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The Impact of COVID-19 on the Mental Health of College Students

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ABSTRACT

COVID-19 changed the world in the span of a few months. Schools and other businesses had to close and move to an online format to decrease physical interaction and stop the spread of the virus. Many people went without seeing close friends and loved ones due to the quarantine or lost someone close to them due to the virus. Students enrolled in college were sent home abruptly and could not return in person to school for the remainder of the year. Even when they were allowed to return to school, new guidelines and how classroom content was delivered were put into effect. Quarantine and the pandemic caused the mental health of many students to decline. COVID-19 also caused an increase in other stressors, such as financial stability, lack of food, or housing options. The purpose of this study is to research how COVID-19 impacted the mental health of college students. This cross-sectional survey study used a convenience sampling of 15 college students within a specific department at a private university in West Texas. A hierarchical regression analysis shows that the increase in stressors, such as housing and financial stability, was a statistically significant factor in mental health after COVID-19. Based on the findings, universities and communities will need to expand mental health resources, as well as services that provide other needs such as food and financial help. More studies with larger sample sizes on this issue would be beneficial in order to better understand the impact COVID-19 had on the mental health of college students.

The Impact of COVID-19 on the Mental Health of College Students

A Thesis

Presented to

The Faculty of School of Social Work

Abilene Christian University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science in Social Work


By

Jack Marcelain

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This thesis, directed and approved by the committee for the thesis candidate Jack Marcelain, has been accepted by the Office of Graduate Programs of Abilene Christian University in partial fulfillment of the requirements for the degree

Master of Science in Social Work


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CHAPTER I

INTRODUCTION

Problem Statement

After December 2019, the world faced a new challenge in the form of the COVID-19 virus. The world had not experienced an outbreak that required such a response like this in generations. In a short span of two years, the world had to adapt in a way that left people confused, frustrated, and emotionally tired. In 2019, one in every eight people—or 970 million people—around the world were living with a mental disorder, with anxiety and depressive disorders being the most common (Global Health Data Exchange, 2022). By the end of 2020, the number of people living with anxiety and depression rose 26% and 28%, respectively (World Health Organization, n.d.). In late 2019 and early 2020, COVID-19 emerged, and many things started to change fast and drastically. By the end of April 2021, over three million people around the world had died due to COVID (World Health Organization, n.d.). The pandemic was something that affected people of all ages and backgrounds. Before COVID-19, college students already had the stress of being independent for the first time. They already struggle with the extreme workload of school and worry about financial burdens such as paying for school or personal expenses (Reid et al., 2021). The COVID-19 pandemic took an emotional toll on people worldwide with a significant increase in anxiety and depression. The COVID-19 pandemic and its effects took a toll on the mental health of many people around the world, with anxiety and depression rates increasing.

After the pandemic was declared an emergency, schools, businesses, restaurants, and organizations had to close and people had to quarantine in their homes for months. Many people went without seeing friends and family members due to the quarantine. Something that was once as simple as leaving your house, going to the grocery store, and going to the gym was now more complicated and considered a risk. Many people lost their jobs and homes due to the financial troubles caused by the pandemic. The new normal was social distancing from others and wearing masks, something that took away the joy and familiarity of interacting with others. Due to the isolation and stress of the quarantine and pandemic, mental health issues such as anxiety and depression have become more common and severe in people around the world (Baysan et al., 2021). Before the pandemic, services such as school, religious activities, meetings, mental and physical health services, etc. were all provided face-to-face. That was considered normal to conduct business in person, but once the pandemic began that had to change. In an attempt to stop the spread of the virus and to keep communities safe, services had to be conducted online. Doctor's appointments and mental health services, such as counseling sessions and case management meetings, had to be completed through telehealth. Due to the pandemic, many face-to-face activities had to shift to an online format to stop the virus from spreading, which is another reason anxiety and depression rates rose.

For months hospitals became overwhelmed as many beds and floors were being filled with patients who had COVID-19. At some points, it seemed like there was no end in sight as people continued to be admitted to hospitals. Doctors, nurses, social workers, and other hospital staff were being overworked without any relief. Mental health providers saw an increase in people seeking services and treatment due to the toll of the

pandemic on their mental health. The outbreak also had an impact on the mental health of healthcare professionals, mental health providers, and anyone else whose job required them to continue working throughout the pandemic. As of the time of writing (spring of 2023), the pandemic continues to influence the world. Schools, businesses, and other organizations have reopened and are conducting services in person again, but the virus and the aftermath will be something that will not be forgotten for a long time.

Previous Research and Research Gap

This study includes a literature review in the second chapter that explores how the COVID-19 pandemic impacted the mental health of college students. The literature review of this study suggests that mental health issues among college students were increasing even before the start of the COVID-19 pandemic (Scofield et al., 2017). Using previous studies (El-Monshed et al., 2021; Sprung & Rogers, 2021) this study has identified factors that influence the mental health of college students, such as grades and balancing multiple aspects of life. Factors that impacted the mental health of college students during the COVID-19 pandemic include having to leave school abruptly and return home, worrying about their grades when school was no longer in person and it was online, not being able to get as much physical activity, and still struggling to balance life and school (Beiter et al., 2015; Irawan et al., 2020; Sprung & Rogers, 2021; Wilson et al., 2020). Given the fact that COVID-19 has only existed since 2019, the full impact it has had on mental health is not yet comprehended (American College Health Association, 2019). More research is needed to understand the best interventions when dealing with the mental health issues caused by COVID (Wilson et al., 2021). Despite the ongoing efforts to understand the impact of COVID-19 on mental health, there remain significant

research gaps. This thesis project faces feasibility challenges such as limited access to relevant data and difficulties in conducting studies to evaluate interventions.

