psychological outcomes. Thus, the ‘occupational role’ predictor indicated nurses would exhibit poorer psychological outcomes than doctors during an outbreak. ‘Specialized training and preparedness’ was a protective factor, in regard to preventing and decreasing stress/anxiety levels among HCPs.

Therefore, when training was perceived as inadequate or insufficient by HCPs, they were more likely to experience symptoms of PTSD and burnout, which could have long-term ramifications. The ‘high-risk environments’ predictor depended upon the healthcare professional’s risk of exposure to infected patients. High risk of exposure to infected patients was strongly associated with symptoms of anxiety, stress, sleep problems, PTSD, alcohol consumption, and burnout (Stuijtzand et al., 2020).

The ‘job stress’ predictor depended upon whether the healthcare professional’s ability to do his/her job was compromised or not and if they were involuntarily or voluntarily deployed to treat infected patients. If they involuntarily cared for infected persons as opposed to voluntarily caring for them then they self-reported higher levels of anxiety and depression. The ‘perceptions of safety threat and risk’ predictor depended upon the feelings of trust the HCPs put into the equipment and infection control measures implemented by their workplace. If the HCPs believed in the precautionary procedures implemented by the workplace, then they held a decreased perception of personal risk. However, if they did not believe or trust in the precautionary measures implemented by their workplace then they held a high perception of personal risk (Stuijtzand et al., 2020).

Social predictors included organizational support, family/friends support, social rejection or isolation, and an impact on life. Organizational support and family/friends support are considered protective factors when at sufficient levels. However, insufficient or low levels of psychological support indicated poor mental health outcomes. Social rejection or isolation was also indicative of poor mental health outcomes. Additionally, healthcare professionals who experienced an impact on life, such as reduced contact with family due to the outbreak, were more likely to experience poor mental health outcomes (Stuijtzand et al., 2020).

Personal predictors included marital status, living situation, healthcare experience, age, and household income. Several studies indicated that an individual being single was predictive of them suffering from more symptoms of psychological distress, depression, and PTSD. Studies also indicated that those who lived in a dormitory or far away from their family were more likely to exhibit symptoms of PTSD than those who lived with their family. Additionally, having less healthcare work experience was indicative of elevated levels of psychological distress in HCPs exposed to infected persons. Being a healthcare professional of a younger age was also predictive of a HCP suffering from increased symptoms of anxiety, depression, and PTSD. Lastly, HCPs having a lower household income was indicative of them reporting elevated symptoms of PTSD (Stuijtzand et al., 2020).

Psychological predictors included resilience (hardiness), maladaptive coping, fatigue, having a negative emotional experience of the outbreak, and having a psychiatric disorder before the outbreak. Resilience (hardiness) was a protective factor in regard to mental health during an outbreak. Therefore, HCPs with higher resilience scores exhibited better mental health outcomes. Maladaptive coping was considered a risk factor for HCPs. Thus, high instances of maladaptive coping were indicative of increased symptoms of burnout and psychological stress in HCPs. In addition to this, physical and mental fatigue was indicative of poor mental health outcomes during an outbreak. Having a negative emotional experience/perception of the outbreak increased the likelihood of HCPs developing PTSD. Furthermore, an HCP was more likely to develop a new onset psychiatric disorder during an outbreak if they already had a psychiatric disorder before the outbreak (Stuijtzand et al., 2020).

Healthcare professionals are more likely to experience mental health problems during the coronavirus outbreak due to increased stress and burden. Therefore, this rapid review indicates

that widespread screening to identify HCPs in need of support is of crucial importance in regard to minimizing the negative impact COVID-19 will have on their overall mental health. Based on the evidence provided in this review, the healthcare professionals most in need of support during this time would be those having direct contact with infected patients, those who have been involuntarily deployed to work with infected patients, individuals with less healthcare work experience, individuals with a lower household income, those who are single, those who do not currently live with family, and individuals of a younger age. Support for these individuals could be provided in the form of educational campaigns, which would encourage HCPs to seek help for mental issues experienced during the pandemic. Additionally, support for these individuals could be provided in the form of psychoeducation workshops, psychological first aid workshops, and cognitive behavioral therapy group programs (Stuijzand et al., 2020).

## **Summary**

Overall, while no studies were found which directly observed the relationship between nursing students and mental health during the coronavirus pandemic, there were studies available which observed the relationship between other groups, such as students and healthcare workers, and their mental health during the pandemic. Also, there were several studies, which tried to determine the impact the pandemic has had on the general public's mental health. While the groups researched in these studies contained several differences, they all held the notion that most people's mental health was negatively affected by the pandemic (Kaligis et al., 2020; Javed et al., 2020; Ali Shah et al., 2020; Kendrick & Isaac, 2020). Therefore, interventions, such as easy access to mental health services as well as financial services, should be implemented in order to curb the negative effects the pandemic will have on people's mental health.

Additionally, those most vulnerable to mental health issues during this time, such as students and

healthcare workers, should have specific interventions available to them to help preserve their mental health during these times.

## **Methods**

This study was a non-experimental, analytic study using a mixed-methods survey. The setting of the study was a regional university in the southern region of the United States. The university has admitted a total of 161 students into its nursing program as of 2021. The researcher distributed an e-mail containing a cover letter, script, and a link to the online survey to all School of Nursing professors. These professors then distributed the email and its attachments to their respective student email lists. Students were allowed to complete the survey from the comfort of their own home, using their computer, smartphone, or some other device with Internet access.

## **Sampling**

The following criteria were used in defining eligibility to participate:

1. The participant must be currently enrolled in the university's nursing program.
2. The participant must volunteer and be willing to submit the online survey.

## **Protection of Human Rights**

The protocol for this study was submitted to the Institutional Review Board for the Protection of Human Participants at the participating university. However, the Institutional Review Board informed the researcher that their study did not require IRB review and instead sent them a determination letter (see Appendix A). The cover letter (see Appendix B) indicated the risks of participation in the study. The participants were informed that only the researcher

and a select few nursing faculty members would have access to the responses. Participants were assured that their responses to the survey would be kept on a password-protected computer. Participants were also informed that participation in the study was completely voluntary and withdrawal from the study could occur at any time without consequences.

To help ensure confidentiality, the researcher did not include questions asking for information, such as their IP address, name, or any other prompts which could identify the participants of the survey. Participants completed the survey from the privacy of their own electronic device. The researcher only had access to the responses at the conclusion of the allotted time frame.

### **Instrument for Data Collection**

The tool used for data collection was the Mental Health Among Nursing Students Amid the Coronavirus Pandemic Survey (see Appendix C) designed by the researcher, a baccalaureate prepared nursing student. The survey included the following ten questions used for demographic classification purposes: age, gender, race/ethnicity, their status as a nursing student at the university, the semester of nursing school they were in, their relationship status, their status as a member of the LGBTQ+ community, the number of offspring they have, and their employment status. Next, there were eight yes/no questions pertaining to the ways in which participants have communicated with family and friends during the pandemic, if participants have experienced difficulty in getting supplies during the pandemic, if participants have contracted COVID-19, if people close to the participants have contracted COVID-19, if people close to the participants have died from COVID-19, if participants have felt overwhelmed over the course of the pandemic, if participants feel adequately supported by the university, and if participants have experienced financial loss related to the pandemic.