Nevertheless, this study attempts to bridge a research gap by making further explorations into the impact of COVID-19 on mental health among college students.

The Present Study

The purpose of this study is to explore how COVID-19 impacted the mental health of college students. This study attempts to answer the following research questions:

1. RQ1: What was the prevalence of mental health problems (i.e., depression and anxiety) among college students before the COVID-19 pandemic, and what is the status at the time of conducting this study (i.e., after the COVID-19 pandemic onset)?
2. RQ2: What factors contribute to the current mental health issues among college students?

CHAPTER II

LITERATURE REVIEW

The purpose of this literature review is to understand how COVID-19 impacted the mental health of college students. This includes college students who were already struggling with mental health issues and were already seeking or in services at the start of the pandemic, students who had never struggled with serious mental health issues, and students who had to adapt to the pandemic on top of adapting to being on their own. Data and information from COVID and present data regarding the increase in mental health symptoms were collected to better understand COVID's impact on people. While the entire world experienced COVID, how people experienced the virus was different. The mental health of many began to decline, and mental health issues began to increase (Srivastava et al., 2020). Research has been completed to address these rises, and resources to help combat these issues have been developed and introduced. Even though the pandemic is not as severe and life has gone back to what it once was, COVID still remains a threat, and research is still being completed to understand the effects it had and continues to have on the population.

Method of Literature Review: Search Strategies

This study used articles in scientific journals that are peer reviewed. The initial search began in September 2022 and lasted until December 2022. The terms “mental health” and “COVID-19” were originally searched for. Once articles were collected based upon that initial search, the term “college students” was added to narrow the search

and find articles that pertain to this study. All articles published within the last fifteen years were taken into consideration.

Mental Health of College Students Pre-COVID

Mental health issues of college students have been on the rise for years even before the start of the COVID-19 pandemic. The American College Health Association (2015 & 2019) surveyed over 100,000 college students in their undergraduate years regarding the state of their mental health and tracked how the data changed. Of the 100,000 undergraduate students surveyed from 2015 to 2019, the diagnoses of anxiety increased from 17.7% to 24.3%. Students reporting that they were depressed and so much so that they have had trouble functioning in the past 12 months of the time this survey was given to them increased from 36.7% to 45.1%.

A survey conducted by Reid et al. provides useful information. In this study, college students were asked to choose what they thought were the most common issues on campus. Their options included “stress, anxiety, depression, pornography, addictions, eating disorders, perfectionism, financial stress, post-traumatic stress disorder, transitioning into adulthood/college, and other” (2021, p. 103). Out of all those options, 77.80% (424) chose stress, and 76.70% (418) chose anxiety. The same survey found that 66% of the undergraduate students surveyed experienced overwhelming anxiety in the past year. Of the students surveyed, 45% said they struggled with severe depression. Of that 66% experiencing overwhelming anxiety, only 24% sought treatment (Reid et al., 2021). In a survey conducted by Gibbons et al., 46.9% stated they were concerned with anxiety and depression issues (2019). The mental health problems of college students have been increasing for years (Duffy et al., 2019). The COVID-19 pandemic brought an

increase in those problems (Czeisler et al., 2020; Gonzales et al., 2020; Son et al., 2020). Before the pandemic, anxiety and depression were the most prevalent mental health issues among college students, and the severity of both has only been increasing (Hart et al., 2019; Mahmaud et al., 2012). Gibbons et al. found that 46.9% of college students listed that depression and anxiety were their top concerns (2019). The same study found that 52.7% of college students were primarily concerned about how to manage their stress (Gibbons et al., 2019).

Factors of Mental Health Issues Among College Students

There are many factors that could lead a college student to experience anxiety and depression. Sprung and Rogers (2021) wrote that work-life balance is one of those factors. Students that are struggling with work-life/school balance will be less satisfied with their school performance, which will lead to faster burnout, and will decrease their psychological state (Butler, 2007; Laughman et al., 2016; Park & Sprung, 2013). Out of 822 full-time and graduate students, 55.4% responded that trying to balance work and school/social life was difficult for them (Gibbons et al., 2019). Many students will also have to work, raise kids, and take care of family members on top of going to school, and just working while in college can lead to an increase in mental health issues, especially for rural college students (Reid et al., 2021). There are not many mental health resources in rural universities, and mental health issues are increasing, so those resources are needed now more than ever (Cujppers et al., 2021; Reily, 2018). Other factors that increase the likelihood of depression and anxiety in college students include lack and quality of sleep, body image, concerns about the future, and health (El-Monshed et al., 2021). According to the American College Health Association, the amount of college

students that were seriously contemplating suicide within the last 12 months during the time of this survey increased from 9.8% to 13.3% (2015, 2019). According to the Penn State Center for Collegiate Mental Health, 86% of the students who did commit suicide in 2014 did not seek help for it (2018). Other areas that college students listed as stressors were their grades and wanting to succeed (Beiter et al., 2015). This data and evidence suggest that, even before COVID, college students around the country were struggling with mental health issues.

Mental Health of College Student During COVID-19

After COVID began, more mental health support was needed due to the rise in depression, anxiety, and stress (Drouin et al., 2020; Durankus & Aksu, 2022; Keeter, 2022). A survey administered by Son et al. found that 71% of the college students who took the survey reported their anxiety increased due to COVID, and 44% reported having depression (2020). Eighty-five percent of college students who took another nationwide survey reported an increase in anxiety and stress after the start of the pandemic (Timely MD, n.d.). Lee et al. discovered from their survey that eight out of ten students had modest or severe stress, and 36–44% put they had moderate or severe depression and anxiety (2021). Another survey distributed across 14 colleges around the country from March to May of 2020 found that depression rose 5.2% among college students from the previous year (Healthy Minds Network, 2020).

After the pandemic began, colleges switched to online classes and students had to return home, which caused a negative impact on many (Irawan et al., 2020). Attending college in person has been shown to give students meaning and better satisfaction in their life (Haslam et al., 2009). Di Malta et al. (2022) wrote that when students are together or

connected, they are less likely to experience anxiety and to get bad grades. Due to isolating and adapting to virtual learning, students were experiencing loneliness, which could lead to insomnia, stress, and anxiety amongst other mental health issues (El-Monshed et al., 2021). In the United Kingdom, a group of college students were surveyed, and 29% of them said they were dissatisfied with how COVID changed their schooling experience. In the same survey, 65% said they were unhappy with the accommodations COVID forced them to return or go to, and they reported a decrease in their satisfaction with their life (Zimmermann et al., 2021). Students reported that their grades dropped due to moving to online courses (McGivern & Shepherd, 2022). As mentioned earlier, grades are a common factor of stress for a student that can lead to anxiety or depression (Beiter et al., 2015). Baker et al., report that the pandemic also caused uncertainty in the job market, which has an impact on college students (2020). A study conducted by McGivern and Shepherd found that students reported that their mental and/or physical health had been negatively impacted by COVID and a decrease in self-esteem (2022). McGivern and Shepherd (2022) also report that students also claimed that COVID impacted their quality of life, they had financial worries due to the pandemic and lockdown, worry about future job opportunities, unhealthy eating habits, lack of support, and difficulty forming and maintaining relationships.

The pandemic causing many to have to return home or at least leave their university meant people leaving close friends and even losing their jobs (American College Health Association, 2020). Quarantine also impacted the physical activity of students. Students no longer had a recreational facility to which they had easy access, they could no longer participate in intramurals or any other types of sports, and the little

amount of exercise of just walking to and from class each day was no longer an option (Wilson et al., 2020). Research shows that a decline in physical activity can lead to a decline in mental health (Duncan et al., 2020; Dunton et al., 2020; Kang et al., 2021; Lesser & Nienhuis, 2020; Meyer et al., 2020; Stanton et al., 2020). During COVID-19, anxiety and depression rates for college students increased, and trying to balance the many different areas of their lives became more difficult (American College Health Association, 2015, 2019; Sprung & Rogers, 2021).

Conclusion of Literature Review

This literature review examined the rise of mental health issues of depression and anxiety in college students before and after the start of the COVID-19 pandemic. Even before the start of the pandemic in 2019, mental health issues in college students were present. Factors that impacted mental health included leaving school abruptly, worries about grades in the new era of school during the pandemic, not being able to balance life and school, and not being able to get enough physical activity during the quarantine were all indicators of an increase in mental health issues (Beiter et al., 2015; Irawan et al., 2020; Sprung & Rogers, 2021; Wilson et al., 2020). It is assumed that students experienced more stress while they adjusted to a new way of living during the COVID-19 pandemic. Previous literature shows that what the world knows about COVID-19 is still new and being researched. Therefore, this study attempts to explore how COVID-19 impacted the mental health of college students.

CHAPTER III

METHODOLOGY

The purpose of this exploratory cross-sectional study is to gather data to explore how COVID-19 impacted the mental health of college students, with a specific focus on depression and anxiety. This study seeks to answer the following research questions:

1. RQ1: What is the prevalence of mental health problems (i.e., depression and anxiety) among college students before the COVID-19 pandemic and the status at the time of conducting this study (i.e., after the COVID-19 pandemic onset)?
2. RQ2: What factors contribute to the current mental health issues among college students?

Research Design

To explore how COVID-19 impacted the mental health of college students, this research was conducted in the form of a cross-sectional survey by surveying a sample of college students at one point in time. A longitudinal study would have been better suited for casual inference (i.e., mental health changes due to a factor such as a pandemic) (Yegidis et al., 2018). It was desirable to collect data from two points in time, before and during COVID-19. However, this research design, a cross-sectional survey study, was chosen because it was not feasible to collect data before the pandemic. In this survey, the participants were asked to recall their experiences prior to the beginning of the pandemic. To enable comparison, participants were also asked the same questions during the time

the survey was being conducted. Not all information may be accurate due to the inaccuracy in some of the recalled memories of those participating in the survey.

Sampling

The target population for this study is a group of undergraduate and graduate students in the United States. A desirable sampling frame would have been a group of undergraduate and graduate students from multiple universities around the country. Since it is not possible to have students from multiple universities participate, this study used a sample of students who are all within a specific department at a private, faith-based university in West Texas. It would be more desirable to recruit students from more departments at the university, but this was not possible due to the large number of students at the university and the difficulty in getting the survey to all students. The inclusion criteria for this study were limited to students who are 18 years of age or older within the specific department at the chosen university. Given the information, the chosen sampling method is considered a convenience sampling. Due to a small sampling size that is not totally accurate of the study population (i.e., all college students), limitations of this study do exist.

Measures

The data collected from the group of undergraduate and graduate students were collected via a self-administered online survey created using Qualtrics (See Appendix D). The questionnaire measures mental health status, specifically depression and anxiety. Factors that impact mental health such as sleep, sleep quality, and support were also collected.