Also, included in the survey were seven ‘increased, decreased, and no change’ questions, based on research, pertaining to the participants, eating habits, sleeping habits, alcohol consumption, stress/anxiety levels, social media consumption, sexual activity level, and exercise habits (Asiamah et al., 2020). Finally, the survey included the following seven open-ended questions:

- Do you suffer from any diagnosed mental health disorders?
- Do you suffer from a chronic illness?
- Have you experienced any academic challenges related to the pandemic?
- What resources offered/strategies used by the university or the School of Nursing are you aware of?
- Have you used any of the resources offered/strategies used by the university or the School of Nursing to help students during the pandemic?
- Is there anything else the university could do to help its students during this time?
- Is there anything that the School of Nursing could do to help its nursing students during this time?

The questions used in the study were chosen to identify risk factors for developing mental health disorders during the pandemic, such as increased sedentary behavior, any change in eating habits, and increased alcohol consumption (Asiamah et al., 2020). These questions were a reflection of questions used in studies also pertaining to the impact of COVID-19 on mental health. However, these studies consisted of various demographics, none of which specifically pertained to nursing school students, making it more difficult to accurately compare the results of this study with others. For statistical analysis, the mean and standard deviation of continuous

data were reported. Categorical data was reported in the form of percentages and overriding themes were identified for the short response questions.

### **Data Collection Procedures**

Potential participants received an invitation email (see Appendix D), cover letter, and link to the online survey. The invitation email instructed participants to follow the attached link and fill out the survey to the best of their ability. Participants were assured confidentiality and that withdrawal from the study would not result in any consequences. The cover letter informed participants that submitting the survey implied consent. Data collection required approximately 15 minutes of each participant's time. The survey was available for submission for 7 days. At the conclusion of the 7-day period, the researcher accessed the raw data at a private location. Only the researcher and a select few nursing faculty members were allowed to review the raw data.

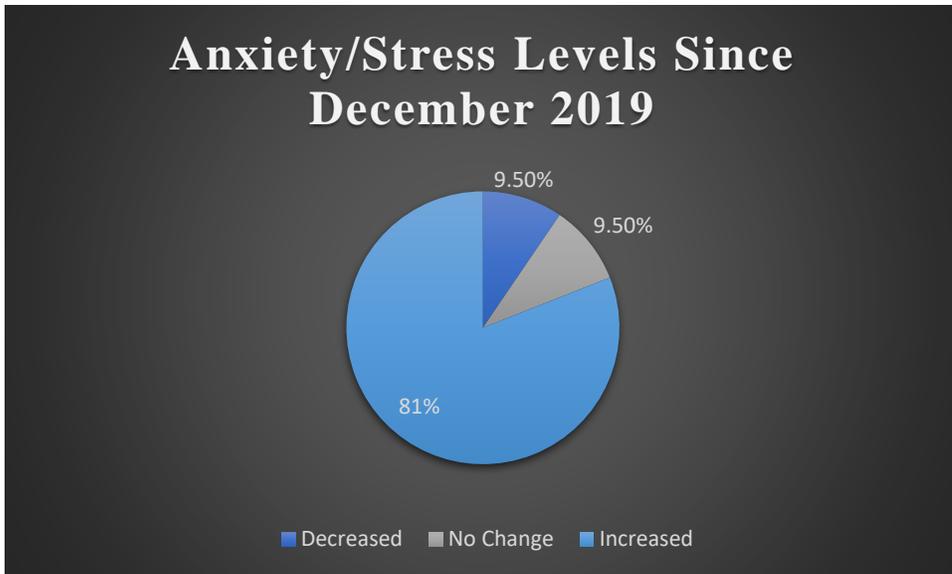
### **Results**

Of the 21 participants (N = 21), 1 (4.8%) was 19 years of age, 5 (23.8%) were 20 years of age, 8 (38.1%) were 21 years of age, 2 (9.5%) were 22 years of age, 4 (19%) were 23 years of age, 0 were 24 years of age, 0 were 25 years of age, and 1 (4.8%) was 26 years of age. The mean age was 21 years with a standard deviation of 1.53 years. Of the participants, 19 (90.5%) were female, 1 (4.8%) was male, and 1 (4.8%) was other. Of the participants, 21 (100%) identified as White/Caucasian, 0 identified as Black or African American, 0 identified as Hispanic or Latino, 0 identified as Asian, 0 identified as American Indian or Alaska Native, 0 identified as Native Hawaiian or Other Pacific Islander.

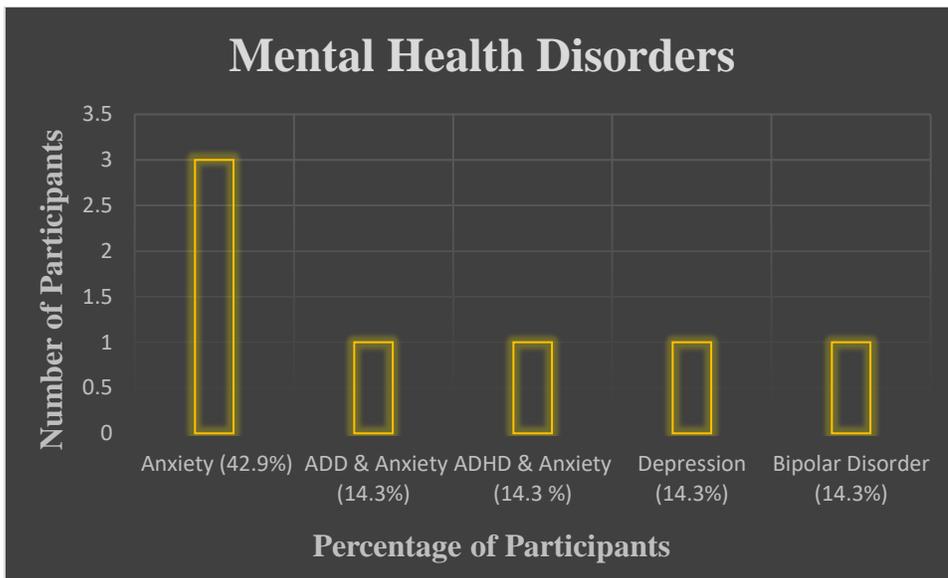
When asked if they were a student within the School of Nursing, 21 (100%) responded yes and 0 responded no. When asked what semester of the nursing program they were in, 6

(28.6%) responded the 1<sup>st</sup> semester, 5 (23.8%) responded the 2<sup>nd</sup> semester, 0 responded the 3<sup>rd</sup> semester, 6 (28.6%) responded the 4<sup>th</sup> semester, and 4 (19%) responded the 5<sup>th</sup> semester. When asked about their relationship status, 10 (47.6%) responded as being single, 10 (47.6%) responded as being in a relationship, 1 (4.8%) responded as being married, and 0 responded as being divorced. When asked if they identified as a member of the LGBTQ+ community, 18 (85.7%) responded no and 3 (14.3%) responded yes. When asked about the number of offspring they have, 21 (100%) responded with 0 offspring, 0 responded with 1 offspring, 0 responded with 2 offspring, and 0 responded with 3 or more offspring. When asked if they were currently employed, 15 (71.4%) responded yes and 6 (28.6%) responded no. When asked, in the follow-up question, whether or not they worked in a healthcare related field, 8 (53.3%) responded no and 7 (46.7%) responded yes.

When asked if they would describe themselves as ‘feeling overwhelmed’ since the beginning of the pandemic, in December 2019, 18 (85.7%) responded yes and 3 (14.3%) responded no. When asked to describe their anxiety/stress levels since December 2019, 17 (81%) reported ‘increased’, 2 (9.5%) reported ‘decreased’, and 2 (9.5%) reported ‘no change’ (see figure 1). When asked if they suffered from any mental health disorders, 6 (28.6%) responded no, 8 (38.1%) preferred not to respond, and 7 (33.3%) responded yes and then went on to name the specific disorder(s) (see figure 2). When asked if they suffer from a chronic illness, 8 (38.1%) responded no, 11 (52.4%) preferred not to respond, and 2 (9.5%) responded yes and then went on to name the specific illness(es).



**Figure 1:** Response to the question, “How would you describe your anxiety/stress levels since December 2019?”



**Figure 2:** Response to the question, “Do you suffer from any diagnosed mental health disorders? If yes, please name the disorder.” Of the 7 (33.3%) participants who responded ‘yes’ to the question, these were the mental health disorders that they indicated suffering from.

When asked if they had been diagnosed with COVID-19, 17 (81%) responded no and 4 (19%) responded yes. When asked if anyone close to them, such as a friend or family member,

had been diagnosed with COVID-19, 19 (90.5%) responded yes and 2 (9.5%) responded no. When asked if anyone close to them had died from COVID-19, 20 (95.2%) responded no and 1 (4.8%) responded yes. When asked if they had experienced financial loss related to the pandemic, 11 (52.4%) responded yes and 10 (47.6%) responded no. When asked to describe their sleeping habits since December 2019, 12 (57.1%) reported 'decreased', 6 (28.6%) reported 'no change', and 3 (14.3%) reported 'increased'. When asked to describe their eating patterns since December 2019, 14 (66.7%) reported 'increased', 4 (19%) reported 'decreased', and 3 (14.3%) reported 'no change'. When asked to describe their exercise habits since December 2019, 12 (57.1%) reported 'decreased', 5 (23.8%) reported 'increased', and 4 (19%) reported 'no change'.

When asked to describe their consumption of alcohol since December 2019, 9 (42.9%) reported 'increased', 7 (33.3%) reported 'no change', and 5 (23.8%) reported 'decreased'. When asked to describe their sexual activity since December 2019, 10 (47.6%) reported 'no change', 6 (28.6%) reported 'decreased', and 5 (23.8%) reported 'increased'. When asked to describe their social media consumption since December 2019, 14 (66.7%) reported 'increased', 4 (19%) reported 'no change', and 3 (14.3%) reported 'decreased'. When asked if they had experienced any academic changes related to the pandemic, 2 (9.5%) responded no, 7 (33.3%) responded yes and then went on to describe how those changes affected their ability to succeed, and 12 (57.1%) preferred not to respond. When asked if they had experienced any difficulty in obtaining necessities, such as food, water, medications, masks, hygiene items, and/or cleaning supplies since the beginning of the pandemic, in December 2019, 13 (61.9%) responded no and 8 (38.1%) responded yes. When asked if they had used long distance communication methods which allow them to see the person they are speaking with, such as FaceTime or Zoom, in order to

communicate with family and/or friends since the start of the pandemic, 19 (90.5%) responded yes and 2 (9.5%) responded no.

When asked if they believed that their university had provided adequate support to its students during this difficult time, 16 (76.2%) responded yes and 5 (23.8%) responded no. When asked about what resources offered/strategies used by their university or the School of Nursing were they aware of, 1 (4.8%) responded none, 7 (33.3%) preferred not to respond, and 13 (61.9%) responded with various programs and institutions, such as the Covid clinic, the counseling center, tutoring services, and the creation of various grants and scholarships. When asked if they had used any of the resources offered/strategies used by their university or the School of Nursing to help students during the pandemic, 2 (9.5%) responded no, 10 (47.6%) preferred not to respond, and 9 (42.9%) responded yes and then went on to name which resources and strategies they used. When asked if there was anything else that their university could do to help its students during this time, 2 (9.5%) responded no, 8 (38.1%) responded yes and then went on to name ways in which their university could help more, and 11 (52.4%) preferred not to respond. Lastly, when asked if there was anything that the School of Nursing could do to help its students during this time, 1 (4.8%) responded no, 7 (33.3%) responded yes and then went on to provide examples of ways the School of Nursing could help during this time, and 13 (61.9%) preferred not to respond.

## **Discussion**

According to the results of this study, the pandemic triggered an overall increase in the anxiety/stress levels of those who participated, with 17 (81%) describing their anxiety/stress levels as being increased since the beginning of the coronavirus pandemic in December 2019. Additionally, 18 (85.7%) participants described themselves as ‘feeling overwhelmed’ since the

beginning of the pandemic, in December 2019. Therefore, this study suggests that the current pandemic has triggered an overall decline in mental health within the nursing students who participated in the study, which would correlate with the findings of other studies concerning the effect of the coronavirus pandemic on mental health (Kaligis et al., 2020; Javed et al., 2020; Ali Shah et al., 2020). Also, in accordance with other studies, are the reported changes in sleeping habits, eating patterns, exercise habits, and social media consumption, seen within the sample, throughout the course of the pandemic (Asiamah et al., 2020).

These reported changes include the following: 12 (57.1%) participants indicating a decrease in sleeping habits and 3 (14.3%) participants indicating an increase in sleeping habits since December 2019, 14 (66.7%) participants indicating an increase in eating patterns and 4 (19%) participants indicating a decrease in eating patterns since December 2019, 12 (57.1%) participants indicating a decrease in exercise habits since December 2019, and 14 (66.7%) indicating an increase in social media consumption since December 2019. According to previous studies, an increase or decrease in sleeping habits is an indicator of stress and a risk factor for developing mental health disorders (Kaligis et al., 2020). Therefore, 71.4% of the sample, reporting a decrease or increase in sleeping habits suggests that the participants experienced a decline in their mental health since the start of the pandemic, in December 2019.

Also, according to previous studies, an increase or decrease in eating patterns is an indicator of stress as well as a risk factor for developing mental health disorders (Asiamah et al., 2020). Thus, 85.7% of participants reporting a decrease or increase in eating patterns since December 2019, suggests that participants experienced a decline in their mental health related to the current pandemic. Additionally, 57.1% of participants reported a decrease in exercise habits since December 2019. This data further suggests that the participants experienced a decline in

their mental health related to the pandemic due to previous studies suggesting that an increase in sedentary behavior or a decrease in physical activity is a manifestation of stress (Asiamah et al., 2020). Lastly, 66.7% of participants reporting an increase in social media consumption since the beginning of the pandemic, also suggests that participants experienced an overall decrease in their mental health. This is due to previous studies observing a correlation between increased social media consumption and decreased mental health status among individuals (Kecojevic et al., 2020).