Mental Health Status

The mental health status of the participants before and after COVID-19 was collected. The participants were asked if they have ever been diagnosed with depression, anxiety, and/or PTSD. They were then asked to fill out the Patient Health Questionnaire-4 (PHQ-4), which has been proven to be effective for measuring the anxiety and depression of college students (Löwe et al., 2010; Khubchandani et al., 2016). The PHQ-4 has a total of four questions that are measured via a Likert scale from 0 to 3, with the first two questions measuring anxiety and the last two measuring depression (Kroenke et al., 2009). The PHQ-4 is scored from 0 to 12 and measures how mild to severe the participant's depression and anxiety is based upon their answers.

Life Stressors

Participants were also asked about any other stressors in their life during the COVID-19 pandemic. The questions included in the survey asked if the respondent had any concerns regarding housing, access to food, sleep, quality of their sleep, and financial or job issues. The participants were also asked to answer if they were diagnosed with depression, anxiety, or PTSD before or after March 2020.

Stressors due to COVID-19

The survey collected data on pandemic-specific stressors. The questions include if the participant has ever had a loved one or someone close to them pass away due to COVID and if the participant has ever been diagnosed with COVID. They were also asked if COVID has caused anyone close to them has been hospitalized or become seriously ill.

Demographic Information

Demographic information such as age, sex, and race of the participant was collected in the survey. Due to the topic of the survey and the possibility of the participant having to disclose some past traumatic events, and in accordance with the state law of age of consent, all participants had to be 18 or older to complete the survey. Participants were asked on the consent page if they are 18 or older, and there were clear instructions on the same page that they may not take the survey if they were younger than 18. No demographic or gender was excluded from taking the survey. Participants had the option to identify their race (White, Black, African American, American Indian, Alaska Native, Asian, Native Hawaiian, Pacific Islander, Spanish, Hispanic, Latino, and other) and their gender (male, female, non-binary/third gender, or may choose “prefer not to say”). All participants must be enrolled in college and within the specific department being surveyed.

Ethical Consideration

The major ethical issues were included in the informed consent section of the survey. The survey was anonymous because no personal data such name, address, etc., were collected that could identify the participant. The participants did not receive any compensation, and the survey as completely voluntary. The data was only accessed by the principal investigator. After the data were used for the purposes of this study, it will be erased within three years. Participants were asked in the survey if they have lost any loved ones due to COVID, so they could experience some emotional distress. The phone number and location of the counseling center have been put in the Informed Consent section in the event this survey does cause emotional distress. Once approval was given

by the IRB (see Appendix A), the survey was sent out to participants. After the survey had been sent, they were given a specific number of days in which they could complete the survey. Once those number of days passed, responses were no longer collected, and the data were stored on a flash drive that was password-protected.

Data Collection

Data were collected via a survey made through the website Qualtrics and analyzed using SPSS Statistics. The survey was sent once IRB approval was given for the study. The researcher first sent a survey invitation email (see Appendix B) to a representative of the School of Social work at a private university in West Texas. The invitation email included instructions on how to begin the survey along with the link to the Qualtrics survey that the researcher had created. The representative then sent emails to a group of undergraduate and graduate college students enrolled in the Spring 2023 semester within the specific department. By clicking the link, a participant was instructed to read the Informed Consent and give their consent by clicking “I consent” (see Appendix C). If they chose to continue to participate in the survey, they were asked multiple questions regarding their mental health state and the impact that they believe COVID-19 had upon them. This study has been determined by the researcher to be a minimal-study risk.

Data Analysis

Data were analyzed using descriptive statistics, such as means and standard deviations, to describe the sample. Research questions were answered by using the following statistical analyses:

- RQ1: Descriptive analyses were used to answer the following question:
What is the prevalence of mental health problems (i.e., depression and

anxiety) among college students before the COVID-19 pandemic and the status at the time of conducting this study (i.e., after the COVID-19 pandemic onset)?

- RQ2: Regression analyses were conducted to answer the following question: What factors contribute to the current mental health issues among college students?

CHAPTER IV

FINDINGS

Participants

The findings are presented by using a sample of 20 responses of college students who completed the consent process. All data included to maximize the use of data. Table 1 presents descriptive statistics regarding the demographic background of the participants. The majority of the people who completed the survey were female (90%). Out of the entire group, the majority of those who completed the survey reported they were in their 20s (84.4%). The ages of the participants ranged from 20s to 40s ($M = 24.95$ years, $SD = 5.39$).

Table 1

Characteristics of the Sample (N = 20)

Variable	Category or Range	<i>N</i> or <i>M</i>	% or <i>SD</i>
Age (years)	21~40	24.95	5.39
Age group	20s	16	84.4
	30s	2	10.6
	40s	1	5.3
Gender	Male	2	10.0
	Female	18	90.0
Race	Hispanic	2	10.0
	NH White	13	65.0
	NH Black	4	20.0
	NH Asian	1	5.0

Descriptive Statistics of Major Variables

Table 2 presents the answers of the 15 respondents regarding their experiences related to the COVID-19 pandemic. Of the 15 respondents, 13 (86.7%) reported they had been diagnosed with COVID-19, and 5 (33.3%) reported someone close to them had died due to the virus. This table also presents data regarding other stressors that the participants were experiencing during the pandemic, with over half (53.3%) reporting they had financial concerns.