While the previously mentioned changes in behavior are in accordance with previous studies on the effects of COVID-19 on overall mental health, there were some changes in behavior, observed in the study, which were not in accordance with these studies (Asiamah et al., 2020). These changes include the following: 12 (57.1%) participants indicating a decrease or no change in alcohol consumption since December 2019 compared to 9 (42.9%) participants indicating an increase in alcohol consumption since December 2019; also, 6 (28.6%) participants indicating a decrease in sexual activity since December 2019 compared to 5 (23.8%) participants indicating an increase in sexual activity and 10 (47.6%) participants indicating no change in sexual activity since December 2019. According to previous studies, a decrease or no change in alcohol consumption indicates an increase in overall mental health (Asiamah et al., 2020). Therefore, 57.1% of participants reporting a decrease or no change in alcohol consumption compared to 42.9% of participants reporting an increase in alcohol consumption suggests that the participants experienced an overall increase in mental health since the start of the pandemic. This data, therefore, contradicts the notion that the current pandemic has led to an overall decline in the mental health of the nursing students at this university. Consequently, this also contradicts

the notion that the pandemic has had an overall negative impact on the mental health of individuals, as indicated by the vast majority of studies on this matter.

Additionally, previous studies concerning COVID-19 and its impact on mental health suggests that an increase in sexual activity indicates an overall increase in mental health and, conversely, a decrease in sexual activity indicates an overall decrease in mental health (Asiamah et al., 2020). Therefore, while 28.6% of survey participants reporting a decrease in sexual activity versus 23.8% of survey participants reporting an increase in sexual activity could possibly indicate an overall decrease in mental health, the values are too close in number to come to that conclusion safely. In addition to this, 47.6% of survey participants reporting no change in sexual activity further confounds whether or not the data indicates an overall decrease or increase in the mental health of the nursing students. Therefore, this piece of the data is inconclusive in providing an indication for the overall mental health of nursing students at this university. As a consequence, this data does not adhere to the notion of the pandemic having an overwhelmingly negative impact on one's mental health, which has been suggested by past studies.

Although not all of the previously mentioned data adheres to the observation that the pandemic has had an overtly negative impact on the mental health of individuals, the majority of data does adhere to this observation. Therefore, it can tentatively be said that the results show that the sample experienced an overall decline in mental health and, therefore, it could be correlated that the nursing students at the university experienced an overall decline in their mental health. In addition to this, there were other risk factors for decreased mental health, which were observed in the data, such as 19 (90.5%) participants being female, 19 (90.5%) participants having someone close to them be diagnosed with COVID-19, and 11 (52.4%) participants experiencing financial loss related to the pandemic. Past studies indicate that being a female

increases one's chances of experiencing declines in mental health, especially during times of great stress such as living through a global pandemic (Kecojevic et al., 2020). This may be due to the marked differences between males and females in their expression of attitudes and emotions, thus resulting in females being more prone to experiencing stress in relation to life experiences. Therefore, 90.5% of participants being female increases the sample's overall risk for experiencing a decline in their mental health during this time.

Individuals having loved ones contract a deadly virus, such as COVID-19, could undoubtedly cause someone to experience increased feelings of worry and distress (Simon et al., 2020). Therefore, 90.5% of participants reporting someone close to them contracting COVID-19 would put them at increased risk of experiencing negative mental health consequences. Lastly, experiencing financial loss is often times a very stressful and detrimental experience in regard to a person's mental wellbeing (Kecojevic et al., 2020). Thus, 52.4% of participants experiencing a financial loss related to the current pandemic would undoubtedly increase their risk of experiencing a decline in their mental wellbeing.

Factors which also have an impact on the mental health of nursing students during this pandemic include the following: age, race/ethnicity, relationship status, number of offspring, which semester of the nursing program they are in, their status as a member of the LGBTQ+ community, their employment status, their field of employment, if they suffer from any mental health disorders, if they suffer from any chronic illnesses, if they have contracted COVID-19, if anyone close to them has died from COVID-19, their ease in obtaining necessities, their use of long distance communication methods with family and friends, and whether or not they believe their university has provided them with adequate support during this time. The age range of the sample is 19-26. While past studies indicate that older people are more capable of dealing with

stress than their younger counterparts, the age distributions within these studies were much larger than the one for this sample (Naser et al., 2020). Therefore, concluding that the younger participants, those 21 and younger (66.7%), were more vulnerable to declines in mental health than the older participants, those 22 and older (33.3%), would be inaccurate. The race and ethnic makeup of this sample population is 100% white. Previous studies concerning the coronavirus pandemic suggest that those who are apart of minority groups, experienced greater rates of mental decline, during the pandemic, than their white counterparts (Browning et al., 2020). However, this information cannot be applied to this sample due to its lack of diversity.

According to the data, 10 (47.6%) participants reported being single while 10 (47.6%) participants reported being in a relationship and 1 (4.8%) reported being married. Taking into account previous studies, this would suggest participants who reported being single were more prone to declines in mental health than their counterparts (Naser et al., 2020). This is due to people in relationships having more access to social support, in the form of their partner, than those who are single. Therefore, it can be hypothesized that participants who reported being in a relationship or married (52.4%) would be less at risk for experiencing a decline in their mental health than those who reported being single (47.6%) during the pandemic. Twenty-one (100%) of participants reported having 0 offspring or children. Previous data indicates that those who have children are more prone to declines in mental health, during the pandemic, than those who do not have children (Russell et al., 2020). This is due to the stress of raising a child, during such uncertain times, putting a considerable strain on a parent's mental wellbeing, thus resulting in declines in their mental health. Unfortunately, this information cannot be applied to the sample due to its lack of diversity.

Six (28.6%) survey participants reported being in the first semester of the university's nursing program, 5 (23.8%) survey participants reported being in the second semester of the university's nursing program, 6 (28.6%) survey participants reported being in the fourth semester of the university's nursing program, and 4 (19%) survey participants reported being in the fifth semester of the university's nursing program. There is no specific data to determine whether the semester they were in would have an impact on their overall mental health. However, previous studies pertaining to the mental wellbeing of healthcare workers indicated that healthcare workers who had more experience were better equipped to deal with stressful situations related to the current pandemic than their newcomer counterparts (Stuijzand et al., 2020). Therefore, it could be hypothesized that nursing students in their first and second semesters of the program (52.4%) were more vulnerable to pandemic related stressors and declines in mental health than their more experienced peers, within their fourth and fifth semesters (47.6%) of the program.

According to the survey data, 18 (85.7%) participants reported not being members of the LGBTQ+ community while 3 (14.3%) participants reported identifying as members of the LGBTQ+ community. Taking into consideration pandemic related research, it could be hypothesized that members of the LGBTQ+ community (85.7%) would be more vulnerable to declines in mental health than their non-LGBTQ+ counterparts (14.3%) (Woolston, 2020). This is due to previous studies indicating that those who identified as members of the LGBTQ+ community often received less social support from friends and family members. Thus, resulting in them being increasingly vulnerable to declines in their mental health when compared with those who were not LGBTQ+.

Fifteen (71.4%) participants indicated being currently employed while 6 (28.6%) participants indicated being currently unemployed. Additionally, 53.3% of participants who

indicated being employed were not employed in a healthcare related field while 46.7% of those participants were employed in a healthcare related field. Previous studies suggest that unemployed students are more susceptible to stress and decreases in mental health than employed students (Kecojevic et al., 2020). In addition to this, previous studies also suggest that those who work in healthcare related fields are more susceptible to decreases in mental health than those who are unemployed and those who do not work in healthcare related fields (Naser et al., 2020). Therefore, individuals who indicated being unemployed (28.6%) were more mentally vulnerable than those who indicated being employed in non-healthcare related fields (53.3%). This could be the result of, many undergraduate students relying on their jobs to provide for themselves throughout their studies, thus making the prospect of unemployment a significant cause of stress for most students. However, individuals who indicated working in healthcare related fields (46.7%) were more mentally vulnerable than those who did not work in healthcare related fields (53.3%) and those who were unemployed (28.6%). This is likely due to those working in healthcare related fields being more likely to come in contact with persons infected with coronavirus, thus increasing their anxiety and stress levels and making them more susceptible to mental health decline.

When asked whether or not they suffered from any mental health disorders, 8 (38.1%) participants preferred not to respond while 7 (33.3%) participants indicated suffering from one or more mental health disorders and 6 (28.6%) participants indicated suffering from no mental health disorders. According to previous studies, those who indicated suffering from one or more mental health disorders were more mentally vulnerable than those who indicated not suffering from any mental health disorders (Kaligis et al., 2020). This is the result of those suffering from mental health disorders already being considered mentally vulnerable when compared to those

who do not suffer from any mental health disorders. Therefore, those who indicated suffering from one or more mental health disorders (33.3%) were more likely to experience a decline in their overall mental health during the pandemic than those who indicated not suffering from any mental health disorders (28.6%).

When asked whether or not they suffered from any chronic illnesses, 11 (52.4%) participants preferred not to respond while 8 (38.1%) participants reported not suffering from any chronic illnesses and 2 (9.5%) participants reported suffering from chronic illnesses. In accordance with previous studies, those who reported suffering from chronic illnesses would be considered more mentally vulnerable than those who reported not suffering from any chronic illnesses (Kaligis et al., 2020). This is due to chronic illnesses often causing increased stress and anxiety levels within those afflicted, thus placing them at an increased risk for experiencing mental decline. Therefore, those who reported suffering from a chronic illness (9.5%) were more likely to experience an overall decline in their mental health, during the pandemic, than those who did not report suffering from a chronic illness (38.1%).

According to the survey results, 17 (81%) participants reported never contracting COVID-19 while 4 (19%) participants did report contracting COVID-19. Based on previous studies concerning the current pandemic and mental health, those who reported contracting COVID-19 would be at an increased risk for experiencing mental distress when compared with those who did not contract COVID-19 (Simon et al., 2020). This is the result of, those who have contracted COVID-19 often having an increased fear of infection and thus, elevated stress levels when compared with those who have not contracted the virus. Therefore, those who have contracted COVID-19 (19%) are more likely to experience mental decline during the pandemic than those who have not contracted COVID-19 (81%).

Also, when asked if anyone close to them had died from COVID-19, 20 (92.5%) participants reported not losing anyone close to them to the virus while 1 (4.8%) participant did report losing someone close to them to the virus. In accordance with previous studies, those who reported losing loved ones to the virus were predisposed to experiencing mental decline due to the loss of a loved one often causing one to undergo great mental anguish (Simon et al., 2020). Thus, the participant who reported losing someone to the virus (4.8%) is more likely to experience an overall decrease in their mental health, during the pandemic, than those who did not report losing a loved one to the virus (92.5%).

When asked if they had experienced any difficulty in obtaining necessities, such as food, water, medications, hygiene items, and/or cleaning supplies since the beginning of the pandemic, 13 (61.9%) participants reported not experiencing difficulty in obtaining these items while 8 (38.1%) participants did report experiencing difficulty in obtaining these items. Previous research indicates that those who experienced difficulty in obtaining supplies during the pandemic often had increased anxiety and stress levels related to such difficulties, thus making them more vulnerable to mental decline (Kecojevic et al., 2020). Therefore, those who reported difficulty in obtaining necessities (38.1%) were more likely to experience a decline in their mental health during the pandemic than those who did not report difficulty in obtaining necessities (61.9%).

When asked if they had used long distance communication methods which allow you to see the person you are speaking with, such as FaceTime or Zoom, in order to communicate with family or friends since the beginning of the pandemic, 19 (90.5%) participants indicated yes while 2 (9.5%) participants indicated no. In accordance with previously done research, chatting over video creates stronger bonds with others and better mitigates feelings of isolation than

audio-only or messaging options (Lindsay et al., 2020). Therefore, chatting over video and/or fostering visual connections with friends and family is imperative during times of increased isolation, such as the current pandemic, and those who engage in such practices are more likely to feel a close connection with loved ones and thus, be less susceptible to vulnerabilities in their mental health. In other words, according to past research, individuals who reported speaking with their loved ones via video formats (90.5%), such as FaceTime or Zoom, felt better connected with and supported by their family and friends (Lindsay et al., 2020). Thus, making them less likely to experience a decrease in their mental health, throughout the pandemic, than those who did not report speaking with their loved ones via video formats (9.5%).

When asked if they felt like their university had provided them with adequate support throughout the pandemic, 16 (76.2%) participants responded yes while 5 (23.8%) participants responded no. This is an important factor in determining their overall mental health due to an individual's perception of support being a big indicator of their mental health (Elmer et al., 2020). For instance, previous studies indicated that those who reported receiving adequate support from their friends and family, schools, and workplaces were less likely to experience declines in mental health than those who did not report receiving adequate support from these entities (Elmer et al., 2020). Thus, it can be hypothesized that those who indicated receiving adequate support from their university (76.2%) were less likely to experience negative mental health consequences, during the pandemic, than those who did not indicate receiving adequate support from their university (23.8%).

Lastly, when asked if they had experienced any academic changes related to the pandemic and how these changes had affected their ability to succeed, 12 (57.1%) participants preferred not to respond while 2 (9.5%) participants reported not experiencing any academic

changes, and 7 (33.3%) participants reported experiencing academic changes and then went on to describe how these changes had affected their ability to succeed. According to those who reported experiencing academic changes related to the pandemic (33.3%), these changes included: not studying in groups as often as they did pre-pandemic, their grades dropping, and them experiencing increased anxiety related to attending in-person classes. These academic changes affected their ability to succeed by making them feel less motivated to complete tasks, prompting them to often procrastinate and their attention span being severely decreased, making it hard for them to sit through class lectures. In accordance with previous studies, those who indicated experiencing academic changes related to the pandemic were more likely to experience increased anxiety and stress levels (Keckojevic et al., 2020). Thus, participants who indicated experiencing academic changes related to the pandemic (33.3%) were more likely to undergo declines in their mental health than participants who did not indicate experiencing academic changes related to the pandemic (9.5%).

### **Limitations and Recommendations**

Limitations to this study involved wording and layout of the survey. For example, the two survey questions reading, “Do you suffer from any diagnosed mental health disorders? If yes, please name the disorder” and “Do you suffer from a chronic illness? If yes, please name the illness” were unclear and should have included “If no, please write no”. This would have made it clear to participants that they were supposed to respond to the question even if their response was no, thus making the results of these questions clearer to the researcher. Also, the questions reading, “How would you describe your consumption of alcohol since December 2019?” and “How would you describe your sexual activity level since December 2019?” should have included the options “I do not drink” and “I am not sexually active”. This would have given

the researcher more specific information in regard to the participant's drinking and sexual activity, thus, adding more context to their responses and improving the researcher's interpretation of the data.