Table 2

Descriptive Statistics of COVID-Related Stressors (N = 15)

	Category	N	%
COVID stressors for self	Diagnosed with COVID-19	13	86.7%
COVID stressors for significant others	Death	5	33.3%
	Hospitalization	6	40.0%
	Seriously ill	6	40.0%
	Premature birth	1	6.7%
Life stressors	Housing	3	20.0%
	Food	1	6.7%
	Financial Stability	8	53.3%

Changes in Mental Health Before and After COVID-19

Considering the small sample size, non-parametric statistical analyses about the difference in the paired scores were conducted as an alternative of a paired samples *t*-tests. Both Wilcoxon signed-rank tests for anxiety and depression, measured by the PHQ-4, showed that the after-COVID change was found significantly insignificant. Since the results are consistent with parametric analyses (i.e., statistical insignificance), the results of paired sample *t*-tests are presented in Table 3. The difference in the sum score of PHQ-4 between pre-COVID ($M = 7.58$, $SD = 2.61$) and after-COVID ($M = 7.94$, $SD = 2.80$)

was found to be statistically insignificant ($t_{18} = 0.465, p = 0.648$). The difference in anxiety scores between pre-COVID ($M = 1.97, SD = 0.87$) and after-COVID ($M = 2.13, SD = 0.86$) was found to be statistically insignificant ($t_{18} = 0.590, p = 0.563$). The difference in depression scores between pre-COVID ($M = 1.82, SD = 0.73$) and after-COVID ($M = 1.84, SD = 0.67$) was found to be statistically insignificant, ($t_{18} = 0.117, p = 0.980$).

Table 3

Paired-Samples t-test for Mental Health Before and After COVID

Group	N	Before COVID		After COVID		Paired sample t-test	
		M	SD	M	SD	df	t
PHQ4 Sum	19	7.58	2.61	7.94	2.80	18	0.465
Anxiety	19	1.97	0.87	2.13	0.86	18	0.590
Depression	19	1.82	0.73	1.84	0.67	18	0.117

* $p < .05$, ** $p < .01$, *** $p < .001$

Questions related to mental health were asked differently. Table 4 presents data regarding diagnoses of depression, anxiety, and PTSD both before and after COVID-19.

Table 4

Diagnosis of Mental Health

		Pre-COVID		After-COVID	
		n	%	n	%
Diagnosed with	Depression	5	25.0	6	30.0
	Anxiety	4	20.0	8	40.0
	PTSD	2	10.0	1	5.0

A multiple linear regression was conducted to explore predictors of the sum score of mental health problems after COVID-19. This outcome ranged from 0 (no problem) to 2 (combination of two issues out of three diagnoses: depression, anxiety, and PTSD).

Table 5 shows the hierarchical regression analysis where COVID-19 related experiences,

stressors, and the sum score of mental health problems before COVID. The results show that the overall regression model was statistically significant ($R^2 = 0.413$, $F = 3.751$, $p = 0.033$ explaining the variance in the outcome by 41.3%. After controlling for the other variables included in this model, “life stressors (sum)” was a statistically significant predictor ($t = 2.358$, $p = 0.031$). Other factors were not statistically significant factors for mental health after COVID-19 based on the number of diagnoses.

Table 5

Predictors of Number of Mental Health Diagnosis After COVID-19

Predictors	<i>b</i>	<i>t</i>	<i>p</i>
Significant Others Experience (Sum)	0.079	0.624	0.541
Life Stressors (Sum)	0.408	2.358	0.031
Number of Diagnoses before COVID (Sum)	0.362	1.958	0.068
		<i>F</i>	3.751*
		<i>R square</i>	0.413
		<i>Adjusted R square</i>	0.303

* $p < .05$, ** $p < .01$, *** $p < .001$

CHAPTER V

DISCUSSION

The purpose of this study is to explore how COVID-19 impacted the mental health of college students. The participants of this study were undergraduate and graduate college students within a specific department at a private university in West Texas at the time this research was being conducted. This study used a survey that was given to undergraduate and graduate students who were in their 20s through 40s to determine the impact COVID-19 had upon their mental health, specifically how it impacted their depression, anxiety, or PTSD. The PHQ-4 was included in the survey to measure the levels of anxiety and depression of those who responded. The participants were also asked in the survey to describe any other areas in their life that were feeling stressed about during the COVID-19 pandemic, such as housing, financial concerns, and food. Based on the results of the survey, there was an overall increase in participants who reported having depression and anxiety after the start of COVID-19. Some of the responses also indicated that housing, food, and financial stability were all stressors to some of the respondents during the pandemic. Those who responded also put they knew someone who had become seriously ill or even died due to the virus. The following is a summary of answers to the research questions.

- RQ1: What is the prevalence of mental health problems (i.e., depression and anxiety) among college students before the COVID-19 pandemic and the status at the time of conducting this study (i.e., after the COVID-19

pandemic onset)? Based on a criterion to interpret the results of PHQ-4 (moderate symptoms of anxiety or depression as the sum score of 6–8), the respondents had moderate symptoms of anxiety and depression both before (7.58) and after (7.94). However, there was no statistically significant increase since COVID-19. Other questions about mental health diagnosis suggest that there was an increase in the mental health diagnosis after COVID in the sample. The statistical significance of this change was not tested.

2. RQ2: What factors contribute to the current mental health issues among college students? A regression analysis shows that life stressor was the factor of current mental health while COVID-19 related stressors were not significant factors.