Another limitation to this study was the poor response rate to the survey. Only 21 nursing students responded to the survey out of 161 students. Due to the small size of this sample, it is very unlikely that it is an accurate representation of the total nursing student population at this university. Therefore, for future studies the researcher should try other ways of distributing the survey and if they do utilize an online format again in the future then they should allot the participants more than a 7-day time period to complete it. Also, to further incentivize participation in future surveys the researcher should coordinate rewards to give students who fill out the survey, with their teachers. An additional limitation to the study was the fact that the survey was self-reported. Therefore, it was assumed that all of the questions were answered honestly, however, honesty cannot be guaranteed.

## **Implications**

The information discovered in this study is useful as far as adding on to research about the effects of the current pandemic on mental health. The information discovered in this study is also useful as far as helping to identify nursing students as a subset of an already vulnerable population, which is students. Previous research concerning the pandemic, has indicated that special care must be taken to ensure that vulnerable populations will not experience a massive decline in their overall mental health during the pandemic (Elmer et al., 2020). Therefore, the information discovered in this study is also useful in suggesting that the university which participated in this study should continue to provide adequate support to its students as a

whole, but especially to its nursing student population, if it is to avoid seeing a decline in the mental health of its students during this challenging time.

Past studies have indicated that support in the form of increased financial services, increased access to mental health services, and increased educational services are needed if universities are to avoid seeing major mental health consequences, such as the increased development of mental health disorders, within their student population (Elmer et al., 2020). Therefore, the responses of nursing students to the following questions should be implemented by the university, if they have not already been implemented: what resources offered/strategies used by the university or the School of Nursing are you aware of, have you used any of the resources offered/strategies used by the university or the School of Nursing to help students during the pandemic, is there anything else that the university could do to help its students during this time? If yes, please provide some examples of things that could be done to help, and is there anything that the School of Nursing could do to help its nursing students during this time? If yes, please provide some examples of things that could be done to help.

When looking at the responses of the university's nursing students to the question, "What resources/strategies used by the university or the School of Nursing are you aware of?", many of them included resources, such as Student Disability Services (SDS), counseling services, tutoring services, access to COVID-19 testing clinics, access to COVID-19 vaccination clinics, access to free face masks and hand sanitizer, the offering of grants to students, and making Zoom an option for attending class. When looking at the responses of the university's nursing students to the question, "Have you used any of the resources offered/strategies used by the university or the School of Nursing to help students during the pandemic?", many of them responded with their use of the COVID-19 vaccination clinics,

their use of Zoom to attend class, their use of grant money to provide for themselves, and their utilization of various other healthcare services. Therefore, the responses of the nursing students to these questions indicate that the school has already taken measures to help mitigate the negative mental health consequences associated with living through a pandemic.

However, the nursing students' responses to the following questions indicate that the university and its School of Nursing could help its students in other ways as well, "Is there anything else that the university could do to help its students during this time? If yes, please provide some examples of things that could be done to help" and "Is there anything that the School of Nursing could do to help its nursing students during this time? If yes, please provide some examples of things that could be done to help". The responses to these questions included suggestions, such as giving students more days off, which was prompted by the university's elimination of Spring Break due to COVID concerns, introducing pet therapy to students, offering extra grants and scholarships to students, spreading out exams and assignments more evenly across the semester, professors being more understanding of the stress students are under at this time, providing more hands-on and group learning experiences in the classroom, and changing the nursing program GPA scale temporarily so that it matches the rest of the university, which was prompted by the School of Nursing having higher GPA requirements than the other programs on campus. Therefore, in addition to the resources already being offered and the strategies already being utilized by students, the university still needs to provide support, preferably in the form of these suggestions, to its students if it is to further mitigate the negative mental health consequences of living through a pandemic.

## **Conclusion**

In conclusion, not many studies have been conducted on the effects of the coronavirus pandemic on the mental health of individuals. Therefore, the research conducted in this study will help researchers gain a better understanding of the effects of the current pandemic on the mental health of individuals as a whole. Vulnerable populations, such as students and healthcare workers, were identified in previous studies concerning the effects of the pandemic on mental health. However, the researcher distributed a survey to a subset of a vulnerable population, nursing students, and was able to find a correlation between declines in their mental health and the current pandemic via indicators of stress and risk factors for developing mental health disorders, such as changes in their eating, sleeping, and exercise patterns (Asiamah et al., 2020).

In addition to, finding a correlation between declines in the mental health of the studied population and the current pandemic, it was also suggested that in order to mitigate the decline in mental health seen within vulnerable populations throughout the pandemic, it is important that institutions, such as workplaces, universities, and governments provide adequate support for these individuals. This support can be provided in the form of increased access to mental health services, increased access to education services, increased access to financial services, and increased access to supplies, such as face masks and hand sanitizer. Thus, when examining the mental health of nursing students at the participating university, it is important that the university continues to provide adequate support to all its students, but especially to its vulnerable population of nursing students, in the form of easy access to counseling services, extra access to financial resources, increased access to tutoring services, and easy access to COVID-19 resources, such as vaccination clinics and COVID-19 testing sites. It can be suggested, that if adequate support is not provided then institutions, such as the government,

universities, and workplaces will continue to see negative mental health consequences for individuals who are apart of these vulnerable populations. In other words, if the university is to mitigate the negative mental health consequences correlated with the current pandemic, that were seen within the study, then it should continue to provide adequate support to its students during this difficult time.

## References

- Asiamah, N., Opuni, F. F., Mends-Brew, E., Mensah, S. M., Mensah, H. K., & Quansah, F. (2020). Short-term changes in behaviors resulting from COVID-19-related social isolation and their influences on mental health in Ghana. *Community Mental Health Journal*, 57, 79–92. <https://doi.org/10.1007/s10597-020-00722-4>
- Banerjee, D., Vaishnav M., Sathyanarayana, T. S., Raju, M. S. V. K., Dalal, P. K., Javed, A., Saha, G., Mishra, K. K., Kumar, V., & Jagiwala, M. P. (2020). Impact of the COVID-19 pandemic on psychosocial health and well-being in South-Asian (World Psychiatric Association zone 16) countries: A systematic and advocacy review from the Indian Psychiatric Society. *Indian Journal of Psychiatry*, 62(9), 343-353. [https://doi.org/10.4103/psychiatry.IndianJPsychiatry\\_1002\\_20](https://doi.org/10.4103/psychiatry.IndianJPsychiatry_1002_20)
- Browning, M. H. E. M, Larson, L. R., Sharaievska, I., Rigolon, A., Anirlin, O., Mullenbach, L., Cloutier, S., Vu, T. M., Thomsen, J., Reigner, N., Metcalf, E. C., D'Antonio, A., Helbich, M., Bratman, G. N., & Alvarez, H. O. (2021). Psychological impacts from COVID-19 among university students: Risk factors across seven states in the United States. *PLOS One*. <https://doi.org/10.1371/journal.pone.0245327>
- Elmer, T., Mepham, K., & Stadtfield, C. (2020). Students under lockdown: Comparisons of students' social networks and mental health before and during the COVID-19 crisis in Switzerland. *PLOS One*. <https://doi.org/10.1371/journal.pone.0236337>
- Feinstein, R. E., Kotara, S., Jones, B., Shanor, D., & Nemeroff, C. B. (2020). A health care workers mental health crisis line in the age of COVID-19. *Anxiety and Depression*

*Association of America*, 37(8), 822-826.

<https://doiorg.ezproxy.waterfield.murraystate.edu/10.1002/da.23073>

Javed, B., Sarwer, A., Soto, E. B., & Mashwani, Z. (2020). The coronavirus (COVID-19) pandemic's impact on mental health. *The International Journal of Health Planning and Management*, 35(5), 993-996.

<https://doiorg.ezproxy.waterfield.murraystate.edu/10.1002/hpm.3008>

Kaligis, F., Indraswari, M. T., & Ismail, R. I. (2020). Stress during COVID-19 pandemic: Mental health condition in Indonesia. *Medical Journal of Indonesia*, 29, 436-441.

<https://doi.org/10.13181/mji.bc.204640>

Keckojevic, A., Basch, C. H., Sullivan, M., & Davi, N. K. (2020). The impact of the COVID-19 epidemic on mental health of undergraduate students in New Jersey, cross-sectional study. *PLOS One*. <https://doi.org/10.1371/journal.pone.0239696>

Kendrick, K., & Isaac M. (2020). Mental health impact of COVID-19: Australian perspective. *Indian Journal of Psychiatry*, 62 (9), 373-376.

[http://dx.doi.org/10.4103/psychiatry/IndianJPsychiatry\\_853\\_20](http://dx.doi.org/10.4103/psychiatry/IndianJPsychiatry_853_20)

Lindsay, J. A., Hogan, J. B., Ecker, A. H., Day, S. C., Chen, P., & Helm, A. (2020). The importance of video visits in the time of COVID-19. *The Journal of Rural Health*, 37(1), 242-245. <https://doi-org.ezproxy.waterfield.murraystate.edu/10.1111/jrh.12480>

Merriam-Webster. (n.d.). Pandemic. In *Merriam-Webster.com dictionary*. Retrieved from

<https://www.merriam-webster.com/dictionary/pandemic>

- Naser, A. Y., Eman, Z. D., Al-Rousan, R., Alwafi, H., Alrawashdeh, H. M., Ghoul, I., Abidine, A., Bokhary, M. A., AL-Hadithi, H. T., Ali, D., Abuthawabeh, R., Abdelwahab, G. M., Alhartani, Y. J., Muhaisen, H. A., Dagash, A., & Alyami, H.S. (2020). Mental health status of the general population, healthcare professionals, and university students during 2019 coronavirus outbreak in Jordan: A cross-sectional study. *Brain and Behavior*, 10(8). <https://doi-org.ezproxy.waterfield.murraystate.edu/10.1002/brb3.1730>
- Russell, B.S, Hutchison, M., Tambling, R., Tomkunas, A. J., & Horton, A. L. (2020). Initial challenges of caregiving during COVID-19: Caregiver Burden, mental health, and the parent–child relationship. *Child Psychiatry & Human Development*, 51, 671–682. <http://dx.doi.org/10.1007/s10578-020-01037-x>
- Sediri, S., Zgueb, Y., Ouali, U., Bourgou, S., Jomli, R., & Nacef, F. (2020). Women’s mental health: Acute impact of COVID-19 pandemic on domestic violence. *Archives of Women's Mental Health*, 23, 749–756. <https://doi.org/10.1007/s00737-020-01082-4>
- Shah, S. M. A., Mohammad, D., Qureshi, M. F. H., Abbas, M. Z., & Aleem, S. (2020). Prevalence, psychological responses and associated correlates of depression, anxiety and stress in a global population, during the coronavirus disease (COVID-19) pandemic. *Community Mental Health Journal*, 57, 101–110. <https://doi.org/10.1007/s10597-020-00728-y>
- Shaukat, N., Ali, D. M., & Razzak, J. (2020). Physical and mental health impacts of COVID-19 on healthcare workers: A scoping review. *International Journal of Emergency Medicine*, 13, 40. <http://dx.doi.org/10.1186/s12245-020-00299-5>

- Shervington, D. O., & Richardson, L. (2020). Mental health framework: Coronavirus pandemic in post-Katrina New Orleans. *Journal of Injury and Violence Research*, 12(2), 191-197. <http://dx.doi.org/10.5249/jivr.v12i2.1538>
- Simon, N. M., Saxe, G. N., & Marmar, C. R. (2020). Mental health disorders related to COVID-19–related deaths. *The Journal of the American Medical Association*, 324(15), 1493-1494. <https://doi.org/10.1001/jama.2020.19632>
- Stujifzand, S., Deforges, C., Sandoz, V., Sajin, C. T., Jaques, C., Elmers, J., & Horsch, A. (2020). Psychological impact of an epidemic/ pandemic on the mental health of healthcare professionals: A rapid review. *BMC Public Health*, 20, 1230. <http://dx.doi.org/10.1186/s12889-020-09322-z>
- Suliman, K., Siddique, R., Li, H., Ali, A., Shereen, M. A., Bashir, N., & Xue, M. (2020). Impact of coronavirus outbreak on psychological health. *Journal of Global Health*, 10(1). <http://dx.doi.org/10.7189/jogh.10.010331>
- Woolston, C. (2020). Signs of depression and anxiety soar among US graduate students during pandemic. *Nature*, 585, 147-148. <https://doi.org/10.1038/d41586-020-02439-6>
- World Health Organization. (2021). “WHO Coronavirus (COVID) Dashboard.” Retrieved from [WHO Coronavirus \(COVID-19\) Dashboard | WHO Coronavirus \(COVID-19\) Dashboard With Vaccination Data](#)



**Institutional Review Board**

Appendix A

328 Wells Hall  
Murray, KY 42071-3318  
270-809-2916 • msu.ibr@murraystate.edu

**IRB Determination Letter**

**TO:** Jessica Naber, School of Nursing

**FROM:** Jonathan Baskin, IRB<sub>r</sub>

Handwritten initials "JB" in blue ink.

**DATE:** March 19, 2021

**RE:** Determination for IRB # 21-136

---

**Project Title:** *Mental Health Among Nursing Students Amid the Coronavirus Pandemic*

**Principal Investigator(s):** Cheydan Crump

**Determination:** Quality Improvement/Assessment - Activity is not research as defined in 45 CFR 46.102(l)

The Murray State University IRB has reviewed the information you supplied for the project named above. Based on that information, it has been determined that this project does not involve activities and/or subjects that would require IRB review and oversight. The IRB will keep your determination form on file for a period of 3 years.

Please note that there may be other Federal, State, or local laws and/or regulations that may apply to your project and any changes to the subjects, intent, or methodology of your project could change this determination. You are responsible for informing the IRB of any such changes so that an updated determination can be made. If you have any questions or require guidance, please contact the IRB Coordinator for assistance.

Thank you for providing information concerning your project.

*Opportunity  
afforded*

[murraystate.edu](http://murraystate.edu)

## Appendix B

### Cover Letter

**Invitation to Participate:** You are being invited to participate in a research study entitled *Mental Health Among Nursing Students Amid the Coronavirus Pandemic* that is being conducted by Cheydan Crump an undergraduate nursing student at Murray State University. I want to invite you to participate by filling out a questionnaire that will help me understand how much the pandemic has influenced your overall mental health. I am trying to obtain information from current School of Nursing students. Please answer the questions to the best of your ability without the use of external materials.