Discussion of Major Findings

Based on the answers of those who responded to the survey used for this study, 86.7% responded they had been diagnosed with COVID-19. Less than half (33.3%) responded that someone close to them or a loved one died due to COVID-19, and 40% responded that someone close to them became seriously ill or had to be hospitalized due to the virus. Regarding other stressors that students experienced during the pandemic, 53.3% responded they had financial concerns. Less than half reported any food, housing, or job concerns. The data regarding other stressors such as food, financial stability, and housing was found to be statistically significant. While the data show there was an increase in depression and anxiety, it was not enough for it to be statistically significant. As cited in a previous section, Baker et al. (2020) wrote about how the pandemic caused

uncertainty for jobs due to the uncertainty of what was going to happen next and the lockdown. Based upon the answers given by those who responded, there was an increase in those who experienced depression before COVID-19 ($M = 1.82$) and after COVID-19 ($M = 1.84$). The data based on the answers in the survey also showed an increase in anxiety. Previous literature from Lee et al. (2021) found that 36-44% of college students who took a nationwide survey reported that they suffered from moderate or severe depression and anxiety. Based on previous literature and data, the findings of this research are consistent with the literature review and the research used in it.

Implications of Findings

This study shows an increase in those who experienced anxiety and depression, and an increase in concern over food, housing, and financial concerns after COVID-19. If this data were used to calculate new data or used to represent a larger group of students, the research would show that many students had been diagnosed with COVID-19, lost a loved one due to the virus, or had some other area in their life impacted by the virus. There are more implications based on this data that have an impact on more than just the student. The virus is still recent, and researchers still might not know the full extent of it and what implications it could hold for the future. The present study has found an increase in depression and anxiety after the start of the COVID-19 pandemic although the change was not statistically significant. The insignificant change is inconsistent with previous studies (Son et al., 2020; Stanton et al., 2020; Wilson et al., 2021; Zimmerman et al., 2021). This data also implies that many more people around the world developed mental health issues due to stressors other than COVID-19 itself—stressors that could have been directly impacted by the virus (Lund, 2021). This implies that practitioners,

educators, etc., are going to see an increase in students, clients, and patients with mental health issues and other problems caused by the pandemic, and they will have to prepare and start accommodating these issues. Unfortunately, access to mental health care can be limited, and there could be a shortage of those who provide mental health services, especially if those seeking mental health services are increasing (Morgan et al., 2022).

Due to the increase in mental health issues and other problems in the sample of this study and evidence from other studies (Acharya & Collins, 2018; Czeisler et al., 2020; Lee et al., 2021; Park & Sprung, 2013), mental health resources will need to be expanded across schools and other organizations to accommodate the increase in people who might choose to seek help. Funding might need to be increased as well if there is an increase in people seeking help and treatment. Many people had financial worries and could have lost their jobs due to their lack of income caused by the pandemic (Peltz et al., 2021; Wright et al., 2021). Other services such as housing, food, and financial help would need to be expanded to help those who were impacted by those or any other areas. Many universities have resources and programs to help students who have food or other issues, and these programs could help ease some of the stressors being experienced by students (Julal, 2016). After COVID-19, an expansion or introduction of these types of programs would be beneficial for many students across the country. While this research found there was an increase in depression and anxiety after the start of COVID-19, those who responded to the survey never stated that COVID-19 was the primary cause of their change in mental health. However, this data does show that COVID-19 caused the population sample to worry about areas such as housing, food, and financial concerns, which could have had a direct impact on their mental health.

It should be noted that life stressors (i.e., financial issues, job concerns, and housing) were significant factor of mental health diagnoses while other pandemic-related stressors (i.e., diagnosis of COVID-19 of themselves or death or hospitalizations of significant others) were not significant factors. Acharya et al. (2018) surveyed 631 college students about stressors they are currently experiencing, and the top eight stressors reported were: change in social activity, work with people you do not know, change in sleeping habits, change in eating habits, increased class workload, lower grade than anticipated, being placed in unfamiliar situation, and change in living environment. Another study conducted by Slimmen et al. (2022) shows a strong correlation between stressors—such as family, financial issues, and grades—and perceived stress. That perceived stress then impairs the mental well-being of the student. Addressing stressors such as money, grades, and housing is important because these and many other stressors have a direct impact on the mental health of college students, especially when a student is experiencing multiple stressors at a time.

Limitations of This Study

There are limitations to this study. First, data was only collected from a small group of students at a single rural university in West Texas. The survey for this study was only sent to a small group of students at the university, so the answers do not represent the student body as a whole. Not all of those who started the survey completed it, so some of the answers could not be used due to incomplete data. Those who were chosen to have the survey sent to them were chosen due to convenience sampling. The university used for the data collection is also not an accurate representation of the entire population of college students due to many of the students who attend being more affluent and

having more financial resources than many other students in different universities. Due to this, many of those who responded to the survey might not have been as concerned with financial issues or many other stressors.

The department surveyed may not have as many similar characteristics when compared with other similar departments across the nation. Some might have more students, less affluent students, and more of a difference in race gender, and other backgrounds or demographics. The research was conducted in a cross-sectional design in order to examine their mental health at one point in time, and those who responded were asked to recall the information to the best of their ability. The survey was administered three years after COVID-19 began, so due to the time that had passed and having to rely on their memory, not all information may be accurate. It would be better for future research on this topic to be conducted with a larger sample size in order to have more data to collect and analyze, and data that will better represent the overall population that is being used for the research.