**Purpose & Participant Enrollment:** If you agree to participate, you will be asked to fill out a questionnaire about the specific ways in which the pandemic has affected your mental health. The survey is compiled of 32 survey questions and should take no more than 15 minutes to complete.

**Risks & Benefits:** There are no foreseeable risks to participating in this research. The direct benefits to you are minimal, but I do think the study will contribute to the overall knowledge there is on COVID-19, as far as its impact on mental health, at least as it pertains to students.

**Voluntary Participation:** Your participation in this study is completely voluntary. You have a right to refuse to participate without consequences or to discontinue your participation at any time without penalty. You may refuse to answer any specific questions at any time during the completion of the survey. Withdrawal or refusing to answer specific questions will not result in any consequences to you. If you agree to be a part of the research, but later change your mind, you may stop at any time.

**Data:** If you agree to participate, your responses will be anonymous. I will not collect any identifying information, such as your name. Should you choose to respond, I will keep your information confidential, such as your answers and returning email address, by storing all results in my personal password protected computer, which is only accessible to myself, the primary investigator. To help protect your confidentiality, the survey will not contain information that could personally identify you. Only I and a select few nursing faculty members will have access to the responses. The results of this study will be used for scholarly purposes only.

If you have any questions or concerns about the research study, please contact my faculty mentor, Dr. Jessica Naber, at [jnaber@murraystate.edu](mailto:jnaber@murraystate.edu).

Your completion and return of this questionnaire will indicate your voluntary consent for participation in this research study.

## Appendix C

### Mental Health Among Nursing Students Amid the Coronavirus Pandemic Survey

1. Age \_\_\_\_\_
2. Gender
  - a) Female
  - b) Male
  - c) Other
3. Race/Ethnicity
  - a) White/Caucasian
  - b) Black or African American
  - c) Hispanic or Latino
  - d) Asian
  - e) American Indian or Alaska Native
  - f) Native Hawaiian or Other Pacific Islander
  - g) Other
4. Are you a student in the School of Nursing at Murray State?
  - a) Yes
  - b) No
5. What semester of the program are you in?
  - a) 1
  - b) 2
  - c) 3
  - d) 4
  - e) 5
6. Relationship Status
  - a) Single
  - b) In a relationship
  - c) Married
  - d) Divorced
7. Would you describe yourself as a member of the LGBTQ+ community?
  - a) Yes
  - b) No
8. Number of Offspring

- a) 0
  - b) 1
  - c) 2
  - d) 3 or more
9. Are you currently employed?
- a) Yes
  - b) No
10. If currently employed, do you work in a healthcare related field?
- a) Yes
  - b) No
11. Would you describe yourself as 'feeling overwhelmed' since the beginning of the pandemic, in December 2019?
- a) Yes
  - b) No
12. How would you describe your anxiety/stress levels since December 2019?
- a) Increased
  - b) Decreased
  - c) No change
13. Do you suffer from any diagnosed mental health disorders?
- a) If yes, please name the disorder \_\_\_\_\_.
14. Do you suffer from a chronic illness?
- a) If yes, please name the illness \_\_\_\_\_.
15. Have you been diagnosed with COVID-19?
- a) Yes
  - b) No
16. Has anyone close to you, such as a friend or family member, been diagnosed with COVID-19?
- a) Yes
  - b) No
17. Has anyone close to you died from COVID-19?
- a) Yes
  - b) No

18. Have you experienced financial loss related to the pandemic, such as a cut in wages, loss of scholarships, or loss of a job?
- a) Yes
  - b) No
19. How would you describe your sleeping habits since December 2019?
- a) Increased
  - b) Decreased
  - c) No change
20. How would you describe your eating patterns since December 2019?
- a) Increased
  - b) Decreased
  - c) No change
21. How would you describe your exercise habits since December 2019?
- a) Increased
  - b) Decreased
  - c) No change
22. How would you describe your consumption of alcohol since December 2019?
- a) Increased
  - b) Decreased
  - c) No change
23. How would you describe your sexual activity level since December 2019?
- a) Increased
  - b) Decreased
  - c) No change
24. How would you describe your social media consumption since December 2019?
- a) Increased
  - b) Decreased
  - c) No change
25. Have you experienced any academic changes related to the pandemic?
- a) If yes, how would you describe how those changes have affected your ability to succeed? \_\_\_\_\_
26. Have you experienced difficulty in obtaining necessities, such as food, water, medications, masks, hygiene items, and/or cleaning supplies since the beginning of the pandemic, in December 2019?
- a) Yes

b) No

27. Have you used long distance communication methods that allow you to see the person you are speaking with, such as FaceTime or Zoom, in order to communicate with family and/or friends since the start of the pandemic?

a) Yes

b) No

28. Do you believe Murray State University has provided adequate support to its students during this difficult time?

a) Yes

b) No

29. What resources offered/strategies used by MSU or SON are you aware of?

\_\_\_\_\_.

30. Have you used any of the resources offered/strategies used by MSU or SON to help students during the pandemic? \_\_\_\_\_.

31. Is there anything else Murray State University could do to help its students during this time?

a) If yes, please provide some examples of things that could be done to help\_\_\_\_\_.

32. Is there anything that MSU SON could do to help its nursing students during this time?

a) If yes, please provide some examples of things that could be done to help\_\_\_\_\_.

## Appendix D

### Invitation Email

Dear School of Nursing Faculty,

My name is Cheydan Crump, and I am currently working on my senior honors thesis. In order to conduct the necessary research for my thesis, I will need your nursing students to complete a survey via Google Forms. The survey will be used to determine what kind of effect the pandemic has had on the mental health of nursing students at Murray State University. You should have already received an invitation from me to edit the form. This is just so you know what kind of questions your students will be asked in the form, so please do NOT actually edit it. If possible, please send the email with the attached link below to all of your current nursing students no later than Monday morning. I deeply apologize for the late notice and your help in distributing this survey is very much appreciated.

Sincerely,

Cheydan Crump

Please send the following email and attached link to all of your nursing students:

Hello,

My name is Cheydan Crump. I am an undergraduate nursing student at Murray State University, and I am currently conducting a research study for my honors thesis. In this research study, I will be focusing on and determining the effect the current pandemic has had on the overall mental health of nursing school students. I will try to determine whether nursing students have dealt with an overall decline or improvement in their mental health through their voluntary participation in a survey. The survey will contain questions pertaining to their exposure to COVID-19, changes in health behaviors, and their access to available resources during the pandemic. Additionally, there will be open-ended questions about Murray State University and the School of Nursing's support of students during the pandemic. Please follow the attached link in this email and fill out the survey to the best of your ability. The survey will open on March 29, 2021 and close on April 4<sup>th</sup>, 2021 at 11:59 pm. Your participation in this study is completely voluntary. You have a right to refuse to participate without consequences or to discontinue your participation at any time without penalty. If you agree to participate, your responses will be completely anonymous.

[https://docs.google.com/forms/d/e/1FAIpQLSepJgvmZgKsB\\_I8fRXpi0U2OV6xwYuW-X9h0Fp2GoMn0dofjQ/viewform?usp=sf\\_link](https://docs.google.com/forms/d/e/1FAIpQLSepJgvmZgKsB_I8fRXpi0U2OV6xwYuW-X9h0Fp2GoMn0dofjQ/viewform?usp=sf_link)

Sincerely,

Cheydan Crump