Despite the limitations of this study, such as surveying a convenience sample of students from a faith-based university in West Texas, the results can still contribute to the understanding of social work practice in addressing mental health issues among college students. The findings present a comparison of mental health before and after the COVID-19 pandemic and highlight the various factors that have influenced students' mental well-being during this challenging time.

Conclusion

While there were many limitations, this study showed an increase in depression and anxiety after the start of COVID-19. Due to the pandemic and lockdown, many

people became more concerned and stressed about housing, food, and job issues, and those concerns could have led to an increase in depression and anxiety rates. As time goes on and the world starts to move on from the initial outbreak of COVID-19, its impact and aftermath have caused a variety of problems for people that are still being dealt with. Further studies should continue to study on the impact of the COVID-19 pandemic because it may have a long-term effect.

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APPENDIX A

Institutional Review Board Approval Letter

Date: January 13, 2023

PI: Jack Marcelain

Department: RES-Residential Student, 20531-Masters in Social Work

Re: Initial - IRB-2022-144

How COVID-19 Impacted the mental health of College Students

The Abilene Christian University Institutional Review Board has rendered the decision below for *How COVID-19 Impacted the mental health of College Students*. The administrative check-in date is --.

Decision: Exempt

Category: Category 2 (ii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation.

Research Notes:

Additional Approvals/Instructions:

If at any time the details of this project change, please resubmit to the IRB so the committee can determine whether or not the exempt status is still applicable. All approval letters and study documents are located within the Study Details in Cayuse IRB.

The following are all responsibilities of the Primary Investigator (PI). Violation of these responsibilities may result in suspension or termination of research by the Institutional Review Board. If the Primary Investigator is a student and fails to fulfill any of these responsibilities, the Faculty Advisor then becomes responsible for completing or upholding any and all of the following:

- When the research is completed, inform the Office of Research and Sponsored Programs. If your study is Exempt, Non-Research, or Non-Human Research, email orosp@acu.edu to indicate that the research has finished.
- According to ACU policy, research data must be stored on ACU campus (or electronically) for 3 years from inactivation of the study, in a manner that is secure but accessible should the IRB request access.
- It is the Investigator's responsibility to maintain a general environment of safety for all research participants and all members of the research team. All risks to physical, mental, and emotional well-being as well as any risks to

APPENDIX B

Survey Invitation Letter

2/21/23, 5:36 PM

myACU Mail - COVID-19 Research Survey



Jack Marcelain <jxm15f@acu.edu>

COVID-19 Research Survey

Jack Marcelain <jxm15f@acu.edu>
Draft

Tue, Feb 21, 2023 at 5:36 PM

Dear Prospective Participant,

My name is Jack Marcelain, a candidate of Masters in Science in Social Work at Abilene Christian University.

As a thesis project, I am conducting a survey study (IRB number 2022-144). This survey focuses on the impact COVID-19 had on your mental health. The survey will take approximately 10-15 minutes. The survey is voluntary and anonymous. Please answer the questions to your comfort level. The results will be reported for the group of respondents as a whole. Thank you for your consideration.

Please click this link to give electronic consent and participate in the survey.

https://abilenechristian.qualtrics.com/jfe/preview/previewId/2fc19a27-7757-4ac9-8e85-ce25dbe1e043/SV_3CqoDfLHcsq0bCS?Q_CHL=preview&Q_SurveyVersionID=current

Sincerely, Jack Marcelain

--

Jack Marcelain

APPENDIX C

Survey Informed Consent

Start of Block: Block 3

Informed consent

Welcome to the research study! Please read this informed consent carefully and provide the consent at the end of this screen.

Title of Study: How COVID-19 impacted the mental health of college students(IRB approval number: 2022-144)

You are invited to participate in this study. This form provides important information about that study, including the risks and benefits to you, the potential participant. Please read this form carefully and ask any questions that you may have regarding the procedures, your involvement, and any risks or benefits you may experience. You may also wish to discuss your participation with other people, such as your family doctor or a family member. Also, please note that your participation is entirely voluntary. You may decline to participate or withdraw from the study at any time and for any reason without any penalty or loss of benefits to which you are otherwise entitled. Please contact the PI (Principal Investigator) if you have any questions or concerns regarding this study or if at any time you wish to withdraw. This contact information may be found at the end of this section.

Purpose and Procedures

The purpose of this study is to collect data on how the COVID-19 pandemic affected the mental health of college students. The research will be conducted by the PI, a social work graduate student. You will be asked to answer questions about how you were impacted by COVID. After you sign the informed consent document, you will be asked to complete a one-time survey over the course of the 2023 spring semester. The survey is expected to take 10-15 minutes. Your participation is completely voluntary and you may choose to withdraw at any time and for any reason. If you choose not to participate or to withdraw from the study, there will be no penalty.

Risks and Discomforts

The primary risk of this study is to understand the impacts that COVID-19 had the impact of students enrolled in college. There is a risk of a Breach of Confidentiality, but the researchers have taken steps to minimize the risks associated with this study. You will not be asked for identifying information to further protect your identity. However, if you experience any problems, you may contact the PI (See information below). Some of the survey questions may cause mild to severe emotional distress. If anxious or depressive symptoms increase please seek assistance from a qualified medical professional. [For ACU members: You may contact the ACU Medical and Counseling Care Center at 325-674-2625.

Provisions for Confidentiality

Information collected about you will be handled in a confidential manner in accordance with the law. Due to the nature of this survey, its purpose of collecting information regarding mental

health, and in accordance with state laws regarding the age of consent, **you must be 18 or older to participate in this survey.**

• This survey is **anonymous**. It means that the PI has no way of associating any survey response with the person who submitted that response. None of the responses will be connected to identifying information. Sometimes, we ask questions about demographic traits on our anonymous surveys. These are used to gain additional insight into the data through breakouts by categories such as race, gender, or class year. We will never report data on a single respondent.

Contact

If you have any questions, concerns, or comments, you may contact the **Principal Investigator**.

The **Principal Investigator** is: Jack Marcelain, MSSW Candidate [Jxm15f@acu.edu] ACU Box 27866, Abilene, TX, 79699. If you are unable to reach the Principal Investigator or wish to speak to someone other than the Principal Investigator, you may contact the **faculty supervisor**: Kyeonghee Jang, PhD, LMSW 325-674-6428 khj15a@acu.edu ACU Box 27866, Abilene, TX 79699

If you have concerns about this study or general questions about your rights as a research participant, you may contact Qi Hang, ACU's Executive Director of Research, at qxh22a@acu.edu."

Please click "I am 18 or older and I consent, begin the study" below if you are 18 or older and voluntarily agree to participate in this study. Click only after you have read all of the information provided and your questions have been answered to your satisfaction. If you wish to have a copy of this consent form, you may print it now. You do not waive any legal rights by consenting to this study.

- I am 18 or over and I consent, begin the study (1)
- I do not consent, I do not wish to participate (2)

End of Block: Block 3

APPENDIX D

Survey

PHQ4 The following includes personal questions that evaluate your personal feelings Over the last 2 weeks, how often have you been bothered by any of the following problems?

PHQ4AX1 Feeling nervous, anxious, or on edge

- Not at all (1)
 - Several days (2)
 - More than half the days (3)
 - Nearly everyday (4)
-

PHQ4AX2 Not being able to stop or control worrying

- Not at all (0) (1)
 - Several days (1) (2)
 - More than half the days (2) (3)
 - Nearly everyday (3) (4)
-

PHQ4DP1 Feeling down depressed or hopeless

- Not at all (0) (1)
 - Several days (1) (2)
 - More than half the days (2) (3)
 - Nearly everyday (3) (4)
-

During

Mark all that you were diagnosed with, if you were diagnosed with any of the following **before March 2020**

- Depression
- Anxiety
- PTSD

Mark all that you were diagnosed with, if you were diagnosed with any of the following **after March 2020**

- Depression
- Anxiety
- PTSD

Have you ever been diagnosed with COVID-19?

- Yes
- No

Did your significant others experience any difficulties due to COVID-19? Mark all that apply.

- Death
- Hospitalization
- Seriously ill
- Other

Stressors Were there any other areas of stress in your life since the pandemic has started.?

Mark all that apply

- Housing (1)
- Food (2)
- Financial Stability (3)
- Job Security (4)
- Other (5) _____

End of Block: During

Start of Block: PHQ4 before COVID

PHQ4beforeCOVID Please recall your personal feelings during the semester right before Pandemic: how often have you been bothered by any of the following problems?

PHQ4beforeCOVIDax1 Feeling nervous, anxious, or on edge

- Not at all (1)
 - Several days (2)
 - More than half the days (3)
 - Nearly everyday (4)
-

PHQ4beforeCOVIDax2 Not being able to stop or control worrying

- Not at all (0) (1)
 - Several days (1) (2)
 - More than half the days (2) (3)
 - Nearly everyday (3) (4)
-

PHQ4beforeCOVIDdp1 Feeling down depressed or hopeless

- Not at all (0) (1)
 - Several days (1) (2)
 - More than half the days (2) (3)
 - Nearly everyday (3) (4)
-

PHQ4beforeCOVIDdp2 Little interest or pleasure in doing things

- Not at all (0) (1)
- Several days (1) (2)
- More than half the days (2) (3)
- Nearly everyday (3) (4)

End of Block: PHQ4 before COVID

Start of Block: Demographics Base/Universal



BirthYear What is your year of birth? Put a four digit number: YYYY (e.g., 2004)

Hispanic Are you Spanish, Hispanic, or Latino or none of these?

- Yes (1)
- None of these (2)

Race Choose one or more races that you consider yourself to be:

- White (1)
- Black or African American (2)
- American Indian or Alaska Native (3)
- Asian (4)
- Native Hawaiian or Pacific Islander (5)
- Other (6) _____

Sex What is your sex?

- Male (1)
- Female (2)
- Non-binary / third gender (3)
- Prefer not to say (4)

APPENDIX E

PHQ-4

PHQ-4: THE FOUR-ITEM PATIENT HEALTH QUESTIONNAIRE FOR ANXIETY AND DEPRESSION

Over the last two weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
Feeling nervous, anxious or on edge	0	1	2	3
Not being able to stop or control worrying	0	1	2	3
Feeling down, depressed or hopeless	0	1	2	3
Little interest or pleasure in doing things	0	1	2	3
TOTALS				

Total score is determined by adding together the scores of each of the 4 items. Scores are rated as normal (0-2), mild (3-5), moderate (6-8), and severe (9-12). Total score ≥ 3 for first 2 questions suggests anxiety. Total score ≥ 3 for last 2 questions suggests depression.

Reprinted with permission from Kroenke K, Spitzer RL, Williams JB, Löwe B. An ultra-brief screening scale for anxiety and depression: the PHQ-4. *Psychosomatics*. 2009;50(6):613-21. From *Principles of Neuropathic Pain Assessment and Management*, November 2011.

The PHQ-4 and other tools are available online at www.oregonpainguidance.org/clinical-tools.